

Changes to Gas Pipeline Markers and Indicators

SUMMARY

This bulletin outlines new requirements for installing and maintaining pipeline markers and indicators at Pacific Gas and Electric Company (Company or PG&E) gas main and transmission line locations, in compliance with federal requirements.

Level of Use: Informational Use

AFFECTED DOCUMENT

[Utility Procedure TD-4412P-09, "Gas Pipeline Markers and Indicators"](#)

TARGET AUDIENCE

Personnel involved in directing, supervising, or performing pipeline marker and indicator repairs and installations, including personnel doing the following work: gas transmission and distribution construction (GC); gas maintenance and construction (M&C); gas maintenance and operations (M&O); gas transmission (GT) project management; estimating; GT construction management; leak survey; corrosion mechanics; aerial patrol; and locate and mark.

WHAT YOU NEED TO KNOW

1 Changes to Marker Installation Requirements

1.1 Install markers within line of sight of one another (by the unaided eye) and at significant turn points.

1. IF installing marker within line of sight is impracticable,

THEN follow the pipeline marker intake process in [Utility Procedure TD-4412P-09](#), Step 2.4.

2. IF installing markers at a significant turn,

THEN install two paddles, one on top of the other, each perpendicular to one direction of the pipeline.

2 Changes to Pipeline Markers Maintenance and Replacement Intake Process

NOTE

All pipeline marker abnormal operating conditions (AOCs) are reported using the corrective action program (CAP) OR are entered in specific SAP notifications using electronic reporting processes.

2.1 Document any missing pipeline markers, and markers needing repair using CAP or SAP® process, as appropriate.

Changes to Gas Pipeline Markers and Indicators

- 2.2 Include the following information in the notification:
- Location details (GPS coordinates, address, route, mile point [MP], cross streets [optional], etc.) of the marker in question.
 - Photos of the marker (if existing) and marker location, showing both sides of the marker and the surrounding area (to help determine line of sight).
- 2.3 The CAP notification response team (NRT) assigns pipeline-marker-related notifications to appropriate gas pipeline operations and maintenance (GPOM) supervisors. Pipeline-marker-related notifications may include bundled marker locations.
- 2.4 Complete the following for each CAP notification:
- Create a CAP task to map the pipeline marker location assigned to mapping. This task must be completed before the notification can be closed.
 - Assign work as appropriate to field personnel. A 90-day repair timeframe is desired for pipeline marker notifications. The CAP notification includes a task for supervisor review.
- 2.5 Mapping updates GT-GIS with pipeline marker locations and documents action in CAP notification task.
- 2.6 Gas pipeline operations and maintenance (GPOM) personnel, GPOM supervisor, OR Gas T&D construction personnel complete the following steps when a marker needs to be repaired.
- a. Fill out [Form TD-4412B-018-F01, "Pipeline Marker Installation and Repair Form."](#)
 - Record the location of the removed marker in the upper part of the form (GPS location preferred).
 - Write status in the "Comments" section of [Form TD-4412B-018-F01](#).
 - b. Attach the completed form to the CAP notification.

Changes to Gas Pipeline Markers and Indicators

- 2.7 GPOM personnel, GPOM supervisor, OR Gas T&D construction personnel complete the following steps when a marker needs to be installed.
- a. Fill out [Form TD-4412B-018-F01](#).
 - (1) In the **Comments** section, include the following:
 - Write “Re-installation.”
 - Provide the original location (GPS location preferred) of the marker being relocated.
 - (2) Record the location of the new installation in the upper part of [Form TD-4412B-018-F01](#).
 - b. Remove the existing marker.
 - c. Install the marker in the new location.
 - d. Attach the completed form to the CAP notification.

NOTE

Damage or removal of pipeline markers is a federal offense subject to a fine and/or up to 1 year imprisonment, per U.S. Code, Title 49, Section 60123, “Criminal penalties,” subsection (c).

- 2.8 Obtain permission from GPOM supervision before removing pipeline markers without replacement, as follows:
1. IF markers are to be removed and neither replaced nor relocated,
THEN GPOM personnel OR supervisor complete or oversee the following steps:
 - a. Update the CAP notification, documenting the following:
 - Description of current status of pipeline marker.
 - Location details (GPS coordinates, address, route, MP, etc.) of the marker in question.
 - Photos of the marker, showing both sides of the marker and the surrounding area (to help determine line of sight).
 - b. Fill out [Form TD-4412B-018-F01](#).
 - Under **Action Required**, select **Other**.
 - In the **Comments** section, write “Marker removal request.”

Changes to Gas Pipeline Markers and Indicators

2.8 (continued)

- c. GPOM supervisor reviews [Form TD-4412B-018-F01](#) and provides a response that either approves or denies the request.
- (1) IF the request is approved,
THEN GPOM supervisor or personnel continues the process as follows:
- Fill out [Form TD-4412B-018-F01](#).
 - Under **Action Required**, select **Other**.
 - In the **Comments** section, write “De-installation.”
 - Remove the existing marker.
 - Attach the completed form to the CAP notification.
- (2) IF the request is denied,
THEN the marker remains in place.
- d. Contact the vegetation management department for support in resolving any vegetation issues that impact maintenance, replacement, or new installation of pipeline markers. The vegetation management home page is at <http://pgeweb/electric/am/crm/vm>.

2.9 After a pipeline marker is installed, fill out [Form TD-4412B-018-F01](#).

2.10 Attach the electronic scan of the completed form, with supervisor review, to the appropriate CAP notification.

2.11 Place a hard copy of the form in the local binder.

2.12 Retain records per the Record Retention Schedule.

3 General Marker Installation Guidelines

3.1 IF aerial marker plate and bracket are identified,

THEN remove and replace with pipeline paddle marker, as specified in [Gas Design Standard \(GDS\) L-11.1, “Pipeline Paddle Markers,”](#) Figure 4.

3.2 Install non-metallic pipeline marker posts vertically so that they are perpendicular to the pipeline. See [GDS L-10, “Non-Metallic Pipeline Markers and Decals,”](#) for design specifications.

Changes to Gas Pipeline Markers and Indicators

- 3.3 Install warning decals on all pipeline markers as specified in [GDS L-10](#) and [GDS L-12](#), "[Pipeline Warning Decals.](#)"
- 3.4 IF installing a marker within 1 ft of outside edge of pipeline is not practical,
THEN use offset markers.
- 3.5 The offset marker must be labeled using the decals specified in [GDS L-12](#) to show the direction of the offset.

NOTE

It is a best practice to review easement and franchise agreements AND contact the customer to identify impact.

- 3.6 IF attempting to install markers in private or public landscaped areas or public rights-of-way (ROW),
THEN obtain permission of the appropriate property owner or government agency, when necessary, before installing.

4 Types of Pipeline Markers and Indicators

NOTE

Three classes of markers are a "metallic marker," a "non-metallic marker," and a "pipeline indicator."

- 4.1 Install pipeline markers to identify the location of a pipeline.
 - Refer to Table 1, "Installation Cross-Reference," below, for marker installation guidelines. For some markers, additional steps must be followed during the installation process.
 - Refer to individual marker rows below for additional information.

Table 1. Installation Cross-Reference

Order of preference	Delineate installation area	Contact USA	Confirm pipeline location with locate and mark OQ	Backfill hole, and compact around base
Paddle Marker	Required	Required	Required	Required
Tri-View Marker	Required	Required	Required	Required
Composite Marker	Required	Required	Required	Required
Plastic Post Marker	Required	Required	Required	Required
Pipeline Indicator, drilling required for installation	Required	Required	Required	Required

Changes to Gas Pipeline Markers and Indicators

Pipeline Indicator, adhesive required for installation	Not Required	Required if breaking the surface	Required	Not Required
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DOCUMENT APPROVER

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INCLUSION PLAN

This bulletin will be incorporated into the next major revision of [Utility Procedure TD-4412P-09, "Gas Pipeline Markers and Indicators."](#)

IMPLEMENTATION PLAN

This bulletin will be communicated through GasTDMComms email to the affected stakeholders and audiences, local conference calls, and tailboards from supervisors to their personnel.