



Redacted
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May 5, 2014

Mr. Ken Bruno
Gas Safety and Reliability Branch
Safety and Enforcement Division
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

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

Dear Mr. Bruno:

The Safety and Enforcement Division (SED), Gas Safety and Reliability Branch (GSRB) of the CPUC conducted a General Order 112-E audit of Pacific Gas and Electric (PG&E) Kern Division, from October 14 - 18, 2013. On March 20, 2014, the SED submitted their audit report, identifying violations and findings. Attached is PG&E’s response to the CPUC audit report.

Please contact Redacted at Redacted or Redacted for any questions you may have regarding this response.

Sincerely,

/S/

Redacted

Attachments

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

Redacted
Bill Gibson, PG&E
Sumet Singh, PG&E

**General Order 112-E Findings
CPUC Inspection Report, dated March 20, 2014
Kern Division**

INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
October 14 - 18, 2013	Internal Review	Willard Lam	(415) 703-1327

INSPECTION FINDING

CPUC Finding	<p>A. PG&E's Internal Audit Findings</p> <p>PG&E provided SED a summary of findings from its internal audit conducted prior to the Kern Division Audit. Some of PG&E's internal audit findings are violations of PG&E's own operations and maintenance standards, and are therefore violations of Title 49 Code of Federal Regulations (CFR), §192.605(a). All violations identified in PG&E's internal findings summary are listed in Table 1.</p> <p>Table 1: Kern Division Internal Finding Summary</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Item</th> <th style="text-align: center;">Code Violation</th> <th style="text-align: center;">Topic</th> <th style="text-align: center;">Finding</th> <th style="text-align: center;">Instances</th> <th style="text-align: center;">Corrective Status</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">192.723(b)(1) 192.723(b)(2)</td> <td style="text-align: center;">Leak Survey Distribution</td> <td style="text-align: center;">Maps out of compliance</td> <td style="text-align: center;">10</td> <td style="text-align: center;">Completed</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">192.706</td> <td style="text-align: center;">Leak Survey Transmission</td> <td style="text-align: center;">Maps out of compliance</td> <td style="text-align: center;">36</td> <td style="text-align: center;">Completed</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">192.605(a)</td> <td style="text-align: center;">Leak Repair</td> <td style="text-align: center;">Leaks with late action</td> <td style="text-align: center;">60</td> <td style="text-align: center;">Completed</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">192.605(a)</td> <td rowspan="6" style="text-align: center;">Corrosion Control</td> <td style="text-align: center;">CPA action plans created late or not updated within 30 days</td> <td style="text-align: center;">56</td> <td style="text-align: center;">Completed</td> </tr> <tr> <td style="text-align: center;">5</td> <td style="text-align: center;">192.605(a)</td> <td style="text-align: center;">CPA forms missing supervisor review</td> <td style="text-align: center;">3</td> <td style="text-align: center;">Completed</td> </tr> <tr> <td style="text-align: center;">6</td> <td style="text-align: center;">192.605(a)</td> <td style="text-align: center;">Rectifier output not within the interference results</td> <td style="text-align: center;">6</td> <td style="text-align: center;">Completed</td> </tr> <tr> <td style="text-align: center;">7</td> <td style="text-align: center;">192.605(a)</td> <td style="text-align: center;">Missing pre/post rectifier reads</td> <td style="text-align: center;">1</td> <td style="text-align: center;">N/A</td> </tr> <tr> <td style="text-align: center;">8</td> <td style="text-align: center;">192.605(a)</td> <td style="text-align: center;">Rectifier forms missing information</td> <td style="text-align: center;">5</td> <td style="text-align: center;">Completed</td> </tr> <tr> <td style="text-align: center;">9</td> <td style="text-align: center;">192.465(d)</td> <td style="text-align: center;">CPA areas down for greater than 15 months</td> <td style="text-align: center;">8</td> <td style="text-align: center;">Pending</td> </tr> <tr> <td style="text-align: center;">10</td> <td style="text-align: center;">192.605(a)</td> <td rowspan="2" style="text-align: center;">Instrument Calibration</td> <td style="text-align: center;">Missing Transmission Leak Survey instrument calibration records</td> <td style="text-align: center;">183</td> <td style="text-align: center;">Completed</td> </tr> <tr> <td style="text-align: center;">11</td> <td style="text-align: center;">192.605(a)</td> <td style="text-align: center;">Missing Distribution Leak Survey instrument calibration records</td> <td style="text-align: center;">244</td> <td style="text-align: center;">Completed</td> </tr> <tr> <td style="text-align: center;">12</td> <td style="text-align: center;">192.605(a)</td> <td style="text-align: center;">Idle Stubs</td> <td style="text-align: center;">Gas stub cut-off process timelines not followed</td> <td style="text-align: center;">-</td> <td style="text-align: center;">Completed</td> </tr> </tbody> </table> <p>SED is aware that the Division completed some of the item(s) by the time of this letter. Please provide an update on the corrective status on the item(s) that were pending as of October 18, 2013.</p>	Item	Code Violation	Topic	Finding	Instances	Corrective Status	1	192.723(b)(1) 192.723(b)(2)	Leak Survey Distribution	Maps out of compliance	10	Completed	2	192.706	Leak Survey Transmission	Maps out of compliance	36	Completed	3	192.605(a)	Leak Repair	Leaks with late action	60	Completed	4	192.605(a)	Corrosion Control	CPA action plans created late or not updated within 30 days	56	Completed	5	192.605(a)	CPA forms missing supervisor review	3	Completed	6	192.605(a)	Rectifier output not within the interference results	6	Completed	7	192.605(a)	Missing pre/post rectifier reads	1	N/A	8	192.605(a)	Rectifier forms missing information	5	Completed	9	192.465(d)	CPA areas down for greater than 15 months	8	Pending	10	192.605(a)	Instrument Calibration	Missing Transmission Leak Survey instrument calibration records	183	Completed	11	192.605(a)	Missing Distribution Leak Survey instrument calibration records	244	Completed	12	192.605(a)	Idle Stubs	Gas stub cut-off process timelines not followed	-	Completed
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**General Order 112-E Findings
CPUC Inspection Report, dated March 20, 2014
Kern Division**

PG&E RESPONSE

Regarding its internal review findings, PG&E had one pending corrective action remaining as of October 18, 2013. The one pending item was related to Item 9 in Table 1 above, for which PG&E noted that it would install a deep well anode to restore Cathodic Protection Area (CPA) 157300. The deep well anode was installed and operational on November 23, 2013. The other seven instances counted in Item 9 were resolved prior to the audit, as noted in the Kern Division Internal Review Summary provided to the CPUC.

ATTACHMENTS

Attachment #	Title or Subject
N/A	

ACTION REQUIRED

Action To Be Taken	Due Date	Responsible Dept.
N/A		

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**General Order 112-E Findings
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Kern Division**

INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
October 28- November 1, 2013	NOV – 1	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding	<p>1. <u>General Order 112-E § 143.1 states:</u></p> <p><i>“A gas detector survey must be conducted in business districts and in the vicinity of schools, hospitals and churches, including tests of the atmosphere in gas, electric, telephone, sewer and water system manholes, at cracks in pavement, and sidewalks, and at other locations providing an opportunity for finding gas leaks, at intervals not exceeding 15 months, but at least once each calendar year.”</i></p> <p>SED discovered that the Division was missing the following 2009 Distribution Leak Survey maps containing business districts and public assembly areas to demonstrate compliance with the leak survey requirement under General Order 112-E §143.1:</p> <p>Table 2. Missing Distribution Leak Survey Maps</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Plat Map</th> <th style="text-align: center;">2008 Leak Survey</th> <th style="text-align: center;">2009 Leak Survey</th> <th style="text-align: center;">2010 Leak Survey</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">5127-B7</td> <td style="text-align: center;">8/18/08</td> <td style="text-align: center;">Missing</td> <td style="text-align: center;">1/29/10</td> </tr> <tr> <td style="text-align: center;">5027-C8</td> <td style="text-align: center;">9/9/08</td> <td style="text-align: center;">Missing</td> <td style="text-align: center;">4/8/10</td> </tr> </tbody> </table>	Plat Map	2008 Leak Survey	2009 Leak Survey	2010 Leak Survey	5127-B7	8/18/08	Missing	1/29/10	5027-C8	9/9/08	Missing	4/8/10
Plat Map	2008 Leak Survey	2009 Leak Survey	2010 Leak Survey										
5127-B7	8/18/08	Missing	1/29/10										
5027-C8	9/9/08	Missing	4/8/10										

PG&E RESPONSE

PG&E agrees with this finding. From 2008 and 2010 the leak survey schedules were maintained on a local spreadsheet. The maps were inadvertently removed from the schedule in 2009, but rediscovered and then immediately surveyed in 2010, as noted in Table 2 above. No leaks were found as a result of the 2010 surveys. Leak surveys are now scheduled through the SAP work management system, which has controls to prevent inadvertent removals of leak survey maps from their appropriate schedules.

ATTACHMENTS

Attachment #	Title or Subject
N/A	

ACTION REQUIRED

Action To Be Taken	Due Date	Responsible Dept.
N/A		

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Inspection Dates	Finding	CPUC Contact	CPUC Phone #
October 14 - 18, 2013	NOV – 2	Willard Lam	(415) 703-1327

INSPECTION FINDING

CPUC Finding	<p>2. <u>Title 49 CFR §192.465(d) states:</u></p> <p><i>“Each operator shall take prompt remedial action to correct any deficiencies indicated by the [external corrosion control] monitoring”</i></p> <p>The May 19, 1989, Federal Pipeline and Hazardous Materials Safety Administration’s (PHMSA’s) Inspection Guideline and Interpretation #PI-89-006 for 192.465(d) states that as a rule of thumb, PHMSA interprets “prompt” as having the “correction completed by the time of the next scheduled monitoring”. The Division discovered that Cathodic Protection Area (CPA) No. 157414 had inadequate cathodic protection in June 2010. The Division did not restore the cathodic protection to the CPA to the levels defined in Appendix D of Title 49 CFR Part 192 until December 2011, 18 months after it discovered that the cathodic protection was inadequate.</p>
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PG&E RESPONSE

<p>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 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 and a process to streamline the engineering, permit application, and construction scheduling of deep well anodes.</p>

ATTACHMENTS

Attachment #	Title or Subject
N/A	

ACTION REQUIRED

Action To Be Taken	Due Date	Responsible Dept.
Rollout Process and Procedure changes to Corrosion Control	December 31, 2014	Corrosion Engineering

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INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
October 14 - 18, 2013	NOV – 3	Willard Lam	(415) 703-1327

INSPECTION FINDING

CPUC Finding	<p>3. <u>Title 49 CFR §192.605(a) states:</u></p> <p><i>“Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response.”</i></p> <p>3.1. <u>PG&E Standard O-16 states:</u></p> <p><i>“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.”</i></p> <p>SED discovered five instances listed below in Table 3, where the Division failed to create CPA Follow-Up Action Plans within 30 days as required by PG&E’s standard.</p> <p>Table 3. Missing CPA Follow-up Action Plans</p> <table border="1"> <thead> <tr> <th>CPA Location</th> <th>Date Found</th> <th>Date Restored</th> <th>Days until Restoration</th> </tr> </thead> <tbody> <tr> <td>1571-15-B</td> <td>10/10/11</td> <td>12/13/13</td> <td>64</td> </tr> <tr> <td>1573-02</td> <td>5/20/11</td> <td>7/27/11</td> <td>68</td> </tr> <tr> <td>1574-20</td> <td>12/20/10</td> <td>2/17/11</td> <td>59</td> </tr> <tr> <td>L-312</td> <td>3/16/12</td> <td>5/4/12</td> <td>49</td> </tr> <tr> <td>4760-03</td> <td>11/29/10</td> <td>1/3/11</td> <td>35</td> </tr> </tbody> </table> <p>3.2. <u>PG&E Work Procedure WP4430-04 Attachment 1 states:</u></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 completed [Valve Maintenance Record] form.”</i></p> <p>SED discovered that the Division failed to list a pressure rating on several Valve Maintenance Record forms. Some of the valves with no pressure rating on the Valve Maintenance Record form are provided in Table 4.</p> <p>Table 4. Valves Missing Pressure Rating</p> <table border="1"> <thead> <tr> <th>Valve Number</th> <th>Valve Location</th> <th>Station Name</th> </tr> </thead> <tbody> <tr> <td>11</td> <td>Bowman & China Lake</td> <td>Bowman Regulating Station</td> </tr> <tr> <td>T-62.98A</td> <td>L-300A @ T-62.98A</td> <td>Chambliss Station</td> </tr> <tr> <td>T-62.36A</td> <td>L-300A @ T-62.36A</td> <td>SunWorld Trailer Park</td> </tr> </tbody> </table> <p>3.3. <u>PG&E Pole Mount/Pedestal Mount Rectifier Test and Site Evaluation Form states:</u></p>	CPA Location	Date Found	Date Restored	Days until Restoration	1571-15-B	10/10/11	12/13/13	64	1573-02	5/20/11	7/27/11	68	1574-20	12/20/10	2/17/11	59	L-312	3/16/12	5/4/12	49	4760-03	11/29/10	1/3/11	35	Valve Number	Valve Location	Station Name	11	Bowman & China Lake	Bowman Regulating Station	T-62.98A	L-300A @ T-62.98A	Chambliss Station	T-62.36A	L-300A @ T-62.36A	SunWorld Trailer Park
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“Check box for all items inspected and Record AC/DC Voltage and DC amperage measurements leave blank if not applicable. Note corrections or changes in Log on back of form”

SED discovered that the Division failed to properly document rectifier direct current (DC) amperes, DC voltage rating, and fusible alternating current (AC) breaker disconnect switch rating changes on the back of the Pole Mount/Pedestal Mount Rectifier Test and Site Evaluation Form for the three rectifiers listed below in Table 5.

Table 5. Missing Documentation for Rectifier Form Changes

Rectifier Number	CPA Number	Changes
KC87	157426	The rectifier DC amperes rating and DC voltage rating changed in 2012 with no record of rectifier replacement.
168	156201	The rectifier DC amperes rating, DC voltage rating, and fusible AC disconnect switch rating changed in 2011 with no record of rectifier replacement.
KC-13	157102-A	The rectifier DC amperes and DC voltage ratings changed in 2012. The fusible AC disconnect switch rating changed in 2011. Both changed occurred with no record of rectifier replacement.

3.4. PG&E Standard O-71 Copper-Copper Sulfate Reference Electrodes states:

“Check each reference electrode for calibration four times each calendar year, not to exceed 4-1/2 months.”

SED discovered that the Division failed to calibrate six Miller RE5 reference electrodes, shown below in Table 6, at least 4 times a year as required by PG&E Standard O-71.

Table 6. Reference Electrode with Improper Calibration

Serial Number	Period Missing Calibration
03 / B17791	2011
FM#IC30 / B16119	2011
FM#IC28	2011, 2012
FM#IC26 / B25878	2012
027	Greater than 4.5 months between 6/30/11 and 12/21/11
026	2011

3.5. PG&E Form TD-4412P-02-F01 states:

- a. *“If the Metrotech 9890/850 signal strength differs by (+/-) 25% of the baseline signal strength OR the Vivax vLocML differs by (+/-) 15% decibel (dB) of the baseline, then remove instrument from service and send to approved repair facility.”*

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SED discovered the following instances, listed below in Table 7, where the Division failed to remove Metrotech Vivax instruments from service and send to an approved repair facility when calibration readings were outside of the acceptable range.

Table 7. Metrotech Vivax Out of Calibration

Serial Number	Acceptable Range	Readings	Date
17107081179 / 20601070312	57.8-78.2	54.9	7/2/2012
		54.5	11/27/2012
		56.6	7/9/2012
171070400486 / 20601070321	58.65-79.35	45	10/26/2012
		45	11/4/2012
		48	11/27/2012

- b. *"If indicated depth differs from actual measured depth by more than (+/-) 5% plus 2 inches, then remove instrument from service and send to approved repair facility."*

SED discovered the following instances listed below in Table 8 where the Division failed to remove the Metrotech Vivax instruments from service and send to an approved repair facility when the depth readings were outside of the acceptable range.

Table 8. Metrotech Vivax Out of Calibration

Serial#	Depth of Facility	Acceptable Range	Readings	Date
171070801179 / 20601070336	35"	31.25 - 38.75	31"	12/3/2012
171070801179 / 20601070312	24"	20.8 - 27.2	18"	8/6/2012
			18"	9/28/2012
			18"	10/25/2012
			18"	8/13/2012
			18"	10/8/2012
			18"	10/12/2012
			18"	6/1/2012
			18"	6/18/2012
			18"	6/25/2012
			17"	7/2/2012
			17"	11/27/2012
			18"	7/16/2012
171070801196 / 20601070282	24"	20.8 - 27.2	19"	10/23/2012
			20"	11/23/2012

PG&E Leak Survey Instrument Calibration Standard M-53.3 states:

- *"Check the calibration of regularly used Combustible Gas Indicator (CGI) gas*

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detectors at least once a month while the units are in service. All units not in use for the respective month shall be noted as out of service."

- *"If the calibration is not within the allowable limits, send the instrument to an approved service provider for adjustment or repair."*
- *"Also test the units with 100% natural gas"*
- *"Use the [Monthly Verification of the Calibration of Combustible Gas Indicators (CGIs)] form to record all required calibration checks."*

SED discovered the following instances, listed below in Table 9, when the Division failed to follow PG&E Leak Survey Calibration Standard M53.3.

Table 9. CGI Instrument Calibration Issues

CGI Serial Number	Date	Issue
1108-060740	8/24/2011	Missing meter sample gas percentage
1127-061137	7/22/2011	Missing reading for percent lower explosive limit (LEL)
923059551	8/24/2011	Missing meter sample gas percentage
916059401	1/31/2011	Missing reading for percent LEL
717058158	3/21/2011	Instrument not sent out for service/repair when LEL reading was outside acceptable limit
	8/28/2012	
	9/18/2012	
	8/24/2011	Missing meter sample gas percentage
24808	2011	Missing meter sample gas percentage for 2011
24913	2011	Missing meter sample gas percentage for 2011
	7/25/2011	Instrument not sent out for service/repair when LEL reading was outside acceptable limit
2212	1/25/2011	Missing reading for percent LEL
	2/28/2011	
	3/21/2011	
	4/18/2011	
932059654	5/2011	Missing calibration or indication of not in service for May 2011
850059181	4/29/2011	Missing reading for percent LEL
	8/2011	Missing calibration or indication of not in service for August 2011
4207	9/2012	Missing test with 100% natural gas

3.6. PG&E Leak Survey Instrument Calibration Standard M-53.3 additionally states:

"Check the calibration of [Hydrogen Flame Ionization] 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

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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, for [Optical Methane Detectors] on the “Weekly Calibration Check of Optical Methane Detector” form, or for [Remove Methane Leak Detectors] on the “Monthly Remote Methane Leak Detector Daily Self-Test and Calibration Log” form.”

SED discovered the following instances shown below in Table 10 when the Division failed to perform weekly instrument calibration or indicate the unit was out of service.

Table 10. Leak Survey Instrument Missing Weekly Calibration

Instrument Type	Serial #	Months with weeks missing calibration or “out of service” note
Remote Methane	8000550011	2010:Oct
		2011:Jan, Apr, Jul, Aug
Flame Ionization	1500818003 #1	2010:Oct, Nov, Dec
		2011:Jan, Feb, Jun, Jul, Sep, Oct, Dec
		2012:Mar, Jul, Aug
Flame Ionization	1500818004 #2	2010:Oct, Nov, Dec
		2011:Most of the year except for Apr and May
		2012:Mar, Apr, Nov
Flame Ionization	1500818005 #3	2011:Feb, Mar, Jul, Sep, Oct, Nov, Dec
		2012:Feb, Mar, Apr
Flame Ionization	1500537001 #4	2010:Oct, Nov, Dec
		2011:Most of the year except for Mar, Apr, May, Jun
Flame Ionization	7002	2011:Most of the year except for Jul

Please verify if the Division used the instruments listed in Table 10 for gas leak surveys, gas leak rechecks, gas leak investigations, or any other use during each respective period identified as missing calibration. Please provide record(s) showing when the instruments were used without proper calibration documents, and follow up actions the Division has taken to ensure gas leak surveys were performed with calibrated instruments.

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PG&E RESPONSE

3.1

1571-15B

PG&E respectfully disagrees with this finding. PG&E identified a field copy of the CP maintenance record indicating that the restoration date was November 7, 2011 and not December 13, 2011 (See Attachment 1). PG&E acknowledges that information had not been properly transferred from field copies to the permanent files reviewed during the audit.

1573-02

PG&E agrees with the finding that it failed to adhere to PG&E's Gas Standard & Specification O-16, "Corrosion Control of Gas Facilities". The area was restored on June 29, 2011 and not July 27, 2011 as noted in Table 3 above (See Attachment 2). To prevent recurrence, PG&E reviewed CPA Restoration requirements with the Local Corrosion Group on April 3, 2014 (See Attachment 3). Furthermore, PG&E has implemented an electronic notification process through its SAP work management system to ensure these action plans are updated monthly.

1574-20

PG&E agrees with the finding that it failed to adhere to PG&E's Gas Standard & Specification O-16. "Corrosion Control of Gas Facilities". To prevent recurrence, PG&E reviewed CPA Restoration requirements with the Local Corrosion Group on April 3, 2014. Furthermore, PG&E has implemented an electronic notification process through its SAP work management system to ensure these action plans are updated monthly.

L-312

PG&E respectfully disagrees with this finding. PG&E identified a field copy of the CP maintenance record indicating that the restoration date was April 5, 2012 and not May 4, 2012 (See Attachment 4). PG&E acknowledges that information had not been properly transferred from field copies to the permanent files reviewed during the audit.

4760-03

PG&E respectfully disagrees with this finding. PG&E identified a field copy of the CP maintenance record indicating that the restoration date was December 13, 2010 and not January 3, 2011 (See Attachment 5). PG&E acknowledges that information had not been properly transferred from field copies to the permanent files reviewed during the audit.

3.2

PG&E agrees with this finding. PG&E is in the process of communicating asset data from its MAOP Validation effort to its maintenance organizations system-wide to input on appropriate records, including valve maintenance cards. Valves for which PG&E has not identified records to verify pressure ratings will be addressed through a corrective action plan that is being developed to determine appropriate risk-based priorities and actions. PG&E was unable to meet its previous commitment to develop this action plan by April 30, 2014, per its responses to the 2013 Hinkley and Peninsula CPUC Audit Reports. PG&E expects to develop this action plan by May 31, 2014.

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3.3

PG&E agrees with this finding. Kern Division's cathodic protection maintenance personnel will verify the changes to the rectifiers via records and field inspections and will make appropriate corrections to the Pole Mount/Pedestal Mount Rectifier Test and Site Evaluation Forms by May 16, 2014.

3.4

PG&E agrees with this finding. Kern Division determined that in some cases, the electrodes were unavailable when the calibrations were due because they were in a vehicle that was out for maintenance. To mitigate recurrence, Kern Division reviewed the requirements of PG&E Standard O-71 Copper-Copper Sulfate Reference Electrodes with the Corrosion Mechanics on April 3, 2014 (See Attachment 3). Furthermore, the Division reminded mechanics to remove all calibration equipment prior to any vehicle maintenance.

3.5.a and b

PG&E agrees with these findings and is implementing the following corrective actions to prevent recurrence:

- In 2014, Kern Division began using a single location/calibration field to calibrate all locate machines to improve timely identification of signal/depth variations that may arise in documentation.
- Kern Division is now using the revised calibration form TD-5811P-205-F-01 (revised October 2013), which requires the calibration location and the depth of the facility site, which will improve clarity in documentation.
- PG&E's Gas Operations Quality Control (QC) group has begun regular reviews of all calibration documentation in each division. As part of the review process, QC will notify the Locate and Mark Supervisor of discrepancies on the calibration document.
- PG&E provided refresher briefing to Kern Division Locate & Mark personnel to review proper calibration documentation and procedures (See Attachment 6).
- In 2012, Kern Division installed a new instrument calibration site in Bakersfield, working with consultants from Metrotech, to ensure more accurate, consistent, and timely calibrations. The previously used calibration site was subject to interference, resulting in false errors and delays in calibration.
- The Kern Division Damage Prevention Supervisor will continue to ensure timely and thorough completion of monthly reviews and sign-offs of the calibration forms.

3.5

PG&E agrees with this finding. PG&E reviewed the calibration procedures and process for sending an instrument into repair with the Kern Division employee responsible for the monthly calibrations (See Attachment 7). Going forward, the Kern Division Distribution M&C Supervisor will review and initial the calibration form after each monthly calibration.

In May 2013, PG&E published a revised form TD-4110P-21-F-01, "Monthly Verification of the Calibration of Combustible Gas Indicators (CGIs)." The revised form simplifies the gas meter sampling ranges to improve consistent recording of calibrations. The CGI instruments listed in Table 9 are no longer used for routine Leak Surveys in Kern Division; Kern Division's Leak Survey personnel have converted to using daily self-tested Detecto Pak-Infrareds (DPIRs).

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3.6

PG&E agrees with this finding. Kern Division has reviewed its leak survey and calibration records and has verified that for the majority of the weeks with missing calibration records, the instruments were not in use. PG&E acknowledges that it failed to properly document that the instruments were not in use for those weeks.

From its review, Kern Division has identified 12 plats surveyed in 2011 with two instruments that did not have records of calibrations for the applicable weeks (Table A). For the two instruments used for these leak surveys (Flame Ionization Units 1500818003 #1 and 7002) , PG&E has confirmed that the earliest calibration records subsequent to the leak surveys show that each instrument was within acceptable calibration limits (Attachment 8).

Table A. Leak Surveys Performed With Instruments Lacking Proper Calibration Records

Plat	Survey Date	Instrument	Subsequent Calibration Date
00C4	9/29/2011	FI 1500818003 #1	10/13/2011
00C5	9/29/2011	FI 1500818003 #1	10/13/2011
00H4	9/27/2011 9/29/2011	FI 1500818003 #1	10/13/2011
00G4	6/30/2011 7/2/2011	FI 7002	7/6/2011
00I5	7/2/2011	FI 7002	7/6/2011
00A3	7/2/2011	FI 7002	7/6/2011
00A8	7/2/2011	FI 7002	7/6/2011
00B3	7/2/2011	FI 7002	7/6/2011
00B4	7/2/2011	FI 7002	7/6/2011
00B5	7/2/2011	FI 7002	7/6/2011
00B8	7/2/2011	FI 7002	7/6/2011
00I1	7/2/2011	FI 7002	7/6/2011

To mitigate recurrence, Kern Division has removed all Flame Ionization Packs from service and has replaced them with a daily self-tested DPIR. Furthermore, instrument calibrations are now being

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tracked in the SAP work management system to improve visibility and timeliness of required calibrations.

ATTACHMENTS

Attachment #	Title or Subject
1	CP Maintenance Record – CPA 157115-B
2	CP Maintenance Record – CPA 1574-20
3	Refresher Briefing – Corrosion Control
4	CP Maintenance Record – CPA L-312
5	CP Maintenance Record – CPA 4760-03
6	Refresher Briefing – Locate and Mark
7	Refresher Briefing – CGI Calibration
8	Leak Survey Instrument Calibrations - FI 1500818003 #1 and FI 7002

ACTION REQUIRED

Action To Be Taken	Due Date	Responsible Dept.
Develop action plan to specify pressure rating of valves.	May 31, 2014	Gas T&D Operations
Verify changes to rectifiers KC87, 168, and KC-13 via records and field inspections and make appropriate corrections to Pole Mount/Pedestal Mount Rectifier Test and Site Evaluation Forms	May 16, 2014	Kern Division M&C Corrosion

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INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
October 14 - 18, 2013	AOC – 1	Willard Lam	(415) 703-1327

INSPECTION FINDING

CPUC Finding	<p>Observations and Concerns</p> <p>1. During a review of the Division’s valve records, SED observed the following instances of conflicting or incongruous data in Table 11:</p> <p>Table 11: Valve Records</p> <table border="1"> <thead> <tr> <th>Valve</th> <th>Location</th> <th>Observation</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>Redacted</td> <td>Valve pressure rating listed as 7403 psig</td> </tr> <tr> <td>Z-110</td> <td>Redacted</td> <td>Valve location drawing lists 2” but the Valve Maintenance Record Form lists 3”</td> </tr> <tr> <td>Z-154</td> <td>Redacted</td> <td>Valve location drawing lists 2” but the Valve Maintenance Record Form lists 4”</td> </tr> <tr> <td>Z-102</td> <td>Redacted</td> <td>Valve location drawing lists 4” but the Valve Maintenance Record Form lists 2”</td> </tr> <tr> <td>Z-098</td> <td>Redacted</td> <td>Valve location drawing lists 3” but the Valve Maintenance Record Form lists 2”</td> </tr> </tbody> </table> <p>Please provide SED with an update on the follow-up actions the Division will take to clarify the conflicting or incongruous data.</p>	Valve	Location	Observation	B	Redacted	Valve pressure rating listed as 7403 psig	Z-110	Redacted	Valve location drawing lists 2” but the Valve Maintenance Record Form lists 3”	Z-154	Redacted	Valve location drawing lists 2” but the Valve Maintenance Record Form lists 4”	Z-102	Redacted	Valve location drawing lists 4” but the Valve Maintenance Record Form lists 2”	Z-098	Redacted	Valve location drawing lists 3” but the Valve Maintenance Record Form lists 2”
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Z-098	Redacted	Valve location drawing lists 3” but the Valve Maintenance Record Form lists 2”																	

PG&E RESPONSE

PG&E has updated the valve maintenance records and valve location drawings for the valves listed in Table 11 to reflect correct and consistent data (See Attachment 9).

ATTACHMENTS

Attachment #	Title or Subject
9	Valve Maintenance Records and Valve Location Drawings

ACTION REQUIRED

Action To Be Taken	Due Date	Responsible Dept.
N/A		

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