

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
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August 19, 2014

GA2012-10

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

RE: SED closure letter for the General Order (GO) 112-E Operator Qualification Program of Pacific Gas and Electric Company

Dear Mr. Singh:

The Safety and Enforcement (SED) of the California Public Utilities Commission reviewed Pacific Gas and Electric Company's (PG&E) response letter dated January 10, 2014 for the findings identified during the GO 112-E Operator Qualification (OQ) Audit. This audit of PG&E' OQ Program was conducted from October 22 – 26, 2012.

A summary of the audit findings documented by the SED staff, PG&E' response to our findings, and SED's evaluation of PG&E' response taken for each finding are outlined for each identified Probable Violation and Area of Concern.

This letter serves as the official closure of the 2012 OQ Audit and any matters that are being recommended for enforcement will be processed through the Commission's Citation Program or a formal proceeding.

Thank you for your cooperation in this Audit. Please contact Adriana Crasnean at (213) 620-2598 or by e-mail at adriana.crasnean@cpuc.ca.gov if you have any questions.

Sincerely,

Kenneth Bruno
Acting Program Manager
Gas Safety & Reliability Branch
Safety and Enforcement Division
California Public Utilities Commission

CC: [Redacted], PG&E
[Redacted] – PG&E
Alula Gebremedhin, GSRB/SED
Philip Nguyen, DOT

2012 PG&E Operator Qualification Program Audit Findings Summary

Probable Violations

1. Probable Violation #1(a) – 49 CFR §192.805 Qualification Program:

“Each operator shall have and follow a written qualification program.”

PG&E did not follow its own procedure and document individuals' evaluations. Several evaluation records were not available during the audit. PG&E explained to SED staff that PG&E does not retain evaluation documentation. PG&E's OQ Plan, Section 1.1.10, last paragraph states,

“All department managers / superintendents / supervisors share the responsibility to ensure that the skill evaluations have been completed for the employees with gas covered task responsibilities in their areas and that the evaluations were properly documented”.

Therefore, PG&E is in violation of 49 CFR §192.805 for not following its procedures.

PG&E's Response:

PG&E respectfully disagrees with this finding. PG&E's Operator Qualification Plan does not specifically state that the knowledge-based written test must be retained as part of the qualification record. Since the inception of PG&E's Operator Qualification Plan, it has been expected that the evaluator will confirm that personnel obtain a 100% score on the knowledge-based written test as part of the evaluation and prior to the completion of the qualification evaluation form. The completed qualification evaluation form serves as the record of evaluation.

To clarify just what qualification evaluation records are to be retained, the Utility Standard TD-4008S Operator Qualification Program Requirements will specify what qualification evaluation records are to be retained.

SED's Conclusion:

SED reviewed PG&E' response and accepts the corrective action planned to bring the records retention practices in compliance by specifying in the Utility Standard, TD-4008S Operator Qualification Program Requirements, what qualification evaluation records are to be retained. SED recommends that no fine or penalty be imposed since the violation did not create any hazardous conditions for the public or utility employees. However, SED may review the implementation of these stated corrective actions during future inspections.

2. Probable Violation #1(b) – 49 CFR §192.805 Qualification Program:

PG&E did not follow its own procedure and evaluate all individuals performing covered tasks for their capabilities to recognize and react to Abnormal Operating Conditions (AOC). PG&E OQ Plan, Section 1.1.1, states:

*“All individuals who operate and maintain pipeline facilities:
- be qualified to operate and maintain the pipeline facilities, and
- have the ability to recognize and react appropriately to abnormal operating conditions that may indicate a dangerous situation or a condition exceeding design limits.”*

In addition, PG&E OQ Plan, Section 1.2.4, when addressing criteria for the evaluator, states:

“He or she, through knowledge or experience, must only be able to: ascertain participant's ability to perform a covered task, and substantiate an individual's ability to recognize and react appropriately to abnormal operating conditions that might occur while performing the task”.

SED staff reviewed PG&E's OQ records and concluded that it did not evaluate all individuals who perform covered tasks for their capability to recognize and react to AOCs. Therefore, PG&E is in violation of Title 49 CFR § 192.805.

PG&E's Response:

PG&E respectfully disagrees with this finding. PG&E's Operator Qualification Plan requires individuals, as part of each task's qualification criteria, to appropriately recognize and react to abnormal operating conditions (AOCs). Evaluators must make this determination through questions and observations during the performance-based portion of the evaluation. The Qualification Evaluation forms require that the evaluator records this portion of the evaluation. Many, but not all, of the written knowledge-based portion of the evaluations specifically address AOCs.

To better document questions to be asked and observations to be made by the evaluator relating to abnormal operating conditions, starting in 2013, the performance-based portion of evaluations have been scripted and include a demonstration of the individual's ability to recognize and appropriately react to AOCs. By December 31, 2014, all knowledge-based tests will include questions on recognizing and appropriately reacting to AOCs.

SED's Conclusion:

SED has reviewed PG&E' response and accepts the corrective action planned to bring the documentation practices in compliance by including questions about individual's ability to recognize and appropriately react to AOCs in both the knowledge-based tests and performance-based evaluations. SED recommends that no fine or penalty be imposed since the violation did not create any hazardous conditions for the public or utility employees. However, SED may review the implementation of these stated corrective actions during future inspections.

3. Probable Violation #1(c) – 49 CFR §192.805 Qualification Program:

PG&E's OQ Plan, Section 1.2.6, states:

“The criteria below are applied to each covered task and classification to determine the appropriate evaluation frequency for that task.

- 1. Repetitive nature*
- 2. Level of risk*

3. Complexity
4. Existence of checks and balances, such as:
 - (a) Checklists; written plans
 - (b) Follow-up actions
 - (c) Audits
 - (d) Job aids
5. Regulatory requirements
6. Gas Standards and Specification materials
7. Written materials
8. Work performance history
9. Observation during:
 - (a) Performance on the job
 - (b) Simulation
 - (c) Other form
10. OJT support"

In Addition, PG&E OQ Plan, Section 1.2.6.1, states:

"Re-qualification intervals for all covered tasks shall not exceed five (5) years for each covered task."

PG&E used five year reevaluation intervals for all covered tasks and failed to determine task specific reevaluation intervals for each covered task by taking into consideration the Difficulty, Importance, Frequency Analysis, Safety, Complexity, Risk Analysis, or Consequences if the covered tasks were incorrectly performed.

By not including the requirements of the above procedures in determining the re-qualification intervals for all covered tasks, PG&E is in violation of 49 CFR §192.805.

PG&E's Response:

PG&E respectfully disagrees with this finding. Part IV of PG&E's Operator Qualification Plan – Gas Operator Qualification Justification Process, describes the process that Subject Matter Experts followed to determine each covered task's subsequent qualification intervals. This process took into account internal field audits, use of Gas Standards and Specifications, training, job aids, repetitions of covered tasks, and the ability to review an individual's qualifications at any time there is reason to suspect performance of covered tasks is not adequate. The Subject Matter Experts determined that five-year intervals was appropriate for all covered tasks.

Taking into consideration the Difficulty, Importance, Frequency Analysis, Safety, Complexity, Risk Analysis, or Consequences if the covered tasks were incorrectly performed, are factors listed in ASME B31Q Standard. ASME B31Q is not an industry standard incorporated by reference per §192.7. In 2013, the Gas Qualifications Department performed an extensive benchmarking process by looking at other utilities nationwide. As a result, Utility Standard S4450 "Operator Qualification Program" is being superseded by TD-4008S "Operator Qualification Program Requirements" which specifies a 3-year subsequent qualification interval for all covered tasks.

SED's Conclusion:

SED has reviewed PG&E's response and accepts the corrective action to conduct 3-year subsequent qualification interval for all covered tasks as specified in Utility Standard S4450 "Operator Qualification Program", which superseded TD-4008S "Operator Qualification Program Requirements". SED recommends that no fine or penalty be imposed since the violation did not create any hazardous conditions for the public or utility employees. However, SED may review the implementation of these stated corrective actions during future inspections.

4. Probable Violation #1(d) – 49 CFR §192.805 Qualification Program:

PG&E's OQ Plan, Section 1.1.11, "Audit Schedule and Responsibility", states:

"The System Gas Operator Qualification Program Coordinator will maintain a list of all Local Gas Operator Qualification Plan Coordinators. The SGOQPC will audit the LGOQPC annually, or more often if needed, to verify all copies of the plan are up to date and to initiate changes if any copies are not up to date. The annual audit shall be documented."

In addition, PG&E OQ Plan, Section 1.1.12, "Annual Review and Responsibility", states:

"The Local Gas Operator Qualification Plan Coordinator/Local Supervision will at a minimum annually review the list of covered tasks and subtasks with covered and non-covered employees. The annual review shall be documented on an original signed roster"

PG&E did not document its review of the following sections of its OQ Plan as listed in Table 1 since 2009.

Table 1

| Document | Review Date |
|--|-------------|
| PG&E Gas Operator Qualification Plan Part I | 06/29/2009 |
| PG&E Gas Operator Qualification Plan Part II | 01/14/2003 |
| Gas Operator Qualification Justification Process | 01/13/2003 |

By not reviewing and documenting its OQ Plan annually as required, PG&E is in violation of Title 49 CFR § 192.805.

PG&E's Response:

PG&E respectfully disagrees with this finding. PG&E's System Gas Operator Qualification Program Coordinator has annually reviewed the Operator Qualification Plan as part of the annual review of all gas operations and maintenance procedures per §192.605(a). Only the portions of the Operator Qualification Plan that are revised are issued with the current date. Sections of the Operator Qualification Plan that have no changes will retain their original dates.

SED's Conclusion:

SED has reviewed PG&E' response and accept the clarification and determined that no future action is necessary since PG&E's Operator Qualification Plan reviewed annually as part of Operations and Maintenance Plan. SED will retract this violation. No further action is required.

5. Probable Violation #1(e) – 49 CFR §192.805 Qualification Program:

PG&E did not follow its OQ Plan, Section 1.1.11, "Audit Schedule and Responsibility", which states:

"The LGOQPC must notify the director responsible for the plan when annual review is completed. The report shall include audit findings and an action plan to correct any deficiencies".

PG&E identified issues in its periodic review of the effectiveness of its OQ Plan, but failed to initiate corrective action. PG&E made changes to its procedures and covered tasks, but did not update other sections of its OQ Plan to reflect the changes. For example, Section 1.5.2, of the PG&E OQ Plan includes by reference another procedure: SH&C 202, "Incident Notification, Investigation, and Analyses Procedure". PG&E explained to SED staff that this procedure is no longer used by PG&E. Instead, the OQ Plan should refer to the updated procedure "1465-02 Gas Event" currently used by PG&E.

By not revising all relevant sections of its OQ Plan, PG&E is in violation of 49 CFR §192.805.

PG&E's Response:

PG&E agrees with this finding. There were references to outdated procedures that had not been updated in the Operator Qualification Plan.

Effective January 2014, PG&E is replacing its Utility Standard S4450 "Operator Qualification Program" and the Operator Qualification Plan with Utility Standard TD-4008S, "Operator Qualification Program Requirements" and six work procedures. References to other PG&E procedures are electronically linked in all guidance documents on PG&E's electronic Technical Information Library. This ensures that the link will result in referencing the most up-to-date document.

SED's Conclusion:

SED has reviewed PG&E' response and accepts the corrective action to link all procedures on PG&E's electronic Technical Information Library that contains the most up-to-date documents. SED recommends that no fine or penalty be imposed since the violation did not create any hazardous conditions for the public or utility employees.

6. Probable Violation #2 - 49 CFR §192.805(a) Qualification program:

(a) "Identify covered tasks"

PG&E did not identify some applicable covered tasks in its OQ Plan. These tasks include welding, non-destructive testing, excavation, compressor station maintenance, meter installation and maintenance, regulator installation and maintenance, backfilling, service line installation and repair.

By not including the above covered tasks in its OQ Plan, PG&E is in violation of Title 49 CFR § 192.805(a).

PG&E's Response:

PG&E agrees with this finding for the activities that meet the four-part criteria in §192.801(b). PG&E has identified covered tasks by comparing all work activities associated with the installation, construction, operations, and maintenance of natural gas facilities with the four-part criteria in §192.801(b). Tasks listed above that are being performed as part of a new installation do not meet this four-part criteria, and have not been included in PG&E's Operator Qualification Plan. With the CPUC's ongoing proceeding to revise General Order 112-E to include "new construction" activities as operator-qualified covered tasks, PG&E filed comments on September 27, 2013 on the impact of including new construction activities under the Operator Qualification Rule. Weld repairs, transmission station maintenance, including components at compressor stations, regulator maintenance, service line repairs, and excavating and backfilling around critical gas facilities have been part of PG&E's Operator Qualification Plan since inception.

PG&E will be reviewing the remaining activities noted above and incorporate those activities into its Operator Qualification program by December 31, 2015.

SED's Conclusion:

SED has reviewed PG&E's response and accepts the corrective action planned to include the "new construction" activities into its OQ program by December 31, 2015 pending CPUC's approval of the revised General Order 112. However, PG&E must include all activities meeting the four-part criteria into compliance immediately. By not identifying all company applicable operation and maintenance covered tasks (i.e. meter replacements, service regulator replacements), PG&E continues to allow non-OQ personnel to perform covered tasks which could potentially create a hazardous condition for the public or utility employees. Therefore, SED recommends an enforcement action for this violation.

7. Probable Violation #3 – 49 CFR §192.805(b) Qualification Program:

(b) "Ensure through evaluation that individuals performing covered tasks are qualified."

PG&E's OQ Records indicate that it does not consistently apply its covered tasks evaluation methods throughout its OQ Program. For example, PG&E qualified some individuals based on observation by simulation while others were qualified based on knowledge tested using an oral or written test.

PG&E must establish a task specific evaluation method that it will consistently be use across its OQ Program to ensure as required by Title 49 CFR, Part 192.803, that

*"Qualified means that an individual has been evaluated and can:
(a) Perform assigned covered tasks; and
(b) Recognize and react to abnormal operating conditions."*

By not having a consistent method of evaluation for the same covered tasks, PG&E is in violation of Title 49 CFR §192.805(b).

SED's Conclusion:

SED has reviewed PG&E's response and determined that PG&E did not address this violation in its response letter. In their response, PG&E stated that they have revised its Operator Qualification Program with the implementation of Utility Standard TD-4008S and includes six Utility Procedures. Changes made to the OQ Program will be evaluated in future audits. SED recommends that no fine or penalty be imposed at this time since the violation did not create any hazardous conditions for the public or utility employees.

8. Probable Violation #3(a) - 49 CFR §192.805(b) Qualification Program:

PG&E's OQ Plan does not require evaluation of generic abnormal operating conditions (AOC). At its annual "Gas Operator Qualification Plan AOC" seminars, PG&E communicates the generic AOCs to the attendees. However, PG&E does not evaluate the attendees at the seminar.

By not including the generic AOCs in the evaluation process, PG&E is in violation of 49 CFR §192.805(b).

PG&E's Response:

PG&E respectfully disagrees with this finding. As noted in our response above to NOV-1.b, PG&E does require that evaluations, through questions and observations during the performance based portion, determine if the personnel being evaluated have the ability to recognize and appropriately react to abnormal operating conditions.

The annual refresher training exceeds the requirements of Subpart N – Qualification of Pipeline Personnel of CFR 192, and is provided to all personnel who work on PG&E's gas system. The intent of the annual training is to ensure that the workforce is aware of the qualifications necessary to work on the gas system, and to reduce the probability and consequence of incidents caused by human error.

SED's Conclusion:

SED has reviewed PG&E's response and recommends that no fine or penalty be imposed since the violation did not create any hazardous conditions for the public or utility employees.

9. Probable Violation #3(b) - 49 CFR §192.805(b) Qualification Program:

PG&E's OQ evaluation process does not identify general and task specific AOCs for each covered task. SED reviewed eight covered tasks and found that six did not include any AOC questions and two had written test evaluation questions that were not relevant to the specific covered tasks. The eight covered tasks SED reviewed are in the Table 2:

Table 2

| Task Name | AOC included in the evaluation | Comments |
|--|--|---------------|
| Distribution Composite Leak Repair | No AOC | Attachment #2 |
| Distribution Pipe Coating – Tape / Paint | No AOC | Attachment #3 |
| F. S. Mechanical Repair | No AOC | Attachment #4 |
| Pipe Replacement | No AOC and test questions are not relevant to the covered task | Attachment #5 |
| Weld Repairs | No AOC and test questions are not relevant to the covered task | Attachment #6 |
| Mechanical Repair - Steel | No AOC | Attachment #7 |
| Atmospheric Corrosion / Monitor | One AOC | Attachment #8 |
| Pipe-to-Soil Reads | One AOC | Attachment #9 |

PG&E'S Response:

PG&E respectfully disagrees with this finding. PG&E's Operator Qualification Plan requires individuals, as part of each task's qualification criteria, to appropriately recognize and react to abnormal operating conditions. Evaluators must make this determination through questions and observations during the performance-based portion of the evaluation. The Qualification Evaluation forms require that the evaluator record this portion of the evaluation.

The written knowledge-based tests are currently being revised and are made available when each one has been completed. The revisions will include questions relating to abnormal operating conditions. The written knowledge-based tests for the tasks identified in SED's Table 2 will be issued by February 28, 2014, with the exception of the Distribution Composite Leak Repair task which has been eliminated as an approved method of leak repair and the OQ task has been eliminated.

SED's Conclusion:

SED has reviewed PG&E' response and accepts the planned corrective action to bring the evaluation in compliance by including in both knowledge-based tests and performance-based evaluations, questions about individual's ability to recognize and appropriately react to general and task specific AOCs. PG&E should review all company's covered tasks knowledge-based tests to include questions relating to generic and task specific abnormal operating conditions.

SED recommends that no fine or penalty be imposed since the violation did not create any hazardous conditions for the public or utility employees.

10. Probable Violation #4 - 49 CFR §192.805(f) Qualification Program:

“(f) Communicate changes that affect covered tasks to individuals performing those covered tasks;”

PG&E's OQ Plan, Section 1.7.1, "Communicate Changes" does not include a provision to identify how changes to the procedures, tools standards and other elements used by individuals in performing covered tasks are communicated to its contractors and how these changes are implemented in the evaluation process.

By not including its contractors in the Communicate Changes process, PG&E is in violation of Title 49 CFR §192.805(f).

PG&E'S Response:

PG&E agrees with this finding. TD-4008S will specify what communication, depending on the significance of the change, is required, and what will be required of PG&E's 3rd-party compliance vendor and contractors who perform operator qualified work.

SED'S Conclusion:

SED has reviewed PG&E' response and accepts the corrective actions planned to bring this issue in compliance, by including the contractors in the Communication Changes process. However, by not communicating changes to the procedures, tools, standards, and other elements used to perform a covered task to the contractors, PG&E's contractors may not be aware of any significant changes, which may result in a hazardous condition. SED recommends an enforcement action for this violation.

11. Probable Violation #5 - 49 CFR §192.807(b) Recordkeeping:

"(b) Records supporting an individual's current qualification shall be maintained while the individual is performing the covered task."

PG&E did not have a complete record of evaluation for individuals qualified to perform covered tasks. SED found that some evaluation records for oral tests and observations of simulation were missing. PG&E explained to SED staff that PG&E does not retain evaluation documentation.

By not retaining complete records of evaluation for individuals qualified to perform covered tasks, PG&E is in violation Title 49 CFR § 192.807(b).

PG&E's Response:

PG&E respectfully disagrees with this finding. PG&E's Operator Qualification Plan Section 1.8, Recordkeeping, specifies the qualifications records that are to be maintained. It does not specifically state that records of oral tests and observations made by the evaluator must be kept as part of the qualification records to be retained. The completed qualification evaluation form serves as the record of qualification, and checking the appropriate box for "Oral Test" or "Observation by simulation" by the evaluator is sufficient to document that portion of the evaluation.

To better document a consistent set of questions asked during the oral test, or observations made during this portion of the evaluation, as well as a demonstration of skills by the personnel being evaluated, PG&E is in the process of creating an Evaluator Script for Record of Evaluation for each covered task. These evaluator scripts for all covered tasks are

being made available to evaluators as they are completed. All covered tasks will have an evaluator script by June 1, 2015.

SED's Conclusion:

SED has reviewed PG&E' response and accepts the corrective actions planned to document its evaluations by creating an Evaluator Script for Record of Evaluation for each covered task. SED recommends that no fine or penalty be imposed since the violation did not create any hazardous conditions for the public or utility employees.

12. Probable Violation # 6 - 49 CFR §192.809 (e) General:

“(e) After December 16, 2004, observation of on-the-job performance may not be used as the sole method of evaluation.”

PG&E's OQ Plan, Section 1.3.2.1, *“Method of Qualification Evaluation”*, states:

“Performance-based qualification evaluation is used for the initial qualification.”

In addition, Section 1.3.3.2, *“Method of Qualification Evaluation”*, states:

“The Company will use performance-based evaluation when doing subsequent qualification.”

PG&E cannot use observation of on-the-job performance as a sole method for evaluation for a person initially or subsequently qualified to perform a cover task after December 16, 2004. Therefore, PG&E is in violation of Title 49 CFR § 192.809(e).

PG&E must review and revise its OQ Plan to ensure that it does not use observation of on the job performance as the sole method for evaluation of a person initially or subsequently qualified to perform a covered task.

PG&E's Response:

PG&E agree with the findings. The Operator Qualification Plan will be replaced with TD-4008S and its six work procedures. Section 2.4 of the standard specifically states that observation during on-the-job performance is not to be used as the sole method of evaluation.

SED's Conclusion:

SED has reviewed PG&E' response and accepts the corrective actions included in your revised OQ Plan which clearly states that observation during on-the-job performance is not to be used as the sole method of evaluation. SED recommends that no fine or penalty be imposed since the violation did not create any hazardous conditions for the public or utility employees.

Areas of Concern / Recommendations

1. **Area of Concern #1:** PG&E Pipeline Facility definition included in its OQ Plan, Section 1.1.2 Definitions, states:

"Pipeline Facility: all parts of those physical facilities, owned and operated by the company, through which gas moves in the course of transportation, including distribution, transmission, and gathering lines"

SED discovered that PG&E's definition of pipeline facility does not clearly address all facilities it owns and operates such as "rights of way". PG&E should revise its definition of pipeline facility to be consistent with 49 CFR §192.3.

PG&E's Response:

PG&E agrees with this concern. TD-4008S will include the definition of pipeline facility to be consistent with 49 CFR §192.3.

SED's Conclusion:

SED has reviewed your response and feels the proposed corrective actions articulated by PG&E sufficiently address the AOC if implemented as indicated in your response. SED may opt to test this stated corrective action at a future date.

2. **Area of Concern #2:** PG&E's OQ Plan, Section 1.1.4(c), "Plan requirements", states:

"...ensure that non-qualified individuals performing a covered task are supervised by a qualified individual".

In addition, Section 1.1.10, "Local Responsibility", states:

"All employees are also responsible for performing without supervision only those covered tasks for which they have been qualified under this plan."

PG&E should change "supervised" by a qualified individual with "directed and observed" by a qualified individual, to be consistent with 49 CFR §192.805(c).

PG&E's Response:

PG&E agrees with this concern. TD-4008S Section 5 will utilize "directed and observed" instead of "supervised" to describe allowing individuals that are not qualified to perform a covered tasks."

SED's Conclusion:

SED has reviewed your response and feels the proposed corrective actions articulated by PG&E sufficiently address the AOC if implemented as indicated in your response. SED may opt to test this stated corrective action at a future date.