

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



October 31, 2016

GI-2016-08-PGE01-02B

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

SUBJECT: General Order 112 Gas Inspection 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 inspection of Pacific Gas & Electric (PG&E) Company's East Bay Division (Division) from August 29 through September 2, 2016.¹ The inspection included a review of the Division's operation and maintenance records related to pressure control devices, and emergency and relief valves for the years 2014 and 2015 and some other records. A representative field sample of the Division's facilities in the cities of Alameda, Oakland, Richmond, Berkeley and Hercules was also inspected. 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 inspection.

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

Sincerely,

A handwritten signature in blue ink that reads "Kenneth A. Bruno".

Kenneth Bruno - Program Manager
Safety and Enforcement Division

Enclosure: Summary of Inspection Findings

cc: Dennis Lee, SED
Mike Falk, PG&E Compliance Gas Operations
Susie Richmond, PG&E Gas Operations Regulatory Compliance and Risk Analysis

¹ General Order 112-F was adopted by the Commission on June 25, 2015 via Decision 15-06-044.

SUMMARY OF INSPECTION FINDINGS

I. Probable Violations

A. PG&E's Internal Audit Findings

Prior to the start of inspection, 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 inspection. For those items not corrected prior to the inspection, please provide an update on PG&E's progress to complete the corrective actions.

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

Table 1: PG&E's Internal Review

Code Section	Asset Type	Year: # of Non-Compliance(s)	Finding Description	Completion Date
192.605 (a)	Regulating Station	2015: 1	Station Maintained outside compliance window. GT CONOCO PHILIPS MTER & REG STATION (FL GT.STAT.MISC.CONOCOPHIL.FLTR and GT.STAT.MISC.CONOCOPHIL.VALV)	3/2/2016
		2015: 2	Pressure Record Document Incorrectly filled out. Station Name/Location: DR RC-11 WEBSTER ST / ATLANTIC ST-1RU-1 ; DR RC-02 HIGH ST & MADISON ST-1RU-1	3/1/2016
192.605 (a)	Valves	2015:1	Missed Maintenance: During Valve stabilization, valve X-22 was found to not have a maintenance item or maintenance plan.	3/2/2016
		2015:9	Missed Maintenance: STATION VALVES and LINE VALVES were installed but never entered into SAP.	1/13/2016
		2015:2	Missed Maintenance: 2 emergency valves, V-B02 and V-G07 missed 2015 maintenance within 15 mos. from prior maintenance.	3/3/2016
		2015:1	Missed Maintenance: AMC Past due. Valve found frozen and inoperable on 5/5/14, corrective turned in for repair. PR notification 107870891 was completed by I&R and should have been left open since maintenance was not completed. This resulted in the valve not showing up on the SAP Compliance report. Oakport Valve R-9	3/8/2016

192.605(a)	Valves	2015:1	Missed Maintenance: Valve V-C236 (Hill/San Pablo) was paved over in 2015, resulting in missed maintenance. Valve was maintained on 5/31/14.	3/3/2016
		2015:6	Non-Compliance of Company Procedures (TD-4430P-04) Missed Lubrication: FV-45, FV-70, FV-18, D-90, FV-90 A-13	Need update
		2014:2	Valves Inoperable beyond 1 Year: Asset Name: ZV-08; R-98	6/1/2016

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 Valve Maintenance

Title 49 Code of Federal Regulations §192.745 Valve maintenance: Transmission lines states:

(a) Each transmission line valve that might be required during any emergency must be inspected and partially operated at intervals not exceeding 15 months, but at least once each calendar year.

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

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

(a) 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.

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

SED during the inspection found following valves missed annual inspection and exceeded the 15-months maximum timeframe allowed by the code. In addition, where required, no Alternate Valves were designated.

(i) Valve, J-01: 62nd Avenue and Foothill Blvd., Oakland: Last maintenance was done on 11/21/14, and the 2015 calendar year inspection was missed. The notes also indicate that the valve is paved over, and a corrective was turned in after 12/29/15 inspection. Please provide an update.

(ii) Valve H-07: N/S Russel E/S Claremont, Berkeley: It was not operated during the year 2014. The notes from 2014 show, "Unable to operate" and there is no record of Alternate Means of Control (AMC) designation. Please provide an update.

(iii) Valve B-18, currently inoperable since 2015. There was an incorrect entry for operation in 2016 and another inoperable entry. Currently there is a request for designation of AMC but no valve has been assigned.

(iv) Valve E-07, Oakport Office (June binder) – last maintenance was performed in 2014; the notes say stem broke and valve frozen. It is more than 15 months and no AMC has been designated. Please provide an update.

1.2. Late Supervisor Review (valves)

PG&E procedure TD-4430P-04, Rev 1, section 3.3 states:

“Maintenance supervisor, upon completion of valve maintenance, will accomplish the following:

1. Review, within 30-working days, each Gas Utility Form TD-4430P-04-F02, “Gas Valve Maintenance Record Form—Service History” for accuracy and completeness. Return Service History Form to personnel that performed maintenance to correct errors and omissions.”

SED observed that maintenance records for the following valves were not reviewed and signed during the required timeframe:

A-15, A-19, A-28, B-77 and FV-41

1.3. Late Supervisor Review (Regulator Station)

PG&E procedure TD-4540P-01, Rev 0, section 7.1 (4) states:

“Review AND approve all records for work performed at each regulator station within 30 days of completion of maintenance”

SED observed that maintenance records for the stations RB-02 and RC-01 for the year 2015 were not signed in the required timeframe.

1.4. Meterset Assemblies and Large Volume Customers

PG&E procedure D-4540S, Rev 0, Table 2 Maintenance Schedule outlines the frequency intervals for regulating stations. According to this table Class A Inspection of customer meterset assemblies should be performed at least once every 5-calendar years and large volume customer regulator set at least once each calendar year, at intervals not to exceed 15 months.

SED found that maintenance for following assets was not performed as per the required timeframe:

- M-12 - City of Oakland CNG, 7101 Edgewater Dr., Oakland
- M-09 - Metro Furniture/One Work Place, 7220 Edgewater, Oakland
- M-14 - Peets Coffee – 2001 Harbor Bay Parkway, Alameda
- M-16, Gallager & Burke, 344 High Street, Oakland
- Emery Station, 5858 Horton Street, Emeryville
- Federal Building, 1301 Clay Street Oakland

- Alameda CO-GEN, 2900 Main Street Alameda
- D-11: 850 Marina Bay parkway, Richmond
- C-18: 2101 Franklin Canyon Rd., (Phillips 66 Company)
- P-16: 1145 Harbour Way S, Richmond
- Heating Plant (1), UC Berkeley
- Heating Plant (2), UC Berkeley: maintained on 7/12/08 & 6/5/10 but lapsed the 5 year interval

1.5. Capacity of Pressure Relieving Devices

Title 49 Code of Federal Regulations §192.201, Required capacity of pressure relieving and limiting stations, states:

(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:

(1) In a low pressure distribution system, the pressure may not cause the unsafe operation of any connected and properly adjusted gas utilization equipment.

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

(i) If the maximum allowable operating pressure is 60 p.s.i. (414 kPa) 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;

(ii) 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; or

SED observed that for station, R-E03 Jackson & Buchanan St., Albany, the downstream maximum allowable operating pressure (MAOP) is 50 psig, and the set pressures for regulator and monitors are 40 psig and 45 psig respectively. However, automatic shut-off valve (ASV) is set at 57 psig, which is above the allowable limit of 56 psig as per 49 CFR 192.201 (a)(2)(ii).

1.6. Response not received

PG&E has not provided response for the following data request:

(1) 192.517(b) requires keeping record of pressure test failures (under 192.513) for at least five years. It appears from discussions with PG&E staff that the records have not been kept. Please confirm.

(2) PG&E in its self-identified violation via letter July 7, 2014 reported that failure records for plastic joiners have not been kept to determine whether they need requalification (using both visual and destructive examination). Hence, under special exercise performed, PG&E requalified joiners using both visual and destructive examination.

After that special exercise, has PG&E kept records to implement 192.285(c) as required at that time prior to Amdt. 192-120, 80 FR 12779, Mar. 11, 2015, effective October 1, 2015?

(3) 192.285(c) was amended through Amdt. 192-120, 80 FR 12779, Mar. 11, 2015, effective October 1, 2015. Did PG&E amend procedures to take account of it? Please provide the revised procedure.

(4) As per our understanding from discussions with PG&E staff procedure was revised in August 2016. How the period from October 1, 2015 to the new PG&E procedure is covered? Is it correct to say that PG&E has not implemented the revised code language until August 2016 for joiner qualification?

(5) Has PG&E kept record of plastic joints failed under pressure (192.513) to implement the revised code language after new code language of 192.285(c) became effective? If yes, please provide the same.

II. Areas of Concern/ Observations/ Recommendations

SED made following observations during the audit. We understand that PG&E is taking steps to remediate the situations, please provide the information and update.

1. A large number of valve maintenance records (valve cards) did not have valve pressure ratings. For example, the records at Oakport office (October, November, & December anniversary months binders), all of them except valve K-99 (a total of 128 valves), there was no pressure rating. A similar observation was made for 45 valves in June binder at the Oakport office.

Please provide detailed explanations of any efforts that PG&E made to find this critical information ("Type", "Pressure Rating", "Make/Model", "Size") for those filled as "Unknown" on valve cards.

2. It was observed that numbering of certain fire valves on regulator station diagram, station datasheets and valve cards did not match. The examples are fire valves at the regulator stations, RJ-12, RJ-11, RRA-03 and RL-03. PG&E explained that the fire valves have been renumbered; however, the records are not updated. Please provide information on efforts that are being made to update and synchronize the records, and expected deadline for the same.
3. A number of valves had notes such as hard to turn, stem is broken and need to be replaced. In some case there were no correctives and in other cases there were correctives in place, but no action has been taken. Examples are valves G-34, G-35, T-27, P54, C-29, R-81, F-97 and T-37. Please provide update on actions being taken to resolve the situation, and expected deadlines.
4. SED observed that a number of regulator stations have issues with fresh air vent system, corrosion/painting/coating, vault lids and lock up. There are either no correctives or for some of these corrective orders in place, some dating back to 2010 /2012 but no action has been taken. It is expected that these should be remediated as soon as possible. Please provide an update on completion or expected completion dates.
The examples are RA-01, RB-02, RB-05, RA-03, RA-05, RA-08, RA-18, RC-02, RC-04 and RC-05.
5. Regulator Station, RA-01: Beaudry & Powell, Emeryville:
The maintenance notes have requests for valve replacement since 2014, but still no corrective action has been taken.
6. Regulator station, RA-03: Broadway Terrace & Pinewood, Oakland: Didn't lock up in both 2014 and 2015 inspections. The work orders have been created; please provide an update on corrective action.
7. Regulator station, R-E06: 7th St. & Gilman St., Berkeley: The folder contains notes on "missing ventilation stack" (with notification # 109198852) since the 9/6/14 inspection and an email note stating "the station will be rebuilt in 2015", however, there is no record of corrective action(s).

PG&E provided information that the station will be rebuilt under work order, PM 30882899. Please provide an update.

8. C-86: Hillmont Drive and Altamont, Oakland: The notes show a request since 2013, "valve frame and cover needs to be re-centered". It appears that a corrective has been submitted, but there is no record of corrective action. Please provide an update.
9. P-54: Congress and Foothill Blvd., Oakland: There are notes from PG&E staff, "valve stem is not fitting key correctly, corrective to replace valve" both during 2012 and 2013 inspections. There was no record of corrective action. Please provide an update.
10. There were number of valves, that have notes such as "valve not taking grease" or other greasing issues, but no corrective action has been taken. Examples are:

C-29, G-34, G-35, B-92, R-75.

11. SED observed that set points of Automatic Shutoff Valve (ASV) were not recorded on the maintenance data sheets for the following regulator stations:

RA-15, RA-16, RA-17, RA-18, R-Z02, R-Z03, R-G06, A06, RA-01, RA-04 and RA-08.

PG&E responded that brass label tag on each equipment in the field has set point recorded on it. SED recommends that it will be helpful to have the same recorded on maintenance data sheets for the sake of the verification of records.

12. SED inspected the alarm history provided for the Division. Following observations were made:

- (a) PG&E's standard "Alarm Definition and Rationalization Process", Section 2 lists, "2.1. Alarm Priorities" and "2.2. Response Codes", however, SED did not find a correlation between the two; it was not clear that what kind of response code will be assigned for each alarm priorities. For example, "Immediate Response" for alarms categorized as "Emergency" etc. Please provide PG&E plan to address this issue.
- (b) SED identified 719 alarm events categorized as 'Emergency' from the list provided. After discussions with PG&E, it was found that 64 of them didn't have any record of the cause and the actions taken to resolve.

PG&E in its post-audit response has provided a list with comments. Please provide the cause of these discrete alarms and actions taken, if required.

13. During field inspections, following observations were made:

- (a) A leak was noticed on valve E-41, Alameda. The valve was also hard to turn. PG&E staff has reported a leak on this valve during maintenance inspections on 8/27/13, 9/12/14, 8/22/15. We understand that there is a corrective in place for replacement but no action has been taken. Please provide an update.
- (b) Regulator station DR-11 Alameda. A leak was found, and PG&E Staff mentioned that the filter is leaking and work order is in place to replace the filter and also make changes to vault for the ease of station maintenance. The station is located next to a parking lot and a busy road and hence need an urgent action. Please provide an update.

(c) Valve F-97- It was found to be very hard to turn by two people even after the application of grease. The notes in the folder show that it has been very hard to turn since 2014. There is no corrective action in place. Please provide details of PG&E planned remedial action and expected completion date.

(d) Regulator station R-L08

The lock-up was not achieved on both monitor and regulator. The cartridge was changed at the monitor and a diaphragm at the regulator which was due to Sulphur build-up. There has been an issue of lock-up at this station in every maintenance cycle since 2013. Therefore, special attention is needed to look at the underlying problem and take a remedial action. Please provide information on PG&E's plan to address this.

In addition, the lock-up issues due to Sulphur build-up have been observed in recent and the previous years' Division audits. PG&E should make a comprehensive plan to address it at regulator station level and system-wide. Please provide information on PG&E's plan to address Sulphur build-up issue.

(e) Valves H-07, H-05 and H-06

Pipe corrosion was observed at this location. PG&E mechanics stated that they have noticed corrosion but were not sure how to record this information. Therefore, mechanics need system-wide tailboards to provide instructions that all observations must be recorded, and where to record this information.

In addition, these valves were found hard to turn in previous years; a contractor fixed these recently, but no records were kept which indicates a communication gap and short-coming in the record keeping.