Attachment A: TD 4412P-07

Patrol Gas Pipeline

Patrolling Gas Pipelines

Summary

This utility procedure establishes a process for patrolling Pacific Gas and Electric Company (PG&E or Company) gas facilities (facilities).

Level of Use: Information Use

Target Audience

- Pipeline Patrol Process Owner (PPPO)
- Aerial patrollers
- Ground patrollers
- Field supervisors responsible for the oversight of ground patrollers (field supervisors)
- Gas engineering (Engineering) personnel
- Personnel involved with identifying and evaluating both class location and high consequence areas
- Asset and Risk Management personnel
- Land Department personnel
- PG&E Academy personnel
- Personnel involved with Operator Qualification (OQ) evaluations
- Regulatory Compliance and Support personnel
- Contract personnel for patrol-related duties

NOTE

The duties outlined in this utility procedure may be completed by the appropriate alternates, designees, or personnel with greater and encompassing authority, as necessary.

Safety

Hazards impacting this work include, but are not limited to, the following conditions:

- Human presence or activity
- Environmental surroundings, including climate conditions

- Machinery and equipment
- Traffic conditions
- Tripping and slipping hazards
- Vegetation
- Animals

Before You Start

Read this entire procedure before patrolling gas pipelines.

Compare the publication date and version number on your working copy of this document against the published version in the Technical Information Library to verify that it is current.

All personnel involved with this procedure must perform the duties outlined herein in compliance with the federal regulations and Company standards that this procedure is designed to reflect. Any deviation from any part of this procedure, whether accidental or intentional, necessary or voluntary, must be reported to the appropriate supervisor as soon as possible upon discovery.

Titles of positions or documents are subject to revision.

Aerial Patrollers

NOTE
Aerial patrollers who held active Operator Qualifications 08-01 (Inspect and Maintain Transmission Line) and 08-02 (Inspect and Maintain Distribution Line) prior to the publication of this procedure will be granted Operator Qualification 08-04 once this document is published.

- Prior to conducting patrol, aerial patrollers must complete and pass any aerial patrol training directed by the PPPO, pass both an initial and recurring, semi-annual aerial patrol performance evaluations, as well as hold the following OQ (or their equivalents):

  08-04, "Aerial Patrol"

Ground Patrollers

- Personal Protective Equipment (PPE)

  Personnel following this procedure must wear the following personal protective equipment (PPE), at a minimum, plus any other applicable PPE, as specified in the *Code of Safe Practices*:

  - Required to wear:

- Traffic vest
- Proper work footwear (no sneakers allowed)
- Long-sleeved shirt
- Long pants

- Must be available:
  - Hard hat
  - Gloves
  - Safety glasses
  - Hearing protection

- Recommended:
  - Sufficient hydration
  - Sufficient protection from the elements
  - Co-worker communication plan and means of communication
  - Customer notification plan, if necessary
  - Other equipment necessary to produce a quality, traceable, verifiable, and complete patrol (such as a laser range finder, GPS, digital camera, electronic tablet, etc.), as conditions warrant.

NOTE

Ground patrollers who held active Operator Qualifications 08-01 (Inspect and Maintain Transmission Line) and 08-02 (Inspect and Maintain Distribution Line) will remain qualified to perform ground patroller duties until June 30, 2014. By that date, patrollers must complete and pass the aforementioned ground patrol training, and also earn the revised 08-01 Operator Qualification [Ground Patrol (Trans/Dist)] in order to remain eligible to perform the ground patroller duties outlined in this utility procedure.

- Prior to performing patrol, ground patrollers must complete and pass any ground patrol training directed by the PPPO, as well as hold the following Operator Qualifications (or their equivalents):
  - 03-04, Atmospheric Corrosion / Monitor

- 03-05, Pipe Inspection
- 08-01, Ground Patrol (Trans/Dist)
- 08-03, Maintain Line Markers

Table of Contents

Procedure Steps

1 Scope of Patrol

1.1 Facilities to Patrol

1. The inventory of gas facilities that require patrol are identified in accordance with federal regulations and may be expanded upon by Company policies.

2. The gas facilities that require patrol include the following:

   a. Transmission Facilities.

   - Transmission facilities as determined by the Transmission Integrity Management Program (TIMP) using "Risk Management Procedure 06, Revision 08, Appendix A" (or its subsequent revisions or replacements).
   - The frequency of patrols is determined by the size of the line, the operating pressures, the class location, terrain, weather, and other relevant factors.
   - Gathering lines as determined and indicated by TIMP.

   b. Distribution Facilities.

   - Distribution facilities, as determined by appropriate local personnel, that operate in places or on structures where anticipated physical movement or external loading could cause leakage or failure.

- The frequency of patrolling mains must be determined by the severity of the conditions which could cause failure or leakage, and the consequent hazards to public safety.
- Exposed distribution mains excluding customer riser pipes and customer meter and regulator sets not included in the preceding point immediately above as determined by the appropriate local personnel. This exclusion includes curb meters in vaults and high-to-high sets to an individual customer, two small adjacent or adjoining customers, or multiple small customers served through a meter header or manifold (also known as non-district high pressure regulators).

c. Any other gas facilities requiring special attention, as conditions warrant.

1.2 Frequency of Patrol

Table 1. Minimum Patrol Frequency Requirements

Facilities	Minimum Frequency	Acceptable Methods
Transmission and Gathering pipelines	Quarterly*	Aerial and/or Ground
• Backbone pipelines (through the end of the year 2014, as part of the Pipeline Safety Enhancement Plan)	Monthly**	Aerial and/or Ground
• Pipelines currently in the Pipeline Safety Enhancement Plan (through the end of the year 2014)	Bi-monthly (every other month)	Aerial and/or Ground
Distribution lines in places or on structures where anticipated physical movement or external loading could cause failure or leakage and consequent hazards to public safety. *(See below)*		
• In business districts	Quarterly*	Aerial and/or Ground
• Outside business districts	6 months†	Aerial and/or Ground
Exposed Spans (an atmospheric corrosion evaluation for exposed transmission and distribution facilities)	3 Years††	Ground

* *At least 4 times each calendar year, not to exceed 4 ½ months to the date.*
** *At least once each calendar month.*
† *At least twice each calendar year, not to exceed 7 ½ months to the date.*
†† *At least once every 3 years, not to exceed 39 months to the date.*

1.3 Methods of Patrol

Patrol is conducted either aerially (via fixed-wing airplane or helicopter), or on the ground (via car, truck, 4x4 off-road vehicle, walking, or other appropriate means of traversing the right-of-way, excluding motorcycles).

1.4 Special Patrols

1. Field supervisors or the PPPO may direct the execution of additional patrols as conditions warrant. These scenarios include, but are not limited to, natural disasters or other events that may impact the integrity or accessibility of facilities.

2. These patrols are subject to the same procedures governing the corresponding patrol type (ground or aerial) as outlined in this document.

1.5 Reportable Conditions

Refer to TD-4412P-07-F01, "Ground Patrol Report," for a list of reportable conditions to be observed during patrol.

1.6 Documenting Patrols

As it may not be practical to complete a patrol report for each of the many facilities in each field supervisor's jurisdiction, a single patrol report may represent patrol of a group of these facilities as pre-determined by the PPPO. In these cases, there must be sufficient accessory documentation to identify the exhaustive list of facilities patrolled.

1.7 Informal Communication of Observations

Only personnel holding the appropriate Operator Qualifications or their equivalents may conduct patrols, investigate observations, document findings on official patrol forms, and initiate or complete any necessary follow-up actions;

HOWEVER,

PG&E encourages all personnel to observe, communicate, and inspect all conditions that may impact public safety and the operation of gas facilities, to the extent that personnel are comfortable and safe doing so. Observations must be communicated to the appropriate field supervisor, or, if this information is unknown, submitted to the *Corrective Action Program* as soon as practicable.

2 Aerial Patroller Duties

2.1 Aerial Patrol

1. The purpose of aerial patrol is to observe surface conditions on and adjacent to the pipeline right-of-way per the system of record. Refer to TD-4412P-07-F01, "Ground Patrol Report," for details concerning reportable conditions and the applicable zones of review.

2. Aerial Patroller Duties for Aerial Patrol

   a. Receive patrol assignment from PPPO. Flight schedules are subject to change due to safety concerns, crew availability, mechanical failure, inclement weather, etc.

b. Follow the pre-flight safety and flight tracking requirements outlined in the Pipeline Patrol Operations Manual (Operations Manual).

c. While in flight, safety is the top priority. Maintain situational awareness, and communicate hazards to the pilot and patrol team as appropriate.

d. Navigate the flight route, and direct the pilot.

e. Visually inspect the assigned facilities for reportable conditions within the Immediate and Adjacent Zones. Refer to the Ground Patrol Report for details.

(1) IF an observed condition is believed to pose an urgent threat to pipeline safety or integrity,

THEN act in accordance with Attachment 2, "Field Notices for Urgent Aerial Observations."

f. Use TD-4412P-07-F04, "Aerial Patrol Report," to document the facilities patrolled and all observed conditions.

g. Send each completed Aerial Patrol Report and any appropriate supplemental documents to the PPPO as soon as practicable.

2.2 Video Review

1. Video of aerial patrol flights is recorded whenever possible. The purpose of performing review of this video is as follows:

a. To visually inspect the Immediate and Adjacent Zones, as defined by TD-4412P-07-F01, "Ground Patrol Report," for reportable conditions as a quality control measure for aerial patrol.

b. To survey the area 0 to 660 ft (or farther, depending on the Potential Impact Radius of the pipeline) from both sides of the pipeline for conditions that may result in a change in human occupancy. (Refer to TD-4412P-07-F05, "Report of Change in Human Occupancy" for details).

(1) IF a different method of reviewing the pipeline for changes in human occupancy (e.g., aerial photography, ground survey, etc.) is employed at least quarterly (at least 4 times each calendar year, not to exceed 4½ months to the date),

THEN video review will not require human occupancy reviews and will be performed only as directed by the PPPO.

c. To create or update catalogs of previously reported observations. As directed by the PPPO, these catalogs, if updated quarterly, may be used in lieu of re-reporting observations to the field. Refer to the Operations Manual for details.

2. Video Reviewer Duties

   a. Review video of aerial patrol flights as per the Operations Manual.

   b. Document conditions observed from video review on a separate Aerial Patrol Report, noting that it is being used as a "Video Review Report." Send each completed Video Review Report and any appropriate supplemental documents to the PPPO as soon as practicable.

3 Ground Patroller Duties

NOTE

For all duties described below, it is strongly encouraged that ground patrollers capture digital images of each observed condition whenever possible, and include these images as supplements along with any other applicable documentation.

3.1 Ground Patrol

1. Ground patrol is conducted as a scheduled or special activity as directed by the PPPO or field supervisor.

2. Ground Patroller Duties for Ground Patrol

   a. Receive assigned facilities to patrol from field supervisor.

   b. Visually inspect the assigned facilities in the Immediate and Adjacent Zones for reportable conditions. Refer to TD-4412P-07-F01, "Ground Patrol Report," for details concerning reportable conditions and the applicable zones of review.

      (1) IF, during the course of patrol, the ground patroller determines that immediate action is necessary to maintain the safe operation of the facility,

      THEN field personnel perform the following steps:

      i. Retreat to a safe location, if necessary.

      ii. Contact the appropriate field supervisor (or designated alternates).

      iii. IF the field supervisor cannot be reached,

      THEN perform the following steps:

      a. Contact PG&E Gas Control at 1-800-811-4111.

      b. Inform the field supervisor as soon as possible that Gas Control has been notified.

iv. Perform duties and document actions as directed by the field supervisor or Gas Control, based on the capacity to respond safely.

v. Resume patrolling, unless otherwise directed.

c. Pending supervisor approval and the holding of appropriate Operator Qualifications, patrollers may perform corrective work within their capabilities (e.g., applying missing stickers, reinstalling downed or misaligned markers, etc.). Document corrective work on TD-4412P-07-F01, "Ground Patrol Report," and any supplementary forms as appropriate.

d. Document observed conditions on the Ground Patrol Report, and fill out any supplemental documents based on these findings as necessary.

(1) In addition to the Ground Patrol Report, use the following "sub-forms" when applicable, as indicated on the Ground Patrol Report:

- TD-4412P-07-F02, "Exposed Piping and Spans."
- TD-4412P-07-F03, "Landslide Area."
- TD-4412P-07-F05, "Report of Change in Human Occupancy."
- TD-4412P-07-F06, "Report of Encroachment along Pipeline."
- TD-4412P-07-F07, "Report of Vegetative Cover along Pipeline."

(2) The list of sub-forms above is not necessarily an exhaustive list of documents that must be completed as a result of patrol or any follow-up actions (e.g., warnings to third-parties encroaching upon the pipeline, notices of unsafe work practices, etc.).

(3) IF a facility cannot be properly identified, located, accessed, or otherwise patrolled safely and accurately, due, for example, to prohibitive vegetation, locked gates, hazardous conditions, missing markers, prohibitive facility maintenance, etc.,

THEN document this event as indicated on the Ground Patrol Report.

e. Submit the Ground Patrol Report and any supplemental documents to the field supervisor for review and approval as soon as practicable.

3.2 Ground Investigation

1. Ground investigation is conducted in response to an aerial or video review observation (see Section 4.1.2 below).

2. Ground Patroller Duties for Ground Investigations

a. Receive assigned aerial or video review observation(s) to investigate from field supervisor.

b. Locate the observation using the provided GPS coordinates and/or other geographic information.

NOTE

The ground investigation must account for the aircraft's approximation of the observation's location.

c. Visually inspect the following areas for reportable conditions.

(1) The observation.

(2) The area between the observation and the nearest patrolled facility.

(3) 150 feet along the pipeline, in both directions from the observation, if possible.

d. IF, during the course of a ground investigation, the ground patroller determines that immediate action is necessary to maintain the safe operation of a facility,

THEN refer to Section 3.1.2.b.1 above.

e. Perform duties described in Section 3.1.2.c through 3.1.2.e above, utilizing the TD-4412P-07-F08, "Ground Investigation Report", in place of the Ground Patrol Report.

NOTE

Unlike a Ground Patrol Report, a Ground Investigation Report does not represent a visual inspection of the entire Immediate and Adjacent Zones at the given location. Rather, the form is used only to document all conditions observed during the limited visual inspections detailed in 3.2.2.c. above.

3.3 Human Occupancy Review

1. The purpose of a human occupancy review is to evaluate the area from 0 feet to 660 feet (or farther, depending on the Potential Impact Radius of the pipeline) from both sides of the pipeline for conditions that may result in a change in human occupancy.

2. Unless a pipeline is reviewed by another method (e.g., video review, aerial photography, etc.), a human occupancy review must be performed quarterly (at least 4 times each calendar year, not to exceed 4½ months to the date).

3. Ground Patroller Duties for Human Occupancy Reviews

a. Visually inspect the area from 0 feet to 660 feet (or farther, depending on the Potential Impact Radius of the pipeline) from both sides of the pipeline for reportable conditions. (Refer to TD-4412P-07-F09, "Human Occupancy Review Report" for details).

b. IF, while performing a human occupancy review, a ground patroller observes reportable conditions not related to human occupancy (as per TD-4412P-07-F01, "Ground Patrol Report"),

THEN follow the process for ground patrolling as stated in Section 3.1 above. Document the finding on the Ground Patrol Report.

c. IF, during the course of a human occupancy review, the ground patroller determines that immediate action is necessary to maintain the safe operation of a facility,

THEN refer to Section 3.1.2.b.1 above.

d. Document any conditions on the TD-4412P-07-F09, "Human Occupancy Review Report," and fill out any supplemental documents based on these findings as necessary.

(1) IF a facility cannot be properly identified, located, accessed, or otherwise reviewed safely and accurately, due, for example, to prohibitive vegetation, locked gates, hazardous conditions, missing markers, prohibitive facility maintenance, etc.,

THEN document this event as indicated on the Human Occupancy Review Report.

4. Submit the Human Occupancy Review Report and any supplemental documents to the field supervisor for review and approval as soon as practicable.

3.4 Human Occupancy Investigation

1. A human occupancy investigation is a targeted investigation performed at the direction of the PPPO in response to a request from class location or high consequence area personnel for additional information concerning a relevant aerial or video review observation.

2. Ground Patroller Duties for Human Occupancy Investigations

a. Receive assigned aerial or video review observation to investigate from field supervisor.

b. Locate the observation using the provided GPS coordinates and/or other documents.

NOTE
The investigation must account for the aircraft's approximation of the observation's location.

c. Visually inspect the observation for reportable conditions. (Refer to the TD-4412P-07-F05, "Report of Change in Human Occupancy".)

(1) IF, during the course of a human occupancy investigation, the ground patroller determines that immediate action is necessary to maintain the safe operation of a facility,

THEN refer to the process for responding to urgent observations in Section 3.1.2.b.1 above.

d. Document the results of the investigation on TD-4412P-07-F05, "Report of Change in Human Occupancy."

e. Submit the Report of Change in Human Occupancy and any supplemental documents to the field supervisor for review and approval as soon as practicable.

4 Field Supervisor Duties

4.1 Field Supervisor Duties in Response to Aerial and Video Review Observations

1. Receive Aerial Patrol Reports and Video Review Reports from the PPPO.

2. Field supervisors must respond to each aerial or video review observation by ONE of the following methods:

a. Dispatch qualified personnel to perform a ground investigation at the site of the observation as soon as practicable (given the urgency of the observation). Refer to Section 3.2, "Ground Investigation," above for details.

b. IF the observation has been previously ground investigated,

AND the supervisor determines that further investigation is not necessary,

THEN note these facts, together with the date of the previous ground investigation, in the "Explanation for No Ground Investigation" section of the Aerial Patrol Report or Video Review Report.

c. Provide a written explanation in the "Field Response" section of the Aerial Patrol Report or Video Review Report as to why the observation does not require investigation. Use information such as USA ticket numbers, PG&E work order or clearance numbers, etc., when available.

3. In addition to any of the response methods described above, the supervisor may specify on the Aerial Patrol Report or Video Review Report that the observation does not require further reporting by aerial patrol or video review personnel by checking the "Do NOT Re-Report" box on the appropriate report.

CAUTION

Only elect that an observation should not be re-reported if the observation poses no future threat to the pipeline's integrity.

4.2 Additional Field Supervisor Duties

- Conduct the necessary actions to ensure the safety and integrity of facilities based on observations reported during patrol.
- Dispatch ground patrollers to patrol or investigate assigned facilities.
- Dispatch ground patrollers for targeted human occupancy investigations, as directed by the PPPO.
- Review any documents provided by the ground patrollers, and ensure that all necessary documentation has been accurately completed. Sign all forms upon approval.
- Submit scans or electronic equivalents of all patrol-related forms to the PPPO at PatrolReportsSubmiss@pge.com, or elsewhere as directed by the PPPO, as soon as practicable.
- File the original documents locally, unless otherwise directed by the PPPO. Barring any legal hold for a longer duration, retain all patrol records and supplemental forms related to patrol for five (5) years per federal requirements. All personnel must receive approval from the PPPO prior to destroying any records related to patrol program.
- Recommend changes to the inventory of facilities to be patrolled, and recommend adjustments of patrol frequency to the PPPO, as conditions warrant.

5 PPPO Duties

- General
  - Serve as the Subject Matter Expert (SME) for pipeline patrol.
  - Ensure compliance requirements of patrol are fulfilled.
- Safety, Quality Control, and Quality Improvement

- Oversee the safe operation of aerial patrols. The PPPO has the authority to suspend an aerial patroller, an aerial patrol pilot, or all aerial patrol operations, until such time as the PPPO deems the situation safe to resume.
- Conduct aerial and ground patrol training.
- Conduct performance evaluations of both pilots and aerial patrollers.
- Review, validate, and incorporate recommendations from aerial patrollers, pilots, field personnel, and other sources into future patrols as appropriate.
- Conduct additional quality control efforts, and implement program improvements.

- Asset Management
  - Maintain an inventory of facilities to be patrolled.
  - Maintain a centralized database of patrol records.
  - Maintain a centralized tracking mechanism to ensure timely process flow.
  - Notify field supervisors and aerial patrollers of facilities to be patrolled and the methods designated for patrolling these facilities.
  - Schedule aerial patrols, and direct the execution of ground patrols (including patrols for compliance or special patrols, as conditions warrant), ground investigations, human occupancy reviews, and human occupancy investigations.
  - Receive and catalog submitted patrol records.
  - Notify aerial patrollers or field supervisors of any incomplete or missing documentation.
  - Send a copy of the completed Aerial Patrol Report, Video Review Report, and any supplemental documents to the appropriate field supervisor as soon as practicable after completion of the flight.
  - Maintain catalogs of redundant observations by directing the quarterly review of aerial patrol flight videos, by updating the catalogs with the results, and by communicating existing conditions to the field supervisors and other appropriate departments.
  - Forward notifications and documentation as necessary to the appropriate departments for post-patrol follow-up action.
  - Report annual program metrics.

- Other Administrative Duties
  - Maintain the Pipeline Patrol Administrative Operations Manual.
  - Review and approve proposals from aviation contractors.
  - Review and respond to date requests for patrol information.

END of Instructions

Definitions

Backbone line: A large-diameter, high-pressure transmission pipeline that is used to transport gas from interstate pipelines and California gas fields to PG&E's local transmission and distribution system.

Class location: The density of buildings as defined in Code of Federal Regulations Title 49 CFR192.5, "Class locations."

Distribution line: A pipeline other than a gathering or transmission line.

Exposed facility: A facility that is normally exposed to the atmosphere. This includes mains and services on the roofs of buildings and equipment in underground vaults. Excluded facilities include those exposed in a temporary excavation, curb meters, cased piping, and buried valve bodies within a frame and cover that may or may not be in contact with the soil.

Gathering line: A pipeline that transports gas from a current production facility to a transmission line or main. This term includes collection lines taking gas from wells.

High consequence area: An area identified using Method 2 as defined in per Code of Federal Regulations Title 49 CFR 192.903, "What definitions apply to this subpart," *High consequence area (2)*.

High pressure regulator: A type of pressure regulation device.

Potential Impact Radius: The radius of a circle within which the potential failure of a pipeline could have significant impact on people or property.

Transmission line: A pipeline, other than a gathering line, that 1) transports gas from a gathering line or storage facility to a distribution center, storage facility, or large volume customer that is not downstream from a distribution center; 2) operates at a hoop stress of 20 % or more of SMYS; or 3) transports gas within a storage field.

Implementation Responsibilities

Field supervisors respond to aerial and video review observations, direct the execution of ground patrols, ground investigations, and corrective actions resulting from any patrol-related observations, and review, approve, submit, and store patrol documentation.

Patrolling Gas Pipelines

Aerial patrollers perform aerial patrols, review aerial patrol videos, and report conditions observed.

Ground patrollers perform ground patrols and investigations of aerial observations and report conditions observed.

Personnel involved with class location and high consequence areas, Asset and Risk Management, and the Land Department use patrol observations to perform analysis in their respective areas and communicate requests for additional follow up to the PPPO.

Land Department personnel review reports from the patrol process to conduct appropriate follow

Engineering personnel perform analyses of relevant patrol observations and determine necessary actions.

The PPPO oversees the patrol process, maintains a database of patrol records, and implements improvements to patrol program operations.

Regulatory Compliance and Support personnel communicate relevant issues requiring attention to the PPPO.

Governing Document

- Utility Standard S4412, "Preventing Damage to Underground Facilities," governs this document.

Compliance Requirement / Regulatory Commitment

Federal Code Requirements - Code of Federal Regulations (CFR) Title 49:

- 49 CFR §192.705, "Transmission lines: Patrolling," with respect to establishing a patrol program to observe threats to the safety and operation of transmission facilities in accordance with additional criteria regarding the frequency, methodology, and scope of these patrols.
- 49 CFR § 192.721, "Distribution systems: Patrolling," with respect to establishing a patrol program to observe threats to the safety and operation of distribution facilities in accordance with additional criteria regarding the frequency and scope of these patrols.
- 49 CFR §192.613, "Continuing Surveillance," with respect to providing continuing surveillance of changes in class location, failures, and other unusual operating and maintenance conditions of gas facilities.
- 49 CFR §192.481, "Atmospheric corrosion control: Monitoring," with respect to inspecting facilities that are exposed to the atmosphere.
- 49 CFR §192.609, "Change in class location: Required study," with respect to identifying potential changes in class location.

- 49 CFR §192.707, "Line markers for mains and transmission lines," with respect to the installation and maintenance of pipeline markers.
- 49 CFR §192.903, "What definitions apply to this subpart?" (Subpart O--Gas Transmission Pipeline Integrity Management), with respect to identifying high consequence areas.
- 49 CFR §192.905, "How does an operator identify a high consequence area?" with respect to identifying high consequence areas.
- 49 CFR §192.935, "What additional preventive and mitigative measures must an operator take?" with respect to monitoring high consequence areas.

Regulatory Commitments:

- Pacific Gas and Electric Company's Response to the Consumer Protection and Safety Division's May 25, 2012 Investigative Report into the Operations and Practice of Pacific Gas and Electric Company's Natural Gas Transmission Pipeline System in Locations with High Population Density. (July 23, 2012). (Testimony of Jane Yura and Redac Redacted
- Pacific Gas and Electric Company's Pipeline Safety Enhancement Plan (Implementation Plan). (August 26, 2011). (Prepared testimony).

Reference Documents

Developmental References:

- Pipeline Patrol Operations Manual
- Risk Management Procedure, RMP 06-Rev. 08, Appendix A
- Risk Management Procedure, RMP 08-Rev. 08
- TD-4127S, "Class Location Determination and Compliance Requirements"
- TD-4430P-02, "Gas Transmission Stations Inspection, Testing, and Maintenance Procedures"
- TD-4490S, "Gas Pipeline Rights-of-Way Management"
- TD-4412P-07-F01, "Ground Patrol Report"
- TD-4412P-07-F02, "Exposed Piping and Spans"
- TD-4412P-07-F03, "Landslide Area"
- TD-4412P-07-F04, "Aerial Patrol Report"

- TD-4412P-07-F05, "Report of Change in Human Occupancy"
- TD-4412P-07-F06, "Report of Encroachment along Pipeline"
- TD-4412P-07-F07, "Report of Vegetative Cover along Pipeline"
- TD-4412P-07-F08, "Ground Investigation Report"
- TD-4412P-07-F09, "Human Occupancy Review Report"
- TD-4412P-07-F10, "Aerial Patroller Performance Evaluation"

Supplemental References:

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

Appendices

- NA

Attachments

- Attachment 1, "Pipeline Patrol Process"
- Attachment 2, "Field Notices for Urgent Aerial Observations"
- Attachment 3, "Guidance for Visual Atmospheric Corrosion and Coating Inspections on Exposed Pipelines"

Document Recision

- This document supersedes Utility Procedure TD-4412P-07, "Patrolling Pipelines and Mains," Rev. 4, issued 08/03/2012.

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Patrolling Gas Pipelines

Revision Notes

Where?	What Changed?
Entire document	Major rewrite (see TD-4412P-07 Guidance Document Analysis [GDA] for details) and conversion to Guidance Document Management template.

Attachment B: TF 4001P-04

Gas Product and Supplier Approval

Pacific Gas and Electric Company

Utility Procedure: TD-4001P-04
Publication Date: 05/09/2012 Rev: 1

Gas Product and Supplier Approval

Summary

This procedure describes the steps to initiate, evaluate, and approve the following items: 1) new gas products, 2) modifications to existing gas products, and 3) suppliers of these products to facilitate the use of safe, reliable, and effective products in the gas transmission and distribution (T&D) system.

Level of Use: Informational Use

Target Audience

All personnel who propose or approve new (or modifications to existing) products, tools, or technologies (or their suppliers) for use in the gas T&D system.

All gas technical teams and personnel who review and approve gas products, tools, or technologies.

Safety

This procedure helps Pacific Gas and Electric Company (the Company) ensure that products used in the gas T&D system are safe, reliable, and effective.

Personnel and technical teams must use a conservative, inquiring bias to critically review the personal safety, public safety, and environmental impacts of any proposed product.

Before You Start

Personal protective equipment (PPE): NA

Training: Personnel performing tasks contained in this procedure for the first time must consult with experienced personnel who have facilitated gas product approval projects.

Forms: Attachment 2, "Gas T&D New Product/Modification Evaluation Approval Checklist."

Attachment 3, Form TD-4001P-04-F01, "In-field QC Inspection Plan Request Form."

Gas Product and Supplier Approval

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Procedure Steps

1 New Product / Product Modification Identification

1.1 Identify a potential new product, or a modification to an existing product, typically through one of these three channels:

- Need initiated internally to address an issue or as part of a Company strategic initiative.
- Need initiated internally by end users to improve or replace existing products.
- Need initiated by a supplier with the introduction of a new product or a modification that may benefit the Company.

1.2 Determine business justification for this new or modified product or new supplier.

1.3 Obtain information on the new product or modification from the supplier.

1.4 Notify the appropriate standards facilitator or supervisor of a possible new product / product modification evaluation effort.

1.5 Determine whether the new product or modification is subject to this procedure by reviewing the following screening criteria in Table 1, "Screening Criteria for Gas Product/ Modification Evaluation Procedure" on the next page.

Gas Product and Supplier Approval

1.5 (continued)

Table 1. Screening Criteria for Gas Product/ Modification Evaluation Procedure

Gas Criteria	Answer	Action
1. Is the product part of a customized design job approved by a professional engineer?*	Yes	Discontinue use of this procedure.
	No	Review for Gas Criteria 2 below.
2. Is the product reviewed and approved by other Company departments or teams (for example, vehicles or environmental cleanup products)?	Yes	Discontinue use of this procedure.
	No	Review for Gas Criteria 3 below.
3. Does the product meet any ONE of the following criterion: a) Is the product a standardized product that bears gas pressure? b) Does the product affect the Company's cathodic protection systems? c) Does the product affect the coatings or wraps of the gas system? d) Does the product affect the measurement or pressure regulation of the gas system? e) Is the product an instrument used to verify code-required construction, maintenance, or operations activities? f) In the judgment of the product review initiator, would the product benefit from a formalized new product review process?	Yes	Continue with the use of this procedure by going to Step 1.6 below.
	No	Discontinue use of this procedure.

* All products that require maintenance and/or operations procedures need to follow the steps in Utility Procedure TD-4001P-01, "Gas Document Development and Update Process."

1.6 Determine product evaluation type using Table 2, "Product Evaluation Type" below.

Table 2. Product Evaluation Type*

Major	Minor	First Article Inspection (FAI)
New product (technology, substitution, replacement).	Physical dimension change with no significant impact to the form, fit, or function of the product.	Major product manufacturing process or equipment change.
New supplier of existing product.	Color change with no significant impact to the form, fit, or function of the product.	Manufacturing location change for original equipment manufacturers (OEMs) of product.
Changes that relate to safety features of the product.	Configuration change with no significant impact to the form, fit, or function of the product.	Change in sub-tier suppliers of product.
Product has not been tested to industry standards.		Manufacturing environment change with no impact to the form, fit, or function of the product.
Any change that impacts the form, fit, functionality, or interchangeability of the product.		Product performance changes (yield, scrap, customer return rate, etc.).
Any change that requires additional training / qualifications for users of the product related to the product.		Quality systems department standard operating procedure (SOP) change (for example, quality control [QC] testing frequency, methods, certifications, etc.).
Product manufacturing raw material change (different material).		Supplier of product lacks quality systems or is not certified (for example, ISO 9001, etc.).
		Product shipping change.
		Personnel/organization change of product supplier.
		Product that has a lapse in production for two years or more.

Note: An evaluation may be initiated under one type of evaluation but changed to another type based on the results. For example, the preliminary results of an FAI may call for further evaluation of the product by a gas engineer. Supplier Quality personnel conduct the FAIs.

1.7 IF product or change qualifies as an FAI,

THEN contact supplier quality inspection personnel who initiate this inspection per supply chain management (SCM) procedure SCM-2105P-01, "First Article Acceptance Process for Purchased Material," located on the Supply Chain website.

OTHERWISE, complete Section 1 of Attachment 2, "Gas T&D Product Approval Checklist."

1.8 Obtain a completed supplier quality questionnaire through supplier quality personnel and perform the following tasks:

- Review the questionnaire with the supplier quality engineer to determine the supplier's capability to make the product in a repeatable, reproducible, and accurate manner.
- Conduct supplier visits or audits based on the results of the questionnaire review, if needed.

1.9 Determine if the product supplier is financially strong by contacting purchasing personnel. If it is a new supplier, request a credit report on the supplier from purchasing personnel.

1.10 Submit the partially completed checklist to the appropriate gas standards facilitator for gas technical team review and a decision on whether or not to proceed with the new product / modification evaluation. Contact supervisor of gas standards section if no technical team covers the product.

1.11 Check with appropriate management personnel as to whether funding is available to test the new product, as well as deploy it in the target deployment timeframe.

1.12 The gas standards facilitator must perform the following steps:

- Present or have project presented to the team.
- Record the team decision by documenting in the team's minutes and posting a copy of the product approval checklist to the team's SharePoint.
- Inform the new product / modification initiator of the team decision.
- Communicate the decision to the affected supplier, as needed.

1.13 IF the decision is to conduct a major product evaluation,

THEN follow the steps in Section 2, "Major new product / modification Evaluation and Approval."

OTHERWISE, follow the steps in Section 3 for a minor product evaluation.

2 Major New Product / Modification Evaluation and Approval

2.1 Obtain as much information as possible on the new product or modification as shown in Table 3, "Product Information."

Table 3. Product Information

Material and technical specifications.	Outline drawings.
Utility references.	Conformance with national standards.
Design test results.	Lab tests or certifications (particularly environmental and life testing).
Product safety test results.	Production test results.
Maintenance and operating instructions.	Installation instructions.
Weather proofing characteristics.	Storage condition requirements.
Samples or prototypes.	Durability (accelerated life/age testing).
Estimated costs (installation, maintenance, servicing).	Product demonstrations (including successful demonstration of the Company's use of product).
Shipping Requirements	

2.2 Contact supplier quality personnel to help investigate if the supplier or product has been previously used by the Company and been discontinued. If necessary, perform the following tasks:

- Determine the reasons for discontinuing use.
- Review historical performance of other products made by the same supplier at the Company.

2.3 Obtain adequate samples of the product for review and testing.

2.4 Compare features of the product with comparable products and existing products in use as shown in Table 4, "Product Features." Involve other departments to provide feedback as needed.

Table 4. Product Features

Technical features.	Reliability.
Quality.	Safety.
Performance.	Ease of use.
Material problem reports.	Service life span must be verified through OEM testing or independent laboratory tests.
Maintenance requirements.	Supplier's ability to produce this product in a repeatable, consistent form
Supplier's attributes.	Commercial reasons.
Economics.	Product operation and maintenance training requirements.
Technical support	Service after sale

2.5 Evaluate and compare with other suppliers of same or similar product. Consider evaluating a second supplier of the same product for approval.

2.6 Contact supplier quality personnel to review all supplier certification testing and outside lab testing, and in so doing perform the following tasks:

- Ensure that the supplier is aware of all certification, testing, inspection, and supplier quality requirements necessary for qualification.
- Ensure the product has been appropriately tested to recognized industry standards and other requirements as specified.
- Consider accelerated aging testing to simulate extreme weather conditions.

2.7 Interview a minimum of three other utilities and/or users of the product for input on the product's qualities. If the product is a prototype, then this step does not apply. Obtain details on any current or prior issues/concerns with the product or supplier. Involve supplier quality personnel as needed in this step.

2.8 Prepare a rough draft of an infield quality control inspection plan for the product, using Attachment 3, Form TD-4001P-04-F01, "In-field QC Inspection Plan Request Form" and following the instructions provided in Attachment 4, Job Aid TD-4001P-04-JA01, "Instructions for Completing an In-field QC Inspection Plan Request Form."

2.9 Contact training process personnel to discuss impacts on curriculum.

2.10 Contact operator qualification (OQ) program personnel to discuss impacts.

2.11 Review the costs of product, including implementation costs (material purchase, testing, field trials, initial in-field quality control costs, and training costs) and ongoing maintenance costs. Take into account the complexity of installation and maintenance.

2.12 Evaluate the results of Steps 2.1 through 2.11 and determine whether or not to proceed with consensus from the supplier quality team.

2.13 Prepare and submit a revised Attachment 2, "Gas T&D Major New Product Approval Checklist" to the appropriate gas standards facilitator.

2.14 The gas standards facilitator polls the gas technical team on whether or not to proceed with further evaluation.

2.15 The gas technical team performs the following four tasks:

- Reviews and discusses the recommendation.
- Decides whether or not to proceed with further evaluation.

2.15 (continued)

- Elevates the project approval to the appropriate team for approval, depending upon if it is a Class 1, 2, or 3 project, per Utility Standard TD-4001S, "Gas Standards Documentation Requirements."
- Informs the responsible evaluator and supplier quality team of the tech team decision and the reasons.

2.16 If no interest is expressed by the gas technical team,

THEN stop the evaluation AND gas standards facilitator records the team decision.

OTHERWISE, continue with the following steps below.

2.17 Modify the product in conjunction with the supplier, as necessary, to fit the Company's system. Attach a report of any product modifications made, as appropriate.

2.18 Obtain further samples that are fabricated using a standard (mass) production process.

2.19 Perform any needed lab tests or other required testing (supplier quality) to verify technical features and record the results. Attach any reports, as appropriate.

2.20 Evaluate a production unit(s) by comparing it, as needed, to the existing approved product to validate usability of the product.

2.21 Install production unit(s) in a field trial, if appropriate, for further evaluation. During the field trial, remain mindful of the following conditions:

- The field trial conditions need to be as close to the planned use of the product as possible, including environmental factors, locations, configurations, etc.
- If possible, perform the field trial in the most extreme, worst case, currently available environmental conditions, installation challenges, and planned use of the product by the Company.
- Field personnel must participate in the field trial(s).

2.22 Review the product's installation, operating, and maintenance procedures with the appropriate methods and procedures personnel.

2.23 Verify that the supplier can supply both the initial and the long-term expected demands. Establish if there are other suppliers of same product in the event the product is no longer produced by the supplier under evaluation.

2.24 Update the draft field quality control inspection plan previously prepared in Step 2.8 above.

2.25 Update training process personnel and OQ program personnel to discuss impacts.

2.26 Prepare a final report on the results of the product evaluation and a recommendation on use at the Company with consensus from the supplier quality team.

2.27 Submit the product evaluation report and draft field quality control inspection plan to the gas standards facilitator to obtain a final decision from the assigned gas technical team.

2.28 The gas technical team performs the following actions:

- Reviews and discusses the final evaluation report and recommendation.
- Decides whether or not to make a recommendation to approve the new product or modification.

2.29 The gas standards facilitator performs the following tasks:

- Informs the new product / modification project initiator of the decision and the reasons.
- Records the decision and stores the report on the appropriate SharePoint site.

2.30 The project initiator informs the supplier quality team, purchasing, and as needed, the supplier of the decision.

2.31 IF the new product or modification is approved,

THEN proceed to Section 4, "Develop Guidance and Training Documents."

OTHERWISE, discontinue further investigation on the product / modification.

3 Minor New Product / Modification Evaluation and Approval

3.1 Obtain detailed information on the new product or modification (see Table 3 in Step 2.1).

3.2 Obtain a sample of the product (built using a standard production build process, not a prototype) for review and analysis, if required.

3.3 Contact supplier quality personnel for requirements from the supplier including inspections, certifications, and testing that must be completed on the test article to support qualification. These requirements may be waived by supplier quality personnel for minor changes in certain circumstances. Ensure these requirements flow to the supplier.

3.4 Contact supplier quality engineering personnel to determine if it is warranted to obtain a completed supplier quality questionnaire through the supplier quality engineer.

- Review the questionnaire with the supplier quality engineer to determine the supplier's capability to make the product in a repeatable, reproducible, and accurate manner.
- Conduct supplier visits or audits based on the results of the questionnaire review, if needed.

3.5 Compare features of the product with comparable products and existing products in use (see Table 4 in Step 2.4). Involve other departments to provide feedback as needed.

3.6 Investigate if the supplier or product has been previously used by the Company but discontinued.

- Determine the reasons for discontinuation.
- Review historical performance of other products made by the same supplier at the Company.

NOTE

The following step can be waived for minor changes after consulting with supplier quality personnel.

3.7 Review all supplier certification testing and outside lab testing, and in so doing perform the following steps:

- Ensure that the supplier is aware of all certification, testing, inspection, and supplier quality requirements necessary for qualification.
- Ensure the product has been appropriately tested to recognized industry standards and other requirements as specified.

3.8 Review the costs of new product /modification, including sourcing implementation, and ongoing maintenance costs. Take into account the complexity of installation and maintenance.

3.9 Evaluate results of Steps 3.1 through 3.8, including any reports, and perform the following tasks:

- Share the results with the appropriate gas technical team and supplier quality.
- Solicit feedback on the results.

3.10 Prepare and submit Attachment 2, "Gas T&D Product Approval Checklist" to the gas standards facilitator for gas technical team review on product approval based on the results of Steps 3.1 through 3.9.

3.11 The gas standards facilitator records the decision and stores the report on the appropriate gas technical team SharePoint. The gas standards facilitator informs supplier quality personnel regarding the decision.

3.12 IF the product or modification is approved,

THEN proceed to Section 4, "Develop Guidance and Training Documents."

OTHERWISE, discontinue further investigation on the product / modification.

Gas Product and Supplier Approval

4 Develop Guidance and Training Documents

4.1 For major gas new product / modification evaluations, finalize the field quality control inspection plan previously prepared in Step 2.24 above with the appropriate QC personnel. Obtain agreement and timing from personnel assigned to implement the plan.

4.2 Contact mapping personnel to discuss whether or not a mapping symbol is needed. Have a symbol created, if needed.

4.3 The document steward develops new or revised existing Company guidance documents and/or forms to cover the proposed changes by following the steps in Utility Procedure TD-4001P-01, "Gas Document Development and Update Process." (For example, A-forms, Gas Service Records, etc.). As necessary, include supplier quality personnel in the review of the revised documents.

4.4 The document steward prepares an announcement (for example, tailboard) and communication plan (conference calls, road shows, etc.) to cover the initial communication of the product deployment.

4.5 Working with gas standards facilitators, obtain any needed material code(s).

4.6 Contact supplier quality personnel to prepare a specific incoming supply inspection plan for major product changes.

4.7 Before announcing the new product, ensure that all necessary prerequisite deployment sourcing activities are completed. Such activities include, but are not limited to, the following items:

- Established or revised material codes.
- Communicated the new or revised material codes to supplier quality personnel.
- For a new product – ordered and accumulated an appropriate working stock and developed a plan to transition to the product.
- For a new product – ordered and accumulated an appropriate emergency stock.
- For a revised product – developed a plan to transition to the revised product.
- For a revised product – replaced emergency stock with the version.

4.8 IF the launch of a new product requires a purge of existing material, contact supplier quality personnel to initiate purge activities per Utility Procedure SCM-2104P-01, "Freezing and Purging Suspect Materials," located on the Supply Chain website.

4.9 Review all requirements with supplier quality personnel and verify completion of tasks in accordance with this document.

4.10 Facilitate the development of training programs and training aids needed to cover the training needs for the product.

1. Training needs to cover the following topics, as applicable:

   - Product specifications
   - Safety features and risks
   - Operating requirements
   - Identifying product defects/issues
   - Maintenance

2. Involve the manufacturer as needed.

4.11 Determine any necessary changes to OQ plans with the assistance of the personnel charged with OQ plan duties.

4.12 Determine, along with the curriculum development personnel, any other training needs not listed above.

5 Deployment and Training

5.1 Before announcing the new product/evaluation, ensure that all other necessary prerequisite deployment activities have been completed. Such activities include, but are not limited to, the following items:

- Developed or updated training, qualification, and QC programs.
- Developed or updated supplier quality incoming inspection checklists, as needed.
- Developed or updated audit documentation and schedule for performing routine supplier audits for the product.
- Developed the In-field QC inspection plans.
- Revised estimating and mapping programs (for example, fast flow estimating [FFE]) and symbols to reflect the change, if needed.
- Ensured the other computer programs (for example, Integrated Gas Information System [IGIS]) that could be affected by change are ready.

5.2 Obtain approval from the sponsoring manager of the gas technical team for the timing of the announcement, and in consultation with the affected work groups.

5.3 Announce the changes and deploy the product, communication plan, and QC field inspection plan.

5.4 Assist in implementing training, if required, for the following personnel:

- Maintenance and construction (M&C) or field services personnel
- Engineering personnel
- Subject matter experts
- Inspectors
- Supplier quality auditors

END of Instructions

Gas Product and Supplier Approval

Definitions

First article inspection (FAI): a supplier quality process used when there are enough changes to a product to require a thorough quality analysis and review of the supplier. If a new or revised product evaluation is conducted, the FAI may be conducted as part of the evaluation, as indicated in this document.

Supplier: any external company or organization that makes or modifies products (for example, original equipment manufacturer [OEM]).

Implementation Responsibilities

All personnel (including technical teams, responsible engineer, new product evaluation initiators, and supplier quality engineers) involved in reviewing and/or approving new gas products or modifications to gas products must follow this procedure.

The document owner issues a Guidance Tailboard with this procedure and conducts a conference call with affected gas and supplier quality managers and supervisors.

Gas T&D and supplier quality supervisors use the Guidance Tailboard to communicate this procedure to affected personnel (see the Target Audience section).

Governing Document

Utility Standard TD-4001S, "Gas Standards Documentation Requirements."

Compliance Requirement/ Regulatory Commitment

Code of Federal Regulations (CFR) Title 49: Transportation, Part 192—Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards, Subpart B—Materials.

Reference Documents

Developmental References:

Utility Procedure SCM-2104P-01, "Freezing and Purging Suspect Materials."

Utility Procedure SCM-2105P-01, "First Article Acceptance Process for Purchased Material."

Utility Procedure TD-4001P-07, "In-field Quality Control Inspection Plans for New Gas Products."

Gas Product and Supplier Approval

Utility Standard TD-4001S, "Gas Standards Documentation Requirements."

Supplemental References:

Engineering Material Specification (EMS) 5500, "Procedure For Evaluating And Approving Gas Meters And Metering Devices"

Utility Procedure TD-4001P-01, "Gas Document Development and Update Process"

Appendices

NA

Attachments

Attachment 1, "Gas T&D Product Approval Flowchart."

Attachment 2, "Gas T&D Product Approval Checklist."

Attachment 3, Form TD-4001P-04-F01, "In-field QC Inspection Plan Request Form."

Attachment 4, Job Aid TD-4001P-04-JA01, "Instructions for Completing an In-field QC Inspection Plan Request Form."

Document Recision

This procedure supersedes Utility Procedure TD-4001P-04, "New Gas Product Approval" Rev. 0, issued 11/2009.

Approved By

Redacted

Document Owner

Redacted

Document Contact

Redacted

Gas Product and Supplier Approval

Revision Notes

Where?	What Changed?
All	Used new procedure template.
Title	Changed to "Gas Product and Supplier Approval" from "New Gas Product Approval" to incorporate First Article Inspection procedures.
Summary	Rewritten to tighten the focus on the procedure's purpose on not only product approvals, but supplier approvals, also. "How to" steps were moved to the procedures steps in Section 1.
Target Audience	Added "(or modifications to existing)" to ensure scope is consistent throughout procedure.
Safety	Added "impact on environment" as well as other minor editorial changes.
Before You Start	Minor editorial changes.
Table of Contents	Added.
Procedure Steps Section 1 Product Modification Identification	Added step 1.1 to identify how gas product / modification approval projects are identified. Re-wrote gas product / modification approval project's screening criteria into more understandable table format (Table 1) In table 1, added criterion 3. f) to allow for other products to undergo the more formalized new product review process. Added Table 2 to provide criteria for major product evaluations, minor product evaluations, and First Article Inspections Steps 1.6, 1.7, and 1.8 added to provide direction on how to initiate a First Article Inspections and obtain suppler information.
Section 2 Major Product / Modification Evaluation and Approval	Added section on major gas product / modification approval projects that includes roles for supplier quality inspection personnel. This section was obtained from the electric product approval procedure and was modified for gas. Evaluation and approval steps are now part of this section. In addition, steps are added to complete an In-Field QC Inspection Plan Request Form.
Section 3 Minor Product / Modification Evaluation and Approval	Added section on minor gas product / modification approval projects that includes roles for supplier quality inspection personnel. This section was obtained from the electric product approval procedure and was modified for gas. Evaluation and approval steps are now part of this section.
Section 4 Develop Guidance and Training Documents	Re-titled section to cover the need to develop guidance documents and training material prior to deployment. Added step 4.1 to develop a field quality control inspection plan to

Gas Product and Supplier Approval

Where?	What Changed?
	perform initial quality control procedure on product field installations to ensure personnel are installing or using products correctly. Added step 4.2 to ensure mapping is aware of the need for any symbols for equipment. Added steps 4.6, 4.7, 4.8, and 4.9 to ensure supplier quality personnel are involved in the deployment of a gas product. Step 4.11 has been modified to have the sponsoring manager of the technical team approve the timing of the deployment.
Section 5 Deployment and Training	This section changed to focus on deployment of communications and training tasks. Step 5.2 has been modified to have the sponsoring manager of the technical team approve the timing of the deployment
Definitions	Added definitions for first article inspection and supplier.
Implementation Responsibilities	Added specific tasks for different personnel.
Compliance Requirement	Added code reference.
Reference Document	Added several supplemental reference documents.
Attachments 1 and 2	Modified Attachments 1 and 2 to conform to steps in the procedure.
Attachments 3 and 4	Added these attachments to the procedure.

Attachment C: TIMP Training Records

Instructor: Redacted

MEETING

Date: 5/2/13 RMP-06 Training

Location: Kettleman

Name	LAN ID	Department
Redacted		Integrity Mgnagement (IM)
		IM
		ILI - TrmP
		IM (PE → ECDA/ICDA)
		ECDA
		Information / Proc. Improv.
Redacted	Redacted	IM - ILI
Redacted	Redacted	PS&A - ILI
Redacted		IM

DECEMBER 10, 2013

RMP-06 ANNUAL REVIEW

NAME	TITLE
Redacted	SENIOR TRANSMISSION SPECIALIST
Redacted	MANAGER, INFORMATION PROCESS MGMT
Redacted	Risk Management Engineer
	Risk Management Engineer
	AM Principal-Transmission
Redacted	PRINCIPAL -
Redacted	TECHNICAL SPECIALIST
	Gas Engineer
Redacted	Gas Engineer, DA
Redacted	DA
Redacted	MANAGER - RISK
Redacted	
Redacted	Risk Management Engineer
	ENG. II - MANAGER
Redacted	IMPLEMENTATION
Redacted	Business Analyst
	Principal Cor. Engr.
	Supervising Engr.
Redacted	DA Engineer
	Technical Specialist
	Technical Specialist
	Field Engineer
Redacted	
Redacted	
Redacted	FIELD ENGINEER
	Field Engineer
	Gas Engineer

From: Redacted
To: Redacted
Cc: Redacted
Subject: FW: TAIM Monthly Meeting/Redacted Redacted
Date: Tuesday, February 18, 2014 8:56:49 AM

Here is the email I sent to Mike after reviewing RMP 6.

Reda

From: Redacted
Sent: Monday, December 16, 2013 9:38 AM
To: Redacted
Cc: Redacted
Subject: RE: TAIM Monthly Meeting/Redacted

Mike,

RMP reviewed on 12/13/13.

Regards,

Red

From: Redacted
Sent: Tuesday, December 10, 2013 9:48 AM
To: Redacted Redacted
Cc: Redacted
Subject: FW: TAIM Monthly Meeting/Redacted

Red and Redacte

Please review the slides Red has provided, and email both he and I to confirm you've completed this as part of the annual review. Might be a good in-flight activity, if you're pressed for time this week. Thanks.

Very Respectfully,

Reda

Redacted

From: Redacted
Sent: Tuesday, December 10, 2013 7:51 AM
To: Redacted Redacted; Redacted,
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Cc: Redacted Redacted Redacted Redacted; Redacted; Redacted
Redacted 'ybhargava@exponent.com'; Redacte
Redacted Redacted Redacted
Subject: RE: TAIM Monthly Meeting/Redacted Redacted

RMP-06, revision 8 overview presentation attached for those who may join via phone.

<< File: RMP06rev8 Review 12_10_2013.pptx >>

From: Redacted
Sent: Monday, December 09, 2013 10:41 AM
To: Redacted Redacted Redacted Redacted
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'robertliddicoat@gtsinc.us'; Redacted Redacted
Cc: Redacted Redacted Redacted); Redacted Redacted Redacted
Redacted Redacted Redacted 'ybhargava@exponent.com'; Redact
Redacted Redacted Redacted
Subject: RE: TAIM Monthly Meeting/Redacted; Redacted

Please note:

The agenda for this month will include a presentation overview of RMP-06. I anticipate this will truncate the round table session, but as RMP-06 review is required annually for everyone within TIMP, following the Monthly progress report and incidents report by Red we will repurpose this meeting with an overview presentation of RMP-06 which is our overarching procedure for Transmission Integrity Management.

If you cannot attend, powerpoint materials have been prepared and those will be available for review after the meeting.

Thanks, BCM

-----Original Appointment-----
From: Redacted **On Behalf Of** Redacted
Sent: Sunday, September 08, 2013 7:46 PM
To: Redacted Redacted Redacted); Redacted Redacted
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Redacted .; Redacted robertliddicoat@gtsinc.us'; Redacted Redacted
Cc: Redacted Redacted Redacted Redacted Redacted Redacted
Redacted 'ybhargava@exponent.com'; Redacte
Redacted Redacted; Redacted
Subject: TAIM Monthly Meeting/Redacted
When: Tuesday, December 10, 2013 8:00 AM-10:20 AM (UTC-08:00) Pacific Time (US & Canada).
Where: BR1Y #2013; Call-In Info: Redacted

11/22/13 – Adding conference room

Requested by:

Redacted

Participants:

Transmission Asset Integrity Management Team

Location:

CR Bishop Ranch 1 Bldg. Y - #2013

Call-In Info:

- Redacted
- Leader PIN: Redacted to provide

Standing Agenda:

1. Safety
2. Monthly Progress Report
3. Incidents
4. Issues - Roundtable

Organized by:

Redacted

Redacted

From: Redacted
Sent: Monday, December 30, 2013 3:06 PM
To: Redacted
Subject: FW: RMP-06 Make-Up Training
Attachments: RMP06rev8 Review 12_10_2013.pptx

Redacte

I have read and understand the presentation for RMP-06 training. Can you please mark me complete?

Thanks,
Redac

From: Redacted
Sent: Tuesday, December 10, 2013 4:08 PM
To: Redacted
Cc: Redacted
Subject: RE: RMP-06 Make-Up Training

At this time, no.

You can review the presentation and send a notification to Redacted documenting that you have read and understand the presentation and we will document your review accordingly.

Reda

From: Redacted
Sent: Tuesday, December 10, 2013 3:52 PM
To: Redacted
Subject: RMP-06 Make-Up Training

Red

Is there an RMP-06 make up training session planned?

Thanks,

Redacted
ILI Engineer
Pacific Gas & Electric Co
6111 Bollinger Canyon Rd. Desk 4910G
San Ramon, CA 94583
Redacted

CLARION TECHNICAL CONFERENCES
THE BIENVILLE BUILDING, COURTLANDT SQUARE, 3401 LOUISIANA STREET, SUITE 255, HOUSTON, TEXAS 77002

Certificate of Completion

This certifies that the person named below attended and completed the following course organized by Clarion Technical Conferences:

DEFECT ASSESSMENT IN PIPELINES

Houston, Texas
February 11-12, 2013

Redacted

PG&E

Continuing Education Units (CEUs) awarded:
1.4

Phil Hopkins

Prof. Phil Hopkins