

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
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September 6, 2013

GA2013-02

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

SUBJECT: General Order 112-E Gas Audit of PG&E's North Bay Division

Dear Ms. Yura:

On behalf of the Safety and Enforcement Division (SED) of the California Public Utilities Commission, Terence Eng, Willard Lam, Quang Pham, Carolina Contreras, and Balraj Sandhu conducted a General Order 112-E audit of Pacific Gas and Electric Company's (PG&E) North Bay Division (Division) from April 8-12, 2013. A representative from the Pipeline and Hazardous Materials Safety Administration (PHMSA) also attended. 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 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 cursive script, appearing to read "Michael Robertson".

Michael Robertson
Program Manager
Gas Safety and Reliability Branch
SED/CPUC

Enclosure: Summary of Inspection Findings

cc: Frances Yee, PG&E Gas Engineering and Operations
Mary Muse, PG&E Senior Gas Engineer
Larry Berg, PG&E Gas Regulatory Support
Dennis Lee, SED
Aimee Cauquiran, SED
Terence Eng, SED
Don Martin, PHMSA

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 audit it conducted of North Bay Division (Division). Some of PG&E's internal audit 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). All of the violations that PG&E identified are noted in Table 1.

Table 1. North Bay Internal Review Summary (Years 2010-2012)

Item	Code Violation	Topic	Findings	Instances	Corrective Status
1	192.723(b)(2)	Leak Survey Distribution	5-year maps exceeded 63-month due date	46	Completed
2	192.605(b)(3)		Services marked as not found on maps	74	Pending
3	192.13(c)		Services on Leak survey plats not ticked	2	Pending
4	192.13(c)		Multiple maps had minor documentation inconsistencies	Not listed	Completed
5	192.706	Leak Survey Transmission	Maps completed outside compliance time frame	4	Completed
6	192.603(b)		Maps not properly documented as leak surveyed	1	Completed
7	192.721	Distribution Patrols	Landslide patrol missed	2	Completed
8	192.13(c)		Corrective actions in progress	9	Completed
9	192.13(c)	Instrument Calibrations	Leak survey maps missing a record of calibration for various dates	13	Completed
10	192.13(c)		Station recorders missed annual calibration	2	Completed
11	192.13(c)	Leak Repair	Leaks with late action noted	19	Completed
12	192.13(c)		No record of USA number where one was required	3	Completed

Table 1. North Bay Internal Review Summary (continued)

Item	Code Violation	Topic	Findings	Instances	Corrective Status	
13	192.465(a)	Corrosion Control	Annual/Yearly P/S Reads not read once each calendar year or exceed 15 months	5	Completed	
14	192.465(a)		Less than 10% of the total 10%er population monitored	2	Completed	
15	192.13(c)		CPA not Resurveyed within a 6-yr interval, not to exceed the final day of the 6th year	1	Completed	
16	192.465(a)		Bi-Monthly P/S Reads exceeded 2 1/2 month criteria	1	Completed	
17	192.13(c)		10%er written action plan missed 30 day deadline	4	Completed	
18	192.13(c)		Pipe to soil reads written action plan missed 30 day deadline	12	Completed	
19	192.13(c)		Written action plan missed review/update deadline	12	Completed	
20	192.13(c)		Missing explanation when pipe to soil did not meet criteria	10	Completed	
21	192.13(c)		Corrective actions missing when interference was indicated	1	Completed	
22	192.13(c)		Post-restoration rectifier read was late	7	Completed	
23	192.13(c)		Idle Stubs	Deactivation records not reviewed within deactivation time limits	13	Completed
24	192.13(c)			Gas service records and plat maps not updated to document stubs	17	Pending
25	192.13(c)	Emergency Plan	Missing rosters from 2010 training exercises	1	Completed	
26	192.603(b)	MAOP	Incomplete supporting documentation	1	Pending	
27	192.13(c)	Emergency Zones	Maps updated to show proper valve open/close position	7	Completed	

SED is aware that several of PG&E's findings had been corrected prior to SED's audit. Please provide SED an update on the items that were still pending corrective actions as of April 12, 2013.

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 WP 4430-04 Gas Valve Maintenance Requirements and Procedures dated March 2009, p.4 states in part:

“Gas transmission valves classified as “emergency,” gas distribution “critical” main valves, and district regulator station valves, including upstream and downstream fire valves, must be inspected, serviced/lubricated (where required, see the paragraph above), and operated (see Paragraph 3.A., “New Valves”) at intervals not exceeding 15 months to the date, but at least once each calendar year. If a valve requiring lubrication (all plug valves and ball valves if a positive shutoff cannot otherwise be obtained. Gate valves do not require lubrication.) is not lubricated regularly, it may become inoperable, not shut off adequately when necessary, or develop external valve stem leakage.”

The Division did not lubricate plug valve VD-35 FM-110 in 2012.

1.2 PG&E’s Work Procedure WP4430-04 Attachment 1, Gas Valve Maintenance Requirements and Procedures, states:

*“Ensure that all natural gas block valves (2” and greater for gas transmission district-maintained facilities) requiring maintenance per this work procedure and ball or plug valve regulators have a **completed** [emphasis added] ‘Valve Maintenance Equipment Card.’”*

SED reviewed the Division’s Valve Maintenance Cards and discovered that a large volume of valve maintenance equipment cards were not completed and missing information such as the make, model, pressure rating, and/or serial number. A sample of such valves is listed below.

Valve No.: O-80, O-92(5.15), O-93(5.16), O-94(5.17), O-95B, O1-35 O-05, O-06, O-07, O-10, O-11, O-12, O-13, O-15, O-16, O-17, O-24, O-25, T-02, T-03, T-04B, T-04D, T-04E, T-06, T13, T-21, T-22, T-26, T-27, T-27, T-28, I-44, I-45, I-47, I-48, I-49, I-50, I-51, I-53, I-54, I-56, I-58, I-59, I-60, I-61, I-62, I-63, I-65, I-66, I-67, I-70, I-71, I-72, I-73, I-74, I-77, I-79, I-82

Therefore, the Division is in violation of Title 49 CFR §192.13(c) for not following PG&E Work Procedure WP4430-04, Attachment 1.

1.3 PG&E’s Standard M-53.3, Verifying the Calibration of Portable Combustible Gas Indicators, Hydrogen Flame Ionization Units, Optical Methane Detectors, and Remote Methane Leak Detectors, states in part:

1.3.1 *“Check the calibration of HFI gas detectors before the first field use in any given week. If the unit is not used and its calibration not checked for any given week, record that the particular unit was out of service for that week. Record this on the “Weekly Calibration Check of Flame Ionization Unit” form, (Attachment B), for OMDs on the “Weekly Calibration Check of Optical Methane Detector” form, (Attachment C), or for RMLDs on the “Monthly Remote Methane Leak Detector Daily Self-Test and Calibration Log” form (Attachment E).”*

1.3.1.1 SED reviewed the Division’s Detecto-Pak 4 (DP4) calibration records and determined that it did not complete a calibration record for each month between 2010 and 2012. DP4 equipment numbers along with the issues found are listed below.

- A. 7010: Missing records for 07/2011, 09/2011, 10/2011. No LAN ID listed for 12/12/2011 calibration
- B. 0009: Missing records from 09/2010 through 12/2010
- C. 3006: Missing records after 11/2012; missing records for 10/2010, 10/2011, 11/2011, 12/2011, 10/2012, 12/2012
- D. 0127: Only 08/2011 records were found
- E. 6037: Only 10/2012 records were found
- F. 66329: Only 8/2012, 09/2012, and 10/2012 records were found
- G. 1001: Only 6/2010, 7/2010, and 8/2010 records were found

Therefore, the Division is in violation of Title 49 CFR §192.13(c) for not following PG&E Standard M-53.3.

1.3.1.2 SED reviewed the Division’s Detecto-Pak Infra-Red (DP-IR) calibration records and determined that it did not complete a calibration record for each month between 2010 and 2013. DP-IR equipment numbers along with the issues found are listed below.

- A. 6012: Only 4/2013 records were found
- B. 6011: No 4/2013 records
- C. 7016: No 4/2013 records
- D. 6006: No records after 8/2012

Therefore, the Division is in violation of Title 49 CFR §192.13(c) for not following PG&E Standard M-53.3.

1.3.2 *“The OMD has an accuracy of $\pm 10\%$ within range of 1 to 100 ppm. If your OMD varies from calibration by more than $\pm 10\%$ within the range of 1 to 100 ppm, there is something wrong with the instrument, and it should be examined by a trained technician.”*

SED reviewed the Division’s Optical Methane Detector (OMD) calibration records and found that readings taken on 5/25/12 and 3/1/13 were not within an accuracy of $\pm 10\%$, with no documentation as to whether a trained technician

examined the equipment. Therefore, the Division is in violation of Title 49 CFR §192.13(c) for not following PG&E Standard M-53.3.

1.4 PG&E Standard O-16...

1.4.1 Section 6A(1) states in part:

“After the CPA has been restored and re-polarized, record final P/S on-potential and rectifier measurements on the “Standard Cathodic Protection Maintenance Report,” Attachment D, or in PLM.”

SED reviewed the Division’s Standard Cathodic Protection Maintenance Reports and discovered that it did not record rectifier measurements at several locations after it restored the Cathodic Protection Areas (CPAs). The locations are listed in Table 2.

Table 2. Locations lacking post-restoration rectifier readings

CPA	Location	Date restored
042-07	252 Esperanzo	9/23/2010
042-10	811 Spring St.	10/19/2010
985-15	146 Marina Vista	6/17/2011
985-15	146 Marina Vista	9/11/2011
985-15	637 Redwood	6/17/2011
985-15	637 Redwood	9/11/2011
985-20	460 Cascade	6/1/2012

Therefore, the Division is in violation of Title 49 CFR §192.13(c) for not following PG&E Standard O-16, Section 6A(1).

1.4.2 Section 6A(3) states in part:

1.4.2.1 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.”

SED reviewed the Division’s corrosion control records and discovered that it developed several CPA Follow-Up Action Plans over 30 calendar days after the CPAs were found below adequate levels. The locations are listed in Table 3.

Table 3. Locations with CPA Follow-Up Action Plans developed after over 30 days

CPA	Location	Date Down	Action Plan Created	Gap (days)
907-2C	2032 Ohio Street and 1148 Nebraska Street	5/2/2012	6/4/2012	32
985-24	Florence Ave to Helens	8/10/2010	10/19/2010	70
042-05	Crescent Ave & Main St	8/10/2010	10/19/2010	70
041-05	N/of Shoreline Hwy	8/10/2010	10/19/2010	70
986-01	37 Echo Drive	9/8/2012	4/12/2013	216
042-07	Kyle Cove	9/8/2012	4/12/2013	216
985-25	Miller Ave	9/9/2012	4/12/2013	215

Therefore, the Division is in violation of Title 49 CFR §192.13(c) for not following PG&E Standard O-16, Section 6A(3).

1.4.2.2 "If the action plan exceeds 90 days, the action plan needs to be reviewed and approved by corrosion engineering personnel, the area superintendent, and the manager of technical services within 120 days."

SED reviewed the Division's CPA Follow-Up Action Plans and discovered that the action plan for CPA 862-01 between 2010 and 2012 exceeded 90 days. No review by corrosion engineering personnel, area superintendent, and/or manager of technical services was documented within 120 days. Therefore, the Division is in violation of Title 49 CFR §192.13(c) for not following PG&E Standard O-16, Section 6A(3).

1.4.2.3 "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."

SED reviewed the Division's CPA Follow-Up Action Plans and noticed that CPA 773-01 was down from 3/18/09 to 7/21/10, a period of over 15 months. Two separate action plans were created; the updates connecting the two were separated by over 30 days. Therefore, the Division is in violation of Title 49 CFR §192.13(c) for not following PG&E Standard O-16, Section 6A(3).

2 Title 49 CFR §192.145(c) states:

"Each valve must be able to meet the anticipated operating conditions."

SED noted that the Division did not indicate the pressure rating value on several Valve Maintenance Cards (see valves listed in Section 1.2 of this report). CPUC is aware that the valves with missing pressure rating values are currently being researched as part of PG&E's MAOP validation project; therefore, the Division could not determine if each valve was able to meet its anticipated operating condition. As a result, the Division is in violation of Title 49 CFR

§192.145(c). SED requests an update on PG&E’s MAOP validation project with respect to the valves at this Division.

3 Title 49 CFR §192.465 states, in part:

3.1 (a) “However, if tests at those intervals are impractical for separately protected short sections of mains or transmission lines, not in excess of 100 feet (30 meters), or separately protected service lines, these pipelines may be surveyed on a sampling basis. At least 10 percent of these protected structures, distributed over the entire system must be surveyed each calendar year, with a different 10 percent checked each subsequent year, so that the entire system is tested in each 10-year period.

SED reviewed the Division’s 10%er (separately protected short sections of main or services not in excess of 100 feet) records and found that the Division last inspected the cathodic protection (CP) on the service at 15 Hamilton Drive in Novato in 1998. The Division did not check the CP in 2008 due to limited access and create a subsequent action plan. No action was taken until the Division was notified of our finding. As a result, the Division did not check the entire system in each 10 year period, and therefore is in violation of Title 49 CFR §192.465(a).

3.2 (d) “Each operator shall take prompt remedial action to correct any deficiencies indicated by the monitoring.”

SED reviewed the Division’s corrosion control records and found that the Division took over 15 months to correct two separate down CPAs. CPA 773-01 was down from 3/18/09 through 7/21/10 for a period of 15 months and 3 days. CPA 041-02 was down from 5/4/09 through 8/22/10 for a period of 15 months and 18 days. Pipe-to-soil (P/S) records at 320 Deertrail Lane in Mill Valley showed readings that did not meet the -850 mV criteria defined in Title 49, CFR Part 192, Appendix D. The P/S readings ranged from -.815 V to -.258 V, as shown below in Table 3.

Table 3. Readings at CPA 041-02, 320 Deertrail Lane in Mill Valley

Date	P/S Reading (Volts)
5/4/2009	-.520
7/22/2009	-.721
9/11/2009	-.815
11/5/2009	-.753
1/5/2010	-.761
3/1/2010	-.771
3/24/2010	-.259
5/19/2010	-.258
7/21/2010	-.530
8/21/2010	-.815
8/22/2010	-.901

In defining what constitutes a failure to take prompt remedial action, the DOT Office of Pipeline Safety (now PHMSA) states:

“Enforcement should be sought only when the investigator is convinced that corrective action was unreasonably delayed [and the] investigator must state why he determined the delay to be unreasonable.”

- OPS Operation and Enforcement Manual, Interpretation 192.465(d) 13, May 19, 1989.

As further guidance regarding a §192.465(d) “unreasonable delay” violation, the OPS (PHMSA) interpretation suggests the following:

“As a rule of thumb, the OPS would expect that, under normal conditions, the operator should have the evaluations and decisions made and action started within a few months, (proportionally less where required monitoring is less than a year or where deficiencies could result in an immediate hazard to the public), and correction completed by the time of the next scheduled monitoring.”

As per CPUC Resolution SU-39 dated February 23, 1996, PG&E is allowed to perform rectifier monitoring annually—once each calendar year with intervals not to exceed 15 months. By taking over 15 months to correct 2 separate down CPAs, the Division did not have the corrections completed by the time of the next scheduled monitoring; therefore, the Division is in violation of §192.465(d).

4 Title 49 CFR §192.805 states, in part:

“Each operator shall have and follow a written qualification program. The program shall include provisions to:

(b) Ensure through evaluation that individuals performing covered tasks are qualified

SED reviewed the Division’s atmospheric patrolling records for exposed piping and spans and noticed that PG&E employee Richard Fillippo performed a patrol at 730 Hawthorne Drive in Tiburon in 2009. SED discovered that Mr. Fillippo, at the time of the patrol, was not qualified through evaluation to perform the patrol. Therefore, the Division is in violation of Title 49 CFR §192.805(b) for not ensuring through evaluation that this individual performing a covered task was qualified.

C. Observations and Concerns

- 1 Title 49 CFR §192.463 states:

“Each cathodic protection system required by this subpart must provide a level of cathodic protection that complies with one or more of the applicable criteria contained in Appendix D of this part. If none of these criteria is applicable, the cathodic protection system must provide a level of cathodic protection at least equal to that provided by compliance with one or more of these criteria.”

SED found during its field verification, P/S readings that did not meet the -0.850V criteria that PG&E uses to ensure cathodic protection (CP) compliance. The Division needs to take prompt remedial action to bring the CP levels into compliance. The locations are listed below in Table 4.

Table 4. Field locations with inadequate pipe-to-soil readings

CPA	Location	P/S Reading (Volts)	Date Found
985-15	146 Marina Vista, Corte Madera	-0.540	4/11/2013
985-01	369D Montecito Shopping Center, San Rafael	-0.550	4/11/2013

- 2 PG&E’s Pole-Mount/Pedestal-Mount Rectifier Test and Site Evaluation Form requires that the ground resistance must be measured and documented. All defective items must be corrected within 30 days; an action plan must be initiated for items not corrected within 30 days.

SED inspected the Rectifier at 343 Robin, Mill Valley in CPA 041-02, and found that the Division could not measure the high resistance ground rod. The Division needs to correct this defective item within 30 days or initiate an action plan.