

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



April 3, 2015

Mr. Sumeet Singh, Vice President
Pacific Gas and Electric Company
Gas Asset and Risk Management
6111 Bollinger Canyon Road, Room 4590-D
San Ramon, CA 94583

GA2014-11

SUBJECT: General Order 112-E Gas Audit of PG&E's East Bay Division

Dear Mr. Singh:

The Safety and Enforcement Division (SED) of the California Public Utilities Commission conducted a General Order 112-E audit of Pacific Gas & Electric Company's (PG&E) East Bay Division (Division) from September 15 through September 29, 2014. The audit included a review of the Division's records for the period of 2012 through 2013, as well as a representative field sample of the Division's facilities in the cities of Alameda, Oakland, Emeryville, Berkeley, Richmond and Hercules. SED staff also reviewed the Division's operator qualification records, which included field observation of randomly selected individuals performing covered tasks.

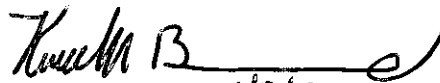
SED's findings are noted in the Summary of Inspection Findings (Summary) which is enclosed with this letter. The Summary reflects only those particular records and pipeline facilities that SED inspected during the audit.

Within 30 days of your receipt of this letter, please provide a written response indicating the measures taken by PG&E to address the violations and observations noted in the Summary. Pursuant to Commission Resolution ALJ-274, SED staff has the authority to issue citations for each violation found during the audit.

If you have any questions, please contact Sikandar Khatri at (415) 703-2565 or by email at Sikandar.Khatri@cpuc.ca.gov.

Sincerely,

Kenneth Bruno
Program Manager
Gas Safety and Reliability Branch
Safety and Enforcement Division


4/3/2015

Enclosure: Summary of Inspection Findings

cc: Larry Berg, PG&E Gas Regulatory Support
Larry Deniston, PG&E Gas Regulatory Support

SUMMARY OF INSPECTION FINDINGS

I. Probable Violations

A. PG&E's Internal Audit Findings

Prior to the start of audit, PG&E provided SED its finding from the internal review it conducted of East Bay Division (Division). Some of PG&E's internal review findings are violations of PG&E's standards, and are therefore violations of Title 49 Code of Federal Regulations (CFR), §192.13(c) or §192.605(a). SED is aware that PG&E corrected some of its findings prior to SED's audit.

Table 1 lists all of the violations from PG&E's internal review.

Table 1: PG&E's Internal Review

Code Section	Year: # of Non-Compliance(s)	Finding Description	Corrective Action	Remediation Date
192.605 (a)	2012: 1	Leak Survey Distribution: Survey Late or Not Completed:	Survey completed 8 days late	04/24/2012
192.605 (a)	2012: 3	Leak repair: Missing USA	Tail-boarded crews about expectations of calling USA during regular business hours	09/21/2012
	2012: 1	Leak repair: Missing Pipe/Soil read (When any BG, Bare Steel Pipe is exposed)	Pipe to soil was taken subsequently after review	05/30/2012
192.605 (a)	2013: 5	Valve Service History Form - Maintenance missed or late	Maintained late as transition from FM to SAP indicated some valves did not make schedule	July 2013
	2012: 8	Valve Service History Form - Maintenance Record indicated 'Corrective Action' needed and no indication of follow-up recorded	All work identified and repair or replacement scheduled in construction. All valves in compliance.	12/31/2014
	2013: 6			9/3/2014
192.605 (a)	2012: 2	Inoperable emergency valve not restored w/in 12 months or documented in file	Both Valves replaced in March 2014	3/31/2014
192.605 (a)	2012: 1	List of pipelines to be patrolled and patrolling method missing or not reviewed annually	Missed 3rd quarter landslide patrol in 2012. Patrols resumed 4th quarter 2012	12/31/2012

192.605 (a)	2012: 1	Corrosion – Rectifier Interference indicated and no Corrective Actions noted on Form (>300MV shift)	Higher than normal potential in February. Potentials dropped to normal range on subsequent bimonthly. No abnormal Conditions found. Tailboard employees to provide explanation on maintenance form.	02/26/2014
192.605 (a)	2012: 1	Corrosion – Rectifier Annual rectifier read missed or late (Distribution and Local Transmission)	Rectifier maintenance went over 15 months by 7 days. Increased awareness during supervisor review. Tailboard employees on maintenance date requirements	02/26/2014
192.605 (a)	2012: 2	Corrosion – Rectifier No explanation or action taken on P/S not meeting -850 mV	Base data from prior resurvey added to all 2012 maintenance sheets on 2/26/14. Tailboard employees on proper and complete documentation	02/26/2014
	2013: 1			Confirmed that no action plan was filled out for reads down 6/14/13 and restored 7/25/13. Tailboard employees on proper and complete documentation
192.605 (a)	2014: 3	Corrosion – Rectifier Maintenance Completed beyond 15 month compliance date	Rectifier Maintenance completed late: # 474: 2 months late #243: 1 day late #246: 75 days late	07/10/2014 08/06/2014 08/06/2014
192.605 (a)	2013: 1	Corrosion – Rectifier Area Down over 30 days w/no action plan	Area was up 2 months later. No action plan created	04/18/2013
	CPA's: 5			
	2012 and 2013 10%: 62			

192.605 (a)	2013: 1	Corrosion - Rectifiers Missed Maintenance, CPA: C7-63	A folder was never made up for this CPA. Action plan needs to be updated; area found down 4/2/2013 and is still currently down waiting to be replaced. Tailboard employees on action plan process	Planned 11/1/2014
192.605 (a)	2012-13: 18	Corrosion – Casings Missed maintenance	Continue to investigate and complete missed maintenance	Planned 11/1/2014
192.605 (a)	2012: 4	Corrosion – Resurvey Yearly P/S location not established as required (e.g., Steel main and Reg. station tied via wire)	Corrosion mechanic created new Yearly read to read in February. Corrosion mechanic verified ETS installed in the field. Worked with Asset strategist to ensure RW's were added to yearly asset registry	02/14/2013 and 02/27/2014
192.13 (c)	2012: 11	Instrument Calibration: Reference test instrument not calibrated annually not exceeding 15 months	Validated all gauges currently in compliance	09/05/2014
192.13 (c)	2012: 2	Electrodes missed calibrations	1 st quarter 2012 missed calibration. No 2012 calibration until 5/9/2012. 2 nd quarter missing calibration	Completed 09/12/2012
192.13 (c)	5	5 idle stubs were not cutoff after 1 year of determining that cutoff was required. The deadline for cutoff was 06/28/2014.	The 5 idle stubs will be cutoff by the end of 2014	Planned 12/31/2014

B. SED Findings

1. Title 49 CFR §192.605 states in part:

(a) *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... ”*

(b) *Maintenance and normal operations.*

The manual required by paragraph (a) of this section must include procedures for the following, if applicable, to provide safety during maintenance and operations.

(1) Operating, maintaining, and repairing the pipeline in accordance with each of the requirements of this subpart and Subpart M of this part... ”

1.1 Internal surface not inspected

Title 49 Code of Federal Regulations §192.475 (b) states that:

“Whenever any pipe is removed from a pipeline for any reason, the internal surface must be inspected for evidence of corrosion... ”

PG&E procedure O -16, Section 9(A) states:

“Whenever steel pipe is removed from a pipeline, it and the adjacent pipe must be inspected and evaluated to determine the presence and extent of any internal corrosion... ”

(a) SED staff reviewed construction records for three distribution projects: PM#s 30956473, 30902500 and 30956569. SED found that no internal surface inspections were performed when the pipe was exposed during the construction projects with PM#s 30956473 and 30956569.

(b) In addition, internal surface inspections were not performed during the repairs on steel pipeline for leak #s 28-12-22037-1, 28-12-22031-1 and 28-13-24020-1.

1.2. Yearly locations not established

PG&E procedure O-16, Section 4(D) states:

“Yearly Reads: Yearly P/S on-potential monitoring points shall be established on distribution piping CPAs in the following circumstances:

- Establish yearly monitoring points at all locations where the failure of a locating wire will cause a section of steel main to become isolated and not be detected by bi-monthly monitoring.*
- Where a regulator station is tied to a CPA via a wire, the regulator station shall be established as a yearly”*

SED observed that yearly locations were not established for the following Cathodic Protection Areas (CPA):

CPA (Cathodic Protection Area)	Number of locations	Comments
C7-13	3	(1) A service off of Hillview (2) A section of main on the North End of Jordan Rd. (3) A main tapped off of the main on Carlsen St.
C7-23A	2	(1) Along Mandela Parkway, South of 15 St. (2) On Cedar, near 9 th .
B2-39	1	38 th Avenue
B1-21	2	El Sobrante (plat E-14) and San Pablo Dam road and Contra Costa road (plat F-13)
B3-11	3	1.Ramona (labeled RY-4) 2.Intersection of Portland and Santa Fe (labeled RY-5) 3.Intersection of Portland and Curtis (RY-6)
B41-6	1	Address: 2454 San Pablo. It was just entered in SAP
B1-3	1	Parr Boulevard Richmond (Plat D-7 and D-8). It was identified during CPA resurvey on 8/1/2009
B1-12	1	Tyler (Plat E-10). It was identified during the CPA resurvey on 09/26/2010

1.3. P/S locations not monitored

Title 49 Code of Federal Regulations §192.465 External corrosion control: Monitoring. States:

" (a) 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..."

SED found that there are two galvanic systems where certain locations are not being monitored. These include Map C7-9 (four locations) and Map C7-27 (one location).

1.4. 10% locations not monitored within 10-year period

Title 49 Code of Federal Regulations §192.465 states:

"... However, if tests at those intervals are impractical for separately protected short sections of mains or transmission lines, not in excess of 100 feet (30 meters), or separately protected service lines, these pipelines may be surveyed on a sampling basis. At least 10 percent of these protected structures, distributed over the entire system must

be surveyed each calendar year, with a different 10 percent checked each subsequent year, so that the entire system is tested in each 10-year period."

PG&E procedure O-16, Section (5)(A)(3) states:

"Monitor individual isolated services of any length at least once each 10 years. This includes individual buried, metallic fittings, PG&E-owned gas houselines, and isolated main segments less than 100' long. Monitor at least 10% of all such facilities each year. Each successive year, monitor a different selection of at least 10% of the facilities. Any "10%er" read that is found to be less negative than -850 mV must be restored within 30 calendar days from the day it is discovered.

- (a) SED found that dates between previous read and 2013 is greater than 10 years for the following 15 locations below:
41271954, 41271955, 41271956, 41271957, 41271980, 41271981, 41271982, 41271983, 41271984, 41271985, 41271986, 41271987, 41271988, 41271989, 41271990
- (b) No previous read dates for one location at 979 Jones (ID: #41271019)
- (c) SED reviewed Division's 2012 and 2013 10%ers records and requested a similar list to verify the compliance of test locations, which were checked in the last 10 years. However, Division was unable to provide the previous records to show the compliance of corrosion checks conducted in the last 10 years. SED determined that in order to verify the compliance of the locations, which were checked from 2012 through 2013, Division must provide complete records showing all readings recorded in the prior 10 years. Hence, SED determined that Division could not demonstrate its compliance.

1.5. Casings

- (i) PG&E procedure O-16, Section G, Casing Monitoring and Maintenance States:

"Local transmission, backbone transmission pipelines, and gas gathering pipeline cased crossings must be monitored annually (once each calendar year with intervals not to exceed 15 months) ..."

SED found during the audit that:

- (a) Casings P/S read was performed late for the following casing locations between 2012 and 2013:
41423315 and 41397224
- (b) Multiple casings P/S not read in 2012 and 2013.

2012: 41403892, 41425761, 41425844, 41406514

2013: 414032892, 41397284, 42721891, 41425854, 41425711, 41425718, 41425725, 41425732, 41425738, 41425746, 41425769, 41425776, 41425783, 41425790, 41425798, 41425806, 41425814, 41425861, 41425874, 41425882, 41406514

(ii)

Title 49 Code of Federal Regulations §192.467(a) states:

"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."

PG&E procedure O-16, Section G, Casing Monitoring and Maintenance states that:

"...Cased pipeline crossings that are found to be contacted (the casing is in electrical contact with the pipeline) shall be reported to corrosion engineering personnel within 30 days of discovery of the contact. Contacted casing reported to corrosion engineering personnel will be remediated as part of the contacted casing remediation program administered by corrosion engineering personnel. Once included in the contacted casing remediation program, the cased crossing will be evaluated and assigned a priority number and listed on the current list of contacted cased crossings. Contacted cased crossings will be remediated as resources become available. An action plan for contacted cased crossings shall be maintained by the local maintenance organization and shall consist of a standard contacted cased remediation plan, a description of the contacted case remediation program, and confirmation from corrosion engineering personnel that the particular casing is in the contacted casing program. In the year that a contacted casing is scheduled for remediation, the project manager responsible for the remediation work will prepare an individualized action plan for the work to attempt to clear the casing contact, anticipated to be performed during the year. The project manager will forward a copy of the action plan to the local maintenance organization to be included in the action plan for the contacted casing. The project manager shall update the action plan every 30 days and forward a copy of the most recent version of the action plan to the local maintenance organization to be included in the action plan for the contacted cased crossing."

SED observed that:

- (a) No corrective action was performed for the casing reads found out of compliance for the year 2012 and 2013 for casing 41396858
- (b) Multiple casings were found out of compliance (low pipe reads) without follow-up corrective actions

ID	Read dates
42649038	5/2/2013
41397198	12/7/2012
41397235	12/7/2012 & 12/12/2013
41416736	12/8/2012

1.6. Inadequate Cathodic Monitoring Test Locations

Title 49 Code of Federal Regulations §192.469 External corrosion control: Test stations states:

"Each pipeline under cathodic protection required by this subpart must have sufficient test stations or other contact points for electrical measurement to determine the adequacy of cathodic protection."

PG&E procedure O-16, Section 4(B) states:

"Pipe-to-Soil Test Locations:

Gas distribution test locations selected for monitoring cathodic protection effectiveness shall be at locations where the level of protection is the lowest for that CPA or shall be at locations where the loss of effective CP in the CPA would be detected."

SED observed the following CPAs with only one established test location:

(a) B1-26

This CPA only has one test location at 300 Gertrude Avenue; the farthest location from the rectifier would be by the San Pablo Regulator Station.

(b) B5-32

There is only one test location at 1106 Portland Avenue, El Cerrito. The rectifier located at N/W corner of Kains St & Garfield Ave appears to be protecting a five-block area and the farthest location from rectifier is near Marin Avenue.

(c) B41-9

The rectifier is located at Merchant Avenue and Kendall Avenue, Crockett. There is only one test location at the Nantucket Restaurant in Crockett.

Unless PG&E can provide documentation to demonstrate that the established test locations are at the lowest level of protection for that particular CPA or that the single test location can sufficiently detect a loss of CP in the CPA, PG&E must establish additional test locations to demonstrate adequacy of CP throughout the CPA.

After the audit, PG&E through an email has conveyed that it has established two additional test locations for the CPA area B41-9 and one for the CPA area B5-32.

1.7. Calibration

PG&E procedure M53.3 (page 1) states in part that:

"Verifying Calibration of CGIs: Check the calibration of regularly used CGI gas detectors at least once a month..."

PG&E procedure TD-4110P-25, section 2.7 "Running the Self-Test", part 1 states that

"Every day the DP-IR is in service, personnel must verify the instrument's calibration prior to use by performing the following self-test..."

PG&E procedure, TD-4110P-21, section 2.2. states that:

"Regularly verify the calibration of portable HFI units, OMDs, RMLDs, and IR detectors according to the frequencies specified in Table 1 below."

Table 1. Required Frequencies of Calibration Verification

Unit	Calibration Verification Frequency	Operational Test Frequency
HFI	Weekly	NA
RMLD	Daily	NA
IR detector	Daily	NA
OMD	Weekly	Daily

During the audit, SED noted that various leak detection equipment were not calibrated as required or noted that the equipment was out of service:

- (a) Leak survey equipment DP-IR were not calibrated daily as required:

Equipment #	Month/Year	Record location
0004	08/13	Richmond
0005	8/12, 10/12, 2/13, 3/13	Richmond
3002	06/13	Richmond
0008	09/13	Richmond
4011	2/13, 4/13, 5/13	Richmond
9001144010	4/13, 7/13, 8/13	Oakport
9001144011	12/12	Oakport
8101021006	7/13, 8/13	Oakport

- (b) Heath DP-4 not calibrated once a week as required:

Equipment #	Month/Year	Record location
1500903010	02/12	Oakport
1500914006	06/12	Oakport

- (c) CGIs not calibrated correctly:

Equipment #	Month/Year	Record location
4118	7/12, 8/12	Richmond
4062	7/12, 8/12	Richmond

1.8. Valves

Title 49 of Code of Federal Regulations, §192.747 Valve maintenance: Distribution systems states:

“(b) Each operator must take prompt remedial action to correct any valve found inoperable, unless the operator designates an alternative valve.”

PG&E procedure, TD-4430B-001, page -2 states:

“Upon discovery of an inoperable valve the following procedure applies.

- A. Complete AMC procedure for inoperable valves which are not promptly repaired (see Attachment 2 for an example of an AMC)...*”

C. 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..."

SED found that valve FV-09 at Regulator Station RA-15 is frozen since 7/18/2013. It is also an Emergency valve and no Alternate Means of Control (AMC) was established. However, the valve maintenance sheet has a note on 08/18/2014 that a request for replacing the valve is in place.

1.9. Mapping/Record keeping Issues

Title 49 of the Code of Federal Regulations, §192.605(b)(3) states that:

"making construction records, maps and operating history available to appropriate operating personnel"

Additionally, PHMSA ADB-02-03 states:

"Owners and operators of gas distribution, gas transmission, and hazardous liquid pipeline systems should ensure that accurate construction records, maps, and operating history are available to appropriate operating, maintenance, and emergency response personnel ...", it further adds that, "RSPA urges every pipeline operator to ... (2) keep these maps and records up-to-date as pipeline construction and modifications take place; ..."

PHMSA ADB-02-03 also reminds Operators of their responsibility to maintain construction records, maps, and operating history and to make this information available to appropriate operating personnel to enable them to safely and effectively perform their duties.

During the field visit, SED observed that the records available with PG&E staff did not accurately reflect the conditions of assets in the field.

(a) The records for the following valves were inconsistent with the field conditions.

Valve Identification	Address	Comments
A-51	Martin Luther King J. Way and 61st street	The valve card record showed this to be a 12" valve; however, during field inspection, it did not appear to be of this size. PG&E staff stated that it would be investigated further.
W-34	Foothill Blvd and 35th Avenue Oakland (SAP# 41280746)	The valve card records showed its normal position "CLOSED" but maintenance sheets record showed 'As Found (AF)' and 'As Left (AL)' positions as "OPEN". Valve was also open at the time of the field visit. This was brought to the attention of PG&E staff and a change was made on valve card sheet on 9/29/14 to

		record its normal position as "OPEN". It would be helpful to know why it was placed "CLOSED" on valve card in first instance?
--	--	---

- (b) For map 7E-6, two risers were noted as not being there by the leak surveyor in 2008. The map from 2013 shows the services still being there. A mapping change has not been completed in the 5 years since 2008.

1.10. Leak record

PG&E procedure TD-4110P-03 states:

"10 Documenting Leaks on Leak Log and Taking Appropriate Action

10.1 Investigate to determine grade of leak...

10.2 Obtain leak number... "

SED during field visit observed a leak at a belowground valve, K-79 (Grand Ave and Mandana Blvd, Oakland) which measured 6% LEL. A leak was also reported during the last valve maintenance performed on 12/13/2013. In a response to inquiry, PG&E reported on 09/29/2014 that although mechanic called to report the leak observed on 12/13/2013 but no leak number was created.

1.11. Patrolling

Title 49 Code of Federal Regulations §192.721 Distribution systems: Patrolling. states:

"(b) Mains in places or on structures where anticipated physical movement or external loading could cause failure or leakage must be patrolled-

(1) In business districts, at intervals not exceeding 4½ months, but at least four times each calendar year; and

(2) Outside business districts, at intervals not exceeding 7½ months, but at least twice each calendar year."

(a) A review by SED of the "Slide Binder" provided by PG&E in Oakland office showed that there were a large number of distribution patrols outside of the business districts that were not conducted twice per calendar year in the Oakland district.

(b) Despite several requests, no information was provided for "slide patrols" in Richmond district.

II. Areas of Concern/ Observations/ Recommendations

1. During the field visit, SED staff observed a Pipe-to-Soil (P/S) value of -875 mV at a casing located at Silver/Maple Dr. (# 41396858, EBR327050; EB-41-F6) which indicates the possibility of a potential contact, and hence should be investigated.
2. **CP criteria not met – field visit**

PG&E procedure O-16 states in section 3(A) that:

“Cathodic protection systems will be considered adequately protected when the lowest P/S potential is –850 mV or more negative, with reference to a copper-copper sulfate electrode, with cathodic protection current applied...”

SED during field visit found that the following locations did not meet required P/S potential criteria:

CPA/Reference	Address	P/S Reading (mV)	Type of monitoring	Comments
C7-29	6241 Chelton, Oakland	-490	10%	
# 41282050	2033 Encinal Ave., Alameda	-400	10%	
#41282775	1607 89th Ave. Oakland	-722	10%	
41271157	1126 Masonic, Richmond	-783	10%	
41271193	561 The Alameda, Richmond	-780	10%	A drivable anode was placed during the site visit.
C7-27	6150 Johnston Dr., Oakland	-234	Yearly	Valve almost buried in the ground
C7-41	995 Longridge, Oakland	-480	Annual	

3. Pipeline Markers

3.1.

Title 49 of Code of Federal Regulations §192.707 Line markers for mains and transmission lines states:

“(a) Buried pipelines. Except as provided in paragraph (b) of this section, a line marker must be placed and maintained as close as practical over each buried main and transmission line:

(1) At each crossing of a public road and railroad; and

(2) Wherever necessary to identify the location of the transmission line or main to reduce the possibility of damage or interference.”

PG&E procedure TD-4412P-09, Section 1 (1.1) (1) states:

"Install pipeline markers, also known as "line markers" or "markers," according to Code of Federal Regulations (CFR) Title 49, Transportation, Part 192—Transportation of Natural and other Gas by Pipeline: Minimum Federal Safety Standards, Subpart M—Maintenance, Section 192.707, "Line markers for mains and transmission lines."

a. Buried pipelines. Except as provided in paragraph (b) of this section, a line marker must be placed and maintained as close as practical over each buried main and transmission line:

(1) At each crossing of a public road and railroad; and

(2) Wherever necessary to identify the location of the transmission line or main to reduce the possibility of damage or interference.... "

SED staff made following observations during the field visit:

(a) The staff visited PG&E facilities located at the junction of Sycamore and Palm Avenue in Hercules. Two pipelines 105B and StanPac run in parallel at this location. However, it was noted that there were no line markers on both side of Palm Avenue where pipelines cross the road. There is a need of two markers on each side of the road, one for each line i.e. 105-B and StanPac.

(b) During the visit of Line DFM 123-01 near Atlas and Giant Road (41412957, EBR337020; EB-1-A11), it was observed that there might be a need of line markers since pipeline crosses the rail tracks. However, it depends upon the class location; a request for this was made to PG&E staff to determine the need of markers.

3.2.

PG&E procedure TD-4412P-09, Section 4.2 further states:

"IF decals are not legible, are missing, or if the phone number is not consistent with L-10 and L-12

THEN install or replace the warning decals on the markers. "

SED staff noted that:

(a) At the location Embarcadero and 450' NW of 19th Street, Oakland (41397235, EBR427080; EB-7-F8), the marker was present but some letters on it were covered with paint and it had non-working phone number, 415-234-1234.

(b) For the exposed section, 24" TP Crossing near Lake Merritt Tidal Canal, N-side of Embarcadero, the marker on one side was not legible and it had non-working phone number, 415-234-1234.

4. Despite repeated reminders, no information was provided for the following:

(a) A request was made on the first day of the audit to provide information regarding distribution pipeline sites identified in the Division, which require patrolling in addition

to the sites mentioned in "Slide Binder" provided in Oakland office. This was also pointed out in the CPUC's letter for 2012 audit (AOC-3).

- (b) No information was provided for "exposed sections" in Richmond district.
- (c) A request was made on first day of the audit to provide information regarding "hazardous meter locations" in the Division. No information was provided. During field visits, the subject was discussed with staff, which indicates that there is a possibility of having meters in location such as on or in close proximity of earthquake faults, or meter locations prone to flooding and others. It is recommended that the Division should carry out a study to determine existence of such meter locations, and take necessary safety measures in case of their existence.

(d) CPA area: B1-26

A request was made for the copies of casing locations for this CPA. There appears to be at least two transmission lines (L-105A and L-0126) and one distribution line that cross two railroad tracks, Plat E-9. Casing P/S reads at these locations were requested, but were not provided.

- 5. SED observed that in a number of instances, plug valves were not lubricated during regulator/valve annual inspections, and the maintenance sheets had notes, such as "Grease won't go in". Some examples are:
 - Regulator station RA-44, valve FV-18
 - Regulator station RC07, valve FV-83
 - Valves: C-34, R-75 and R-92

It is recommended that PG&E should investigate to determine the cause(s) and take necessary measures to rectify the problem.

- 6. SED observed that in a number of cases during the review of regulator stations and valves by PG&E staff before the audit, "Corrective Action" requests were placed. Examples are general corrosion at regulator station, issues with vault lids etc. It is expected that the Division will take necessary steps to rectify these at the earliest.
- 7. SED observed PG&E's leak surveyor conducting surveys at various locations and the following observations were made:
 - (a) A leak survey using DP-IR was carried out the Lincoln and Willow Streets in Alameda, Map 9A-08. A leak was found on the main on Lincoln Avenue opposite to house # 2055. The read was 66 ppm. The mechanic called for a crew, and later reported that they recorded 0.75% gas and graded the leak as Grade-3.
 - (b) Another leak survey was performed along Forest Street in Oakland and the following was observed:
 - (i) The meter at house # 515 is located under a staircase with the vent outside. The mechanic observed a reading of 8 ppm on meter assembly using DP-IR and told that it is considered as Abnormal Operating Condition (AOC) and will turn in a request to move the meter outside.

- (ii) The mechanic observed a leak at the fittings on meter set at house #497. He used soap test to confirm the leak and told that he will report it to Gas Service Representative (GSR).
- (iii) The mechanic recorded a reading of 8 ppm on meter set at house #493. He performed soap test to confirm the leak and noted it as grade 3 leak. Additionally, the meter set and vent are in the enclosure at this house which mechanic told that he would report to the office.