Pacific Gas and Electric Company®

Frances Yee
Manager
Regulatory Compliance
Gas Operations

6111 Bollinger Canyon Rd.
4th Floor
San Ramon, CA 94583
925-328-5733

Fax: 925-328-5591
Internet: FSC2@pge.com

January 16, 2014

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 Gas Audit – PG&E's Burney District

Dear Mr. Robertson:

The Safety and Enforcement Division (SED) conducted a General Order 112-E audit of PG&E's Burney District from August 26-30, 2013. On December 2, 2013, the SED submitted its audit report, identifying violations and findings. Attached is PG&E's response to the CPUC audit report.

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

Sincerely,

/S/

Frances Yee

Attachments

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

General Order 112-E Findings
CPUC Inspection Report December 2, 2013
Burney District

INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
August 26-30, 2013	Internal Review	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding

A. PG&E's Internal Audit Findings

Prior to the start of the audit, PG&E provided SED its findings from the internal review it conducted of the District. Some of PG&E's internal review findings are violations of PG&E's operations and maintenance standards, and are therefore violations of Title 49 Code of Federal Regulations (CFR), §192.13(c). SED is aware that PG&E corrected all of its findings prior to SED's audit. Table 1 lists all of the violations that PG&E noted.

Table 1: Findings from PG&E's Internal Review

Topic	Code	Finding	Instances
Emergency Valves	192.13(c)	Valve maintenance record was missing GMS review signature	1
	192.13(c)	Valve maintenance records for several valves were missing employee's LAN ID	4
	192.745(a)	Valve missing December 2009 and 2010 maintenance documentation	2
	192.13(c)	Power actuated blowdown valves missed the 2nd semi-annual inspection and service	5
Station Maintenance	192.13(c)	Relief valve maintenance record was missing employee's signature	1
	192.739(a)	Missed February 2010 relief valve maintenance. The valve is also missing maintenance documentation for 3/2/2011	2
	192.13(c)	Actuator maintenance for valves missing April 2010 documentation	2
	192.13(c)	Sections of the Station Maintenance Forms for pressure limiting stations had several blank spaces in 2009 and 2010	2
	192.739(a)	Missing Pressure control valve maintenance documentation for Sept 2010	1
	192.13(c)	Power actuated valve missed the 2nd semi-annual service and operate for 2010, 2011, and 2012	3

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	Leak Survey	192.13(c)	GMS signature was missing on Leak Survey record for 2009	1
		192.13(c)	Patrolling & leak survey on 5/14/2010 and other dates had forms with white-out used	Not specified
		192.13(c)	Pencil used on patrolling & leak survey forms dated 1/22/2010	Not specified

PG&E RESPONSE

As acknowledged by SED in their audit report, PG&E corrected all of its findings from its internal review prior to the August 2013 audit.

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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INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
August 26-30, 2013	NOV-1	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding

B. Audit Findings and Violations

1 Title 49 CFR §192.13(c) states:

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

1.1 PG&E Utility Procedure TD-4430P-02, Gas Transmission Stations Inspection, Testing, and Maintenance, page 7 states in part:

"Use Attachment 8, Form TD-4430P-02-F03, "Valve Actuator Maintenance Record," to document inspection and maintenance work on power actuators."

Though recorded in PG&E's Pipeline Maintenance System, the District did not record the actuator maintenance for Valves V-21 (GOV-21) and V-22 (GOV-22) at Locations K-2, BCS/MP82 Process Gas on the valve actuator maintenance forms in 2013. The last documented maintenance on the form was 4/10/12 for both valves.

1.2 PG&E Utility Work Procedure WP4430-04, Gas Valve Maintenance Requirements and Procedures, page 4 states in part:

"Power-actuated isolation and block valves must be inspected, serviced, lubricated, and operated twice each calendar year (at approximate 6-month intervals)."

The District did not inspect, service, lubricate, or operate twice a year during the indicated years the following nine actuated valves:

a. BCS/MP82 Process Gas SOV-120, V-6: Years 2009 through 2013

b. BCS/MP82 Process Gas FV-10, V-8: Years 2009 through 2013

c. BCS/MP82 Process Gas SOV-120B, V-32: Years 2009 through 2013

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d. BCS/MP82 Process Gas GOV-125-2, V-43: Years 2009 through 2013

e. TCS/MP24 Process Gas SOV-2, V-4: Years 2009 through 2013

f. TCS/MP24 Process Gas SOV-51, V-8: Years 2010 through 2013

g. TCS/MP24 Process Gas SOV-51B, V-40: Years 2010 through 2013

h. TCS/MP24 ESD GOV-16, V-N: Years 2010 through 2013

i. TCS/MP24 ESD GOV-16B, V-R: Years 2010 through 2013

1.3 PG&E's WP4430-04 Attachment 1, Gas Valve Maintenance Requirements and Procedures, page 1 states in part:

"Ensure that all natural gas block valves (2" and greater for gas transmission district-maintained facilities) requiring maintenance per this work procedure and ball or plug valve regulators have a completed 'Valve Maintenance Equipment Card.'"

The Valve Maintenance Record Forms for the nine valves specified in 1.2 of this report inaccurately list the lube/inspection frequency as annual. These valves must be inspected twice a year per PG&E Utility Work Procedure WP4430-04, and the Valve Maintenance Record Forms should reflect as such.

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

1.4.1 Page 1: *"If the calibration is not within the allowable limits, send the instrument to an approved service provider for adjustment or repair."*

While performing calibration tests of Combustible Gas Indicators (CGIs), the District recorded instances where the percent of the Lower Explosive Limit (% LEL) readings were outside the allowable calibration limits, but the District did not send the instruments to an approved service provider for adjustment or repair. Table 2 lists

these instances.

Table 2. CGI Calibration Reads Outside of Allowable Limits

Serial Number	Date	Allowable Limits	% LEL Reading
10189	3/2/2009	46% - 60%	42
	4/16/2009		42
	11/3/2009		45
13342	4/16/2009	46% - 60%	44
	5/4/2009		44
6881	12/6/2010	42% - 58%	41
6881	3/3/2009	46% - 60%	42
	4/15/2009		40
	5/5/2009		41
	6/15/2009		40
	7/9/2009		40
	8/3/2009		40
	9/9/2009		40
	10/5/2009		42
	11/5/2009		42
	12/10/2009		42
QG0519	3/3/2009	46% - 60%	40
	4/15/2009		40
	5/5/2009		40
	6/15/2009		40
	7/9/2009		40
	8/3/2009		40
060044	2/2/2010	34% - 46%	48

1.4.2 Page 3: *"Check the calibration of HFI gas detectors before the first field use in any given week. If the unit is not used and its calibration not checked for any given week, record that the particular unit was out of service for that week. Record this on the "Weekly Calibration Check of Flame Ionization Unit" form…"*

The District performed monthly instead of weekly calibrations of the following Hydrogen Flame Ionization Units (HFIs) during the indicated time periods:

a. Detecto-Pak 4 (DP4) Serial# 1500906006: Years 2012, 2011, and

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the month of September in 2010.

b. Detecto-Pak 3 (DP3) Serial# 9065.5: Years 2012 and 2011.

1.4.3 Page 3: *"Record the weekly calibration checks on the "Weekly Calibration Check of Flame Ionization Unit" form, for OMDs on the "Weekly Calibration Check of Optical Methane Detector" form, or for RMLDs on the "Monthly Remote Methane Leak Detector Daily Self-Test and Calibration Log" form.*

The District did not perform weekly calibrations of Remote Methane Leak Detector (RMLD) Serial# 8001010006 during the months of 11/2012 and 10/2012.

1.5 PG&E's Standard M-60.2 Mark-And-Locate Instrument Calibration and Repair (Instruments Used for USA Purposes), states in part:

1.5.1 Page 2: *"The instrument must be sent to an approved repair facility if the signal-strength readings differ by more than 25% of the baseline reading."*

The baseline strength reading for mark-and-locate instrument Metrotech 9890, Serial# 48626 is 905. During calibration, the equipment must be within 25% of the baseline strength; (i.e. between 679 and 1131) or otherwise sent for repair. In 10/2011, the District recorded a reading of 554. In 11/2011, the District recorded a reading of 541. Although these values fall outside of the acceptable calibration limits, the District did not send the instrument to an approved repair facility as required by PG&E Standard M-60.2.

1.5.2 Page 3: *"The instrument must be sent to an approved repair facility if the measured depth reading varies by ± 5%, + 2" from the actual facility depth, or if the depth reading is erratic."*

The baseline depth of both mark-and-locate equipment Metrotech 850 and Metrotech 9890 is 20". During calibration, the equipment

must be within 5% of the baseline strength + 2" (i.e. between 17" and 23") or otherwise sent for repair. The District measured depths outside of the acceptable limit during the following months in Table 3 without sending the instruments to an approved repair facility.

Table 3. Mark and Locate Calibration Reads Outside of Allowable Limits

Model	Serial #	Date of Reading	Reading
Metrotech 850	012304	02/2009	16"
Metrotech 850	004800	03/2010	16"
Metrotech 9890	48626	04/2011	16"
Metrotech 9890	49682	04/2011	16"
		08/2011	16"

PG&E RESPONSE

1.1: PG&E agrees with this finding. The valve actuator maintenance forms for valves V-21 (GOV-21) and V-22 (GOV-22) have been updated to reflect the work performed on April 3, 2013. (See Attachment B)

To prevent recurrence, a refresher briefing was given to the Burney District employees on the subject of using proper forms to document maintenance. (See Attachment C)

1.2, 1.3: PG&E agrees with this finding. PG&E has updated the PLM scheduling tool and the valve maintenance records to reflect the required semi-annual maintenance. Redacted Redacted Redacted were serviced and operated a second time in 2013 on October 28, 2013. Redacted was maintained on August 15, 2013, and will be maintained again in February 2014. (See Attachment D)

1.4 and 1.5: PG&E agrees with these findings. The instruments mentioned above are now within calibration limits and are being checked for calibration within the intervals prescribed in PG&E's standards.

To prevent recurrence, a refresher briefing was given to the Burney District employees on procedures for instrument calibration and what to do when calibration checks fall outside of acceptable limits. (See Attachment E) In addition, Burney District has implemented an

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improved recordkeeping process for instrument calibration.

ATTACHMENTS

Attachment #	Title or Subject
A	PLM Printout with April 2013 Maintenance
B	Updated valve actuator maintenance forms
C	Refresher Briefing – proper maintenance documentation
D	Updated Semi-Annual Valve Maintenance Records
E	Refresher Briefing – instrument calibration procedures

ACTION REQUIRED

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

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General Order 112-E Findings
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Burney District

INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
August 26-30, 2013	NOV-2	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding	**B. Audit Findings and Violations** 2 Title 49 CFR §192.145(c) states: *"Each valve must be able to meet the anticipated operating conditions."* The District did not indicate a value for the pressure rating of Valve No. Gov-130 located at Burney Compressor Station, BCS KS Fuel Gas Building on its Valve Maintenance Card.

PG&E RESPONSE

PG&E disagrees that this is a violation of CFR §192.145(c). However, PG&E does agree that not specifying a pressure rating on the Valve Maintenance Record for valve GOV-130 does not comply with PG&E's Valve Maintenance Work Procedure TD-4430P-04.

Valve GOV-130 is an American National Standards Institute (ANSI) 300#, 740 psig rated valve. It is part of the fuel gas piping system at the Burney Compressor Station, which has an MAOP of 320 psig. Therefore it complies with CFR §192.145(c).

PG&E has updated the Valve Maintenance Record for Valve GOV-130 to specify the valve rating. See Attachment F.

ATTACHMENTS

Attachment #	Title or Subject
F	Valve Maintenance Record GOV-130

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 #
August 26-30, 2013	NOV-3	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding

B. Audit Findings and Violations

3 Title 49 CFR §192.707 states in part:

(d) "Marker warning

The following must be written legibly on a background of sharply contrasting color on each line marker

(2) The name of the operator and the telephone number (including area code) where the operator can be reached at all times."

Pipeline markers at Thermo Electric Mile Points (MP) 42.08, 69.4, 67.10, and 114.85 indicate to call 510-757-1607 in case of emergency. The phone number, when called, does not lead to contact with PG&E. SED called the number and was greeted with a recorded message that asks the caller to try again later.

PG&E RESPONSE

PG&E agrees with this finding.

Burney District has replaced the warning stickers on pipeline markers along transmission lines L-400 and L-401 at mile points (MP) 42.08, 69.4, 67.10, and 114.85. Burney District has started checking all pipeline markers in the district for similar issues. Due to winter access limitations, Burney District will resume visiting the remaining locations in the spring of 2014, and expects to have this task completed by May 31, 2014.

ATTACHMENTS

Attachment #	Title or Subject
None	

ACTION REQUIRED

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Action To Be Taken	Due Date	Completion Date	Responsible Dept.
Replace remaining warning stickers on pipeline markers in Burney District	May 31, 2014		Burney District

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INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
August 26-30, 2013	AOC-1	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding	C. Observations and Concerns
	1 PG&E's Capacity Review of Relief Devices at Redacted Redacted Redacted. The District did not include documentation on the results of the computer simulation along with its records. SED recommends keeping documentation of the results of the computer simulation to verify the value of 2020 MMSCFD.

PG&E RESPONSE

PG&E agrees with this concern. Although a screen shot of the computer simulation was included in the previous capacity review package, the inputs used to generate the maximum compressor capacity of 2,020 MMSCFD (Million Standard Cubic Feet per Day) were not identified. A new version of the capacity review package has been generated. Attachment G is the current version of the Redacted review package with inputs used to generate the maximum compressor capacity (2,325 MMSCFD) and screen shots of the software that PG&E's System Planning Department utilizes to model the gas system.

ATTACHMENTS

Attachment #	Title or Subject
G	Redacted Review 2013

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 #
August 26-30, 2013	AOC-2	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding	2 The District did not service Redacted Redacted in 2012 as indicated on the Gas Station Facilities Maintenance Report. The District claims that they service the pressure selectors once a month. PG&E should confirm if servicing the pressure selectors is a required maintenance task, and if so, consider adopting a procedure outlining how to service it, how often to service it, who is to service it, and how to recognize any abnormal operating conditions.

PG&E RESPONSE

PG&E agrees with this concern. The employee who performed this maintenance task was not clear on which box on the Station Maintenance Report applied to the task; however he did list the equipment. The employee has corrected the 2012 form. (See Attachment H) To avoid further confusion, Burney District has created pre-printed Station Maintenance Report forms (See Attachment I) for Indian Springs with grayed boxes for fields that do not apply to the station.

ATTACHMENTS

Attachment #	Title or Subject
H	2012 Corrected Station Maintenance Report
I	Redacted Maintenance Report - Modified

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 #
August 26-30, 2013	AOC-3	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding	3 Valve maintenance record form F4430-04-1 revised 5/13/09 has field "lube/inspection freq" with one blank line for input. In some cases, the District filled in the blank with "annual", though verbally indicating that even though the District is required to inspect these valves annually, the valves may not necessarily require annual lubrication. PG&E may consider revising the forms to distinguish lube frequency from inspection frequency, providing one blank line for each.

PG&E RESPONSE

PG&E agrees with this concern and has revised the form. Please see Attachment J – Gas Valve Maintenance Record Form 1/1/14 Version. This revision of the form distinguishes the valve inspection frequency from the specification of the valve requiring lubrication.

ATTACHMENTS

Attachment #	Title or Subject
J	Gas Valve Maintenance Record Form 1/1/14 Version

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 #
August 26-30, 2013	AOC-4	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding	4. PG&E's Contract Management team does not retain certification records of certain contractors. During the audit, SED asked for the certifications of two radiographer contractors who performed work on the Ruby Intertie. PG&E had to subsequently request the certification from the contractor. SED recommends that PG&E keep the certifications on file after reviewing them. This will ensure that PG&E retains the certifications in its own historical records should the contractor lose its records or cease to operate.

PG&E RESPONSE

PG&E agrees with this concern. In 2013, Gas Operations created a SharePoint site for internal use which will list the approved vendors of non-destructive examinations (NDEs), and the certifications of their employees. Access to the site information is restricted to PG&E employees who have a need to view the certifications of the NDE vendors and their employees. The site will be fully populated with approved NDE vendors by December 15, 2014.

ATTACHMENTS

Attachment #	Title or Subject
None	

ACTION REQUIRED

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
SharePoint site to contain a complete list of approved NDE vendors and their employee certifications	December 15, 2014		Gas T&D Operations

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INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
August 26-30, 2013	AOC-5	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding	5 During SED's field inspection at Burney Compressor Station BNCC131600 K-2, the mechanic took a pipe-to-soil reading of -805 mV with the electrode one foot from the pipe. The mechanic then moved the electrode back to four feet from the pipe and recorded a pipe-to-soil reading of -842 mV. The mechanic finally moved the electrode back to six feet from the pipe and recorded a pipe-to-soil reading of -871 mV. The mechanic was satisfied with the result and required no further investigation. PG&E's Corrosion Standard O-16 does not allow nor disallow mechanics from moving the electrode until he/she obtains a reading more negative than -850 mV. SED would like to know if and when this practice is allowed, and what the limit is (could the electrode be moved back 10 feet? 50 feet?).

PG&E RESPONSE

PG&E agrees with this concern. The pipe-to-soil reading location taken during the audit is not a suitable location because of the high-resistance lava rock covering much of the station yard. The PG&E mechanic attempted to move the reference electrode several times to contact soil without such high resistance as lava rock. Gas Standard O-16 states that the reference electrode should be placed as close as possible over the pipe.

To eliminate the need to move the reference electrode and avoid the high resistance lava rock, Burney District has removed approximately 2 feet of lava rock over both the suction and discharge pipes and installed 10-inch diameter PVC conduit. (See Attachment K) The conduit extends 18 inches below ground and is filled with native soil. These Electrolysis Test Stations (ETSs) will be the locations for all future pipe-to-soil reads. Work was completed on December 19, 2013. A pipe-to-soil reading of -1042 mV on the compressor suction piping, and a pipe-to-soil reading of -1039 mV on the compressor discharge piping was taken on December 19, 2013, indicating adequate cathodic protection.

ATTACHMENTS

Attachment #	Title or Subject
K	Work Request for ETS's at Burney CS

ACTION REQUIRED

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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 #
August 26-30, 2013	AOC-6	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding	6 PG&E's Corrosion Standard O-16, p. 6 states in part: *"Potentials more negative than −1,600 mV with protective current applied should not be present anywhere on the protected, gas-carrying structure, with the exception of annual systems and 10%ers. If a pipe potential more negative than −1,600 mV is found with rectifier current applied ("on"), additional testing is required to ensure the polarized "instant off" potential does not exceed −1,200 mV. Contact corrosion engineering personnel for information on this test and approval."* During SED's field inspection, the District recorded pipe-to-soil potentials of -11 V on L-401 at MP 42.08 and -15 V on L-400 at MP 42.08. Please advise SED on the status of the cathodic protection at these pipeline locations.

PG&E RESPONSE

PG&E agrees with this concern. These reads were taken within the anodic field at this location of impressed current anodes installed nearby. To ensure adequate cathodic protection per Gas Standard O-16 requirements, pipe-to-soil reads ("instant off") were taken on transmission lines L-400 and L-401 at MP 42.08 by temporarily turning off power to the impressed current cathodic protection station. Please see Attachment L for the work request. "Instant Off" readings of -1180 mV on L-400, and -1190 mV on L-401 were taken on December 16, 2013, which are within acceptable limits specified in Gas Standard O-16.

ATTACHMENTS

Attachment #	Title or Subject
L	Work Request for P/S Reads at MP 42.08

ACTION REQUIRED

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

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Inspection Dates	Finding	CPUC Contact	CPUC Phone #
August 26-30, 2013	AOC-7	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding	In 1997, the District based relief valve capacity calculations for Redacted Redacted Every year after 1997, the reliefs were set to operate at no greater than 935 psig, the maximum allowable operating pressure (MAOP) of the downstream line. The District did not recalculate the capacity of the relief devices based on the set point of 935 psig for each year from 1998-2012. Although the reliefs are still technically set to operate in accordance with §192.201(a), the District may want to review and recalculate the capacity of the relief devices based on the set point of 935 psig.

PG&E RESPONSE

The pressure used to calculate the relief valve capacity is based on compliance with §192.201 and PG&E's Gas Standard H-70. The Station Engineering Department performs the calculation and generates the Capacity Review Form for relief valves based on federal regulations and PG&E's standards. The actual relief valve set point can be lower than the maximum pressure setting as noted in Item 6 of Part 2 on the "Capacity Review of Relief Devices at Compressor Stations" form. (See Attachment M) The relief valve will start to open and relieve gas to atmosphere at the actual set point pressure, and will have adequate capacity for the system being protected at the point that the system pressure reaches the maximum pressure setting specified on the form. Therefore, PG&E does not believe that the relief valve capacity calculations need to be revised.

ATTACHMENTS

Attachment #	Title or Subject
M	RV Capacity Review – Compressor Stations

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 #
August 26-30, 2013	AOC-8	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding	In 1997, the District based relief valve capacity calculations for Redacted Redacted on a set point of 940 psig. Every year after 1997, the reliefs were set to operate at no greater than 935 psig, the MAOP of the downstream line. The District did not recalculate the capacity of the relief devices based on the set point of 935 psig for each year from 1998-2012. Although the reliefs are still technically set to operate in accordance with §192.201(a), the District may want to review and recalculate the capacity of the relief devices based on the set point of 935 psig.

PG&E RESPONSE

The pressure used to calculate the relief valve capacity is based on compliance with §192.201 and PG&E's Gas Standard H-70. The Station Engineering Department performs the calculation and generates the Capacity Review Form for relief valves based on federal regulations and PG&E's standards. The actual relief valve set point can be lower than the maximum pressure setting as noted in Item 6 of Part 2 on the "Capacity Review of Relief Devices at Compressor Stations" form. (See Attachment M) The relief valve will start to open and relieve gas to atmosphere at the actual set point pressure, and will have adequate capacity for the system being protected at the point that the system pressure reaches the maximum pressure setting specified on the form. Therefore, PG&E does not believe that the relief valve capacity calculations need to be revised.

ATTACHMENTS

Attachment #	Title or Subject
M	RV Capacity Review – Compressor Stations

ACTION REQUIRED

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
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Inspection Dates	Finding	CPUC Contact	CPUC Phone #
August 26-30, 2013	AOC-9	Terence Eng	(415) 703-5326

INSPECTION FINDING

CPUC Finding	SED asked for documentation to demonstrate clearance from substructures as required by §192.325 for the installation at the Redacted but the information could not be provided by the end of the audit. Please provide SED with this documentation.

PG&E RESPONSE

Compliance with §192.325, Underground clearance, for the Redacted project is described below. This description would be applicable for other pipeline installation projects.

The Redacted will be referenced as an example for this document.

To ensure minimum clearance is met, the following steps are taken:

Step 1) USA Alert:

Contact is made with the one-call system (USA North or USA South) to notify all utilities to locate and mark their facilities within the marked construction site. In this step, PG&E will also locate and mark their facilities (Locate and Mark is documented in Attachment N for the USA tickets associated with the 2010 Ruby Pipeline Intertie project).

Step 2) Land Survey:

In the preliminary stages of designing the job, a land survey is performed to collect data on marked underground facilities, topography, and any other above ground obstructions (See Figure 1 below). This data is delivered to the estimating or design and drafting to be incorporated in design drawings.

Figure 1: Redacted **Survey Map with indicated depths (See Attachment O)**

Definitions: NOV – Notice of Violation
AOC – Area of Concern

Redacted

Step 3) Excavation:

Within the construction site, preliminary excavation is done to physically verify the location of all marked utilities that cross PG&E's existing and proposed pipeline within the construction site. It is also used to expose PG&E's existing pipeline. Excavation is documented in USA tickets (See Attachment N).

Step 4) Design Standards:

Per Attachment E of Gas Standard A-34, construction drawings are to include the following note:

> "This pipeline must be installed with at least 12" of clearance from any other underground structure not associated with the pipeline."

This note notifies field personnel of the minimum clearance required. For the Redacted this note is shown on the "Construction Notes" on sheet 2 of drawing 30712203 (Figure 2).

Figure 2: Clearance Note (See Attachment P, Sheet 2, Cell E5)

5. THIS PIPELINE MUST BE INSTALLED WITH AT LLAST 12 INCHES OF CLEARANCE FROM ANY OTHER UNDERGROUND STRUCTURE NOT ASSOCIATED WITH THE PIPELINE.

Step 5) Design Changes:

If any anomalies are found in steps 1 to 3 (i.e. actual location doesn't match marked location, discovery of unknown facilities), then design changes are made to meet to minimum clearance requirements and overcome the anomalies. Redacted did not undergo any design changes associated underground structures not

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associated with the pipeline.

Step 6) As-builts:

After construction is done, the Field Engineer/Inspector is to document the actual conditions of installed equipment including clearances from other utilities. On the Redacted was identified as the foreign utility. The "As-built" clearance between PG&E pipeline and Redacted pipeline is shown on sheet 4 of drawing 30712203 (Figure 3).

Figure 3: Pipeline Spacing with Redacted (See Attachment P, Sheet 4, Cell B5)

Redacted

ATTACHMENTS

Attachment #	Title or Subject
N	Redacted
O	
P	

ACTION REQUIRED

Action To Be Taken	Due Date	Completion Date	Responsible Dept.

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General Order 112-E Findings
CPUC Inspection Report December 2, 2013
Burney District

No further action required.			

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