Gas Transmission – Maintenance and Construction
QUALIFICATION EVALUATION FORMS

This document contains all the required forms and tools to properly qualify an employee in the given OQ task. The following instructions will guide you in how to complete this process.

This document contains the following documents:

Pages 1 and 2: Official DOT input forms. This document is to be completed by an approved OQ Evaluator for the given task. Field supervisors are not to sign and submit this document unless they are an approved evaluator.

Page 3 : This table contains the required training requirements for either initial or subsequent OQ Evaluation. It specifies the required formal training, OJT (via FTO's) and performance testing (JPM's) that must be completed prior to OQ Evaluation.

Pages 4 – end: These contain the actual Field Training Outlines necessary to complete any required OJT and Job Performance Measurements (JPM's) associated with this task. **These must be completed prior to OQ Evaluation**.

To complete the **OQ Process** follow these steps:

1. Go to the T drive and find the desired OQ folder for the given OQ task

   T:\TRAINING\OPERATOR QUALIFICATION\ New Initial and Subsequent Forms

2. Determine if the employee requires initial or subsequent evaluation.
3. See page 3 of the document which specifies the required training.
4. Schedule the employee to complete any required formal training.
5. Working with your district MP, schedule the employee to complete any required OJT or testing (see pages 4 to the end)
6. If formal training, Field Training Outlines and JPM's are complete, contact [redacted] to schedule an evaluation. The primary role of the Evaluator is to assess knowledge, skills and abilities. They are not there to provide training.
7. Upon completion of OQ Evaluation, page 1 of this document is sent to [redacted] for processing. Do not send in this form directly to HR Learning Services.
8. The original DOT Form (page 1) is forwarded to HRLS by [redacted] This notification is then input into Training Server and will appear on the DOT Operator Qualification Report for the employee's district. Maintenance Planning is also notified so that PLM (report 70) can be updated with current information.

The employee can now be properly scheduled to perform OQ associated work.

Pacific Gas and Electric Company

DOT OPERATOR QUALIFICATION

QUALIFICATION EVALUATION

❒ Initial
❒ Subsequent

EMPLOYEE FULL NAME (PRINT)		Last four of SS#

Job Title _____ Area _____ Work Location _____

Subtask Name Gas Purging Subtask #: 07-02.00

SUBTASK OBJECTIVE: Using one or more of the below "Evaluation Methods", demonstrated the knowledge, skill and ability to perform this task following these qualification criteria.

		Qualified
1.	**Safety Requirements:**	❑
	• Ability to identify and resolve abnormal operating condition(s)	
2.	**Access, understand and apply the following Company Standard(s):**	❑
	• Gas Standards - A38 and GO 112E	
3.	**Preparation:**	❑
	• Supply gauges and valves • Provide vent stack • Hand tools • Leak detection soap • Bonding cables	
4.	**Installation:**	❑
	• Install gauges • Install vent stacks • Install compressor and air hose	
5.	**Purging:**	❑
	• Purging above bell hole • Make sure there is nobody near by	
6.	**Testing:**	❑
	• Soap test fittings and welds • Inspect welds	
7.	**Remove Purging Equipment:**	❑
	• Remove air hose • Remove vent stack and gauges • Remove bonding clamp	

EVALUTION METHODS (Check all that apply)

Observation On-The-Job Performance ❑ Observation by Simulation ❑ Oral Test ❑
Observation by On-The-Job Training ❑ Written Base Test ❑ OTHER - Field Performance Audit ❑

Comments / Actions:

EVALUATOR'S NAME AND CORP ID | EVALUATOR'S SIGNATURE | DATE

6/23/05 version
*OM&C/FSD - Mail completed **original** Qualification Evaluation form(s) to [redacted] Room B101 @ 3301 Crow Canyon Rd, San Ramon, CA.*
*CGT - Mail completed **original** Qualification Evaluation form(s) to [redacted] @ 375 N. Wiget Lane, Walnut Creek, CA.*
OM&C/FSD/CGT - Send copy to LGOQPC (Local Gas Operator Qualification Plan Coordinator)

Initial/Subsequent Evaluator Instructions

Subtask Name: Gas Purging Subtask#: 07-02.00

Evaluator must provide the following reference material(s):

- Abnormal Operating Condition (AOC) Job Aid
- Gas Standard

Note:
Using reference material(s) listed above, individuals must answer all questions correctly. If individual cannot provide the correct answer(s) or demonstrate performance after two additional attempts, the Evaluator should refer to the Operator Qualification Basic Plan Manual, Section 1.3.3.3 for further instructions.

Knowledge

Criteria #	Requirement
1.	Review Annual Operator Qualification Job Aid and Abnormal Operating Conditions (AOC) with individual(s).
2.	Provide individual with Gas Purging Test.

Performance

3. – 7.	Individual must perform checks as required on the Qualification Evaluation for each of these following method(s): • Preparation • Installation • Purging • Testing • Remove Purging Equipment **Note:** Skill must be demonstrated through simulation or actual field performance. Individual must verbalize each action step (bulleted items in Steps 3-7).

GSMTS Operator Qualification Training Requirements

PURGING **Task 07-02** **Gas Purging**	**Initial Qualification[1]**	**Initial Qualification[2]**	**Subsequent Qualification[3]**
I. Recommended Training Or Equivalent On-The-Job Training	Must follow the Company/Union Program	Required	Optional
II. Text and Reference Review		Required: Text and References listed in Training Binder FTO that pertain to Vol. 1 TB 2-6	Required: Review of UO Standard S4131, GS&S A-38, A-38.1, and all applicable Job Aids listed in FTO.
III. On-The-Job Training Job Performance Measure JPM		Required: JPM Vol. 1, TB 2-6.1, -6.2, -6.3, -6.5, and -6.6	Required: JPM Vol. 1, TB 2-6.1
IV. Academic Requirements		No further requirement (Testing completed with training)	Subsequent OQ Test
V. Documentation	Original OQ form kept in WC; Original JPM's kept in District's training file.		

[1] Employee new to PG&E (also pertains to an existing GSMTS Journeyman advancing to the next classification in the training program).
[2] PG&E Journeyman with task in base classification but is not Operator Qualified to do the task.
[3] PG&E Journeyman currently Operator Qualified in the task.

Supports OQ tasks: 07-01, 07-02, 07-03, 07-04

Objective	Trainee Name: [Click here and enter name]

The trainee will be able to correctly perform the tasks associated with Pipeline Purging. Performance shall also be consistent with all applicable company procedures and policies.

OJT Instructions	OJT Hours Guideline: 80 hours

Reviewer's Role – A qualified reviewer (journeyperson or equivalent) will guide the trainee in completing the objectives for each sub task in this outline. Work with the trainee by discussing, explaining, or performing as necessary the concepts associated with each sub task.

Trainee's Role – Under direction of a qualified reviewer, the trainee will perform the sub tasks described below to prepare for completing a Job Performance Measure.

OJT Process Steps

1. GMS reviews FTO requirements with SME.
2. GMS determines Sub tasks & OJT hours.
3. GMS schedules with WMS.
4. SME and Trainee complete OJT hours.
5. Completed –signed FTO is returned to GMS.
6. GMS verifies completed FTO.
7. GMS schedules JPM.

Text and References:

- Code of Safe Practices
- Gas Standards & Specifications (GS&S):
  - A-38 Procedures for Purging Gas Facilities
  - A-38.1 Installation and Operation of Air Movers
  - A-60 Gas Main Welding Sleeves
  - A-63 Gas Main Repair Can
  - A-64 Gas Line Patches and Half Soles
  - B-53.2 High Pressure Clamp
- Job Aids:
  - Vol 2 TB 2-11a Installation of Air Movers
  - Vol 2 TB 2-11b Air Mover Drawing 182877
  - Vol 2 TB 2-11c Preparation of Lamb Air Mover
- Maps and Drawings
- Recommended Practice RP4710 Production Fluid/Pipeline Liquid -- Leak Response and Contaminated Soil Handling Procedure
- UO Standards:
  - S4131 Hot and Cold Work Methods for Natural Gas Pipeline Shutdown and Tie-in
  - S4134 Steel Pipeline Repair
  - S4420 Gas Transmission Clearance Procedure which includes CGT Clearance Procedures Manual, Air Mover Manual
- Work Area Protection Guide

Trainee Materials:

- Air mover (w/ground strap)
- Air compressor with gauges and hoses
- Probe rod or grounding rod
- Various hand tools, duct seal
- Combustible Gas Indicator (CGI)
- Lifting device (to remove certain blow-off stack caps)
- Air gauges (to measure Mainline pressure for welding safety)

Major Sub-Tasks:

Vol 1 TB 2.6.1	Gas Purging	**Vol 1 TB 2.6.4**	Air Purging and Inert Purging
Vol 1 TB 2.6.2	Air Compressor Operation	**Vol 1 TB 2.6.5**	Liquid Removal
Vol 1 TB 2.6.3	Install Air Mover	**Vol 1 TB 2.6.6**	Pipeline Shutdowns and Tie-ins

Sub-Task Vol 1 TB 2-6.1 **Gas Purging**

Note: This sub-task supports both the Operator Mechanic and the Transmission Mechanic job duties.

Objective: The trainee will be able to correctly explain:

- the purpose of pipeline purging.
- the various precautions required.

Demonstrate and/or explain:

- the purpose of pipeline purging.
- the contents of GS&S A-38 by thoroughly reviewing it.
- the basic process of isolating a pipeline section for purging (e.g., single main line valve {MLV} isolation because they are so far apart).
- the differences in purging procedures for cold work vs. hot work.
- the necessary safety precautions involved in pipeline purging (continuous atmospheric monitoring in case a main line valve leaks by, flammable gases, proper grounding of air mover to ground probe, etc.).
- how to be careful not to introduce any possible ignition sources into the area during the purging process.
- what happens to a Combustible Gas Indicator (CGI) on its low range scale if used in a heavy natural gas atmosphere.
- how to perform gas purging (adhere to the required steps associated with preparation, installation, and testing).
- how to maintain appropriate records.

Hours Recommended	OJT Hours Received*	Trainee	Reviewer	Date
4 Hours	☐☐☐☐	[Initials]	[Initials]	[Date]

Sub-Task Vol 1 TB 2-6.2 **Air Compressor Operation**

Note: This sub-task supports both the Operator Mechanic and the Transmission Mechanic job duties.

Supports OQ tasks: 07-01, 07-02, 07-03, 07-04

Objective: The trainee will be able to correctly start, operate, and stop an air compressor.

Demonstrate and explain how to:

- perform a pre-start inspection including checks of:
  - fluid levels (fuel, water, oil, etc.).
  - condition of belts.
  - general mechanical condition.
- connect hoses and the air-operated equipment as applicable while observing all safety precautions.
- properly monitor an operating air compressor.
- properly shut down an air compressor.
- make an air compressor ready for transport.

Hours Recommended	OJT Hours Received*	Trainee	Reviewer	Date
4 Hours	☐☐☐☐	[Initials]	[Initials]	[Date]

Sub-Task Vol 1 TB 2-6.3 **Install Air Mover**

Note: This sub-task supports both the Operator Mechanic and the Transmission Mechanic job duties.

Objective: The trainee will be able to correctly:

- install an air mover to a pipeline facility for performing cold work.
- perform an effective purge.

Demonstrate and/or explain:

- the contents of GS&S A-38.1 and air mover job aids.
- how to properly connect an air mover to a pipeline facility (flange or valve) using duct seal as needed to get an airtight seal.
- how to properly ground the air mover.
- how to monitor the air mover for proper operation to purge the pipeline (attach air flow ribbons).
- how to use a CGI to sample for natural gas (including the proper sampling location).
- the acceptable levels (on the CGI) to ensure safety.
- how to hook up pressure gauges to monitor mainline pressure.
- proper communications with others involved in the purging process.
- how to size, install, and operate an air mover.
- how to remove all associated purging equipment when job is completed.
- how to maintain appropriate records.

Hours Recommended	OJT Hours Received*	Trainee	Reviewer	Date
8 Hours	☐☐☐☐ ☐☐☐☐	[Initials]	[Initials]	[Date]

Sub-Task Vol 1 TB 2-6.5 **Liquid Removal**

Note: This sub-task supports both the Operator Mechanic and the Transmission Mechanic job duties.

Supports OQ tasks: 07-01, 07-02, 07-03, 07-04

Objective: The trainee will be able to correctly and safely remove pipeline liquids from gas mains.

Demonstrate and/or explain how to correctly:

- remove liquids from a gas main.
- measure and record the amount of liquids removed.
- label containers to transport pipeline liquids.
- complete required documentation.

Hours Recommended	OJT Hours Received*	Trainee	Reviewer	Date
4 Hours	☐☐☐☐	[Initials]	[Initials]	[Date]

Sub-Task Vol 1 TB 2-6.6 **Pipeline Shutdown and Tie-in Procedures**

Note: This sub-task supports both the Operator Mechanic and the Transmission Mechanic job duties.

Objective: The trainee will be able to correctly and safely perform shutdown and tie-in procedures.

Demonstrate and/or explain:

- the contents of UO Standard S4131.
- how to write a clearance to remove a section of pipeline from service (see UO Standard 4420).
- the difference between "cold" and "hot" work methods as defined in UO Standard S4131.
- where the pipeline equipment is stored in your district.
- the purpose of strong back clamps, hydraulic jacks, grounding straps, blind flanges, foreman's plugs, sump pumps, floodlights, and canvas fire blankets.
- how to isolate the mainline valves first and grease them if necessary.
- how to safely remove a flange from a blow-off stack:
  - open the small safety valve to release the pressure in the blow-off line.
  - after all the pressure has been released, remove the flange.
- how to be careful not to introduce any possible ignition sources into the area during this process.
- why not to stand in the direct line of fire (in case the flange blows off forcefully).
- the purpose of using an air mover.
- how to install an air mover.
- how to monitor and operate an air mover during a tie-in procedure ("cold method").
- how to assist the welder when cutting into a pipeline main.
- how to monitor fire in the hole and apply canvas to prevent air from being sucked into the main ("hot method").
- how to properly fill out a Form "A" (Form F4110) Leak survey, Repair, Inspection, Etc. Report.

Hours Recommended	OJT Hours Received*	Trainee	Reviewer	Date
40 Hours	☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐	[Initials]	[Initials]	[Date]

Operator Qualification – Job Performance Measure			
Trainee Name Last First	Corp ID 4 digits	SSN Last 4 digits	Location Headquarters or District Name

Directions: This form documents the Job Performance Measures of the named trainee. Upon completion, the results will be put into the Operator Qualification database. The Evaluator will:

- observe the tasks as they are performed or described and rate the results.
- stop a task if the participant's actions will endanger life or equipment.

Sub-Task Vol 2 TB 2-6.1 **Gas Pipeline Purging**

Note: This sub-task supports both the Operator Mechanic and the Transmission Mechanic job duties.

Task Element	Evaluation Method P = Perform S = Simulate D = Describe	Results S = Satisfactory U = Unsatisfactory NA = Not Applicable	Evaluator Initials Date
Explain the purpose of Gas Pipeline Purging and the various precautions that must be followed.	Method ☐P ☐S ☐D	Results ☐S ☐U ☐NA	Initials Date

Standard: The trainee can correctly:

- state the purpose of pipeline purging.
- explain the contents of GS&S A-38.
- explain the basic process of isolating a pipeline section for purging (e.g., single main line valve {MLV} isolation because they are so far apart).
- explain the difference in purging procedures for "cold" vs. "hot" work.
- explain the necessary safety precautions involved in pipeline purging (continuous atmospheric monitoring in case a main line valve leaks by, flammable gases, proper grounding of air mover to ground probe, etc.).
- explain how to be careful not to introduce any possible ignition sources into the area during the purging process.
- explain what happens to a Combustible Gas Indicator (CGI) on its low range scale if used in a heavy natural gas atmosphere.
- perform gas purging (follow the required steps associated with preparation, installation, and testing).
- maintain appropriate records.

Operator Qualification – Job Performance Measure			
Trainee Name Last First	Corp ID 4 digits	SSN Last 4 digits	Location Headquarters or District Name

Directions: This form documents the Job Performance Measures of the named trainee. Upon completion, the results will be put into the Operator Qualification database. The Evaluator will:

- observe the tasks as they are performed or described and rate the results.
- stop a task if the participant's actions will endanger life or equipment.

Safety Requirements:

- In performance of these tasks, be able to identify and resolve any abnormal operating conditions.
- Wear the appropriate clothing and use all personal safety equipment (PPE).
- Provide work protection.
- Code of Safe Practices Section 13.

Sub-Task Vol 2 TB 2-6.2 **Air Compressor Operation**

Note: This sub-task supports both the Operator Mechanic and the Transmission Mechanic job duties.

Task Element	Evaluation Method P = Perform S = Simulate D = Describe	Results S = Satisfactory U = Unsatisfactory NA = Not Applicable	Evaluator Initials Date
Start, operate, and stop an air compressor.	Method ☐P ☐S ☐D	Results ☐S ☐U ☐NA	Initials Date

Standard: The trainee can correctly demonstrate and explain how to:

- perform a pre-start inspection: checking fluid levels (fuel, water, oil, etc.), condition of belts, and general mechanical condition.
- connect hoses and air-operated equipment (as applicable) while observing all safety precautions.
- properly monitor an operating air compressor.
- shut down an operating air compressor.
- make an air compressor ready for transport.

Operator Qualification – Job Performance Measure			
Trainee Name Last First	Corp ID 4 digits	SSN Last 4 digits	Location Headquarters or District Name

Directions: This form documents the Job Performance Measures of the named trainee. Upon completion, the results will be put into the Operator Qualification database. The Evaluator will:

- observe the tasks as they are performed or described and rate the results.
- stop a task if the participant's actions will endanger life or equipment.

Safety Requirements:

- In performance of these tasks, be able to identify and resolve any abnormal operating conditions.
- Wear the appropriate clothing and use all personal safety equipment (PPE).
- Provide work protection.
- Code of Safe Practices Section 13.

Sub-Task Vol 2 TB 2-6.3 **Install Air Mover**

Note: This sub-task supports both the Operator Mechanic and the Transmission Mechanic job duties.

Install an air mover to a pipeline facility and perform an effective purge.	Method ☐P ☐S ☐D	Results ☐S ☐U ☐NA	Initials Date

Standard: The trainee can correctly:

- explain contents of GS&S A-38.1 and air mover job aids.
- demonstrate and explain the proper connection of an air mover to pipeline facility (flange or valve), using duct seal as needed for an air tight seal.
- demonstrate and explain the proper grounding of the mover.
- monitor the proper operation of the air mover to purge the pipeline (attach air flow ribbons).
- demonstrate and explain the use of a CGI to monitor for natural gas (including the proper sampling location).
- state the acceptable levels (on the CGI) to ensure safety.
- demonstrate and explain the hookup of pressure gages to monitor mainline pressure.
- demonstrate and explain proper communications with others involved in the purging process.
- size, install, and operate an air mover.
- remove all associated purging equipment when complete.
- maintain appropriate records.

Operator Qualification – Job Performance Measure			
Trainee Name Last First	Corp ID 4 digits	SSN Last 4 digits	Location Headquarters or District Name

Directions: This form documents the Job Performance Measures of the named trainee. Upon completion, the results will be put into the Operator Qualification database. The Evaluator will:

- observe the tasks as they are performed or described and rate the results.
- stop a task if the participant's actions will endanger life or equipment.

Safety Requirements:

- In performance of these tasks, be able to identify and resolve any abnormal operating conditions.
- Wear the appropriate clothing and use all personal safety equipment (PPE).
- Provide work protection.
- Code of Safe Practices Section 13.

Sub-Task Vol 2 TB 2-6.5 **Liquid Removal**

Note: This sub-task supports both the Operator Mechanic and the Transmission Mechanic job duties.

Task Element	Evaluation Method P = Perform S = Simulate D = Describe	Results S = Satisfactory U = Unsatisfactory NA = Not Applicable	Evaluator Initials Date
Remove pipeline liquids from gas mains.	Method ☐P ☐S ☐D	Results ☐S ☐U ☐NA	Initials Date

Standard: The trainee can correctly demonstrate and explain how to:

- remove liquids from a gas main.
- measure and record the amount of liquids removed.
- properly label containers needed to transport pipeline liquids.
- complete the required paper work.

Operator Qualification – Job Performance Measure			
Trainee Name Last First	Corp ID 4 digits	SSN Last 4 digits	Location Headquarters or District Name

Directions: This form documents the Job Performance Measures of the named trainee. Upon completion, the results will be put into the Operator Qualification database. The Evaluator will:

- observe the tasks as they are performed or described and rate the results.
- stop a task if the participant's actions will endanger life or equipment.

Sub-Task Vol 2 TB 2-6.6 **Pipe Shutdowns and Tie-ins**

Note: This sub-task supports both the Operator Mechanic and the Transmission Mechanic job duties.

Task Element	Evaluation Method P = Perform S = Simulate D = Describe	Results S = Satisfactory U = Unsatisfactory NA = Not Applicable	Evaluator Initials Date
Perform pipeline shutdown and tie-in procedures.	Method ☐P ☐S ☐D	Results ☐S ☐U ☐NA	Initials Date

Standard: The trainee can correctly demonstrate and/or explain:

- the contents of UO Standard S4131.
- how to write a clearance to remove a section of pipeline from service (UO Standard 4420).
- the difference between "cold" and "hot" work methods as defined in Standard S4131.
- where the pipeline equipment is stored in his/her district.
- the purpose of strong back clamps, hydraulic jacks, grounding straps, blind flanges, foreman's plugs, sump pumps, flood lights and canvas fire blankets.
- how to properly isolate the mainline valves first and grease them if necessary.
- how to safely remove a flange from a blow-off stack:
  - open the small safety valve to release the pressure in the blow-off line.
  - after all the pressure has been released, remove the flange.
- how to be careful not to introduce any possible ignition sources into the area during this process.
- why not to stand in the direct line of fire (in case the flange blows off forcefully).
- the purpose of using an air mover.
- how to assist with the installation of an air mover.
- how to monitor and operate an air mover during a tie-in procedure ("cold method").
- how to assist the welder when cutting into a pipeline main.
- how to monitor fire in the hole and apply canvas to prevent air from being sucked into the main ("hot method").
- how to fill out a Form "A" (Form F4110) Leak survey, Repair, Inspection, Etc. Report.

Link to UO Standard S4131 Hot and Cold Work Methods For Natural Gas Pipeline Shutdown and Tie-In:

http://wwwedm3/cgi-bin/doccontent.dll?LibraryName=dmspge01^dmsedm01&SystemType=2&LogonId=ce0e8ffe79e3d6a81d41a708c69904b5&DocId=003673762&Page=1

Link to Gas Standard and Specification A-38 Procedures For Purging Gas Facilities:

http://wwwedm3/cgi-bin/doccontent.dll?LibraryName=dmspge01^dmsedm01&SystemType=2&LogonId=4e179c0c6adc7c27c6d81de71f79fa04&DocId=982450058&Page=1

Link to Gas Standard and Specification A-38.1 Installation and Operation of Air Movers:

http://wwwedm3/cgi-bin/doccontent.dll?LibraryName=dmspge01^dmsedm01&SystemType=2&LogonId=d770a5659cd9ce7750afdd222301ae8c&DocId=982450059&Page=1

Job Aids:

Air Mover -- Drawing 182877

Air Mover -- Preparation

Air Movers -- Installation

Link to Job Aids: http://wwwint02/gsm/training/job_aids.htm