



**Pacific Gas and  
Electric Company®**

**Glen Carter**  
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January 31, 2011

Ms. Banu Acimis  
Utilities Safety and Reliability Branch  
Consumers Protection and Safety Division  
California Public Utilities Commission  
505 Van Ness Avenue, 2<sup>nd</sup> Floor  
San Francisco, CA. 94102-3298

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

Dear Ms. Acimis:

The Utilities Safety and Reliability Branch (USRB) of the CPUC conducted a General Order 112-E inspection of PG&E’s North Valley Division, from June 28 through July 2, 2010. The attached documents respond to each of the inspection findings listed in your December 30, 2010 letter.

As you know, PG&E identified and reported to the USRB the results of its own internal review of the North Valley Division, in which PG&E found many minor, and some more substantial, nonconformances with the Company’s standards. The results of PG&E’s internal review were the product of a robust internal review program that has been in effect since 2009, in which PG&E looks for discrepancies with its internal standards. That said, PG&E considers the high number of findings it self-reported to be unacceptable. Thus, as you will see, the attached documents show extensive corrective and preventive actions PG&E is taking in the North Valley Division to address its findings. To date, all but one finding has been corrected. The remaining finding will be corrected by July 1, 2011. PG&E will continue to take corrective and preventive actions to ensure that the North Valley Division adheres to the Company’s standards.

In the course of these internal reviews, in addition to specific corrective actions and preventative actions in individual divisions, PG&E has made commitments to implement programmatic improvements in a number of areas in order to reduce future findings. Many of these improvements have been designed and are in the process of implementation. In the case of the Leak Survey Program enhancements, the Company reviewed and revised its Leak Survey procedures and standards to reflect all applicable guidelines. In addition, all employees who are

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responsible for leak survey work were trained on the updated practices. A specific leak survey Quality Control (QC) program was also developed and implemented. These improvements will enable us to significantly reduce the number of issues found across the entire PG&E system.

PG&E's commitment to open and transparent communication with the CPUC around internal reviews, in addition to the CPUC's regular audits of PG&E's O&M activities in seventeen divisions and twelve transmission districts, has resulted in a truly exhaustive list of corrective actions to better protect public safety and improve service. Further, PG&E's internal reviews are not limited to only the requirements of DOT regulations and CPUC general orders, but extend to PG&E's procedures and practices. While PG&E recognizes that USRB considers PG&E's self-identified and reported nonconformances to be potential violations, PG&E believes that all parties benefit from the transparency these internal reviews provide, and intends to continue conducting robust internal reviews, sharing those results with the USRB, and taking appropriate corrective action.

Please note that attachments to this response contain sensitive personal information pertaining to PG&E employees. For this reason, and only this reason, PG&E is providing this response to the CPUC pursuant to Public Utilities Code Section 583.

If you have any questions concerning this report, please contact Larry Berg at (925) 974-4084.

Sincerely,



Glen Carter  
Senior Director, Gas Engineering

#### Attachments

cc: Raffy Stepanian, California Public Utilities Commission  
Michael Robertson, California Public Utilities Commission  
Alok Kumar, California Public Utilities Commission  
Larry Berg, Pacific Gas and Electric Company

Definitions: NOV – Notice of Violation  
AOC – Area of Concern  
AIR – Additional Information Requested

**General Order 112-E Findings  
CPUC Inspection Report dated December 30, 2010  
North Valley Division**

**INSPECTION INFORMATION**

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
June 28 – July 2, 2010	AIR - 1	Banu Acimis	(916) 928-3826

**INSPECTION FINDING**

<b>CPUC Finding</b>	<p>Prior to the start of the audit, PG&amp;E provided the results of its internal review audit of North Valley Division records with an Internal Review Summary Table (IRST). During the audit, we discussed details of the PG&amp;E's internal findings and reviewed related records. The following violations consist of some deficiencies PG&amp;E identified and other violations that we found as a result of the audit.</p> <p>Please provide a status update on items presented in the IRST that were still pending corrective actions as of the last day of the audit.</p>
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**PG&E RESPONSE**

<p>As noted above, PG&amp;E self-reported the listed maintenance deficiencies and set out a comprehensive corrective action plan. At the time of the CPUC's GO 112-E inspection of North Valley Division, PG&amp;E had corrected some of the items referenced in the Internal Review Summary. Since the inspection, PG&amp;E has corrected all of the referenced items except the items listed below. For further detail, please refer to the updated North Valley Division Internal Review Summary (Attachment 1).</p> <p>The following item, as noted in the attached summary, is yet to be closed out with an appropriate corrective action:</p>
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TOPIC	CORRECTIVE ACTION	ANTICIPATED COMPLETION DATE
Reg Stations	Replace valves at 3 regulator stations	7/1/2011

**ATTACHMENTS**

Attachment #	Title or Subject
1	North Valley Division Internal Review Summary Update

**ACTION REQUIRED**

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
Complete remaining Internal Review Action Items	7/1/2011		North Valley Gas M&C, Gas Estimating and Gas Engineering

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**INSPECTION FINDING**

CPUC Finding	<p>I. <u>Title 49 Code of Federal Regulations (49 CFR) §192.13 General</u></p> <p>§192.13(c) requires that "Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part."</p> <p style="text-align: center;"><b><u>NORTH</u></b></p> <p>A. PG&amp;E Utility Work Procedure (WP) 4133-02, Cathodic Protection Area Assessment/ Resurvey Procedures for Gas Distribution requires that "1. General: Review CPAs, as defined in this work procedure, at least once every 6 nominal years.</p> <p>We found that PG&amp;E exceeded the 6-year maximum allowed time period to resurvey the Cathodic Protection Areas (CPAs) shown in Table 1 per PG&amp;E WP 4133-02.</p> <p style="text-align: center;">Table 1- Late CPA Resurveys</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>CPA</th> <th>Survey date</th> <th>Resurvey date</th> </tr> </thead> <tbody> <tr> <td>1360-02</td> <td>02/13/2002</td> <td>12/14 2009</td> </tr> <tr> <td>1080-04</td> <td>10/20/2003</td> <td>-</td> </tr> <tr> <td>1150-05</td> <td>10/20/2003</td> <td>-</td> </tr> <tr> <td>1150-07</td> <td>06/09/2003</td> <td>-</td> </tr> <tr> <td>1563-01A</td> <td>10/21/2003</td> <td>-</td> </tr> </tbody> </table> <p>In addition, many CPAs were noted as being due for full resurveys such as 1011-02, 1361-03, and 1770-01.</p> <p>PG&amp;E needs to resurvey its CPAs, in compliance with its standards to assure that all subsurface metallic gas pipeline facilities continue receiving cathodic protection in compliance with Title 49 CFR, Part 192.</p> <p>B. PG&amp;E's Corrosion Control of Gas Facilities, O-16, General Information, 2. Designing and Installing Cathodic Protection Areas (CPAs), Item O requires "... The corrosion mechanic will obtain pipe-to-soil potential measurements for all affected underground steel facilities and will record the levels found on the as-built drawings. Each applicable construction drawing associated with a construction project must be stamped with the stamp shown in Figure 1 on Page 5. A corrosion mechanic or other qualified employee must certify that all gas-carrying underground steel facilities affected by the construction are adequately cathodically protected before closing out the job by signing the job copy stamp shown below..."</p> <p>Job #30653986, McMurray Drive, in Anderson did not indicate that</p>	CPA	Survey date	Resurvey date	1360-02	02/13/2002	12/14 2009	1080-04	10/20/2003	-	1150-05	10/20/2003	-	1150-07	06/09/2003	-	1563-01A	10/21/2003	-
CPA	Survey date	Resurvey date																	
1360-02	02/13/2002	12/14 2009																	
1080-04	10/20/2003	-																	
1150-05	10/20/2003	-																	
1150-07	06/09/2003	-																	
1563-01A	10/21/2003	-																	

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	<p>steel facilities were inspected for cathodic protection levels, by a qualified individual, prior to closing of the job order.</p> <p>C. PG&amp;E's Utility Work Procedure (WP) 4100-11, Deactivation and/or Retirement of Underground Gas Facilities, Gas Transmission and Distribution (effective date: October 2008) establishes the responsibilities, requirements, and procedures to deactivate underground gas gathering lines, gas transmission lines, gas distribution mains, gas services, and disconnecting services in conformance with Title 49 CFR, Part 192.727.</p> <p>WP 4100-11 requires that "3. Deactivating Transmission Lines, Gathering Lines, and Distribution Mains A. General Procedures 3) Purge all pipe sections to be deactivated of natural gas in accordance with Numbered Document A-38, "Procedures for Purging Gas Facilities."</p> <p>PG&amp;E's Procedures for Purging Gas Facilities, A-38 requires that "General Information 1. Purging is required when: C. ... Company policy requires that all sections of abandoned main be purged..."</p> <p>During the review of deactivation records, we found that Service Order #15921 (PM #30657094), which cut-off and abandoned 14-feet of 4-inch main on 09/30/2008, did not result in purging the line of gas.</p> <p>D. PG&amp;E's Gas Standard, Polyethylene Pipe Specifications and design considerations, A-93 describes the use and design of PE pipe and tubing for use in PG&amp;E's gas distribution system. A-93 requires that "Storage: 21. PE 2406/2708 yellow colored pipe and tubing may be stored outdoors and uncovered for no longer than 3 years from the date the pipe was manufactured (the date printed on the pipe)..."</p> <p>During field examination of an uncovered 2-inch PE pipe (pipe marked with the date of 01/26/2007) outside in the Redding Yard on July 1, 2010, we found that the pipe had exceeded its 3-year outdoor storage life. In accordance with Gas Standard A-93, Item 21, North Valley – North (Redding) was directed that the pipe could not be used for gas use.</p> <p>PG&amp;E needs to ensure that no other expired pipe segments are stored in any of the pipe storage facilities in North Valley Division.</p> <p>E. PG&amp;E's Utility Standard: TD-4350S, Odorization of Natural Gas Requirements requires that "4. Odor Intensity Tests: 4.6. Gas odor must be readily detectable at a concentration of 0.6% gas-in-air or less. 4.7. If gas odor is not readily detectable at 0.6% gas-in-air, the</p>
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	<p>person conducting the test must immediately notify the appropriate supervisor. The supervisor may verify the reading, if appropriate, and must immediately notify the GT district supervisor and/or the M&amp;C distribution gas T&amp;R supervisor, who ensure that immediate and continuing actions are taken to restore adequate odor concentration levels.</p> <p>6. Response to High or Low Odorant Concentration</p> <p>6.1 In response to reports of high or low odorant concentration levels, immediate action must be initiated to investigate and take necessary corrective measures.</p> <p>6.2 Upon receipt of a report of low odorant concentration, the district must initiate immediate and continuing actions to restore adequate odorant concentration levels to provide properly odorized gas. SGC and the affected distribution operating employees must be notified of the situation. SGC coordinates communication between the GT gas quality on-call group, M&amp;C districts, and affected distribution locations."</p> <p>North Valley Division – North conducted odor intensity tests at City of Shasta Lake and Paradise Distribution. The odor intensity test results indicated that gas odor was not detectable at 0.6% gas-in-air at 48 test locations. We noted that PG&amp;E failed to follow-up on low readings to initiate an investigation and take necessary corrective measures to restore adequate odorant concentration levels in order to provide properly odorized gas when personnel recorded low odorant concentrations.</p> <p>F. PG&amp;E's Gas T&amp;D FD-30-B, Welder Qualification for Under 20% of SMYS form, requires an employee's supervisor to be notified of any failure when an employee is tested for welder qualification. On 08/04/2009, Stephen Ballinger did not pass two of the root bend test. His supervisor was not informed as required.</p> <p style="text-align: center;"><b><u>SOUTH</u></b></p> <p>A. Utility Work Procedure (WP) 4412-07, Patrolling Pipelines, Stations, and Mains, Detailed Procedure for Patrolling Pipelines, Stations, and Mains: 6. Corrective Actions requires that "When possible during the patrol, take corrective actions to address conditions found. For conditions that require immediate attention and cannot be corrected during the patrol, contact the responsible supervisor or superintendent as soon as possible to have the condition addressed. Corrective actions for conditions that require follow-up attention that can be deferred must be completed before the next patrol and no later than the end of the year following the year of discovery (e.g., conditions found in year one must be addressed no later than the end of year two)."</p> <p>The following gas pipeline aerial patrol reports for 2008 and 2009 showed that pipeline markers were missing and noted to be installed for the transmission lines listed below. However, PG&amp;E did not install the line markers by the end of the year following the year of discovery.</p> <ul style="list-style-type: none"> <li>• Pipeline No: DFM 1027-01 through 17, from Richvale Wye to Oroville Co-Gen, Dates of pipeline patrols which identified missing pipeline markers: Initial discovery date: 8/8/08, following patrol dates: 12/4/08, 2/11/09, 5/6/09, 8/28/09, 12/16/09, still pending.</li> </ul>
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- Pipeline No: DFM 1026-01, from Willows Reg Station to Ritz Warehouse, Dates of pipeline patrols which identified missing pipeline markers: Initial discovery date: 8/8/08, following patrol dates: 12/8/08, 2/6/09, 5/4/09, 8/26/09, 11/9/09, missing pipeline marker was installed on 2/9/10.

B. PG&E's Gas Standards and Specifications Manual, M-Tools, Equipment, and Instruments, M-53.3-Verifying the calibration of portable Combustible Gas Indicators, Hydrogen Flame Ionization Units, Optical Methane Detectors, and Remote Methane Leak Detectors states that Combustible Gas Indicators (CGIs) are required to be calibrated at least once a month while units are in service.

IRST showed that a number of CGIs were not calibrated in 2008. We reviewed the records and identified that the following CGIs with serial numbers given below were not calibrated in January, February, and March in 2008 in Chico.

- 9848-050-036
- 0135051818
- 0142052040
- 0142052048

C. PG&E's Utility Work Procedure (WP) 4412-02: Locating Instruments Calibration Verification and Repair Procedures, Section 2- Calibration Verification states that "Calibration verification of all pipe and cable locating instruments are required to be conducted once each calendar month."

IRST showed that a number of pipe and cable locating instruments were not calibrated in 2009. We reviewed the records and identified that the following pipe and cable locating instruments shown in Table 2 were not calibrated in Chico in accordance with PG&E's requirements.

Table 2- Pipe and Cable Locating Instruments that were not calibrated monthly in 2009

Serial Number	Missed Calibration
12717	from January through August
003272	from February through December
005109	from February through December
005112	from February through December
44932	March, and August through December
46115	March
4266-Transmitter 12449-Receiver	March, and September through December
005978, 010836	March
010836, 014361	March

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**PG&E RESPONSE**

**NORTH**

- A. *PG&E agrees with this finding for Cathodic Protection Area (CPA) 1360-02. PG&E respectfully disagrees with this finding for the remaining CPAs.*

PG&E's review of Cathodic Protection Area (CPA) 1360-02 exceeded the nominal 6-year interval between resurveying as required in Work Procedure WP4133-02. There was more than a nominal six-year interval between the resurvey on February 13, 2002 and the resurvey on December 14, 2009. However, CPA 1360-02 is now in compliance.

The remaining CPA's were resurveyed within the nominal six year period (PG&E considers compliance timely under WP4133-02 if the work is completed by the calendar end of 6<sup>th</sup> year): 1080-04 resurveyed on October 20, 2003 and December 18, 2009, 1150-05 resurveyed on October 20, 2003 and December 15, 2009, 1150-07 resurveyed on June 9, 2003 and December 19, 2009. 1563-01 was resurveyed on December 21, 2004 and September 28, 2010. 1011-02 was surveyed on December 23, 2009 and is not due again until 2015; 1361-03 was surveyed on January 24, 2006 and is not due again until 2012. CPA 1770-01 does not meet the requirements for a resurvey under WP4133-02 because it consists of more than 75% transmission pipe) See Attachment 2 for documentation.

To prevent recurrence, WP4133-02 and the associated CP Resurvey frequency requirements were reviewed with the Division's Corrosion Mechanics. This review was completed on May 12, 2010. These briefings are documented in Attachment 3. On a systemic basis, CP resurveys will be scheduled in the SAP Preventative Maintenance program throughout the company by the end of 2011.

- B. *PG&E agrees with this finding.*

All General Construction Employees, in the North Valley Division participated in a tailboard briefing on January 11, 2011. They were tailboarded on Gas Standard O-16, which includes the requirement to have a Corrosion Mechanic and/or qualified employee inspect and sign off on each job affecting underground steel facilities. These briefings are documented in Attachment 4.

- C. *PG&E respectfully disagrees with this finding.*

PG&E did **not** cut off and abandon 14 feet of 4 inch main on Service Order 15921 as stated by the CPUC. Rather, PG&E cut and abandoned (deactivated) 14 feet of a ½-inch plastic customer service line between the 4" main and the customer's meter. See Attachment 5 for service deactivation documentation. Purging natural gas in this distribution service line is not required by PG&E Gas Standard A-38 (Procedures for Purging Gas Facilities) and PG&E's Standard 4100-11 (Deactivation of Gas Facilities).

- D. *PG&E agrees with this finding.*

The Division had completed a pipe inspection of the Redding yard within the month prior to

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the pipe discovery. However, after the Division's inspection a segment of older pipe had been dropped off in the yard after the inspection.

To prevent recurrence, employees in the Redding yard have been tailboarded on the A-93 requirements of plastic pipe and gas riser storage and inspection. This tailboard was completed on September 27, 2010. These briefings are documented in Attachment 6.

*E. PG&E agrees with this finding.*

This item was noted in PG&E's Internal Review Summary and shared with the CPUC prior to the audit. The employee assigned to the task failed to recognize the importance of notifying his Supervisor when reads were greater than 0.6% gas-in-air. All reads outside the range were within 0.61% and 0.69% gas-in-air, and were discovered during an internal review of records. On February 8, 2010, the employee assigned to take the reads was reminded of the importance of notifying a Supervisor. Further, the Supervisor assigned a second employee to take validation reads pursuant to Utility Standard TD-4350S. The second employee assigned found that the reading fell within the normal range. Records have been in compliance since February 8, 2010. On April 14, 2010, all North Valley Gas T&R employees were tailboarded on the requirements of Utility Standard TD-4350S. See attachment 7 for memo and briefings

*F. PG&E respectfully disagrees with this finding.*

The employee in question failed two of four root bends in the first attempt and was immediately retested as per GSS D-30 # 11. The employee did not leave the test site. He made two more butt welds which passed testing, and was a qualified employee at the end of the qualification session. The employee therefore satisfied the requirements of the qualification test. PG&E's practice is to notify the Supervisor if, at the end of the qualification session, the employee fails to meet the qualification test requirements. An employee who at the end of the qualification session has not passed may not perform production welding. See Attachment 8 for documentation.

**SOUTH**

*A. PG&E agrees with this finding.*

PG&E did not install the gas transmission line markers by the end of 2009, the year following the year of discovery. PG&E completed installation and review of line markers on DFM 1027-01 on September 10, 2010. See Attachment 9 for documentation. As noted, in your letter, the missing line marker on DFM 1026-01 was installed on February 9, 2010.

To prevent recurrence, on May 12, 2010 the Gas T&R personnel assigned to transmission line patrol were tailboarded on the requirements of WP4412-07. See Attachment 10 for documentation.

*B. PG&E agrees with this finding.*

This item was noted in PG&E's Internal Review Summary and shared with the CPUC prior to

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the audit. The Chico Maintenance & Construction yard included 5 Combustible Gas Indicators that missed monthly calibrations for January, February, and March 2008. The CGI units have since been calibrated on a monthly basis.

To prevent recurrence, the Chico Maintenance and Construction supervisor responsible for all leak survey, investigation, and repair in Chico, conducted a tailboard briefing of all qualified leak survey, investigation, and leak repair personnel. The tailboard briefing included the monthly calibration requirements as listed in M-53.3. *See Attachment 11 for documentation.*

*C. PG&E agrees with this finding.*

This item was noted in PG&E's Internal Review Summary and shared with the CPUC prior to the audit. The Chico Maintenance & Construction yard included 9 Pipe and Cable Locating Instruments that missed monthly calibrations in 2009. The instruments have since been calibrated monthly.

To prevent recurrence, the Chico Maintenance and Construction supervisor responsible for all mark and locates in Chico, conducted a tailboard briefing of all qualified mark and locate personnel. The tailboard briefing included the monthly calibration requirements as listed in WP4412-02. *See Attachment 11 for documentation*

**ATTACHMENTS**

<b>Attachment #</b>	<b>Title or Subject</b>
2	CPA Resurvey Forms
3	CPA Resurvey Tailboard Briefing
4	Corrosion Mechanic Sign-Off Tailboard Briefing
5	Service Deactivation Documentation
6	Plastic pipe storage & use requirements Tailboard
7	Odorization Tailboard
8	Welding Test Documentation
9	Pipeline Patrol Documentation
10	Briefing on Pipeline Patrol & Markers Requirements
11	Instrument Calibration & Record Retention Requirements Briefing

**ACTION REQUIRED**

<b>Action To Be Taken</b>	<b>Due Date</b>	<b>Completion Date</b>	<b>Responsible Dept.</b>
Conduct briefing on CPA Resurvey requirements	May 12, 2010	May 12, 2010	NV Gas T&R
Schedule CP Resurveys in SAP PM	December 31, 2011		Gas Engineering
Conduct briefing on Corrosion Mechanic sign-off requirement	January 11, 2011	January 11, 2011	M&C – General Construction

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Conduct briefing on plastic pipe retention requirements	September 27, 2010	September 27, 2010	North Valley M&C
Conduct briefing on pipeline patrol & marker requirements	May 12, 2010	May 12, 2010	NV Gas T&R
Conduct briefing on instrument calibration requirements	July 28, 2010	July 28, 2010	North Valley M&C

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**INSPECTION FINDING**

CPUC Finding	<u><b>NORTH</b></u>
	<p><u>Title 49 CFR §192.605(a) Procedural manual for operations, maintenance, and emergencies.</u></p> <p>§192.605(a) requires that "General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. For transmission lines, the manual must also include procedures for handling abnormal operations. This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least once each calendar year..."</p> <p>Due to management changes, North Valley Division - North did not review its emergency plan in 2008 or 2009.</p>

**PG&E RESPONSE**

<p>It is correct that the Division inadvertently disposed of the documentation confirming that it reviewed the emergency plans in 2008 and 2009. However, the Division in fact updated the entire manual in 2008 and again in 2010. The 2010 version contains the 2010 review, which was observed during this audit.</p> <p>To prevent recurrence, North Valley has signed off and scanned and will continue to scan the Emergency Manual Review form into a shared drive. This will ensure an electronic copy of the review form is maintained.</p>
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**ATTACHMENTS**

Attachment #	Title or Subject
N/A	N/A

**ACTION REQUIRED**

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
Scan the completed annual review form of the Emergency Plan	January 11, 2011	January 11, 2011	Local Gas Engineering

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**INSPECTION FINDING**

CPUC Finding	<b><u>NORTH</u></b>
	<p><u>Title 49 CFR §192.615(a)(4) Emergency plans.</u></p> <p>§192.615 requires that "(a) Each operator shall establish written procedures to minimize the hazard resulting from a gas pipeline emergency. At a minimum, the procedures must provide for the following:</p> <p style="padding-left: 40px;">(4) The availability of personnel, equipment, tools, and materials, as needed at the scene of an emergency."</p> <p>PG&amp;E's Gas Emergency Plan (GEP), Section 2.5 Gas Emergency Supplies defines the requirements and responsibilities for stocking and maintaining, tools, and equipment that may be needed to respond to a gas emergency. GEP Section 2.5.1 Gas Emergency Material requires that "Local operating departments must have sufficient materials readily available to respond to gas emergencies. Local Operating departments must annually plan and conduct a review of gas emergency stock needs and ensure that the necessary materials are on-hand..."</p> <p>During the review of the materials inventory check records for emergency supplies we found that the following tools were not available as required:</p> <ul style="list-style-type: none"> <li>• Two 8-inch Skinner Clamps (024168) (Standard B-53). None were available;</li> <li>• Three 8-inch X 24-inch Weld Cans (040487) (Standard A-62). None were available.</li> </ul> <p>PG&amp;E needs to ensure that gas emergency equipment and tools are readily available to be used to respond to gas emergencies.</p>

**PG&E RESPONSE**

*PG&E agrees that the material specified above was not available during the material inventory check, but upon further review notes that the supplies that were unavailable are not in fact required.*

After reviewing the gas emergency material list in North Valley's Gas Emergency Plan, it was determined that the two 8" skinner clamps and three 8" x 2" weld cans are not required for emergency repairs, and can be deleted from the Emergency Material List. The North Valley Gas Emergency Plan's emergency material list has been updated with these changes. See Attachment 12 for documentation.

To prevent recurrence, the North Valley M&C department will have the material review completed during the review of the Gas Emergency Manual.

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**ATTACHMENTS**

Attachment #	Title or Subject
12	NV Gas Emergency Material List

**ACTION REQUIRED**

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
Update gas emergency material list	January 11, 2011	January 11, 2011	NV Gas M&C, Local Engineering

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**INSPECTION FINDING**

CPUC Finding	<p><b><u>NORTH</u></b></p> <p>Title 49 CFR §192.703 General. §192.703 requires that</p> <p>“(b) Each segment of pipeline that becomes unsafe must be replaced, repaired, or removed from service.”</p> <p>Division has experienced significant sulfur build-up in regulating stations through previous years. These included FM53; FM99, and FM 67, which experienced sulfur build-up in 2009. The North Valley Regulator Station Sulfur Information noted many other instances going back as far as 2005 in which sulfur has been found in stations. Several of the instances noted “excessive” amounts of sulfur within the equipment and, in some cases, the sulfur preventing the equipment from achieving lock-up. In some cases, the Division has installed sulfur filtering devices; and the number of instances in which sulfur was found in equipment appeared to decrease starting in</p> <p>2008. However, maintenance performed since 2008, and as late as April 2010, continues to note high levels of sulfur in the equipment. The records reviewed did not provide any documented effort by the Division to determine the potential causes of the excessive sulfur deposits, and what more may need to be done within the Division to prevent sulfur from potentially affecting the operation of pressure regulating equipment.</p> <p>PG&amp;E needs to take necessary preventive and mitigative actions to prevent any failures that may be caused by sulfur problems observed on the parts of the regulators and monitors.</p>
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**PG&E RESPONSE**

<p><i>PG&amp;E disagrees with this finding.</i></p> <p>During the audit, PG&amp;E supplied records to show that all sulfur issues had been reported in the sulfur database as required in PG&amp;E Work Procedure WP 4540-01, and that North Valley Division had followed all requirements, including installing sulfur filters on many of the pilots. The question raised during the audit concerned what was done with the information once it was loaded in the database. PG&amp;E is actively pursuing a solution to the sulfur deposition problem. Part of that process includes maintaining a database of locations where sulfur is, and is not, found. Where sulfur deposits cause operating problems, the current solution is to install a Sulfagon filter upstream of the pilot. This has proven very successful in preventing sulfur buildup.</p> <p>While PG&amp;E's Gas Standard H-14 requires the installation of sulfur filters at problem locations, the requirement has not been sufficiently flushed out in our maintenance work procedures. The</p>
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result has been that differen areas within PG&E have responded inconsistently. We plan to add clarity by issuing a Gas Information Bulletin that mandates the installation of Sulfagon filters on the pilot control loops at ALL regulator stations where sulfur is found. The database will assist us in monitoring our efforts to comply with the Gas Information Bulletin.

**ATTACHMENTS**

Attachment #	Title or Subject
N/A	N/A

**ACTION REQUIRED**

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
Issue a Gas Information Bulletin to require the installation of Sulfagon filters on pilot control loops where sulfur is found	March 31, 2011		Gas Engineering



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**INSPECTION INFORMATION**

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June 28 - July 2, 2010	NOV - 5	Banu Acimis	(916) 928-3826

**INSPECTION FINDING**

CPUC Finding	<p><b><u>NORTH</u></b></p> <p><u>Title 49 CFR §192.723 Distribution systems: Leakage surveys.</u></p> <p>§192.723 requires that</p> <p>"(a) Each operator of a distribution system shall conduct periodic leakage surveys in accordance with this section.</p> <p>(b) The type and scope of the leakage control program must be determined by the nature of the operations and the local conditions, but it must meet the following minimum requirements:</p> <p style="padding-left: 40px;">(1) A leakage survey with leak detector equipment must be conducted in business districts, 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."</p> <p>A. PG&amp;E installed a service line to 520 Adobe Road, hotel, in 2005. However, Map 1360-H8 was not updated and the service was not placed on an annual leak survey until 2009. As a result, annual surveys of this service were missed for 4 years.</p> <p>B. PG&amp;E did not conduct the annual leak survey on Executive Way, Plat 1080-DR in 2009.</p>
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**PG&E RESPONSE**

<p><i>PG&amp;E agrees with this finding.</i></p> <p>A. PG&amp;E's review of its leak survey records in 2009 discovered that the service line to a hotel at 520 Adobe Rd on Map 1360-H8 was on the 5 year survey, but not on the annual survey. As a result, the service was added to the annual survey in 2009 with an explanation of why it was added, and leak surveyed on November 2, 2009 as demonstrated during this audit. It was also added to the annual survey layer in 2009 and has been in compliance since that time.</p> <p>B. In 2009 &amp; 2010, a service on Executive Way missed being documented on the annual leak survey maps. The service was added to the annual leak survey layer on October 31, 2010 and leak surveyed with the scheduled annual survey on January 10, 2011 and is now in compliance. <i>See Attachment 13 for documentation.</i></p>
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**ATTACHMENTS**

Attachment #	Title or Subject
13	Executive Way Leak Survey documentation

**ACTION REQUIRED**

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
Perform leak survey of Executive Way service	January 11, 2011	January 11, 2011	NV Gas M&C
Add Executive Way service to the annual leak survey layer in the electronic map system	October 31, 2010	October 31, 2010	NV Mapping

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June 28 - July 2, 2010	NOV - 6	Banu Acimis	(916) 928-3826

**INSPECTION FINDING**

CPUC Finding	<p><b><u>SOUTH</u></b></p> <p><u>Title 49 CFR §192.465 (a) External Corrosion Control: Monitoring</u></p> <p>§192.465(a) requires that "Each pipeline that is under cathodic protection must be tested at least once each calendar year, but with intervals not exceeding 15 months, to determine whether the cathodic protection meets the requirements of §192.463. However, if tests at those intervals are impractical for separately protected short sections of mains or transmission lines, not in excess of 100 ft (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."</p> <p>IRST showed that in 2008, PG&amp;E failed to take pipe-to-soil (P/S) potential readings at all locations that were 10 % of the total number of isolated main and transmission lines which were separately protected. During the review of external corrosion protection records we noted that there were a total of 146 isolated main and transmission line locations (10 % of the total number of 1463 locations required to be completed in 10 years) that needed to be monitored in 2008. However, PG&amp;E recorded P/S potentials at only 54 locations and the remaining 92 locations were not completed in 2008. PG&amp;E informed us that P/S potentials of the remaining 92 isolated pipe sections were completed in 2009.</p>
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**PG&E RESPONSE**

<p><i>PG&amp;E agrees with the finding.</i></p> <p>This item was noted in PG&amp;E's Internal Review Summary and shared with the CPUC prior to the audit.</p> <p>PG&amp;E completed tests on less than 10% of the isolated services in 2008 (leaving 92 locations where tests were not completed). The program used to schedule the tests in 2008 measured only the 10-year due date requirement and not the 10% of the total population requirement. In mitigation, it should be noted that none of the 92 services required to achieve 10% of the total population were tested beyond a 10-year interval. Neither in 2008 nor in 2009 did any isolated service exceed 10 years since its previous test.</p> <p>To prevent recurrence the North Valley Transmission and Regulation Supervisor, who is responsible for all corrosion protection and monitoring in North Valley, completed a manual count of all isolated services in 2010 to ensure 10% of the total population was included in the</p>
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scheduled tests. A total of 10.7% of the total population was tested in 2010. Additionally, the isolated services scheduling was moved to the Company's SAP Preventative Maintenance Program in 2010 which has been programmed to schedule tests at each isolated service at intervals no greater than 10 years and to ensure that a minimum of 10% of the total population is tested each year.

**ATTACHMENTS**

Attachment #	Title or Subject
N/A	N/A

**ACTION REQUIRED**

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
10%ers scheduled in SAP PM	December 31, 2010	December 31, 2010	Gas Engineering

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**INSPECTION FINDING**

CPUC Finding	<p style="text-align: center;"><b><u>SOUTH</u></b></p> <p><u>Title 49 CFR § 192.467 External corrosion control: Electrical isolation.</u></p> <p>§192.467(a) requires that "Each buried or submerged pipeline must be electrically isolated from other underground metallic structures, unless the pipeline and the other structures are electrically interconnected and cathodically protected as a single unit."</p> <p>§192.467(d) requires that "Inspection and electrical tests must be made to assure that electrical isolation is adequate."</p> <p>PG&amp;E's Utility Work Procedure (WP) 4133-03, Testing Procedures for Pipe Casing, 4-Testing Procedures for Pipe Casing requires that</p> <p style="padding-left: 40px;">"C. Conduct tests or reviews when the difference between the casing and the carrier pipe pipe-to-soil potentials are less than 100 millivolts (mV) and/or when casing P/S potentials are greater than 800 mV.</p> <p style="padding-left: 40px;">D. A detailed investigation of suspected contact between a pipe and casing is usually conducted in response to information collected during regular monitoring of the pipeline..."</p> <p>PG&amp;E's Utility WP 4133-04, Remediating Casing Contacts, 4-Remediation Procedures requires that</p> <p style="padding-left: 40px;">"A. Perform remediation work in accordance with this WP.</p> <p style="padding-left: 40px;">B. Prepare an action plan for investigation and remediation for cased pipeline crossings suspected to have an electrical contact between the case and pipeline.</p> <p style="padding-left: 40px;">C. Maintain and keep current the action plan in accordance with the requirements of Numbered Document O-16, Corrosion Control of Gas Facilities."</p> <p>During the review of external corrosion records, we reviewed casing-to-soil (C/S) potentials and identified higher potentials shown in Table 3 which indicate that there is no electrical isolation of the casing from the pipe. According to PG&amp;E's standard, if the C/S potential is equal to or more negative than -800 mV, PG&amp;E is required to start an investigation of possible contacted cased pipeline crossing and remediation of the crossings that are confirmed to have contacted cases.</p> <p>PG&amp;E identified the electrical isolation problems at locations shown in Table 3; however, PG&amp;E did not take any remedial actions to correct the deficiencies at locations other than the ones identified in the footnote.</p> <p>Table 3- High C/S potentials recorded in North Valley Division</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Location</th> <th style="width: 15%;">Line Number</th> <th style="width: 15%;">CPA</th> <th style="width: 10%;">C/S (mV)</th> <th style="width: 10%;">P/S (mV)</th> <th style="width: 25%;">Date Recorded (mm/yy)</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Location	Line Number	CPA	C/S (mV)	P/S (mV)	Date Recorded (mm/yy)						
Location	Line Number	CPA	C/S (mV)	P/S (mV)	Date Recorded (mm/yy)								

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Richvale Wye	50	10L050	1028	1028	10/07
Richvale Wye	50	10L050	954	954	10/10/08
Richvale Wye	50	10L050	902	903	11/18/09*
Hwy 99 N/O Hwy 162	50	10L050	809	1018	10/10/08
Hwy 99 N/O Shippee Rd.	50	10L050	840	911	1/06
Hwy 99 N/O Shippee Rd.	50	10L050	800	1013	10/07
Hwy 99 N/O Shippee Rd.	50	10L050	802	971	1/08**
Hwy 99 N/O Nelson-Shippee Rd.	50	10L050	807	N/A	10/10/08
Hwy 45 @ Rd. 29	128	10L128	1008	1011	10/06
Hwy 45 @ Rd. 29	128	10L128	960	1075	10/07
Hwy 45 @ Rd. 29	128	10L128	999	1002	10/10/08
Hwy 45 @ Rd. 29	128	10L128	1060	1072	11/18/09*

\*PG&E identified the electrical isolation problem on December 2, 2009 and included this location to PG&E's contacted case remediation program. However, the problem has not been remediated as of July 2, 2010.

\*\*PG&E excavated and inspected this location in 2008 as part of PG&E's pipeline integrity program. The problem was resolved 2 years after the initial discovery by removing water from the casing and installing new end seals.

PG&E needs to take prompt remedial action to resolve the electrical isolation problem at all locations.

**PG&E RESPONSE**

*PG&E agrees that its actions for three of the four locations noted in this finding did not conform with a July 24, 1986 PHMSA interpretation of § 192.467 (See Attachment 15).*

1) L-50 Richvale Wye is L-50 MP 27.01. A standard action plan was created for this casing in 2009 soon after it was reported to Gas Engineering and a copy of the action plan was in the North Valley records at the time of this audit (See Attachment 14). This cased crossing was discovered to be contacted in 2007. The July 24, 1986 PHMSA interpretation specifies that an action plan to remediate contacted casing must be initiated within 6 months of the discovery of the contact. PG&E did not conform with this interpretation and the Regulation Enforcement Guideline by initiating a corrective action plan within 6 months of discovery, however an action plan for this location is now included in the casing remediation program.

2) L-50 Hwy 99 N/O Hwy 162 is L-50A MP 26.82. A case-to-soil potential of -809 mv was measured in 2008. Under the July 24, 1986 PHMSA interpretation we agree that we should have initiated a corrective action plan within six months of the initial discovery. We did not. However, measurements of case-to-soil potential in years previous and since have been well below -800 mv. The data would indicate that the 2008 case-to-soil potential was an aberration and no casing contact really exists. For this reason this casing has not been included in the contacted casing remediation program.

3) L-50 Hwy 99 N/O Nelson-Shippee Rd. is L-50 MP 30.08. This contacted casing was

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remediated in 2008. In 2010, the case-to soil potential was -799 Mv. PG&E respectfully disagrees that any violation of our procedure exists.

4) L-128 Hwy 45 @ Rd. 29 is L-50A MP 0.42. A standard action was created for this casing in 2009 soon after it was reported to Gas Engineering and a copy of the action plan was in the North Valley records at the time of the audit. (See Attachment 16) This cased crossing was discovered to be contacted in 2006. The July 24, 1986 PHMSA interpretation specifies that an action plan to remediate contacted casings must be initiated within six months of discovery of the contact. PG&E did not conform with this interpretation and the Regulation Enforcement Guideline by initiating corrective action within six months of discovery, however this location is now included in the casing remediation program.

In its findings, the CPUC goes further to indicate that "PG&E needs to take prompt remedial action to resolve the electrical isolation problem at all locations." PG&E respectfully disagrees with the need to take prompt remedial action to resolve the electrical isolation at all casing contact locations.

The code does not require prompt remedial action for contacted cased crossings. The code makes no statement about how quickly remedial action must be taken following the discovery of contacted cased crossings. The interpretation of 49CFR192.467(C) was issued on July 24, 1986. Attached to the interpretation is a portion of Regulation Enforcement Guidelines. Below is the portion of the Regulation Enforcement Guidelines that addresses how quickly contacted casings must be addressed.

*A violation of Paragraph 192.467(c) exists if:*

*A cathodically protected transmission or distribution pipeline, other than unprotected copper inserted into ferrous pipe, is electrically connected to metallic casings that are a part of the underground system and within six months of discovery of the electrical short between the casing and pipeline, the operator has not initiated corrective action in accordance with Paragraph 3 below. Discovery shall be presumed upon conduct of on [sic] electrical survey with results as described in Paragraphs 2(a) and 2(b).*

PG&E's procedures for addressing discovered contacted cased crossings are described in Gas Standard O-16. Contacted casings are to be reported to gas engineering within 30 days of discovery. The cased crossing is then placed on the list of contacted casings. A standard action plan for remediating the cased crossing is forwarded to the maintenance supervisor to be posted in the cathodic protection maintenance records. The list of contacted cased crossings is prioritized annually. PG&E's procedures comply with the Regulation Enforcement Guidelines quoted above.

To prevent recurrence of the failure to take corrective action of a potential casing contact, the North Valley Division Gas T&R Department has been reminded of the requirement in Gas Standard O-16 to notify Corrosion Engineering personnel within 30 days of discovery of a potential casing contact. In addition, taking potential reads at cased pipeline is being scheduled in SAP Preventative Maintenance throughout the system. SAP PM has automatic notifications

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designed so that Corrosion Engineering will be informed of readings meeting the need for corrective action. Full system-wide implementation is expected by the end of 2011.
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**ATTACHMENTS**

<b>Attachment #</b>	<b>Title or Subject</b>
14	Action Plan for L-50 MP 27.01
15	PHMSA Interpretation of 192.467
16	Action Plan for L-50A MP 0.42

**ACTION REQUIRED**

<b>Action To Be Taken</b>	<b>Due Date</b>	<b>Completion Date</b>	<b>Responsible Dept.</b>
Utilize SAP PM for casing potentials system-wide	December 31, 2011	December 31, 2011	Gas Engineering



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**INSPECTION FINDING**

CPUC Finding	<p style="text-align: center;"><b><u>SOUTH</u></b></p> <p><u>Title 49 CFR § 192.503 General requirements</u></p> <p>§192.503 (a) requires that "No person may operate a new segment of pipeline, or return to service a segment of pipeline that has been relocated or replaced, until -</p> <p>"(1) It has been tested in accordance with this subpart and §192.619 to substantiate the maximum allowable operating pressure; and</p> <p>"(2) Each potentially hazardous leak has been located and eliminated."</p> <p>§ 192.725 Test requirements for reinstating service lines requires that</p> <p>"(a) Except as provided in paragraph (b) of this section, each disconnected service line must be tested in the same manner as a new service line, before being reinstated.</p> <p>(b) Each service line temporarily disconnected from the main must be tested from the point of disconnection to the service line valve in the same manner as a new service line, before reconnecting. However, if provisions are made to maintain continuous service, such as by installation of a bypass, any part of the original service line used to maintain continuous service need not be tested."</p> <p>IRST showed that the following segments of pipeline were leak repaired without a pressure test performed or the pressure test was not properly documented on the forms. PG&amp;E crews marked the pretest box on the second page of gas digin incident report (Form A1) but they did not provide any other information to verify that new pipe segment was pretested before installation or new segments of pipe were pressure tested after relocated or replaced and prior to reinstating service lines. There was not sufficient information available to verify the compliance with requirements.</p> <p>A. On February 19, 2008, PG&amp;E crews replaced 18 inches of ½-inch PE service pipe to make repairs of the gas leak No: 0820009-01 which was caused by dig-in activities at 703 Oaklawn Avenue in Chico. According to Form A1, gas pipe was pre-tested at 110 psig for 10 minutes on February 16, 2008; however, we did not find any documentation related to the pretest. Form A1 also indicated that no on-site pressure test was conducted after the leak repair was completed.</p> <p>B. Division's Form A1 and leak repair records for gas leak No: 0830006-1 showed that on April 7, 2008, PG&amp;E crews replaced 6 inches of ½-inch polyethylene pipe (PE) to repair the gas leak caused by dig-in activities at 194 Valley Ridge Drive in Paradise. According to Form A1, the gas pipe was pre-tested at 110 psig for 10 minutes on April 7,</p>
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2008; however, we did not find any documentation related to the pretest. Form A1 also indicated that no on-site pressure test was conducted after the leak repair was completed.

- C. Similarly, on March 16, 2008, PG&E crews replaced 16 inches of ½-inch PE with two MetFit couplings to make repairs of the gas leak No:0852577-1 which was caused by dig-in activities at 1953 Mountain Vista Drive in Thermalito. According to Form A1, the gas pipe was pre-tested at 110 psig for 5 minutes on March 16, 2008; however, we did not find any documentation related to the pretest. Form A1 also indicated that no on-site pressure test was conducted after the leak repair was completed.
- D. On August 12, 2009, PG&E crews replaced 18 inches of ½-inch PE to make repairs of the gas leak No:0960105-1 which was caused by dig-in activities at 110 Highway 99 at 110 E. Spruce Street in Gridley. According to Form A1, the gas pipe was pre-tested at 110 psig for 10 minutes on August 12, 2009; however, we did not find any documentation related to the pretest. Form A1 also indicated that no on-site pressure test was conducted after the leak repair was completed.
- E. PG&E crews completed the leak repairs shown in Table 4. On-site test box located on the third page of the Leak Survey, Repair, Inspection, and Gas Quarterly Incident Report (Form A) was marked; however, no other information such as test pressure or duration was noted on Form As. Table 4 shows the details of these leak repairs.

Table 4 – Gas Leak repairs which were not pressure tested in 2008 and 2009

Leak Number	Leak Address	Type & size of pipe installed	Date of repair	Pre-Test Data	On-site Pressure Test Data
0840032-1	243 E. Tehama St., Orland	8 inches of ¾ - 1 inch steel riser	7/19/08	NA	Soap test
0852565-1	1977 Veatch St., Oroville	1-foot of ½ -inch PE pipe	9/30/08	NA	Soap test
0930010-01	779 Bille Rd., Paradise	6 feet of ½ - inch PE service pipe and ½ - inch PE service tee	3/26/09	NA	Soap test
0920221-1	1125 W. 9 <sup>th</sup> St., Chico	18 inches of 1-¼ -inch PE service	6/2/09	NA	Soap test

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				pipe and riser			
<p>PG&amp;E needs to ensure that the pipeline segments mentioned above are tested as required by Title 49 CFR § 192.503 (a) and § 192.725 (a) and (b). If these sections were not pressure tested or proper test information was not documented prior to reinstating gas service, PG&amp;E needs to excavate and conduct pressure tests as soon as possible. Please provide a status update on this item.</p>							

**PG&E RESPONSE**

*PG&E agrees with this finding.*

The items listed below were all noted in PG&E's Internal Review Summary and shared with the CPUC prior to the audit.

The leak repairs listed above did not have adequate documentation to demonstrate that the facilities were properly pressure tested. All 8 locations have since been re-pressure tested. The table below summarizes the actions taken. *See Attachment 17 for documentation.*

<u>Leak Number</u>	<u>Leak Address</u>	<u>Date of repair</u>	<u>Date of Pressure Test</u>
0820009-1	703 Oaklawn Chico	2/19/2008	10/10/2010
0830006-1	194 Valley Ridge Paradise	4/7/2008	10/13/2010
0852577-1	1953 Mountain Vista Thermalito	3/16/2008	12/21/2010
0960105-1	110 E. Spruce Gridley	8/12/2009	10/20/2010
0840032-1	243 E. Tehama Orland	7/19/2008	1/12/2011
0852565-1	1977 Veatch Oroville	9/30/2008	8/25/2010
0930010-1	779 Bille Paradise	3/26/2009	10/13/2010
0920221-1	1125 W. 9 <sup>th</sup> Chico	6/2/2009	10/12/2010

PG&E believes the problem will not recur with these qualified leak repair personnel. In addition to having to go out and complete the pressure testing, they received a tailboard briefing, which included the test requirements for reinstating services as described in § 192.725, was completed with all personnel qualified for leak repair. This review was completed on May 20, 2010. This briefing is documented in Attachment 18.

**ATTACHMENTS**

<b>Attachment #</b>	<b>Title or Subject</b>
17	Pressure test documentation
18	Leak Repair Requirement Tailboard Briefing

**ACTION REQUIRED**

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<b>Action To Be Taken</b>	<b>Due Date</b>	<b>Completion Date</b>	<b>Responsible Dept.</b>
Pressure test leak repairs with inadequate documentation	January 12, 2011	January 12, 2011	NV M&C
Conduct briefing on leak repair documentation requirements	May 20, 2010	May 20, 2010	NV M&C

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**INSPECTION FINDING**

CPUC Finding	<b><u>SOUTH</u></b>
	<p><u>Title 49 CFR §192.739 Pressure limiting and regulating stations: Inspection and testing</u></p> <p>§192.739 (a) requires that "Each pressure limiting station, relief device (except rupture discs), and pressure regulating station and its equipment must be subjected at intervals not exceeding 15 months, but at least once each calendar year, to inspections and tests to determine that it is -</p> <p>"(1) In good mechanical condition;</p> <p>"(2) Adequate from the standpoint of capacity and reliability of operation for the service in which it is employed;"</p> <p>IRST showed that Regulator Station ORB-38 located on East Gridley Road and Highway 99 in Oroville District was not inspected in the calendar year 2009. District regulator station maintenance records showed it was previously inspected on September 11, 2008. PG&amp;E performed the following inspection of Regulator Station ORB-38 on April 15, 2010.</p>

**PG&E RESPONSE**

<p><i>PG&amp;E agrees with this finding.</i></p> <p>This item was noted in PG&amp;E's Internal Review Summary and shared with the CPUC prior to the audit. District Regulator Station "EAST GRIDLEY HWY 99," ORB-38 was not maintained in the calendar year 2009. Upon discovery, an Annual Class A inspection was performed on April 16, 2010. A normally scheduled Class A inspection was also performed on December 27, 2010 to prevent the station from exceeding 15 months before the scheduled 2011 inspection. <i>See Attachment 19 for documentation.</i></p> <p>To prevent recurrence the scheduling of District Regulator Station Maintenance has moved to SAP Preventative Maintenance (PM). This program issues detailed work tickets, which are completed and inputted back into the tool by the department clerk. SAP PM generates escalating notifications to ensure pending and backlogged work is promptly completed.</p>
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**ATTACHMENTS**

Attachment #	Title or Subject
19	ORB-38 Regulator Station Maintenance

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AOC – Area of Concern  
AIR – Additional Information Requested

**General Order 112-E Findings  
CPUC Inspection Report dated December 30, 2010  
North Valley Division**

**ACTION REQUIRED**

<b>Action To Be Taken</b>	<b>Due Date</b>	<b>Completion Date</b>	<b>Responsible Dept.</b>
Utilize SAP PM for NV regulator stations	August 31, 2010	August 31, 2010	NV Gas T&R

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**General Order 112-E Findings  
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**INSPECTION INFORMATION**

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
June 28 - July 2, 2010	NOV - 10	Banu Acimis	(916) 928-3826

**INSPECTION FINDING**

CPUC Finding	<p style="text-align: center;"><b><u>SOUTH</u></b></p> <p><u>Title 49 CFR §192.747 Valve maintenance: Distribution systems.</u></p> <p>§192.747(a) requires that "Each valve, the use of which may be necessary for the safe operation of a distribution system, must be checked and serviced at intervals not exceeding 15 months, but at least once each calendar year."</p> <p>IRST showed that Regulator Station Valve No. 54 located at District Station No. R-005 in Hamilton City at Line 177 was inspected and lubricated on May 6, 2010 during the maintenance of the Regulator Station. PG&amp;E crews noted that they needed to go back with help to maintain Valve No: 54 on a later date. During our field visit on July 1, 2010, we observed that PG&amp;E crews failed to turn this valve due to the existing problem.</p> <p>Please inform us when the maintenance of Valve No: 54 is completed to ensure that it is in operable condition.</p>
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**PG&E RESPONSE**

<p><i>PG&amp;E respectfully disagrees that this finding is a violation of §192.747.</i></p> <p>During the CPUC field visit to district regulator station R-005 in Hamilton City, valve No. 54, a 4-inch ANSI 300 plug valve, was demonstrated to be operable; although it was difficult to operate, as noted on the station maintenance record. This valve was discussed at the CPUC audit close-out meeting and noted as operable and in compliance; however, it is difficult to turn and located in close proximity to the fence enclosure. The valve was turned again on January 10, 2011, during the annual R-005 station inspection, but continued to be difficult to turn and has been scheduled for replacement. <i>See Attachment 20 for documentation.</i></p>
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**ATTACHMENTS**

Attachment #	Title or Subject
20	R-005 Regulator Station Maintenance

**ACTION REQUIRED**

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
Replace V-54 at Reg Station R-005	July 1, 2011		NV Gas T&R

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**General Order 112-E Findings  
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**INSPECTION INFORMATION**

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
June 28 - July 2, 2010	AOC - 1	Banu Acimis	(916) 928-3826

**INSPECTION FINDING**

CPUC Finding	<b><u>NORTH</u></b>
	<p><u>49 CFR §192.463 External corrosion control: Cathodic protection.</u></p> <p>§192.463(a) requires that "Each cathodic protection system required by this subpart must provide a level of cathodic protection that compiles 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 the criteria."</p> <p>During our field check, P/S readings at R-253 located on Smith Road and at 1830 Hilltop (Red Lion) were found to be negative 0.677 volts and 0.815 volts respectively.</p> <p>PG&amp;E needs to take prompt remedial actions to correct the deficiencies at these locations</p>

**PG&E RESPONSE**

<p>PG&amp;E agrees with this observation.</p> <p>These pipe-to-soil readings were observed to be below adequate levels of cathodic protection during the field portion of the audit. Cathodic protection has been restored at these two locations as follows:</p> <p>1) R-253 at Smith Road: Restored 10/9/2010 2) 1830 Hilltop (Red Lion): Restored 10/15/2010</p> <p>See Attachment 21 for documentation</p>
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**ATTACHMENTS**

Attachment #	Title or Subject
21	CP maintenance records

**ACTION REQUIRED**

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
Restore adequate CP levels	October 15, 2010	October 15, 2010	NV Gas T&R

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**INSPECTION INFORMATION**

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
June 28 - July 2, 2010	AOC - 2	Banu Acimis	(916) 928-3826

**INSPECTION FINDING**

CPUC Finding	<b><u>NORTH</u></b>
	<p>a. We found that low pressure system in Red Bluff hit close to 6.5 inches of water-column pressure. The capacity of this system should be further reviewed for safety and reliability concerns.</p> <p>b. We recommend that the Division and PG&amp;E in general place the maximum torque values directly on the valve cards in addition to the various standards where the calculation/determination of this value may also be addressed. The placement of the value directly on the valve cards would provide a convenient confirmation of the torque not to be exceeded on the particular valves being maintained or operated.</p>

**PG&E RESPONSE**

<p>a. North Valley Division has the following Red Bluff Low Pressure projects currently in engineering-estimating to address the capacity issue, with scheduled construction completion dates of December 31, 2011:</p> <ul style="list-style-type: none"> <li>• Reliability/ Pipeline Replacement: Replace 1970 feet of main, PM 30795703</li> <li>• Capacity: Replace 1400ft of main and uprate 2000 feet of main, PM 30795318</li> </ul> <p>The Red Bluff LP system study was completed on December 6, 2010, which includes operating procedures necessary to maintain a pressure of 5 inches of water column (w.c.) in the system through the 2010-11 winter season. The system has remained well above the 5 inches w.c. so far this winter season.</p> <p>b. PG&amp;E agrees that having the maximum torque value available at the time a valve needs to be operated or serviced is important. Currently, these values are specified in work procedure WP4430-04. PG&amp;E will consider including a field on the Valve Maintenance Record form for maximum torque value in a future form revision.</p>
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**ATTACHMENTS**

Attachment #	Title or Subject
N/A	N/A

**ACTION REQUIRED**

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
Complete construction of PM 30795703 & PM 30795318	December 31, 2011		NV M&C

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**INSPECTION INFORMATION**

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
June 28 - July 2, 2010	AOC - 3	Banu Acimis	(916) 928-3826

**INSPECTION FINDING**

CPUC Finding	<b><u>SOUTH</u></b>																									
	<p><u>49 CFR §192.463 External corrosion control: Cathodic protection.</u></p> <p>§192.463(a) requires that "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 the criteria."</p> <p>During our field check, P/S readings at the locations given in Table 5 were found to be below the -0.85 volts criteria. PG&amp;E informed us that PG&amp;E has started to remedy the deficiencies as indicated under remedial action type and date column.</p> <p>Table 5 – Field P/S readings found below adequate level of protection</p>																									
	<table border="1"> <thead> <tr> <th>Location</th> <th>CP System No</th> <th>P/S Reading (Volts)</th> <th>P/S Reading Date</th> <th>Remedial Action Type and Date</th> </tr> </thead> <tbody> <tr> <td>6149 Laurel Dr., Paradise</td> <td>Part of 10%</td> <td>-0.827</td> <td>June 30, 2010</td> <td>New anode was installed on June 30, 2010,</td> </tr> <tr> <td>5353 Sawmill Dr., Paradise</td> <td>10P004</td> <td>-0.832</td> <td>June 30, 2010</td> <td>Clear illegal bond, area has been down since May 14, 2010 and expected to be completed by July 15, 2010.</td> </tr> <tr> <td>1237 Ivy Street, Chico</td> <td>10C026</td> <td>-0.533</td> <td>July 1, 2010</td> <td>Repair broken anode wire, area has been down since September 14, 2009, and expected to be completed by July 15, 2010.</td> </tr> <tr> <td>521 Arcadian Avenue, Chico</td> <td>10C021</td> <td>-0.845</td> <td>July 1, 2010</td> <td>Clear contact, area has been down since May 13, 2010, and expected to be completed by July 15, 2010.</td> </tr> </tbody> </table>	Location	CP System No	P/S Reading (Volts)	P/S Reading Date	Remedial Action Type and Date	6149 Laurel Dr., Paradise	Part of 10%	-0.827	June 30, 2010	New anode was installed on June 30, 2010,	5353 Sawmill Dr., Paradise	10P004	-0.832	June 30, 2010	Clear illegal bond, area has been down since May 14, 2010 and expected to be completed by July 15, 2010.	1237 Ivy Street, Chico	10C026	-0.533	July 1, 2010	Repair broken anode wire, area has been down since September 14, 2009, and expected to be completed by July 15, 2010.	521 Arcadian Avenue, Chico	10C021	-0.845	July 1, 2010	Clear contact, area has been down since May 13, 2010, and expected to be completed by July 15, 2010.
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**General Order 112-E Findings  
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**PG&E RESPONSE**

*PG&E respectfully disagrees that this observation is a violation of §192.463.*

PG&E has provided cathodic protection for the four pipe locations identified below in compliance with 49 CFR 192.463. PG&E took prompt remedial action to restore adequate cathodic protection in each of the four instances. PG&E's Standard O-16 describes what PG&E defines as prompt remedial action to comply with the code. PG&E complied with Gas Standard O-16 in every instance noted so no violation exists.

- A. The service line to 6149 Laurel Dr., Paradise is less than 100ft in length and is tested at least once every ten years, in accordance with §192.463(a). The most recent scheduled test occurred on May 5, 2010, at which time the Pipe-Soil potential measured -920 mV. In accordance with Gas Standard O-16.5(3) no additional action was required. The service line was tested during this audit on June 30, 2010, at which time the Pipe-Soil potential measured -827mV. The Corrosion Mechanic took immediate action to restore the service by driving an anode. The final Pipe-Soil potential measured on June 30, 2010 was -1699mV. *See Attachment 22 for documentation.*
- B. The Cathodic Protection Area 10P004 was found down on May 14, 2010 as measured at 5353 Sawmill Dr, Paradise. The CPA was restored on August 6, 2010. *See Attachment 23 for documentation.*
- C. The Cathodic Protection Area 10C026 was found down on September 14, 2009 as measured at 1237 Ivy Street. Between September 14, 2009 and August 6, 2010, PG&E took numerous actions to restore the CPA. The CPA was restored on August 6, 2010. *See Attachment 24 for documentation.*
- D. The Cathodic Protection Area 10C021 was found down on May 13, 2010 as measured at 521 Arcadian Ave, Chico. The CPA was restored on July 27, 2010. *See Attachment 25 for documentation.*

**ATTACHMENTS**

<b>Attachment #</b>	<b>Title or Subject</b>
22	6149 Laurel 10%er Read Documentation
23	CPA 10P004 Documentation
24	CPA 10C026 Documentation
25	CPA 10C021 Documentation

**ACTION REQUIRED**

<b>Action To Be Taken</b>	<b>Due Date</b>	<b>Completion Date</b>	<b>Responsible Dept.</b>
Restore CP levels at locations noted	August 6, 2010	August 6, 2010	NV Gas T&R

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**INSPECTION INFORMATION**

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
June 28 - July 2, 2010	AOC - 4	Banu Acimis	(916) 928-3826

**INSPECTION FINDING**

CPUC Finding	<b><u>SOUTH</u></b>
	<p>During the review of the valve maintenance records, we found that some valve cards were not filled out completely and properly to present essential information about valves such as Make/Model, Type, Press Rating, Serial number, Recommended Lubricant/Sealant, Recommended Stem Packing Material, Actuator Type, Wrench (Key) Size, Type (quarter or multi turn) and Number of turns. Some of these valves are V-9.61, V-0.86, V-0.86 (A), V-0.86 (B).</p> <p>PG&amp;E needs to ensure that valve information data fields on the cards are filled out completely and accurately to provide important information about valves.</p>

**PG&E RESPONSE**

<p>This item was noted in PG&amp;E's Internal Review Summary and shared with the CPUC prior to the audit.</p> <p>PG&amp;E has not required that the valve maintenance cards be fully filled out as much of the information is not essential for maintenance purposes. PG&amp;E is beginning work to revise work procedure WP4430-04. As part of this revision, PG&amp;E will clearly specify fields on the valve maintenance card that are mandatory for completion and those that are optional.</p> <p>PG&amp;E has updated the North Valley valve maintenance records to include missing information that could readily be obtained without excavation. The missing information for V-9.61 was not obtained because the local job file did not include the valve specifications and the valve is physically buried, and therefore the information could not be viewed, and per WP4430-04, no further action is required. The missing make/model, type, pressure rating, and recommended lubricant/ seal were added to the valve maintenance cards 0.86, 0.86(A), and 0.86(B). See Attachment 26 for documentation.</p>
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**ATTACHMENTS**

Attachment #	Title or Subject
26	Valve Maintenance Forms for V-.86, V-.86A, V-.86B

**ACTION REQUIRED**

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
Revise WP 4430-04 to provide clear instruction on mandatory fields	12/31/2011		Gas Engineering

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**INSPECTION INFORMATION**

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
June 28 - July 2, 2010	AOC - 5	Banu Acimis	(916) 928-3826

**INSPECTION FINDING**

CPUC Finding	<p><b><u>SOUTH</u></b></p> <p>On June 30, 2010, during our field check, we recorded 0.89 amps for Rectifier No: 100043 in CP System No: 10P004 located at Berkshire w/o Diamond in Paradise. Standard cathodic protection maintenance record showed that interference test value for this rectifier is 0.65 amps.</p> <p>Additionally, on June 30, 2010, we found that the rectifier DC amps reading was 0.69 amps whereas the interference test result on the standard cathodic protection maintenance report showed 0.65 amps for Rectifier No: 100060 in CP System No: 10P003 located at Birch e/o Foster in Paradise.</p> <p>PG&amp;E needs to ensure that sufficient current is provided to the pipeline system by installing a correct size of rectifiers at these locations.</p>
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**PG&E RESPONSE**

PG&E respectfully disagrees with this observation.

- i. During the field check on June 30, 2010, Rectifier No. 100043 in CP System No. 10P004 was found to have an output of 0.89 Amps, while the maximum output set by the Interference Test was 0.65 Amps. This is the same Cathodic Protection System described in AOC-3B. that was known to have an illegal bond between a customer's satellite television system and the PG&E service line. PG&E Gas Standard O-16.4 sets the requirements for adjusting a rectifier; however, finding a rectifier output above the maximum limit established by the Interference Test is not a compliance issue. In this case, the contact had caused the rectifier output to exceed 0.65 Amps. When the contact was cleared and the Cathodic Protection System was read up on August 6, 2010, the rectifier output was 0.62 Amps. *See Attachment 23 for Documentation.*
- ii. During the field check on June 30, 2010, Rectifier No. 100060 in CP System No. 10P003 was found to have an output of 0.69 Amps, while the maximum output set by the Interference Test was 0.65 Amps. Gas Standard O-16.4 sets the requirements for adjusting a rectifier; however, finding a rectifier output above the maximum limit established by the Interference Test is not a compliance issue. Historically, the output of this rectifier has been near the maximum limit; therefore, a second anode and rectifier system was installed and energized on September 24, 2010. *See Attachment 27 for documentation.*

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**ATTACHMENTS**

Attachment #	Title or Subject
23	CPA 10P004 Documentation
27	CPA 10P003 Documentation

**ACTION REQUIRED**

Action To Be Taken	Due Date	Completion Date	Responsible Dept.

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