

Summary This document establishes a formal clearance procedure for working on Pacific Gas and Electric Company (Company) natural gas facilities operating over 60 pounds per square inch gauge (psig) and associated equipment to ensure that work is performed safely on pressurized gas, air, water, or energized electric systems.

All work that meets **any** of the following criteria requires a formal clearance:

- The work affects gas flow, gas quality, or the ability to monitor or remotely operate equipment.
- The first-line supervisor for the maintenance group performing the work concludes that the job cannot be accomplished using a work procedure written and authorized for the job and requires a formal clearance for the work to be performed safely.
- A single qualified person cannot perform the work, with the option of one person assisting.
- The work requires more than three isolation points.
- Not all isolation points are in the line of sight of the personnel performing the work at all times.
- The time required to complete the work exceeds 1 work day.
- The work may impact the Company's ability to maintain service to customers.

Refer to Job Aid TD-4100P-10-JA01, "Performing Non-Clearance – Routine (NCR) Work," for work that may be performed without a clearance.

Level of Use: Informational Use

Target AudienceGas control personnel and all personnel who perform work or provide
engineering support for work on natural gas facilities that operate over 60 psig
and their associated equipment.

Safety Failure to follow these procedures to clear equipment or a pipeline properly could pose a risk to personnel and public safety.

To ensure safety while performing this work, follow all applicable precautions and requirements described in this procedure and in the following documents:

• Utility Standard SAFE-1001S, "Safety and Health Program



Standard"

• <u>Code of Safe Practices</u>

Before You Start Personal Protective Equipment (PPE):

Personnel conducting work under this procedure must use Company-approved PPE as required under the <u>Code of Safe Practices</u>. The following are examples of required PPE:

- Hard hats.
- Ear protection.
- Flame-resistant (FR) traffic vests.
- Proper work attire (e.g., footwear, long-sleeved shirts, eye and face protection, and gloves).

Training and Qualifications:

Personnel performing tasks in accordance with this procedure must first complete the following courses:

- GAS-0400WBT, Gas Clearance Process Initial Training.
- GAS-0401, Gas Clearance Process Training.

Personnel must perform and document training annually. Learning services personnel retain all training documents.

Personnel not trained as qualified clearance holders must work under the direct supervision of a qualified clearance holder.

Tools, Materials, and Equipment:

Personnel must use Company-approved tags (see <u>Job Aid TD-4100P-10-JA03</u>, <u>"Placing Man-on-Line</u>, Caution, and Information Tags").



Table of Contents

Subsection	Title	<u>Page</u>
1	Determining the Clearance Type and Subtype for Work Requiring a Clearance	4
2	Planning and Preparing a Clearance Application	5
3	Repurposing a Completed Clearance for New Clearance Work	6
4	Obtaining Approval for a Clearance Application	6
5	Preparing to Perform Clearance Work	7
6	Obtaining Authorization to Perform Clearance Work	8
7	Changing an Application for a Clearance once Approved	8
8	Clearing Equipment	9
9	"Reporting On"	10
10	Performing Clearance Work	11
11	"Reporting Off"	12
12	Returning Equipment to Service	12
13	Reporting Clearance Complete	12
14	Handling Emergency Clearances	12
15	Recordkeeping	13



Procedure Steps

1 Determining the Clearance Type and Subtype for Work Requiring a Clearance

1.1 Identify the clearance type according to the definitions in Table 1 below.

Table 1. Clearance Types

Туре	Definition	Examples
System	Affects gas flow, gas quality, or the ability to monitor or remotely operate the flow of gas.	 Shutdowns of a line to tie in an offset to clear a storm drain conflict.
		 Valve maintenance requiring the stroking of a valve. (Stroking a valve is the full operation of the valve from full open to full closed or full closed to full open.)
		 Supervisory Control and Data Acquisition (SCADA) equipment calibration.
		Backbone or storage compressor maintenance.
		 Welding or tapping on pipelines that require lowering the line pressure below the maximum operating pressure (MOP).
		• Winter operations that require the operation of a normally closed valve to ensure system integrity.
Non-	Does not affect gas flow,	• Maintenance on a standby generator or auxiliary air compressor.
system	to monitor or remotely operate the flow of gas.	 Bypassing the glycol filter on a dehydrator to change the filter element.
		Maintenance on a gas supply rack.
		• Welding or tapping on pipelines that do not require lowering the line pressure below the MOP.

1.2 Identify the clearance subtype according to the definitions in Table 2 below.

Table 2. Clearance Subtypes

Subtype	Definition	Examples
New	For one-time use or the initial submittal of a clearance that becomes a standard clearance.	 Tying in a new pipeline. Welding on a pipeline with a maximum allowable operating pressure (MAOP) greater than 60 psig. Tapping or plugging a pipeline with an MOP greater than 60 psig.
Standard	Routine or repetitive work.	 Annual maintenance to a regulator valve that must be isolated by opening or closing valves to clear the equipment before it can be operated. Greasing and stroking a valve. (Stroking a valve is the full operation of the valve from full open to full closed or full closed to full open.)
		 Operating any MAOP separation valve for routine maintenance. Internal regulator inspections (all internal inspections on regulators must have a clearance). Corrective maintenance that requires taking a regulator out of service.



2 Planning and Preparing a Clearance Application

NOTE

All forms prepared for a clearance application must be completely and accurately filled out, including marking "N/A" in any field that is not applicable.

- 2.1 The first-line supervisor (or delegate) must fill out an application for clearance according to the instructions in Job Aid TD-4100P-10-JA02, "Preparing an Application for Gas Clearance (Form TD-4100P-10-F01)," including identifying tags to be placed in the Sequence of Operations according to the instructions in Job Aid TD-4100P-10-JA03, "Placing Man-on-Line, Caution, and Information Tags."
- 2.2 When needed, the application preparer must obtain input from gas control and gas engineering personnel for the following information:
 - Blowdown volumes.
 - Minimum pressure requirements.
 - Maximum welding and tapping pressures.
 - Drafting strategies, which include the following options to minimize the release of gas during the clearance:
 - o Operational drafting to adjacent lower pressure lines.
 - Employment of cross-compression upon the recommendation of gas engineering personnel.

NOTE

All strategies and risk assessments must take into account the safety of the public and personnel as well as customer and operational requirements.

NOTE

Clearances that affect electrical systems, valve controller systems, programmable logic controller (PLC) systems, or uninterruptible power supply (UPS) systems must undergo a risk assessment to mitigate any unintended impacts.

2.3 Gaining input from engineering and gas control personnel as needed, the application preparer must perform a risk assessment and incorporate the steps necessary to keep the following unintended impacts from occurring during the clearance:



2.3 (continued)

- Unintended impacts to gas quality.
- Unintended loss of automated control.
- Unintended loss of SCADA communications.
- Overpressure or underpressure excursions.

3 Repurposing a Completed Clearance for New Clearance Work

NOTE

When applicable, a completed clearance can be used for new clearance work if assigned a new clearance number and handled as instructed in this section.

- 3.1 Copy the original clearance application.
- 3.2 Run the application through all of the same steps required for a new clearance application to ensure that it is assigned a new number and goes through all of the reviews and approvals required for any new clearance application.

4 Obtaining Approval for a Clearance Application

NOTE

Initial approval of the clearance application must be obtained before proceeding to perform clearance work. Final authorization to begin work must be obtained the day the work is to commence, as instructed in <u>Section 6, "Obtaining</u> <u>Authorization to Perform Clearance Work."</u>

NOTE

A preliminary or draft clearance, which is not necessarily a complete package, may be submitted to the clearance coordinator for input toward a final clearance package.

NOTE

Non-system clearances are not required to be submitted to gas control personnel for approval.



- 4.1 The following are the approvals required for gas clearances:
 - The first-line supervisor must approve both system and non-system clearances.
 - The clearance coordinator must approve all system clearances.
- 4.2 For a system clearance, the writer of the Application for Gas Clearance must adhere to the following requirements to obtain approval from gas control personnel:
 - Upon request, system clearances must be reviewed and approved by the appropriate engineering personnel (e.g., gas system planning engineering, local engineering, or pipeline, station, or controls engineering).
 - IF work must be done that requires a clearance, but a date to perform the work has not been confirmed,

THEN submit a new clearance application as a "pending clearance" with the date marked "TBD," as described in Job Aid TD-4100P-10-JA02, "Preparing an Application for Gas Clearance (Form TD-4100P-10-F01)."

- Submit the completed clearance application to the clearance coordinator for approval at least 10 business days before starting the work.
- IF a new system clearance application must be submitted less than 10 business days before the start of work,

THEN the following steps must be taken:

- 1. The first-line supervisor must notify the responsible superintendent before requesting gas control personnel to review the clearance application.
- 2. The responsible superintendent must perform the following tasks:
 - a. Determine whether it is valid to submit the application fewer than 10 business days before work begins.
 - b. Authorize submittal of the application.
 - c. Request gas control personnel to expedite (fast-track) the review of the application.
- 4.3 As required by feedback, the clearance writer must update and resubmit the Application for Gas Clearance until approval is obtained.

5 Preparing to Perform Clearance Work

NOTE

At manned stations, the operator on shift may be designated the clearance supervisor (see <u>Attachment 1, "Additional Instructions for</u> <u>Clearances at Manned Stations"</u>).

Page 7 of 19



- 5.1 The clearance supervisor must perform the following tasks in preparation for performing work under a clearance:
 - 1. Print and distribute hard copies of the approved Application for Gas Clearance to all personnel performing work under the clearance.
 - 2. Conduct a clearance tailboard including the following information with all field personnel performing work under the clearance:
 - Safety concerns.
 - Objectives of the clearance.
 - Work assignments.
 - Communication methods.
 - 3. For system clearances, request preliminary authorization from gas control personnel 48 hours before beginning the work.
 - 4. Fill out all necessary tags for the clearance (see <u>TD-4100P-10-JA03</u>).

6 Obtaining Authorization to Perform Clearance Work

- 6.1 For system clearances, on the day clearance work is to begin, the clearance supervisor must obtain final authorization to perform the clearance work from gas control personnel.
- 6.2 For non-system clearances, the clearance supervisor must notify gas control personnel that a non-system clearance is to be performed.
- 6.3 IF the clearance work is at a manned station,

THEN the clearance supervisor must obtain authorization from the operator on shift before obtaining final authorization from gas control personnel (see <u>Attachment 1</u>).

7 Changing an Application for a Clearance once Approved

7.1 IF changes to a system clearance are required after it is approved,

THEN the following steps must be taken:

- 1. Personnel working on the clearance must immediately stop any work in progress.
- 2. The clearance supervisor must submit the revised application with the needed changes to the first-line supervisor and gas control personnel.
- 3. Gas control personnel must perform the following tasks:
 - a. Review the changes.
 - b. Approve the changes.



7.1 (continued)

- c. Reissue the revised Application for Gas Clearance via email to the clearance supervisor.
- 4. Before resuming work, the clearance supervisor must perform the following tasks:
 - a. Redistribute the revised clearance application to all affected personnel.
 - b. Conduct another clearance tailboard with all field personnel performing work under the clearance to discuss the revision.
- 7.2 IF changes to a non-system clearance are required after it is approved,

THEN the following steps must be taken:

- 1. Personnel working on the clearance must immediately stop any work in progress.
- 2. The clearance supervisor must submit the revised application with the needed changes to the first-line supervisor for approval.
- 3. The first-line supervisor must perform the following tasks:
 - a. Review the changes.
 - b. Approve the changes.
 - c. Return the revised application via email to the clearance supervisor.
- 4. Before resuming work, the clearance supervisor must perform the following tasks:
 - a. Redistribute the revised clearance application to all affected personnel.
 - b. Conduct another clearance tailboard with all field personnel performing work under the clearance to discuss the revision.

8 Clearing Equipment



Performing work on equipment that is not properly cleared and tagged can result in harm to persons or property.



NOTE

All clearances must at all times have a clearly designated clearance supervisor who remains on site or available for the duration of the clearance.

- 8.1 The clearance supervisor (or delegate) must follow the Sequence of Operations to correctly position and tag all clearance points to clear the equipment.
- 8.2 The clearance supervisor must perform the following tasks:
 - 1. Ensure that all clearance points are in the correct position and properly tagged and that the equipment is safely cleared for the work, including the proper positioning of any equipment that needs to be operated during a clearance but is not marked on operating maps and diagrams.
 - 2. IF the clearance is for work at a major station,

THEN place a master clearance point MOL tag on the Clearance Communications Board.

9 "Reporting On"

NOTE

Personnel **must never** "Report On" equipment for other personnel.

NOTE

<u>Attachment 1</u> provides additional instructions for performing clearance work at manned stations.

- 9.1 Before performing work, personnel must "Report On" according to the following instructions:
 - 1. For system clearances, the clearance supervisor must "Report On" to gas control personnel before any other personnel "Report On."
 - 2. Gas control personnel must record the "Report On" information on the electronic Master Clearance Board on the Clearance SharePoint website.
 - 3. IF the clearance is for work at a major station,

THEN the clearance supervisor must update the Clearance Communications Board to reflect the personnel "Reported On."



10 Performing Clearance Work

To avoid harm to persons or property, any isolation point with an MOL tag attached must never be operated.

10.1 IF at any time anyone working on the clearance believes that equipment being worked on is not properly cleared or that changes to the clearance are required,

THEN perform the following steps:

- 1. Immediately stop the work.
- 2. Notify the clearance supervisor.
- 3. IF the clearance supervisor decides that the Sequence of Operations and clearance points do not need to be changed on an active clearance,

THEN proceed with the clearance work;

OTHERWISE, IF changes are required,

THEN go to Section 7, "Changing an Application for a Clearance once Approved."

NOTE

Work must not recommence until the application for clearance is revised, resubmitted, and approved and authorization to resume work is obtained.

- 10.2 When performing any of the following critical operations, personnel must follow the instructions in Job Aid TD4100P-10-JA07, "Gauging Pressure During Critical Operations," to monitor pressure with a primary and a backup gauge:
 - Regulator station bypass.
 - Operation of maximum allowable operating pressure (MAOP) separation valve.
 - Maintaining reduced pressure for welding.
 - Clearance purging and packing.
- 10.3 Upon completion of the clearance work, the clearance supervisor must ensure that all equipment involved in the clearance work has been tested and is operating properly before transferring the equipment to operations. (See Job Aid TD-4100P-10-JA04, "Testing Cleared Equipment to be Operational," for additional information on conducting the tests.)

Page 11 of 19



10.4 IF at any time during the clearance work the clearance supervisor becomes unavailable (e.g., due to injury or illness) or expects to become unavailable,

THEN follow the instructions in Job Aid TD-4100P-10-JA05, "Transferring Clearance Supervisor Responsibilities."

11 "Reporting Off"

NOTE

Personnel **must never** "Report Off" equipment for other personnel.

- 11.1 When the clearance work is complete, all personnel who are "Reported On" must "Report Off" according to the following instructions:
 - 1. The clearance supervisor must be the last person to "Report Off."
 - 2. Gas control personnel must record the "Report Off" information on the electronic Master Clearance Board on the Clearance SharePoint website.
 - 3. IF the clearance work is at a major station,

THEN the clearance supervisor must remove the master clearance point MOL tag from the Clearance Communications Board.

12 Returning Equipment to Service

- 12.1 The clearance supervisor must perform the following steps to return the equipment to service:
 - 1. Follow the Sequence of Operations to correctly position and remove the tags from the field clearance points.
 - 2. Restore equipment to normal operation.

13 Reporting Clearance Complete

- 13.1 The clearance supervisor must notify gas control personnel that the clearance is complete.
- 13.2 Gas control personnel must update the clearance status on the electronic Master Clearance Board on the Clearance SharePoint website.

14 Handling Emergency Clearances

14.1 IF an emergency situation in the field requires immediate action to make the situation safe and therefore calls for an emergency clearance,

THEN call gas control personnel to provide verbal notification and receive approval over the phone.



14.1 (continued)

- 1. Notify gas control personnel of the situation.
- 2. Call in all field valve operations to gas control personnel to make a situation safe without an authorized written clearance before physically moving the valve, when possible.
- 3. IF, for safety reasons, valve operations must take place before notifying gas control personnel,

THEN notify gas control personnel as soon as possible.

<u>14.2</u> Once the system is safe, the clearance supervisor must follow <u>Section 4, "Obtaining Approval</u> <u>for a Clearance Application,"</u> to obtain approval and authorization before proceeding with any further work.

15 Recordkeeping

- 15.1 The maintenance group completing the clearance work must forward the original or copies (hard copy or electronic) of all standard clearances (system and non-system) to their local headquarters within 30 days of completing the clearance.
- 15.2 Gas control personnel must keep copies (hard copy or electronic) of all system standard clearances on file for at least 2 calendar years.
- 15.3 For quality review purposes, personnel at the local headquarters must retain the Application for Gas Clearance package (with signatures, times, and dates) for at least 2 calendar years.
- 15.4 Personnel at the local headquarters must retain field copies of clearances for at least 2 calendar years.
- 15.5 For non-emergency clearances, the superintendent for each area must perform the following tasks:
 - 1. Keep track of the number of times requests for clearance application approvals are made less than 10 business days before the start of work.
 - 2. IF there are more than five such occurrences over 2 consecutive months,

THEN the superintendent must perform the following tasks:

- a. Review the clearances to determine whether they were avoidable.
- b. Discuss the reasons for the occurrences with the clearance supervisors and the manager of gas control to prevent recurrence.

END of Instructions

Definitions Active clearance: A clearance is considered active from the time the clearance supervisor requests final authorization until the clearance supervisor reports the clearance complete to gas control personnel.

Caution tag (CT): A tag used to mark equipment (e.g., switches, valves, breakers) that, if operated, may endanger equipment or jeopardize systems operations.

Clearance: Isolating and tagging all energy sources to secure an area between specified points so work can be performed safely.

Clearance Communications Board: A board for tracking clearances when the established and designated master clearance point for cleared equipment is in a major station. The board is located in the major station and displays a log for each ongoing clearance at the station.

Clearance complete: When the system is returned to normal and notification is made to gas control personnel.

Clearance points: The operating mechanism of all switches, breakers, valves, etc. that control power, gas, vapor, or liquid to the cleared equipment.

Clearance supervisor: The supervisor who is responsible for and manages the clearance. The clearance supervisor is responsible for all clearance logs, Clearance Communications Board documentation, and tagging. A clearance supervisor may be any qualified journeyman-level person or an exempt supervisor, including but not limited to an M&C mechanic, first-line supervisor, reservoir engineer, operator mechanic, transmission mechanic, gas control technician, or gas transmission technician. At a manned station, the clearance supervisor may be the operator on shift.

Clearance tailboard: A meeting held with all individuals working on the clearance at the beginning of work, when significant changes occur in the clearance, or as needed. At a minimum, the clearance tailboard addresses safety concerns, objectives of the clearance, work assignments, and communication methods used during the clearance.

Designated person: A qualified clearance holder who, in the judgment of the clearance supervisor, is knowledgeable and experienced with the equipment to which the clearance applies. As directed by the clearance supervisor, designated persons clear equipment, place MOL and CTs on clearance points, and prepare grounding documents.

Electronic Master Clearance Board: The board on the Clearance SharePoint website where gas control personnel track the progress of all clearances.

Gas control personnel: The transmission supervisor, clearance coordinator, operators, transmission coordinators, and senior transmission coordinators.

Gas system operations (GSO): Gas control and all of the manned stations.

Information tag (IT): A tag attached to controls, switches, or equipment to pass on additional information regarding their use in systems operations.

Isolation point: A clearance point that separates a source of energy from the work.

Major stations: For the purposes of these clearance procedures, major stations are backbone compressor stations (Tionesta, Burney, Gerber, Delevan, Bethany, Kettleman, Hinkley, and Topock); storage facilities (McDonald Island, Los Medanos, and Pleasant Creek); and Brentwood, Milpitas, Irvington, and Antioch terminals.

Man-on-Line (MOL) tag: A tag placed on isolation points (e.g., switches, breakers, gates, valves) to isolate equipment from all sources of energy and ensure that work can be performed safely between isolation points.

New clearance: A clearance which does not exist on file and requires the preparation of a new Application for Gas Clearance. A new clearance must go through the approval/authorization process and may become a standard clearance.

New non-system clearance: A clearance submitted for the first time that does not affect gas flow, gas quality, or the ability to monitor or remotely operate the flow of gas. New non-system clearances may become non-system standard clearances if the work is routine or repetitive. New non-system clearances are authorized by the responsible maintenance group at the supervisor level or above; they are not authorized by gas control personnel.

New system clearance: A clearance submitted for the first time that affects gas flow, gas quality, or the ability to monitor or remotely operate the flow of gas. New system clearances may become system standard clearances if the work is routine or repetitive in nature. All new system clearances require authorization from gas control personnel.

Non-Clearance – Routine (NCR) work: Work that is safe to perform without a formal clearance and meets the criteria listed in <u>Job Aid TD-4100P-10-JA01</u>, <u>"Non-Clearance – Routine (NCR) Work,"</u> to qualify as NCR work.

Non-system standard clearance: A clearance that is routine or repetitive and does not affect gas flow, gas quality, or the ability to monitor or remotely operate the flow of gas. The maintenance group submitting the clearance keeps non-system standard clearances on file to reference for future submittals. Non-system standard clearances do not require authorization by gas control personnel.



Protocol: Official notification indicating the intention to "Report On" equipment to perform work or "Report Off" equipment after work is completed and indicating the full name of the person Reporting On or Off, the clearance number, and the equipment associated with the clearance.

Qualified clearance holder: Any personnel qualified to perform the clearance procedure and, in his or her supervisor's judgment, has experience with the equipment to clear. The person must have knowledge of clearance points and the ability to ensure that the equipment is cleared safely.

"Reporting Off": Official notification to gas control personnel (unmanned stations) or the operator on shift (manned stations) and, if applicable, the clearance log indicating that work is complete on cleared equipment. Equipment may not be made available until all personnel "Reported On" have "Reported Off."

"Reporting On": Official notification to gas control personnel (unmanned stations) or the operator on shift (manned stations) and, if applicable, the clearance log that cleared equipment is properly tagged, checked, and safe to work on and that the clearance holder is ready to begin work. All secondary clearance holders must "Report On" to the clearance supervisor.

Secondary clearance holder: Any person qualified to perform work in compliance with this procedure and work on the equipment involved who "Reports On" after the clearance supervisor "Reports On." Knowledge of clearance points and the ability to ensure that equipment is cleared safely is mandatory.

Standard clearance: A clearance for work that is routine or repetitive with an Application for Gas Clearance on file, reviewed and authorized by the first-line supervisor.

System clearance: A new or standard clearance that affects gas flow, gas quality, or the ability to monitor or remotely operate the flow of gas. Authorization by gas control personnel required.

System flow: Gas flow on pipelines operating over 60 psig outside station fence lines.

System standard clearance: A clearance that is routine or repetitive and may affect gas flow, gas quality, or the ability to monitor or remotely operate the flow of gas. The maintenance personnel submitting the clearance and gas control personnel both keep system standard clearances on file to reference for future submittals. Authorization by gas control personnel required.

Implementation	The manager of gas control is responsible for ensuring that the tailboard for
Responsibilities	this document is completed.



	Superintendents and supervisors are responsible for tailboarding this document to all personnel who perform work on natural gas facilities that operate over 60 psig and their associated equipment.		
Governing Document	NA		
Compliance Requirement/ Regulatory Commitment	This procedure is one of many used to satisfy applicable requirements of 49 CFR 192.605, "Procedural manual for operations, maintenance, and emergencies."		
Reference Documents	Developmental References: 49 CFR 192.605, "Procedural manual for operations, maintenance, and emergencies." Supplemental References:		
	NA		
Appendices	NA		
Attachments	Attachment 1, "Additional Instructions for Clearances at Manned Stations" Job Aid TD-4100P-10-JA01, "Performing Non-Clearance – Routine (NCR) Work" Job Aid TD-4100P-10-JA02, "Preparing an Application for Gas Clearance (Form TD-4100P-10-F01)" Job Aid TD-4100P-10-JA03, "Placing Man-on-Line, Caution, and Information Tags"		
	Job Aid TD-4100P-10-J04, "Testing Cleared Equipment to be Operational"		
	Job Aid TD-4100P-10-JA05, "Transferring Clearance Supervisor Responsibilities"		



Job Aid TD-4100P-10-JA06, "Clearance Checklist for Control Room Personnel"

Job Aid TD-4100P-10-JA07, "Gauging Pressure During Critical Operations"

Document Recision	This utility procedure supersedes Utility Procedure TD-4100P-10, "Gas Transmission Clearance Procedure for Facilities Operating Over 60 PSIG," Rev. 0, issued 07/2012.	
Approved By	Redacted	
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Document Contact	Redacted	



Revision Notes

Procedure Revision	Where?	What Changed?
Rev. 0, 07/2012	All sections	This is a rewrite of WP4100-10. It has been changed in its entirety. New topics include information on risk assessment and clarification about welding and tapping clearances.
Rev. 1, 11/2012	Section 3 Job Aid 02, Rev. 1	Added new section with specific instructions for repurposing a completed clearance for new clearance work, requiring that the clearance be assigned a new number and undergo the same reviews and approvals required for a new clearance.
	Step 4.2	Clarified that engineering personnel review and approve system clearances upon request.
	Steps 7.1 and 8.1 Job Aid 06, Rev. 1	Added text to emphasize that once work begins, if a clearance needs to be revised, work must stop until the revised clearance application is approved and that the revised clearance must be distributed to all affected personnel and tailboarded with personnel performing the clearance work before work can be resumed.
	Step 8.2.1 Job Aid 06, Rev. 1	Added text to further emphasize that clearance supervisors must ensure proper positioning of any equipment that needs to be operated during a clearance but is not marked on operating maps and diagrams.
	Step 10.2	Added instruction to follow new Job Aid TD-4100P-10-JA07, Rev. 0, to use two pressure gauges, one primary and one backup, to ensure accurate monitoring when performing critical operations.
	Attachments Section	Added reference and link to new Job Aid TD-4100P-10-JA07.