



<b>Document Type</b>	Utility Standard
<b>Document Author</b>	Brandon Ham and Robert Quijalvo, Jr
<b>Document Owner</b>	Stephanie Uhlich
<b>Document Approver</b>	Mel Christopher

### Section 1: Planning

1. Is the guidance document new or revised? If it is revised, what will change?

This utility standard is revised. The entire standard was rewritten, and includes the following major revisions:

- Added detail on gas clearance general and regulatory requirements
- Removed references to facilities operating above/below 60 psig as a dividing line between transmission and distribution
- Added requirement that transmission clearances affecting distribution facilities follow the transmission clearance process
- Added sections for training requirements, gas clearance communication requirements, and roles and responsibilities

2. Why is the guidance document being written / revised?

This utility standard is being revised for better alignment with new and revised implementing procedures. It is also being expanded to incorporate requirements and roles and responsibilities that apply to all of its associated procedures.

3. What is the scope?

This utility standard provides the general requirements, regulatory requirements, training requirements, gas clearance communication requirements, and roles and responsibilities for clearances, including lockout/tagout (LOTO), on Pacific Gas and Electric Company (PG&E or Company) transmission and distribution (T&D) natural gas facilities. This utility standard does not apply to work on service lines off the distribution system.



4. What are the regulatory requirements or other commitments that this guidance document will address?

[California Code of Regulation \(CCR\) Title 8, Subchapter 7, General Industry Safety Orders, §3314, “The Control of Hazardous Energy for the Cleaning, Repairing, Servicing, Setting-Up, and Adjusting Operations of Prime Movers, Machinery and Equipment, Including Lockout/Tagout”](#)

[CCR Title 8, Subchapter 7, General Industry Safety Orders, §3341, “Accident Prevention Tags”](#)

[Code of Federal Regulation \(CFR\) Title 49, Transportation, Part 192—Transportation of Natural and other Gas by Pipeline: Minimum Federal Safety Standards, §192.605, “Procedural manual for operations, maintenance, and emergencies.”](#)

[CFR Title 49, Transportation, Part 192—Transportation of Natural and other Gas by Pipeline: Minimum Federal Safety Standards, §192.631 “Control room management”](#)

[CFR Title 29, Labor, Part 1910—Occupational Safety and Health Standards, §1910.147, “The control of hazardous energy \(lockout/tagout\)”](#)

[CFR Title 29, Labor, Part 1926—Safety and Health Regulations for Construction, §1926.417, “Lockout and tagging of circuits”](#)

For Gas Operations documents: Answer the questions to the four part test to determine whether the changes will impact OQ qualifications (covered tasks). Consult the OQ team as necessary. A covered task may be impacted (or created) if the change meets ALL FOUR of the following:

- A. Is the task performed on a pipeline facility? **No**
- B. Is the task an operations or maintenance task? **No**
- C. Is the task performed as a requirement of 49 CFR Part 192? **No**
- D. Does the task affect the operation or integrity of the pipeline? **No**

There is no specific OQ for performing the steps in this standard. However, tasks performed during clearance work may require OQs (e.g., turning valves or operating squeezers).

5. Are there any specific safety, health, or environmental issues that need to be addressed?

NA



6. Who will be required to comply?

All personnel who perform work, or provide support for work, on PG&E natural gas T&D systems and associated equipment including but not limited to:

- Gas control center (GCC) personnel (gas transmission control center [GTCC] and gas distribution control center [GDCC])
- Maintenance and construction (M&C) personnel
- Gas pipeline operations and maintenance (GPO&M) personnel
- General construction (GC) personnel
- Pipeline field services personnel
- Gas construction contractors
- Gas system planning personnel
- Gas transmission engineering and design (GTE&D) and gas distribution engineering and design (GDE&D) personnel (including estimators)
- Facility integrity management program (FIMP) and technical services
- Quality control (QC) and quality assurance (QA) organizations supporting field employees
- Project management and major programs personnel
- Maintenance and construction (M&C) coordinator
- Work and resource (W&R) coordinator
- Transmission and distribution mapping

7. What are the expected resources needed to comply (e.g., training development and delivery costs, costs for materials or technology, additional human resources)?

Resources for implementing this standard and procedures as part of the hazardous energy control (lockout/tagout) and clearance alignment Scrum Works are Tactile (SWAT) include the following estimates:

- \$84,000 for LOTO training curriculum development (TD-4441P-20)
- \$195,000 for updates to clearance training curriculum development (TD-4441P-01, P-10, P-11, and P-15)
- \$800,000 for updates to SAP clearance modules (TD-4441P-01, P-10, P-11, and P-20)
- Delivery Costs
  - *GAS-0867WBT Hazardous Energy Control-Lockout/Tagout* delivery costs
    - Course duration 0.5 hours to be taken by approximately 825 employees, for \$100,000.
  - *GAS-0867ILT Hazardous Energy Control-Lockout/Tagout* delivery costs (includes *GAS-0867WBT* for employees required to take both)
    - Course fee approximately \$550 per person and is expected to be taken by approximately 1,300 employees, for \$715,000.
    - Expect to take an average of 6 hours (depending on role), to be taken by approximately 1,300 employees, for \$1,500,000.
  - Total provider cost center (PCC) impact was discussed and approved at the April 16, 2015 Finance and Information Technology Governance Committee meeting, with an action item for Business Finance to monitor costs as opposed to re-planning all the PCCs in 2015.



8. How will this document be communicated and distributed? When?

Awareness and Understanding communications included:

- Emails sent from the leadership level (Jesus Soto in December 2014 and Mel Christopher in May 2015) to all Gas Ops employees.
- Over 30 presentations (both face-to-face and conference call) with various leadership teams and all-hands meetings across gas operations between March and September of 2015.
- Multiple “weekly items of interest” across Gas System Operations, Asset & Risk Management, and Financial & Resource Management lines of business.
- A pilot (including Academy training) was performed for the lockout/tagout procedure at several locations (M&C GC, M&C Division, GPO&M, Station and Storage) between June and August 2015.
- A survey about the pilot (training, materials, and procedure) was conducted and other feedback was shared with the initial document development team.
- Detailed communications requesting names of personnel requiring the various training and requesting tool inventory were sent in May and July 2015.

Implementation communications include:

- GCC sent an email communicating upcoming clearance changes to all personnel who previously completed *GAS-0401 ILT Gas Clearance Process Training*, *GAS-0837 ILT TD-4441P-01: Writing/Endorsing/Approving* or *GAS-0838 ILT TD-4441P-01: Executing*. This email contained a tailboard informing users of WCD changes coming in the September 21, 2015 SAP release in preparation for lockout/tagout and clearance alignment and that further training would be coming during system wide roll-out of the new procedures.
- Academy is creating interim training for the roll-out of lockout/tagout and changes to the clearance process. This interim training will be conducted by the Academy from procedure publication through the procedure effective date (03/01/2016) to ensure impacted employees understand the changes in their role prior to the effective date.
- Clearance writers will have opportunities to attend WebEx learning sessions provided by the GCC to receive further communication on how the clearance writing process is changing to include lockout/tagout.
- A Gas TDM Comms email will be sent out after the last of the TD-4441 series publishes to communicate that they are now all available on the Technical Information Library (TIL). Additional messaging will occur company-wide to drive awareness of gas lockout/tagout and clearance alignment.

**A. Why communicate?** To inform impacted personnel of the general requirements, regulatory requirements, training requirements, gas clearance communication requirements, and roles and responsibilities for clearances, including lockout/tagout, on PG&E T&D natural gas facilities.

**B. Who needs to know about it?** The same personnel listed in question 6 above, plus (for information only) gas estimators in customer service delivery (CSD), asset and risk management (A&RM) personnel (besides FIMP), gas storage asset management personnel, process excellence personnel, and process safety personnel.

**C. What are the key messages?** This document is the governing standard for all gas clearance utility procedures, including hazardous energy control (lockout/tagout) for gas clearances.



8 (continued)

**D. When is the effective date?** 03/01/2016. The effective date is roughly 6 months after publication to provide time for impacted employees to receive communication about the process training and to complete training courses. This will ensure the new processes are being followed by the effective date.

**E. What else do they (your audiences) need to do?** Impacted personnel must read this standard and become familiar with its location on the TIL. In addition, users must ensure they have completed all associated training courses for their role as listed in the Training Requirements section of this standard.

**F. Which manual does this apply to?** *Gas Distribution Maintenance and Operations Manual; Gas Transmission Maintenance and Operations Manual.*

9. What keywords will employees use to search for this document?

gas transmission control center, GTCC, gas distribution control center, GDCC, gas, gas control, transmission, distribution, pipeline, main, clearance, system new clearance, system maintenance clearance, operational change clearance, emergency clearance, non-clearance routine, NCR, LOTO, lockout, tagout, hazardous energy control

10. Will formal sign off by the members of the target audience be required?

Yes, by completion of required training through PG&E Academy.

11. What follow-up actions are needed?

Document owner will follow up with My Learning profile leads when training course numbers are available, to ensure employees that require training are profiled correctly.

12. What other options have been considered?

NA

13. Who needs to review and concur?

Susan Minarcin, Stephanie Uhlich, Brandon Ham, Robert Quijalvo, Tuesdai Powers, Keith Slibsager, Mel Christopher, and Jerrod Meier

14. How often will the guidance document be reviewed?

At least once every calendar year, not to exceed 15 months, to the date.



**Section 2: Guidance Document Consistency Check**

List in the table below existing guidance related to or affected by the proposed new guidance document. The author determines what actions must be taken to ensure existing resources are consistent with the new guidance document and will remain so.

If there are inconsistencies or uncertainty about whether the other resources will remain in-sync with the new document, the author develops a plan to address the situation and documents it here.

Name, Location, and Effective Date	Consistent?	Recommended Action	Responsible Person	Action Due
<a href="#">SAFE-1009S, "Hazardous Energy Control (Lockout/Tagout) Safety Standard"</a>	Yes	NA	Gary Wright	NA
<a href="#">TD-4441P-02, "Maintenance Clearances for Gas Distribution Facilities"</a>	No	Update to the color template for consistency across the document set.  Update procedure title to 'System Maintenance Clearances for Gas Distribution Facilities' and update procedure language accordingly.	Brandon Ham, Stephanie Uhlich	Next revision of TD-4441P-02
<a href="#">TD-4441P-03, "Clearances for Operational Changes on Gas Distribution Facilities"</a>	No	Update to the color template for consistency across the document set.	Brandon Ham, Stephanie Uhlich	Next revision of TD-4441P-03
<a href="#">TD-4441P-04, "Emergency Clearances for Gas Distribution Facilities"</a>	No	Update to the color template for consistency across the document set.  Add language to ensure LOTO is used during an emergency.	Brandon Ham, Stephanie Uhlich	Next revision of TD-4441P-04



**Section 3: Compliance Monitoring**

Mechanism(s) for Monitoring Compliance	Responsible Person
Annual ECTS review	Brandon Ham and Robert Quijalvo Jr.

**Section 4: Stakeholder / Subject Matter Expert Review**

Name	Department	Date of Review
Brandon Ham	GDCC	09/2015
Robert Quijalvo, Jr.	GTCC	09/2015
Keith Slibsager	GCC	09/2015
Stephanie Uhlich	Standards and Procedures	09/2015
Russell Grandmont	GTCC	07/09/2015

Stakeholder Review		
Name	Department	Date of Review
Brian Affleck	Gas Quality Management	04/23/2015
Cathlene Bennett	Gas Pipeline and Operations	04/23/2015
Chuck Martinez	Distribution Construction	04/23/2015
Darin Jones	Gas System Planning	04/23/2015
Daven Phelan	Gas System Planning	04/23/2015
Don Yorke	GTE&D	04/23/2015
Frank Mahoney	Gas System Planning	04/23/2015
George Karkazis	TIMP, Pipeline Services at the time of review	04/23/2015
Jacob Staggs	GDCC	04/23/2015
Ken Rogers	Gas System Planning	04/23/2015
M. Shane Cook	GDCC	04/23/2015
Peter Canton	Training and Implementation	04/23/2015
Roy Surges	Pipeline Field Services	04/23/2015
Scott Powell	GC Gas Field Engineer	04/23/2015
Teresa Duddy	Gas System Planning	04/23/2015



**Guidance Document Analysis (GDA)  
For Gas Clearances  
TD-4441S, Rev: 01**

<b>LOTO SWAT Team</b>		
<b>Name</b>	<b>Department</b>	<b>Date of Review</b>
Charles Foote	Gas Transmission	04/23/2015
Chris Holland	Gas M&O	04/23/2015
John Gaffney	GDCC	04/23/2015
Ken Sheredy	GC Gas Testing and Maintenance	04/23/2015
Mike Badet	M&C - GPO&M	04/22/2015

<b>Transmission Clearances SWAT Team</b>		
<b>Name</b>	<b>Department</b>	<b>Date of Review</b>
Bradley Spainhower	GPOM	04/2015
Christian Roa	Project Manager	04/2015
Curt Klippenstein	GPOM	04/23/2015
Dave Campbell	M&C - GPO&M	04/2015
David Kuryla	TPCO Central	04/23/2015
Gregory Flowers	TPCO Central	05/05/2015
Moriah McCarvel	Gas System Planning	04/23/2015
Scott Powell	GC Gas Field Engineer	04/2015

<b>Distribution Clearances SWAT Team</b>		
<b>Name</b>	<b>Department</b>	<b>Date of Review</b>
Alex Kwong	GC Gas	05/04/2015
Dindo Dalena	GC Gas	05/04/2015
Erik Kvist	Estimating (ADE)	04/2015
Lance Johnson	GPO&M	05/04/2015
Mark Bailey	M&C Gas - T&R	04/2015
Mike Fernandez	Gas System Planning	04/23/2015
Nicole Lew	GDE&D	04/23/2015
Ramon Muller	Gas M&C/Division	04/23/2015