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October 7, 2013

Mr. Mike Robertson  
Gas Safety and Reliability Branch  
Safety and Enforcement Division  
California Public Utilities Commission  
320 West 4<sup>th</sup> Street, Suite 500  
Los Angeles, CA. 90013

Re: State of California – Public Utilities Commission  
General Order 112-E Audit – PG&E’s North Bay Division

Dear Mr. Robertson:

The Safety and Enforcement Division (SED) Gas Safety and Reliability Branch (GSRB) of the CPUC conducted a General Order 112-E audit of PG&E’s North Bay Division from April 8 to 12, 2013. On September 6, 2013, the SED submitted their audit report, identifying violations and findings. Attached is PG&E’s response to the CPUC audit report.

PG&E is providing this response pursuant to Public Utilities Code §583 because this response and/or the attached documents contain information that should remain confidential and not be subject to public disclosure as it contains one or more of the following: critical infrastructure information that is not normally provided to the general public, the dissemination of which poses public safety risks (pursuant to the Critical Infrastructures Information Act of 2002, 6 U.S.C. §§131-134); personal information pertaining to PG&E employees below director level; customer information; or commercially sensitive/proprietary information.

Please contact Larry Berg at (925) 328-5758 or LMB5@pge.com for any questions you may have regarding this response.

Sincerely,

/S/  
Frances Yee

Attachments

cc: Aimee Cauguiran, CPUC  
Dennis Lee, CPUC  
Liza Malashenko, CPUC

Larry Berg, PG&E  
Larry Deniston, PG&E  
Bill Gibson, PG&E  
Jane Yura, PG&E

**General Order 112-E Findings**  
**CPUC Inspection Report dated September 6, 2013**  
**North Bay Division**

**INSPECTION INFORMATION**

| Inspection Dates | Finding        | CPUC Contact | CPUC Phone #   |
|------------------|----------------|--------------|----------------|
| April 8-12, 2013 | Internal Audit | Terence Eng  | (415) 703-5326 |

**PG&E INTERNAL AUDIT FINDINGS****A. PG&E 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 (as of 4/12/13) |
|------|----------------|--------------------------|---|------------|-----------------------------------|
| 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                         |

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|----|------------|-------------------------|--|----|-----------|
| 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 |
| 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 |

Definitions: NOV – Notice of Violation  
FO – Field Observation  
AOC - Area of Concern

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|----|------------|-----------------|---|----|-----------|
| 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.

### PG&E RESPONSE

Updates for the four pending corrective items (item #2, #3, #24, #26) are provided below:

Item #2 – Services marked as not found on map:

The Mark and Locate Group have been dispatched to locate and survey the 74 services. All surveys are scheduled to be completed by March 31, 2014. PG&E will document if the service is active or inactive, and conduct a leak survey for all active services identified. To prevent reoccurrence, PG&E conducted a tailboard briefing with Leak Surveyors and Mappers to review leak survey frequency and the documentation of leak survey, as identified in Procedure S4110 (Attachment A).

Item #3 – Services on plats not ticked :

The leak survey for 42 Geldert Dr (Plat 2986-J4) was completed on March 13, 2013 (Attachment B). The leak survey for 4574 St Helena Highway (Plat 2508-I6) is pending leak survey, to be completed by October 31, 2013. To prevent reoccurrence, PG&E has conducted a tailboard briefing with Leak Surveyors and Mappers to review leak survey frequency, and the documentation of leak survey as identified in Procedure S4110 (Attachment A).

Item #24 – Gas service records and plats not updated to document stubs:

Field personnel have verified the identified stubs and are in the process of updating plat maps

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and GSRs to document stubs, with a target completion date of March 31, 2014. PG&E has also conducted tailboard briefing with Division Mapping as well as Mark & Locate personnel to review the requirements of standard TD-9500P-16 "Deactivation and/or Retirement of Underground Gas Facilities (Attachment C)."

Item #26 – Incomplete supporting documentation for MAOP system

MAOP system #114 in Vallejo has a documented MAOP of 60 psig, with records stating the system was tested and MAOP validated per job #WO 40026A in 1984. Upon further review, the as-builts do not show test data for the distribution main that was installed in the job. PG&E has since re-established the MAOP via special leak survey (Attachment D). To prevent reoccurrence, PG&E conducted a Tailboard briefing with Division Engineering to review Standard TD-4215S, and covered the requirements for performing annual review of MAOP records (Attachment E).

### ATTACHMENTS

| Attachment # | Title or Subject                            |
|--------------|---|
| A            | Tailboard roster for S4110                  |
| B            | Leak survey documentation for 42 Geldert Dr |
| C            | Tailboard roster for TD-9500P-16            |
| D            | MAOP documentation for system #114          |
| E            | Tailboard roster for TD-4215S               |

### ACTION REQUIRED

| Action To Be Taken  | Due Date         | Completion Date | Responsible Dept.                              |
|---|------------------|-----------------|--|
| Complete leak survey for services not found on plat (74)            | March 31, 2014   |                 | North Bay Division<br>Leak Survey              |
| Complete leak survey for service not ticked/highlighted             | October 31, 2013 |                 | North Bay Division<br>Leak Survey              |
| Complete update of gas service records and plat maps for idle stubs | March 31, 2014   |                 | North Bay Division<br>Mapping,<br>Construction |

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**INSPECTION INFORMATION**

| <b>Inspection Dates</b> | <b>Finding</b> | <b>CPUC Contact</b> | <b>CPUC Phone #</b> |
|-------------------------|----------------|---------------------|---------------------|
| April 8-12, 2013        | NOV-1.1        | Terence Eng         | (415) 703-5326      |

**INSPECTION FINDING**

|              |  |
|--------------|--|
| CPUC Finding | <p><b>1 <u>Title 49 CFR §192.13(c) states:</u></b></p> <p><i>“Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.”</i></p> <p>1.1 PG&amp;E’s WP 4430-04 Gas Valve Maintenance Requirements and Procedures dated March 2009, p.4 states in part:</p> <p><i>“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 <u>Paragraph 3.A., “New Valves”</u>) 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.”</i></p> <p>The Division did not lubricate plug valve VD-35 FM-110 in 2012.</p> <p>1.2 PG&amp;E’s Work Procedure WP4430-04 Attachment 1, Gas Valve Maintenance Requirements and Procedures, states:</p> <p><i>“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 <b>completed</b> [emphasis added] ‘Valve Maintenance Equipment Card.’”</i></p> <p>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.</p> <p>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,</p> |
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|  | <p>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</p> <p>Therefore, the Division is in violation of Title 49 CFR §192.13(c) for not following PG&amp;E Work Procedure WP4430-04, Attachment 1.</p> <p>1.3 PG&amp;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:</p> <p>1.3.1 <i>“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).”</i></p> <p>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.</p> <ul style="list-style-type: none"><li>A. <u>7010</u>: Missing records for 07/2011, 09/2011, 10/2011. No LAN ID listed for 12/12/2011 calibration</li><li>B. <u>0009</u>: Missing records from 09/2010 through 12/2010</li><li>C. <u>3006</u>: Missing records after 11/2012; missing records for 10/2010, 10/2011, 11/2011, 12/2011, 10/2012, 12/2012</li><li>D. <u>0127</u>: Only 08/2011 records were found</li><li>E. <u>6037</u>: Only 10/2012 records were found</li><li>F. <u>66329</u>: Only 8/2012, 09/2012, and 10/2012 records were found</li><li>G. <u>1001</u>: Only 6/2010, 7/2010, and 8/2010 records were found</li></ul> |
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|  | <p>Therefore, the Division is in violation of Title 49 CFR §192.13(c) for not following PG&amp;E Standard M-53.3.</p> <p>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.</p> <p>A. <u>6012</u>: Only 4/2013 records were found<br/>B. <u>6011</u>: No 4/2013 records<br/>C. <u>7016</u>: No 4/2013 records<br/>D. <u>6006</u>: No records after 8/2012</p> <p>Therefore, the Division is in violation of Title 49 CFR §192.13(c) for not following PG&amp;E Standard M-53.3.</p> <p>1.3.2 <i>“The OMD has an accuracy of ±10% within range of 1 to 100 ppm. If your OMD varies from calibration by more than ±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.”</i></p> <p>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 ±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&amp;E Standard M-53.3.</p> <p>1.4 PG&amp;E Standard O-16...</p> <p>1.4.1 Section 6A(1) states in part:</p> <p><i>“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.”</i></p> |
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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

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| CPA    | Location                                     | Date Down | Action Plan Created | Gap (days) |
|--------|--|-----------|---------------------|------------|
| 907-2C | 2032 Ohio Street and<br>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."*

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|  | <p>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&amp;E Standard O-16, Section 6A(3).</p> |
|--|--|

**PG&E RESPONSE**

1.1

PG&E agrees with this finding. The valve was inspected and lubricated on April 12, 2013 (Attachment F). PG&E also conducted a tailboard briefing with Transmission and Regulation (T&R) personnel to review the requirements in Work Procedure TD 4430P-04: Gas Valve Maintenance (Attachment G).

1.2

PG&E agrees with this finding. PG&E's MAOP Validation team is continuing to create Pipeline Features Listings for all pipeline facilities operating over 60 psig, and expects completion in December 2013. The team is researching as-built records and determining pressure ratings of valves and fittings throughout PG&E's gas system operating over 60 psig. This information will be transferred to the maintenance organizations responsible for valve maintenance.

1.3.1

PG&E agrees with this finding, and was only able to retrieve some of the records (Attachment H). To prevent reoccurrence, PG&E will conduct a tailboard briefing with leak survey personnel to review the requirements in Work Procedures TD-4110P-25 (Heath DPIR Leak Detector) and TD-4110P-28 (Heath DP-4), by December 31, 2013.

1.3.2

PG&E respectfully disagrees with the NOV for the two referenced dates. A reading of 144.5 ppm was taken on 5/25/12 which is within the acceptable 10% range (139.5 to 170.5 PPM). PG&E has adequate documentation showing the equipment was sent for recalibration by a trained technician on May 31, 2012 (attachment I). PG&E also has records for the week of March 1, 2013 showing the equipment was out of service and not calibrated (Attachment J). However, in reviewing these records, PG&E identified several months that were out of tolerance where PG&E did not recalibrate the equipment. Since the discovery, PG&E has published a new work procedure TD-4110P-24 (OMD Operating Procedures). PG&E will conduct a tailboard briefing by December 31, 2013, with Leak Survey personnel to review requirements, and ensure all equipment is calibrated and adequately documented.

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1.4.1  
PG&E agrees with this finding. The requirements to check rectifier reads after restoring cathodic protection to a cathodic protection area are defined in PG&E’s Gas Standard & Specification O-16, “Corrosion Control of Gas Facilities”. PG&E conducted tailboard briefing with Division Corrosion Personnel to review O-16 Section 6A(1) and these requirements (Attachment K).

1.4.2.1  
PG&E agrees with the finding, and failed to adhere to PG&E’s Gas Standard & Specification O-16, “Corrosion Control of Gas Facilities”.

To prevent recurrence, PG&E conducted a tailboard briefing with the Local Corrosion Group on CPA Restoration requirements on April 1, 2013(Attachment L). The Corrosion Supervisor will conduct monthly record reviews to ensure requirements are met. PG&E will also continue to generate action plans for all areas with inadequate levels of protection that are not remediated within 30 days. PG&E has also implemented an electronic notification process to ensure these action plans are updated monthly.

1.4.2.2  
PG&E agrees with this finding. PG&E has since published a new Gas Information Bulletin TD-O-16B-001 (Attachment M). The new bulletin states that the corrosion supervisor will conduct monthly record reviews to ensure requirements are met, and to ensure the pipeline is adequately protected.

**ATTACHMENTS**

| Attachment # | Title or Subject   |
|--------------|--|
| F            | Valve maintenance card for valve VD-35                     |
| G            | Tailboard for Work Procedure TD 4430P-04                   |
| H            | Various Calibration records for missing instruments listed |
| I            | Calibration certificate dated 5/31/12                      |
| J            | Calibration certificate dated 3/1/2013                     |
| K            | Tailboard roster O-16 6A(1)                                |
| L            | Tailboard roster sheet for WP4133 and O-16                 |
| M            | Gas Information Bulletin TD-O-16B-001                      |

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**ACTION REQUIRED**

| <b>Action To Be Taken</b>  | <b>Due Date</b>   | <b>Completion Date</b> | <b>Responsible Dept.</b>       |
|--|-------------------|------------------------|--------------------------------|
| Complete Pipeline Features Listings and provide transmission valve specification information                           | December 31, 2013 |                        | MAOP Validation Team           |
| Tailboard TD-4110P-25 (Heath DPIR Leak Detector), TD-4110P-28 (Heath DP-4), and TD-4110P-24 (OMD Operating Procedures) | December 31, 2013 |                        | North Bay Division Leak Survey |

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| Inspection Dates | Finding | CPUC Contact | CPUC Phone #   |
|------------------|---------|--------------|----------------|
| April 8-12, 2013 | NOV-2   | Terence Eng  | (415) 703-5326 |

**INSPECTION FINDING**

|              |   |
|--------------|---|
| CPUC Finding | <p>2 <u>Title 49 CFR §192.145(c) states:</u></p> <p><i>“Each valve must be able to meet the anticipated operating conditions.”</i></p> <p>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&amp;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&amp;E’s MAOP validation project with respect to the valves at this Division.</p> |
|--------------|---|

**PG&E RESPONSE**

PG&E agrees with this finding. PG&E’s MAOP Validation team is continuing to create Pipeline Features Listings for all pipeline facilities operating over 60 psig, and expects completion in December 2013. The team is researching as-built records and determining pressure ratings of valves and fittings throughout PG&E’s gas system operating over 60 psig. This information will be transferred to the maintenance organizations responsible for valve maintenance.

**ATTACHMENTS**

|      |
|------|
| None |
|------|

**ACTION REQUIRED**

| Action To Be Taken                  | Due Date          | Completion Date | Responsible Dept.    |
|-------------------------------------|-------------------|-----------------|----------------------|
| Complete Pipeline Features Listings | December 31, 2013 |                 | MAOP Validation Team |

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|-------------------------|----------------|---------------------|---------------------|
| April 8-12, 2013        | NOV-3          | Terence Eng         | (415) 703-5326      |

**INSPECTION FINDING**

|              |   |
|--------------|---|
| CPUC Finding | <p>3 <u>Title 49 CFR §192.465 states, in part:</u></p> <p><i>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.</i></p> <p>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).</p> <p><i>3.2 (d)“Each operator shall take prompt remedial action to correct any deficiencies indicated by the monitoring.”</i></p> <p>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.</p> |
|--------------|---|



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**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

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|  |   |
|--|---|
|  | 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). |
|--|---|

**PG&E RESPONSE**

|     |   |
|-----|---|
| 3.1 | PG&E agrees with this finding, and inspected the service at 15 Hamilton Drive on April 11, 2013. A pipe-to-soil potential was taken and showed that the service was adequately protected (attachment N). To prevent reoccurrence, PG&E implemented changes in its SAP maintenance tool, which now triggers an electronic notification if recorded pipe-to-soil potentials are -1000 mV or less. PG&E also conducted a Tailboard briefing with Local Corrosion Personnel to review O-16: (attachment L).   |
| 3.2 | PG&E agrees with this finding. PG&E had not established in Gas Standard O-16 what is prompt remedial action to correct any deficiencies indicated by the cathodic protection monitoring. Throughout 2014, the Integrity Management/Corrosion Engineering Department will be implementing significant changes in corrosion control processes and procedures. Included in these significant changes will be a specific timeframe defining prompt remedial action to be within 15 months, a process to monitor the performance and life expectancy of sacrificial anodes, and an accelerated anode replacement program, and a process to streamline the engineering, permit application, and construction scheduling of deepwell anodes. |

**ATTACHMENTS**

| Attachment # | Title or Subject  |
|--------------|---|
| N            | Documentation for pipe to soil potential at 15 Hamilton Drive |

**ACTION REQUIRED**

| Action To Be Taken   | Due Date      | Completion Date | Responsible Dept.     |
|--|---------------|-----------------|-----------------------|
| Rollout Process and Procedure changes to Corrosion Control | December 2014 |                 | Corrosion Engineering |

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**INSPECTION INFORMATION**

| Inspection Dates | Finding | CPUC Contact | CPUC Phone #   |
|------------------|---------|--------------|----------------|
| April 8-12, 2013 | NOV-4   | Terence Eng  | (415) 703-5326 |

**INSPECTION FINDING**

|                     |   |
|---------------------|---|
| <p>CPUC Finding</p> | <p>4 <u>Title 49 CFR §192.805 states, in part:</u></p> <p><i>“Each operator shall have and follow a written qualification program. The program shall include provisions to:</i></p> <p><i>(b) Ensure through evaluation that individuals performing covered tasks are qualified</i></p> <p>SED reviewed the Division’s atmospheric patrolling records for exposed piping and spans and noticed that PG&amp;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.</p> |
|---------------------|---|

**PG&E RESPONSE**

|   |
|---|
| <p>PG&amp;E respectfully disagrees with this finding, although agrees that there has been confusion with the nature of the work being assigned here.</p> <p>This particular location consists of exposed distribution steel gas service due to landslide, and per the Pipeline Patrol work procedure, has been scheduled for periodic inspection. That inspection has consisted of monitoring for atmospheric corrosion of the exposed pipe (OQ sub-task 03-04 required), and an inspection to determine the integrity of the pipe (OQ sub-task 03-05)</p> <p>After this location had been identified for periodic inspection, Employee Richard Fillippo was sent out for an inspection of the exposed section of pipe at this address. At the time of the inspection on September 8, 2009, the employee was qualified for OQ sub-task 03-04.00 (Atmospheric Corrosion Monitoring) and OQ sub-task 03-05.00 (Pipe inspection) which would qualify him to complete the inspection (Attachment O).</p> <p>The current version of the Pipeline Patrol Work Procedure, TD-4412P-07, published August 3, 2012, clearly spells out Operator Qualification requirements.</p> |
|---|

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**ATTACHMENTS**

| Attachment # | Title or Subject    |
|--------------|---------------------|
| O            | Employee OQ records |

**ACTION REQUIRED**

|                            |
|----------------------------|
| No further action required |
|----------------------------|

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**INSPECTION INFORMATION**

| <b>Inspection Dates</b> | <b>Finding</b> | <b>CPUC Contact</b> | <b>CPUC Phone #</b> |
|-------------------------|----------------|---------------------|---------------------|
| April 8-12, 2013        | FO-1           | Terence Eng         | (415) 703-5326      |

**INSPECTION FINDING**

| CPUC Finding | <p><b>C. Observations and Concerns</b></p> <p>1 <u>Title 49 CFR §192.463 states:</u></p> <p><i>“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.”</i></p> <p>SED found during its field verification, P/S readings that did not meet the - 0.850V criteria that PG&amp;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.</p> <p align="center"><b>Table 4.</b> Field locations with inadequate pipe-to-soil readings</p> <table border="1"> <thead> <tr> <th><b>CPA</b></th> <th><b>Location</b></th> <th><b>P/S Reading (Volts)</b></th> <th><b>Date Found</b></th> </tr> </thead> <tbody> <tr> <td>985-15</td> <td>146 Marina Vista, Corte Madera</td> <td>-0.540</td> <td>4/11/2013</td> </tr> <tr> <td>985-01</td> <td>369D Montecito Shopping Center, San Rafael</td> <td>-0.550</td> <td>4/11/2013</td> </tr> </tbody> </table> | <b>CPA</b>                 | <b>Location</b>   | <b>P/S Reading (Volts)</b> | <b>Date Found</b> | 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 |
|--------------|--|----------------------------|-------------------|----------------------------|-------------------|--------|--------------------------------|--------|-----------|--------|--|--------|-----------|
| <b>CPA</b>   | <b>Location</b>  | <b>P/S Reading (Volts)</b> | <b>Date Found</b> |                            |                   |        |                                |        |           |        |  |        |           |
| 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         |                            |                   |        |                                |        |           |        |  |        |           |

**PG&E RESPONSE**

PG&E agrees with this observation and has since verified that there is adequate cathodic protection at the two locations noted above on April 13, 2013 (Attachment P). PG&E will continue to promptly address and track any locations found to bring CP levels into compliance.

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**ATTACHMENTS**

| <b>Attachment #</b> | <b>Title or Subject</b>                |
|---------------------|--|
| P                   | CPA 985-15 & 985-01 maintenance report |

**ACTION REQUIRED**

|                            |
|----------------------------|
| No further action required |
|----------------------------|

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**INSPECTION INFORMATION**

| <b>Inspection Dates</b> | <b>Finding</b> | <b>CPUC Contact</b> | <b>CPUC Phone #</b> |
|-------------------------|----------------|---------------------|---------------------|
| April 8-12, 2013        | FO-2           | Terence Eng         | (415) 703-5326      |

**INSPECTION FINDING**

| <b>CPUC Finding</b> | <b>C. Observations and Concerns</b>  |
|---------------------|--|
|                     | <p>2 PG&amp;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.</p> <p>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.</p> |

**PG&E RESPONSE**

|   |
|---|
| <p>PG&amp;E agrees with this observation, and installed a second ground rod for CPA 041-02 on April 25, 2013. PG&amp;E took ground resistance reads on May 28, 2013, and was able to adequately measure ground resistance (Attachment Q).</p> |
|---|

**ATTACHMENTS**

| <b>Attachment #</b> | <b>Title or Subject</b>                       |
|---------------------|---|
| Q                   | CPA 041-02 - PM #41881430 and Rectifier Forms |

**ACTION REQUIRED**

|                                    |
|------------------------------------|
| <p>No further action required.</p> |
|------------------------------------|