



Pacific Gas and Electric Company
California Gas Transmission
Standard

Number: S 4127
Revision: 1

Issuing Department: V.P. GAS AND ELECTRIC TRANSMISSION
Officer: [REDACTED]

Effective Date: 1 Nov 1998
Review Date: 1 Nov 2000

SUBJECT: Responsibility for Class Location Determination, Compliance, and Maintenance

Objective	This standard establishes responsibilities for class location determination, compliance, and maintenance per 49 CFR Part 192 requirements.
Scope	The requirements of this standard apply to all CGT-owned transmission pipeline facilities operating at or over 20% SMYS.
Rescission	Replaces Gas Supply Interim Standard IS 460-1, "Class Location Determination and Maintenance: Pipelines Operating over 40% SMYS", and any other previous instructions, forms, etc., that may be contrary to this standard.
Originator	Gas System Maintenance & Technical Support (GSM&TS) - System Integrity
Responsibility for Implementation	The Manager, Gas System Maintenance & Technical Support (GSM&TS), and the DCS OM&C Area Managers, or their designated representatives, are responsible for ensuring compliance with this Standard.
Contact for Further Information	GSM&TS, [REDACTED]
References	49 CFR Part 192.609, 611 General Order 112E CGT Engineering Guideline EG 4127.1, "Class Location Change requirements: Pipelines Operating Over 40% SMYS." (under development) DCS/GTS Standard D-S0352/S4111, "Patrolling Pipelines and Mains" DCS/GTS Standard D-S0430/S4125, "Maximum Allowable Operating Pressure, Requirements for Distribution Systems and Transmission and Gathering Lines"

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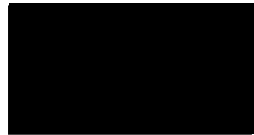
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**Appendices and
Exhibits**

Appendix A, "Class Location Change Flow Diagram"
Exhibit 1, Form F4127, "Report of New Construction Along Pipeline"

**Approvals and
Authorizations**

	11/15/98	Date
Manager, Gas System Maintenance & Technical Support		
W. R. Mazotti	11/18/98	Date
W. R. Mazotti		Date
Vice President, Gas and Electric Transmission		

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Definitions

Class Location: An area defined and classified by criteria set forth in 49 CFR Part 192.5, which reads as follows:

“(a) This section classifies pipeline locations for purposes of this part. The following criteria apply to classifications under this section.

(1) A “class location unit” is an onshore area that extends 220 yards on either side of the centerline of any continuous 1 mile length of pipeline.

(2) Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(b) Except as provided in paragraph (c) of this section, pipeline locations are classified as follows:

(1) **A Class 1 location** is:

(i) An offshore area; or

(ii) Any class location unit that has 10 or fewer buildings intended for human occupancy.

(2) **A Class 2 location** is any class location unit that has more than 10 but fewer than 46 buildings intended for human occupancy.

(3) **A Class 3 location** is:

(i) Any class location unit that has 46 or more buildings intended for human occupancy; or

(ii) An area where the pipeline lies within 100 yards of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12 month period. (The days and weeks need not be consecutive).

(4) **A Class 4 location** is any class location unit where buildings with four or more stories above ground are prevalent.

(c) The length of Class locations 2, 3, and 4 may be adjusted as follows:

(1) A Class 4 location ends 220 yards from the nearest building with four or more stories above ground.

(2) When a cluster of buildings intended for human occupancy requires a Class 2 or 3 location, the class location ends 220 yards from the nearest building in the cluster.”

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Definitions (cont.)

Class Location Change is when the building count or the other factors described in the Class Location definition in 49 CFR Part 192.5, exceed the limit set for the existing class location.

Maximum Allowable Operating Pressure (MAOP) is the maximum pressure at which a pipeline, pipeline segment, or component is qualified to operate in accordance with the requirements of 49 CFR Part 192.

Specified Minimum Yield Strength (SMYS) is the minimum yield strength in psi prescribed by the specification under which pipe is purchased from the manufacturer or as specified in 49 CFR Part 192.

Requirements

1. Pipelines operating at or over 20% and up to 40% SMYS:
Whenever an increase in the building count or the other factors described in the Class Location definition in 49 CFR Part 192.5 indicate a change in class location, the new class location shall be determined and the maintenance frequencies (e.g., patrolling, leak survey, etc.) updated to be commensurate with the new class location.
2. Pipelines operating over 40% SMYS:
Whenever an increase in the building count or the other factors described in the Class Location definition in 49 CFR Part 192.5 indicate a change in class location, a study shall be conducted in accordance with 49 CFR Part 192.609 and 611. Confirmation or revision of the maximum allowable operating pressure that is required as a result of the study must be completed within 18 months of the change in class location.
3. All class location changes shall be evaluated and documented according to the process diagrammed in Appendix A.

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Responsibility
(Refer to Appendix A)

GSM&TS District Foremen and DCS Operating Supervisors

1. Are responsible for class location changes and ensure that any work required to make the pipeline commensurate with the class location is performed.
2. Observe, on a continuing basis, new construction taking place within 220 yards on either side of the pipeline and 100 yards on either side of the pipeline for small well defined outdoor areas (see the definition of "class location" on page 3). This observation should be done in conjunction with scheduled patrols. *Note: Areas experiencing a lot of planned development may require more frequent patrols.*
3. Report new construction on either side of the pipeline, as noted in 3a & 3b below, on the Form F4127 "Report of New Construction Along Pipeline", (see Exhibit 1). Send the form to GSM&TS Mapping in Walnut Creek within 10 working days of the finding.
 - a. Report all new construction along pipelines that are in Class 1 or 2 areas as indicated on the pipeline survey sheet.
 - b. Report only new construction of buildings with 4 or more stories along pipelines that are in Class 3 area as indicated on the pipeline survey sheet.
4. When GSM&TS Mapping sends back the Form F4127 stating that there is no class location change, the total house count noted on the form must be reviewed to ensure accuracy.
5. After a class location study is conducted at the direction of the Pipeline Engineer (only pipelines over 40% SMYS), the District Foremen and DCS Operating Supervisors shall:
 - a. Within 5 working days, review and concur with the Pipeline Engineer's recommended action(s) to be taken to confirm, reconfirm, change, or reestablish the MAOP of each section of pipeline affected.
 - b. Track the scheduled date(s) of the recommended action(s) to ensure the work is completed within the required time frame.
 - c. Document the completion date and the actual work done to the affected sections of pipeline. Communicate this to Mapping, the Pipeline Engineer, and others as necessary.

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**Responsibility
(cont.)**

6. When the current class location changes, the maintenance management program shall be updated to reflect any changes in the maintenance frequencies of the pipeline to correspond with the new class location.

GSM&TS Mapping

1. Within 10 working days of receipt of Form F4127, post the information received from the field (Form F4127) to the Geographic Information System (GIS) and review the data to determine the following:
 - a. There is no class location change. The Form F4127 is filled out indicating this and sent back to the District Foremen/DCS Operating Supervisors.
 - b. There is a potential class location change. The Form F4127 is filled out and sent with a preliminary density survey drawing to the Pipeline Engineer.
2. Provide an updated density survey drawing to the Pipeline Engineer within 5 working days of receipt of field density survey data from Engineering Estimating (only pipelines over 40% SMYS).
3. Within 5 working days of receipt of final approval from the Pipeline Engineer, update the GIS data base to reflect new class location information for affected pipeline segments, and issue new copies of density survey sheets and pipeline survey sheets to the District Foremen/DCS Operating Supervisors.
4. Maintain records indicating present class location.

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**Responsibility
(cont.)**

**All Pipelines
Operating over
20% SMYS**

GSM&TS Pipeline Engineering/Estimating

1. Pipeline Engineer analyzes the information on the density survey drawing received from Mapping for accuracy and notifies the District Foremen/DCS Operating Supervisors of the status within 5 working days.
2. The PE may schedule a field density survey with Engineering Estimating. If requested, the Engineering Estimator conducts & analyzes the field density survey and transmits the information to GSM&TS Mapping within 20 working days.
3. Pipeline Engineer reviews the updated density survey drawing, which includes the information from the field density survey, and within 10 working days notifies the District Foremen/DCS Operating Supervisors and Mapping of one of the following results:
 - a. No change in class location. No further action is required by the field or Mapping. Complete Form F4127 and send copies according to the distribution list on the form.
 - b. The class location has changed; however, the pipeline is commensurate with the new class location. Notify Mapping, complete Form F4127, and send copies according to the distribution list on the form.
 - c. The class location has changed and the pipeline is not commensurate with the new class location. A class location study is required (see paragraph 4 below).
4. When a class location study is required the Pipeline Engineer shall complete the following within 15 working days:
 - a. Conduct a study as required by code (CGT Engineering Guideline EG 4127.1, "Class Location Change Requirements: Pipelines Operating Over 40% SMYS").
 - b. Prepare a written report, including recommendations, and send it to the District Foreman/DCS Operating Supervisor. Send copies of completed Form F4127 according to the distribution list.
 - c. The recommendations in the report shall identify the actions to be taken to confirm, reconfirm, change, or reestablish the MAOP of each section of pipeline affected. Starts the necessary project approval process for funding. *Note: If the MAOP needs to be*

**Only Pipelines
Operating over
40% SMYS**

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*revised, follow the requirements of DCS/GTS Standard D-
S0430/S4125, "Maximum Allowable Operating Pressure,
Requirements for Distribution Systems and Transmission and
Gathering Lines".*

5. Pipeline Engineer will manage the design and coordinate the work with the field to complete the recommended action. Include a schedule of dates that the District Foremen/DCS Operating Supervisors can use to track the work and ensure that the 18 month compliance time frame is met.

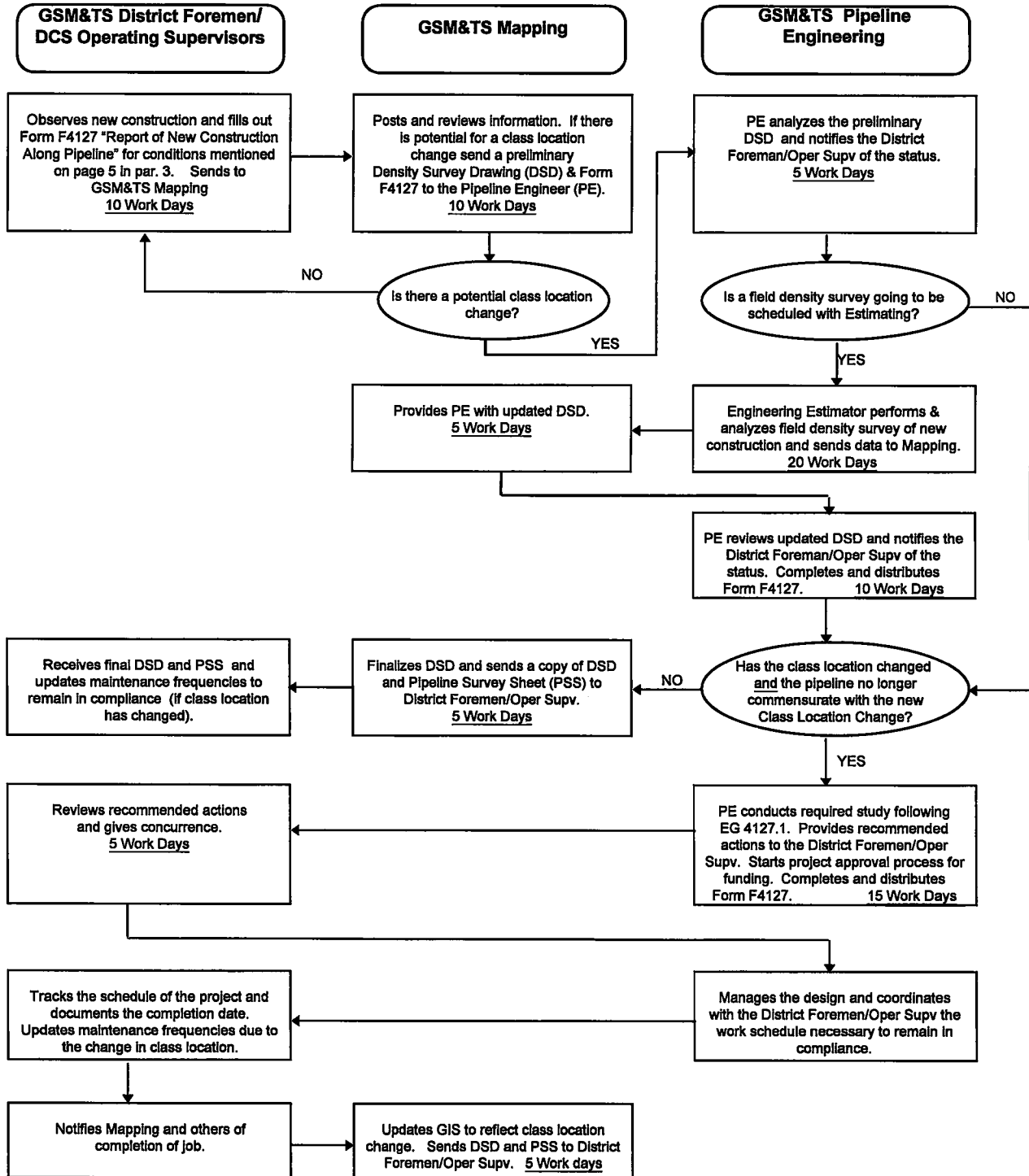
Records

The class location study will be kept at the local field office for the life of the pipeline. A copy of the class location study will be kept in the pipeline file in the records section of GSM&TS.

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CLASS LOCATION CHANGE FLOW DIAGRAM



REPORT OF NEW CONSTRUCTION ALONG PIPELINE For Pipelines Operating at or over 20% SMYS

I. The following types of construction shall be reported:

1. Buildings intended for human occupancy within 220 yards of either side of the pipeline.
2. Buildings or small, well defined outside areas such as playgrounds, recreation areas, outdoor theaters, or other places of public assembly, any of which are to be occupied by 20 or more persons during normal use, and located within 100 yards of either side of the pipeline.

II. To be completed by GSM&TS District or DCS Area personnel:

1. Line No. _____

2. Location: Town _____ Milepoint with reference to pipeline _____

or *Global Positioning System
(GPS) coordinates _____

**(If using GPS skip steps 3 through 8)*

3. Description of building or area _____

4. Distance of building or area from pipeline _____

5. Is the building or area to be occupied by 20 or more people during normal use?

Yes _____ No _____ How Many? _____

6. Number of dwelling units _____ (Report each dwelling unit in a multiple unit dwelling)

7. Date of completion or occupancy _____ (Estimate if structure is still under construction)

8. Remarks _____

9. Field Checked by _____ Date _____

Report of New Construction Along the Pipeline (cont.)

III. To be completed by GSM&TS Mapping Department:

1. Dwelling unit density count based on continuous sliding mile between _____

Mile Point _____ and Mile Point _____

Number of dwellings before new construction _____ Location Class _____

Number of dwellings after new construction _____ Location Class _____

2. Location class change? Yes _____ (if yes, complete form and send to Engineer) No _____ (if no, send form back to the field)

3. Design information

Pipe specification _____ O.D. _____ W.T. _____

Design pressure _____ MAOP _____

4. Strength test information

Date _____ Pressure _____ Test Medium _____

5. Recorded in GIS:

Mapper _____ Date _____

IV. GSM&TS Pipeline Engineering Review

Results:

- a. No Change in class location
- b. The class location has changed, however, the pipeline is commensurate with the new class location.
- c. The class location has changed and the pipeline is not commensurate with the new class location.

Pipeline Engineer _____ Date: _____