Pacific Gas and Electric Company®

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September 3, 2013

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

Re: State of California – Public Utilities Commission
General Order 112-E Audit – PG&E's Gas Transmission Meridian District

Dear Mr. Robertson:

The Safety and Enforcement Division (SED), Gas Safety and Reliability Branch (GSRB) of the CPUC conducted a General Order 112-E audit of PG&E's Gas Transmission Meridian District on May 7-10, 2013. On August 2, 2013, 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 for
Frances Yee

Attachments

cc: Terence Eng, CPUC
Dennis Lee, CPUC
Liza Malashenko, CPUC
Jane Yura, PG&E
Redacted PG&E
Redacted PG&E

General Order 112-E Findings
CPUC Inspection Report August 2, 2013
Meridian District

INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
May 7-10, 2013	NOV – 1	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding

1 Title 49 CFR §192.13(c) states:

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

1.1 PG&E's Standard S4350-TD-4350D Odorization of Natural Gas, section 4.6 states in part:

"Gas odor must be readily detectable at a concentration of 0.6% gas-in-air or less."

PG&E's Form 62-3480 reiterates the requirement, stating:

"If the odor intensity reading is over 0.6% gas in air (too weak) or below 0.1% gas in air (too strong), a confirmation test with a different operator will be performed and the System Gas Control supervisor, or GT&D district supervisor, shall be notified immediately."

The District documented odor intensity readings of greater than 0.6% at the following locations listed in Table 1, but provided no documentation of a confirmation test or supervisor notification.

Table 1: Odorization Test Locations requiring remedial action

Date	Location	Reading
4/5/2011	Redacted	0.70%
4/5/2011		0.70%
4/5/2011		0.70%
4/5/2011		0.70%
4/6/2011		0.70%
4/7/2011		0.70%
4/18/2011		0.70%
2/8/2013		0.70%
2/9/2013		0.70%

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2/9/2013	Redacted	3.00%
2/9/2013		6.00%

1.2 PG&E's Work Procedure WP4110-05 Leak Survey Procedures for Gas Transmission, Section D.1. states in part:

"The leak surveyor is responsible for documenting each leak survey on the sign-off sheet.

The purpose of the sign-off sheet is to provide evidence of the following items for every segment of pipe within a pipeline group:

The model and serial number of the instrument used to survey each pipe segment within the pipeline group."

The District performed leak surveys at Redacted Station on 2/5/13, 2/15/12, and 2/25/11 using a Remote Methane Leak Detector (RMLD). The District did not document the serial number of the survey instrument on the leak survey records.

1.3 PG&E's Work Procedure WP4110-05 Leak Survey Procedures for Gas Transmission, Section D.2.h. states:

"Leak survey supervisors must review leak surveys assigned to their headquarters and conducted by their direct reports, contractors, or temporary employees. After completing the survey and document review, record the reviewer LAN ID and initial the entry."

The District did not document the reviewer LAN ID or supervisor signature on page 2 of 2 of the Redacted Station Gas Transmission Station Leak Survey Report dated 2/5/13.

1.4 PG&E's Work Procedure WP4540-01 District Regulator Station Maintenance, Section II.A.3. states in part:

"Using an approved analog or digital differential pressure gauge, perform a filter differential pressure test and record the pressure reading. If the differential pressure is 2 pounds per square inch (psi) or greater, the filter element must be inspected and immediately changed out if necessary."

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The District recorded the Filter Differential at Reda Station L-136, Location Redacted as being significantly over 2 psi in 2012 and 2013 as indicated in Table 2. The District provided no documentation of remedial action.

Table 2: Filter Differential Readings at Red Station

Date	Reg 22		Reg 21	
	As Found (psi)	As Left (psi)	As Found (psi)	As Left (psi)
4/26/2012	560	559.5	560	559.4
4/24/2013	771.4	771.3	764	763.8

1.5 PG&E's Standard S4131, Selection of Steel Gas Pipeline Repair Methods – Attachment 1, page 9, states that a mechanical clamp *"May be used without welding for a pinhole corrosion leak only and shall be welded under other conditions."*

The District documented a leak (leak number 96-13-22001-B) caused by a weld failure on 3/8/13. The leak was not a pinhole corrosion leak, yet documentation indicates that the District did not weld the clamp onto the pipe as required.

1.6 PG&E's Standard O-16, Corrosion Control of Gas Facilities, page 14, states in part:

9. Internal Corrosion

"All electrical resistance probe readings should be taken and logged at monthly intervals, but not to exceed an interval of 90 days, for the life of the system or until the probe is retired from service."

1.6.1 The District exceeded both the monthly interval and 90 day interval requirement for taking electrical resistance probe readings at three locations, as listed below in Table 3.

Table 3: Locations Where Readings Exceeded the 90 Day Interval

Location	Reading Gap	Interval (days)
Redacted	2/1/12 - 4/5/13	429
	1/21/10 - 3/1/13	1135
	2/9/10 - 4/11/13	1157

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1.6.2 The District routinely exceeded the monthly interval requirement for taking electrical resistance probe readings. The District routinely took readings once every two months rather than once every month. For example, the District performed readings a Redacted in July, September, and November of 2011.

1.7 PG&E's Gas Information Bulletin TD-4430B-001, page 2, states in part:

"All emergency valves found inoperable must be restored to service within 12 months of the finding, or obtain written documentation that the valve is no longer needed."

The District restored two valves to service, shown in Table 4, on L-167 MP13 over 12 months after the District found the valves to be inoperable. The District provided no written documentation indicating that the valves were no longer needed.

Table 4: Valves Inoperable for over 12 months

Valve	Date Found Inoperable	Repaired Date	Interval (months)
V-A	3/16/2010	1/10/2012	> 21
V-B	3/16/2010	3/13/2013	> 35

1.8 PG&E's Standard H-70, Pressure Relief Devices, page 3, states in part:

"In addition to annual capacity testing, the capacity of relief devices shall be verified immediately when changes are made which could affect the ability of the relief valve to protect the system."

The District reduced downstream MAOP from 975 psig to 800 psig at the following locations listed in Table 5. The District did not verify immediately the capacity of the relief devices when changes (reduction in MAOP) could affect the ability of the relief valves to protect the system.

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Table 5: Relief Valve Locations and Date of Downstream MAOP Reduction

Location	Line	Year
Redacted	L-302	2013

PG&E RESPONSE

1.1 PG&E agrees with this finding. The 2011 Odor Intensity readings for the locations listed above required additional corrective actions per PG&E's standard TD-4350S Odorization of Natural Gas. (Replaced with TD-4570P-03 Odorizing Natural Gas in June 2013). Table 1 listed 11 locations, although there are only 10 locations because Redacted is the same location as Redacted The first 9 locations had a reading of 0.7% in 2011. Please see the subsequent 2012 readings which show the reading to be in the acceptable range of 0.1% to 0.6%. (Attachment 1) The last two 2011 readings had the decimal point in the wrong place, and should be 0.3% and 0.6% gas-in-air – within the acceptable range.

Meridian District will conduct a tailboard briefing on September 13, 2013 to ensure employees are aware of the requirement to have Odor Intensity readings by different personnel if the reading is outside the acceptable range and to notify supervision.

1.2 PG&E agrees with this finding. Meridian District has reviewed employee timecards for the dates listed and compared them with the leak survey records and calibration records of the RMLD leak survey instruments. Only employees who utilize the RMLD instruments for the day perform the calibration check prior to use. Meridian District was therefore able to determine which RMLD units were utilized for the days noted above and have added the RMLD serial numbers to the leak survey records. Meridian District conducted a tailboard briefing with employees to ensure that leak survey records are completely filled out.

1.3 PG&E agrees with this finding. The supervisor had only signed the first page of the leak survey record. On August 5, 2013, the supervisor reviewed the entire form for

completeness and signed and dated the second page of the form.

1.4 PG&E respectfully disagrees with the filter differential readings indicate a need for the filter to be disassembled and the element inspected. The District Regulator Station Maintenance Record calls to record the filter pressure differential in either inches of water column, or psi. In this instance, the employee recorded both the actual pressure just upstream of the filter and just downstream of the filter. Please note that the difference in these actual pressures as shown in Table 3 above indicate filter differential pressures NOT requiring further action. The employee was briefed on May 7, 2013 of the need to record the differential pressure value.

1.5 PG&E respectfully disagrees with this finding. The employee who performed this repair was interviewed as a result of this confusion regarding the leak cause. He stated that the leak cause was a pinhole internal corrosion leak, and not a weld failure leak. The IGIS record has been corrected to reflect the leak cause to be internal corrosion. (See Attachment 2). PG&E's procedure TD-4100P-05 Appendix B allows for a pinhole corrosion leak to be repaired by installing a mechanical clamp without welding. See Attachment 3 – TD-4100P-05 which supersedes Standard S4131.

1.6 PG&E agrees with this finding. The corrosometer probe read locations have been placed on a monthly maintenance schedule in the Pipeline Maintenance tool (PLM).

1.7 Meridian District has initiated three corrective orders to make repairs to these corrosometer probes. (WR 193828, 193829, and 193830). The expected completion date is December 31, 2013. PG&E agrees with this finding. These two valves were determined to be inoperable without designating an alternative valve. Meridian District has conducted a tailboard briefing of the bulletin TD-4430B-001 "Establishing Alternate Means of Control (AMC) for Inoperable Valves" to ensure employees are aware of the need to establish an AMC and initiate a job to repair or replace an inoperable valve at the time of discovery.

1.8 PG&E is still collecting documentation on the lowering of L-302's MAOP and its effect on relief valve set points and capacities. PG&E will provide a chronology of events and its actions by September 30, 2013.

ATTACHMENTS

Attachment #	Title or Subject
1	Odor Intensity Reports
1	Odor Intensity Readings Tailboard Briefing

Definitions: NOV – Notice of Violation
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2	A-Form 96-13-22001-1
3	TD-4100P-05

ACTION REQUIRED

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
Conduct tailboard briefing on Odor Intensity readings	September 13, 2013		Meridian District M&C
L-302 MAOP revisions and its effect on relief valve settings and capacities.	September 30, 2013		Regulatory Compliance

Definitions: NOV – Notice of Violation
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General Order 112-E Findings
CPUC Inspection Report August 2, 2013
Meridian District

INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
May 7-10, 2013	NOV – 2	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding

Title 49 CFR §192.201 states in part:

"(a) Each pressure relief station or pressure limiting station or group of those stations installed to protect a pipeline must have enough capacity, and must be set to operate, to insure the following:

(2) In pipelines other than a low pressure distribution system:

(i) If the maximum allowable operating pressure is 60 p.s.i. (414 kP a) gage or more, the pressure may not exceed the maximum allowable operating pressure plus 10 percent or the pressure that produces a hoop stress of 75 percent of SMYS, whichever is lower,"

2.1 The District's Self-Contained Relief Valve Maintenance Record, TD-4430-02-F06, for Redacted L-136, states an MAOP of 550 psig. The District set its relief valve protecting the system at 800 psig for two weeks from 10/15/12 to 11/1/12. The District did not set to operate its relief valve within the allowable limit established by Title 49, CFR §192.201.

2.2 On PG&E's *Capacity Review of Relief Device at Gas Gathering Receipt Point* Form, PG&E compares the maximum production delivery to the maximum calculated relief capacity. PG&E defines adequate capacity as when the maximum production delivery does not exceed the maximum calculated relief capacity. The District did not have adequate capacity, (i.e. the maximum production delivery did exceed the maximum calculated relief capacity at the following locations shown in Table 7). The District did not provide documentation of any corrective measures.

Table 7: Locations with Relief Valves of Inadequate Capacity

Location	Date	Max Production Delivery (MMcfD*)	Max Relief Valve Capacity (MMcfD*)
Redacted	March 2012	1.089	1
	April 2012	1.087	
	Feb 2012	4.531	4.1

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	Redacted	Jan 2011	10.311	4.1
		Feb 2011	10.839	
		March 2011	7.047	
		April 2011	4.81	
		May 2011	4.686	

*MMcfD: Million Cubic Feet Per Day

PG&E RESPONSE

PG&E agrees with this finding. Meridian District will conduct a tailboard briefing on September 13, 2013 to ensure relief valve set points due not exceed pressure established per 192.201. PG&E has determined relief valve capacities, replaced relief valves, and documented the new relief valve capacities for the gas gathering locations. Please see Attachments 4, 5, and 6.

ATTACHMENTS

Attachment #	Title or Subject
4	Redacted Relief Valve Records
5	Relief Valve Records
6	Relief Valve Records

ACTION REQUIRED

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
No further action required			

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INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
May 7-10, 2013	AOC – 1	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding	1 Title 49 CFR §192.201(a)(2)(ii) states: *"If the maximum allowable operating pressure is 12 p.s.i. (83 kPa) gage or more, but less than 60 p.s.i. (414 kPa) gage, the pressure may not exceed the maximum allowable operating pressure plus 6 p.s.i. (41 kPa) gage"* PG&E's most recent TD-4430P-02-F07 Package Regulator/Relief Valve Maintenance Record for Reda Station, System V-20 Supply, with supervisor approval dated 5/1/13, lists the MAOP as 50 psig and the maximum permissible relief set pressure as 60 psig. According to Title 49 CFR §192.201(a)(2)(ii), the relief should be set at no greater than MAOP plus 6 psi, i.e. 56 psi, and documentation should reflect as such.

PG&E RESPONSE

PG&E agrees with this finding. The maintenance record, TD-4430P-02-F07, was completed on April 23, 2013, and noted the "As Left" relief valve set point pressure to be 45 psig. This corresponds to the relief valve capacity calculation showing a 45 psig relief set point, and with adequate relief capacity. The field for Maximum Permissible Relief Set Pressure was incorrectly filled in with 60 psig. This field has been corrected. (See Attachment 7)

ATTACHMENTS

Attachment #	Title or Subject
7	PRV-1 Relief Valve Capacity & Maintenance Record

ACTION REQUIRED

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
No further Action Required			

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INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
May 7-10, 2013	AOC – 2	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding	2 The "Gas Transmission Meridian District Station Routine" form, TD-4430P-02, leaves a blank spot to record the odorometer reading. An odorometer reading is not necessary since these forms are to document data at injection points. Regardless, employees have been listing odorometer readings, though not always accurately. For example, the form for Redacted, dated 1/8/13, lists the odor intensity reading as "4".

PG&E RESPONSE

PG&E agrees with this concern and will revise this form to ensure that the odorometer readings are not inadvertently listed. Also, as noted in NOV-1.1 above, a tailboard briefing will be conducted to remind Meridian District employees of the requirements of taking odor intensity readings

ATTACHMENTS

Attachment #	Title or Subject
None	

ACTION REQUIRED

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
Revise routine station maintenance form to make it certain not to record odorometer readings	September 30, 2013		Meridian District M&C

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INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
May 7-10, 2013	AOC –3	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding	3 Redacted Station's Gas Transmission Station Leak Survey Report requires a check mark for conditions found to be satisfactory. Years 2011 and 2012 are consistent with the use of check marks. In 2/5/13, for tabs (A) Landslides or threatened slides and (B) Erosion by streams, wave action, rain, or other natural causes, PG&E indicated X-marks. Even though check-marks indicate a satisfactory condition, one may conclude that X-marks indicate an unsatisfactory condition. Only after conferring with a District representative was it indicated that X-marks did not signal an issue.

PG&E RESPONSE

PG&E agrees that utilizing check boxes on maintenance documents needs to be consistent so that field conditions are clearly understood. PG&E will tailboard these requirements with Meridian District employees and provide the SED with documentation by September 30, 2013.

ATTACHMENTS

Attachment #	Title or Subject
None	

ACTION REQUIRED

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
Present consistent method to document field conditions	September 30, 2013		Meridian District M&C

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INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
May 7-10, 2013	AOC – 4	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding	4 Relief Valve Maintenance records and capacity reviews for Redacted were incorrectly labeled as being a part of L-400 instead of L-318.

PG&E RESPONSE

PG&E agrees with this concern and will provide the corrected documentation to the SED by September 30, 2013.

ATTACHMENTS

Attachment #	Title or Subject
None	

ACTION REQUIRED

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
Correct labeling of maintenance records and capacity reviews	September 30, 2013		Meridian District M&C

Definitions: NOV – Notice of Violation
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INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
May 7-10, 2013	AOC - 5	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding	5 The District listed three different line numbers for the same facility. Self-Contained Relief Valve Maintenance Record for February, states Redacte Redacted System **L-169**". The Capacity Review of Relief Devices at Gathering Receipt Points Form states Redacted 28-1 Pipe **Line Number 193**". The Capacity Review of Relief Device at Gas Gathering Receipt Point Form states "Pipe Line Number supplied by facility: **199**".

PG&E RESPONSE

PG&E agrees with this concern and will provide the corrected documentation to the SED by September 30, 2013.

ATTACHMENTS

Attachment #	Title or Subject
None	

ACTION REQUIRED

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
Correct labeling of maintenance records and capacity reviews	September 30, 2013		Meridian District M&C

Definitions: NOV – Notice of Violation
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INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
May 7-10, 2013	AOC – 6	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding	6 Dehydrator Station Inspection Form footnotes explains that "inlet minus outlet equals removed", referring to the water content. The numbers do not add up on the form for the Redacted Glycol Dehydrator. For example, on January 2012, the District recorded inlet as 8, the outlet as 3, but the water removed as zero.

PG&E RESPONSE

PG&E agrees with this concern and will provide the corrected documentation to the SED by September 30, 2013.

ATTACHMENTS

Attachment #	Title or Subject
None	

ACTION REQUIRED

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
Correct labeling of maintenance records and capacity reviews	September 30, 2013		Meridian District M&C

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INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
May 7-10, 2013	AOC -7	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding	7 During the field inspection at Redacted Regulator Station, SED observed that a section of pipe (approximately 8 feet in length) consisted of unpainted aboveground pipe. The District should clean and coat the pipe before atmospheric corrosion has a chance to develop.

PG&E RESPONSE

The section of pipe noted does not belong to PG&E. It belongs to the customer and is the responsibilities of the customer.

ATTACHMENTS

Attachment #	Title or Subject
None	

ACTION REQUIRED

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
None Required			

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Inspection Dates	Finding	CPUC Contact	CPUC Phone #
May 7-10, 2013	AOC -8	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding	8 As a District employee was venting gas during a regulator maintenance A-inspection, SED noticed that the nearest fire extinguisher was located somewhere in the vehicle's compartment nearly 30 feet away from the venting. After questioning several employees, it became clear that not everyone knew where the fire extinguisher was located on the truck. SED recommends that the District keep a fire extinguisher nearby, fully exposed, and readily accessible when venting hazardous amounts of gas to the atmosphere.

PG&E RESPONSE

PG&E agrees with this concern. A tailboard with district personnel was held on June 27, 2013 by the local fire department. Use of each vehicle's fire extinguisher was discussed and demonstrated during the "hands-on" session. In addition, Meridian District employees are required to conduct monthly safety inspections of their vehicles, and fire extinguisher operability is one of the inspection items.

ATTACHMENTS

Attachment #	Title or Subject
None	

ACTION REQUIRED

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
No further action required			

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