

Manager Regulatory Compliance Gas Operations 6111 Bollinger Canyon Rd. 4th Floor San Ramon, CA 94583

January 10, 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 PG&E's Operator Qualification Program Audit

Dear Mr. Robertson:

The Safety and Enforcement Division (SED) conducted a General Order 112-E audit of PG&E's Operator Qualification (OQ) Program from October 22 - 26, 2012. On November 7, 2013, the SED issued its audit report, identifying probable violations and recommendations. Attached is PG&E's response to the CPUC audit report.

As noted in a number of the responses, PG&E will significantly modify its Operator Qualification program with implementation of Utility Standard TD-4008S and six Utility Procedures. Therefore, per 49 CFR §192.805(i), PG&E will submit under separate cover notification of the changes.

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

Sincerely,

Attachments

cc: Adriana Crasnean, CPUC Dennis Lee, CPUC Liza Malashenko, CPUC Jane Yura, PG&E
, PG&E
Bill Gibson, PG&E

INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
October 22 -26, 2012	NOV-1	Adriana Crasnean	(213) 620-2598

INSPECTION FINDING

CPUC Finding

1. Title 49, Code of Federal Regulations (CFR), § 192.805 Qualification Program.

"Each operator shall have and follow a written qualification program."

SED reviewed PG&E's OQ Program and determined that it did not follow its own procedures. SED determined the following deficiencies:

a) 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 Title 49 CFR § 192.805 for not following its procedures.

b) 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.

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c) 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 across the board 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 qualification Intervals for all covered tasks, PG&E is in violation of Title 49 CFR § 192.805.

d) 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

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since 2009:

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

Table 1

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

e) PG&E did not follow the second part of 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 Title 49 CFR § 192.805.

PG&E RESPONSE

1a) 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.

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1b) 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 (See Attachment A as an example) 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. (See Attachment B for an example of an Evaluator Script) By December 31, 2014, all knowledge-based tests will include questions on recognizing and appropriately reacting to AOCs.

1c) PG&E respectfully disagrees with this finding.

Part IV of PG&E's Operator Qualification Plan – Gas Operator Qualification Justification Process (See Attachment C), 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.

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

1d) 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). (See Attachment E). 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.

1e) 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 (See Attachment D). 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.

ATTACHMENTS

Attachment #	Title or Subject	
A	Qualification Evaluation Example	
В	Evaluator Script Example	
С	OQ Justification Process	
D	TD-4008S and 6 work procedures	
Е	ECTS annual review of S4450 and OQ Plan	

ACTION REQUIRED

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
TD-4008S to specify record retention	January 31, 2014		Gas
of qualification evaluation records			Qualifications Dept.
Vnowledge and performance portions			Gas
Knowledge and performance portions of all evaluations to include AOCs	December 31, 2014		Qualifications
			Dept.
PG&E's Operator Qualification			Gas
Standard to reference current guidance	January 31, 2014		Qualifications
documents			Dept.

Definitions: NOV – Notice of Violation

INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
October 22 - 26, 2012	NOV-2	Adriana Crasnean	(213) 620-2598

INSPECTION FINDING

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2. Title 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 RESPONSE

2) 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.

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ATTACHMENTS

Attachment #	Title or Subject
None	

ACTION REQUIRED

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
Expand list of operator-qualified covered tasks	December 15, 2015		Gas Qualifications Dept.

Definitions: NOV – Notice of Violation

INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
October 22 - 26, 2012	NOV-3	Adriana Crasnean	(213) 620-2598

INSPECTION FINDING

CPUC Finding

3. Title 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.

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).

PG&E must establish a task specific evaluation method that it will consistently 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."
- a. PG&E's OQ Plan does not require evaluation of generic AOCs. 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 Title 49 CFR § Part 192.805(b).

b. PG&E's OQ evaluation process does not identify AOC specific tasks 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 Table 2:

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

Definitions: NOV – Notice of Violation

Atmospheric Corrosion /	One AOC	Attachment #8	
Monitor			
Pipe-to-Soil Reads	One AOC	Attachment #9	
Table 2			

Table 2

PG&E must ensure through evaluation that individuals performing covered tasks are qualified. By not including in its evaluation process questions about AOC specific tasks, PG&E is in violation of Title 49 CFR § 192.805(b).

PG&E RESPONSE

3a) 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. (See Attachment A as an example).

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. (See Attachment F). 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.

3b) 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 (See Attachment A as an example) require that the evaluator records 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

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

repair and the OQ task has been eliminated.	

ATTACHMENTS

Attachment #	Title or Subject	
A	Qualification Evaluation Example	
F	Annual OQ Refresher Training	

ACTION REQUIRED

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
Issue revised knowledge-based tests			Gas
including AOC questions for identified	February 28, 2014		Qualifications
tasks			Dept.

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

INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
October 22 - 26, 2012	NOV-4	Adriana Crasnean	(213) 620-2598

INSPECTION FINDING

CPUC
Finding

4. Title 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 RESPONSE

4) 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.

ATTACHMENTS

Attachment #	Title or Subject
None	

ACTION REQUIRED

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
TD-4008S to include communication requirements for contractors	January 31, 2014		Gas Qualifications Dept.

Definitions: NOV – Notice of Violation

INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
October 22 - 26, 2012	NOV-5	Adriana Crasnean	(213) 620-2598

INSPECTION FINDING

CPUC Finding

5. Title 49 CFR, § Part 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 RESPONSE

5) 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. (See Attachment B for Evaluator Script example) 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.

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ATTACHMENTS

Attachment #	Title or Subject	
В	Evaluator Script Example	

ACTION REQUIRED

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
Complete Evaluator Scripts for covered tasks and roll out to evaluators	June 1, 2015		Gas Qualifications Dept.

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

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INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
October 22 - 26, 2012	NOV-6	Adriana Crasnean	(213) 620-2598

INSPECTION FINDING

CPUC Finding

6. <u>Title 49 CFR, § Part 192.809 (e) General.</u>

"(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 RESPONSE

6) PG&E agrees with this finding.

The Operator Qualification Plan will be replaced with TD-4008S and its six work procedures. (See Attachment D) 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.

ATTACHMENTS

Attachment #	Title or Subject	
D	TD-4008S and 6 work procedures	

ACTION REQUIRED

Definitions: NOV – Notice of Violation

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
TD-4008S will specify not to use on-			Gas
the-job performance as sole evaluation	January 31, 2014		Qualifications
method	-		Dept.

Definitions: NOV – Notice of Violation

INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
October 22 - 26, 2012	AOC-1	Adriana Crasnean	(213) 620-2598

INSPECTION FINDING

CPUC Finding

1. Title 49 CFR, §192.3 Definitions.

"Pipeline facility means new and existing pipeline, rights-of-way, and any equipment, facility, or building used in the transportation of gas or in the treatment of gas during the course of transportation."

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 a "rights of way". PG&E should revise its definition of pipeline facility to be consistent with 49 CFR, §192.3.

PG&E RESPONSE

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

ATTACHMENTS

Attachment #	Title or Subject	
None		

ACTION REQUIRED

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
TD-4008S to have consistent definition of pipeline facility	January 31, 2014		Gas Qualifications Dept.

Definitions: NOV – Notice of Violation

INSPECTION INFORMATION

Inspection Dates	Finding	CPUC Contact	CPUC Phone #
October 22 - 26, 2012	AOC-2	Adriana Crasnean	(213) 620-2598

INSPECTION FINDING

CPUC Finding

2. Title 49 CFR, § Part 192.805 (c) Qualification Program.

"(c) Allow individuals that are not qualified pursuant to this subpart to perform a covered task if directed and observed by an individual that is qualified;"

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 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 task. (See Attachment D)

ATTACHMENTS

Attachment #	Title or Subject	
D	TD-4008S and 6 work procedures	

ACTION REQUIRED

Action To Be Taken	Due Date	Completion Date	Responsible Dept.
TD-4008S to use "directed and			Gas
observed" by a qualified individual	January 31, 2014		Qualifications
instead of "supervise"			Dept.

Definitions: NOV – Notice of Violation