

Prepared by: [Redacted]



GENERAL REQUIREMENTS WORK REPORTABLE TO THE CALIFORNIA PUBLIC UTILITIES COMMISSION

A-34.1

Asset Type: Gas Transmission and Distribution **Function:** Design and Construction

Issued by: [Redacted] **Original Signed By:** [Redacted] **Date:** 02-25-10

Rev. #05: This document replaces Revision #04. For a description of the changes, see Page 4.

Purpose and Scope

This numbered document establishes uniform procedures for preparing reports required by G.O. 112-E, Sections 125, 126, and 162.3. It also establishes the procedures for filing the reports with the CPUC.

Acronyms

- CFR: Code of Federal Regulations
- CPUC: California Public Utilities Commission
- DOT: Department of Transportation
- G.O.: General Order
- GRI: Gas Research Institute
- LNG: liquefied natural gas
- MAOP: maximum allowable operating pressure
- psig: pounds per square inch gauge
- RS&A: Regulatory Support and Analysis
- RSPA: Research and Special Programs Administration
- SMYS: specified minimum yield strength
- U.S.: United States
- USB: Utility Safety Branch

References

	Document
DOT <i>Code of Federal Regulations</i> , Latest Edition	49 CFR 192 and 49 CFR 193
CPUC General Order 112-E, Latest Edition	G.O. 112-E
Piping Design and Test Requirements	A-34
Hydrostatic Testing Procedure	A-37
Revising the MAOP of Pipelines Operating at 60 psig or Less	TD-4125P-03
Incident Report – Gas Distribution System	Form PHMSA F 7100.1
Incident Report – Gas Transmission and Gathering Systems	Form PHMSA F 7100.2

Definitions of Reportable Work

1. Report work when constructing a new pipeline, or reconstructing or reconditioning an existing pipeline, that meets both of the following conditions:
 - A. At the proposed MAOP, will operate at a hoop stress of 20% or more of the SMYS of the pipe.
 - B. Will cost \$2.5 million (financial) or more.

Note: For the purpose of Item 1 above, “pipeline” work is limited to the installation, relocation, or reinforcement of line pipe. If a project includes both pipeline work and associated non-pipeline related work, such as station regulation and controls, station piping, main-line valve work, or other capital or expense related non-pipeline work, apply only the direct “pipeline” work costs toward the \$2.5 million financial threshold when determining whether a project is reportable.
2. Report work when increasing the MAOP of pipeline systems as outlined below:
 - A. Uprating a pipeline to an MAOP that produces a hoop stress of 20% or more of the SMYS.
 - B. Uprating 2,500’ or more of distribution main from an MAOP of 60 psig or less to an MAOP of more than 60 psig.



C. Upgrading by converting 5,000' or more of a low-pressure distribution main, operating at a standard customer delivery pressure (does not require service regulators) to a high-pressure distribution main, operating in excess of standard customer delivery pressure (requires service regulators).

Exception: Work is not reportable when converting a segment of a distribution system serving 300 or fewer customers by connecting the service lines individually to a higher-pressure main.

3. Report work when test failures occur while strength testing a pipeline that will be operated at a hoop stress of 20% or more of the SMYS of the pipe used.
4. Report work when using a Clock Spring wrap to repair defects in a pipeline operating at 40% or more of SMYS.
5. Report work when constructing a permanent LNG facility or when intending to inject vaporized LNG using a mobile and temporary LNG facility.

Responsibility

6. The responsible engineer for the project shall determine whether or not the proposed work is reportable to the CPUC according to the parameters specified in this document.
 - A. The responsible engineer or designee shall prepare and assemble the specified reports and drawings along with the written reports required by the CPUC.
 - B. Gas engineering employees shall review the written reports and associated documentation, and submit the finalized paperwork to the CPUC.
 - C. Gas engineering employees shall monitor all reportable work and issue status reports, as needed.
 - D. Line organizations shall provide timely feedback to gas engineering regarding the current status of reportable projects under their respective jurisdictions (e.g., scope and schedule changes). Correspondence should be sent by email to Gas CPUC Report.

30-Day Written Notification Report to the CPUC

7. Reports for applicable new construction, reconstruction, or reconditioning jobs must be submitted to the CPUC 30 days before construction begins. Reports must be signed by the senior director of gas engineering before they are forwarded to the CPUC. In order to ensure that reports are filed in a timely manner, it is necessary that gas engineering employees receive accurate and complete engineering reports, written in the specified format, no later than 45 days before the start of construction. Late reports to the CPUC may result in postponing construction or require writing a letter to the CPUC explaining why the report was late.
 - A. Reports to the CPUC must contain the following information:
 - (1) The construction project's job title.
 - (2) An introductory paragraph referencing the section of G.O. 112-E requiring the report and a brief description of the scope of work. Include the following information in the scope of work section of the document:
 - A description of and the purpose for the proposed work.
 - The specification of the pipes selected for installation.
 - The MAOP for which the line is being constructed.
 - The test fluid and test pressure to be used during strength testing. This subsection must refer to Numbered Documents A-34 and A-37, as applicable. The effects of elevation variation on test pressure must be defined on the strength test pressure report.
 - The measures taken to protect the pipeline from hazards as indicated in 49 CFR 192.317 and 49 CFR 192.319.
 - The measures taken to protect the pipeline from external corrosion.
 - The reasons for using casing or bridging where the minimum cover will be less than that specified in 49 CFR 192.327.
 - The estimated financial cost of the project.
 - The estimated start of construction date.
 - Include the name and telephone number of the construction project's contact person.

General Requirements Work Reportable to the California Public Utilities Commission

- (3) A general arrangement drawing of the pipeline installation. This drawing must show the route of the pipeline and identify the class locations and required design factors for each segment of the pipeline requiring different design factors.
- (4) A vicinity map showing the location of the work with respect to other well-defined landmarks.

B. It is not necessary to include a set of construction drawings when submitting the 30-day report to the CPUC. These construction drawings should be available upon request.

Construction drawings must show plan and profile views of the pipeline and include all other required data. For a description of required construction drawing content, format, technical reviews, and professional engineering reviews, see [Numbered Document A-34](#).

8. Reports for uprate projects must be submitted to the CPUC 30 days before beginning an uprate. Reports must be signed by the senior director of gas engineering before they are forwarded to the CPUC. In order to ensure that reports are filed in a timely manner, it is necessary that gas engineering employees receive accurate and complete engineering reports, written in the specified format, no later than 45 days before the start of the uprate. Late reports to the CPUC may result in postponing the uprate or require writing a letter to the CPUC explaining why the report was late.

A. Reports to the CPUC must contain the following information:

- (1) The uprate project's job title.
- (2) An introductory paragraph referencing the section of [G.O. 112-E](#) requiring the report and a brief description of the scope of work. Include the following information in the scope of work section of the document:
 - The MAOP before uprating and after uprating.
 - A description of and the purpose for the uprating.
 - The steps taken to determine the capability of the pipeline to withstand the planned pressure increase.
 - The estimated start date of the uprating.
 - Include the name and telephone number of the uprate's contact person.

B. It is not necessary to include a copy of the detailed uprate procedure when submitting the 30-day report to the CPUC. These procedures should be available upon request. [TD-4125P-03](#) contains a sample low-pressure to semi-high or high-pressure uprate procedure.

90-Day Written Notification Report to the CPUC – Permanent LNG Facility Installation

9. Reports of construction of new, permanent LNG facilities must be submitted to the CPUC 90 days before construction begins. The senior director of gas engineering must sign reports before they are forwarded to the CPUC. In order to ensure that reports are filed in a timely manner, it is necessary that gas engineering employees receive accurate and complete reports, written in the specified format, no later than 15 calendar weeks before the start of construction.

A. Reports to the CPUC must contain the following information:

- (1) The construction project's job title.
- (2) An introductory paragraph referencing [G.O. 112-E](#), Section 162.3, requiring the report and a brief description of and the purpose for the proposed work.
- (3) A location description.

B. It is not necessary to include a set of construction drawings when submitting the 90-day report to the CPUC. These construction drawings should be available upon request.

2-Week Written Notification Report to the CPUC – Mobile and Temporary LNG Facilities

10. Except in an emergency, reports of intending to inject vaporized LNG using mobile and temporary LNG facilities must be submitted to the CPUC at least 2 weeks before the injection occurs. The responsible LNG project manager shall provide the information identified below to an RS&A representative. The RS&A representative will provide the notification to the CPUC. Email notifications to the CPUC are acceptable. The RS&A representative

will also notify key personnel including the senior director of gas engineering that the notification to the CPUC has been made.

A. Reports to the CPUC must contain the following information:

- (1) An introductory paragraph referencing [49 CFR 193.2019](#), requiring the report and a brief description of and the purpose for the proposed work.
- (2) A location description, including to the extent practical, all of the following:
 - Details of the siting,
 - Leakage containment or control,
 - Fire fighting equipment, and
 - Methods employed to restrict public access.

Test Failures

Reports for test failures, as required in the “Definitions of Reportable Work” section, Item 3 on Page 2 of this numbered document, shall be submitted on DOT [Form PHMSA F 7100.1](#) for distribution lines and DOT [Form PHMSA F 7100.2](#) for transmission and gathering lines.

Revision Notes

Revision 05 has the following changes:

1. Updated the “Acronyms” section.
2. Modified the requirement to reflect reporting requirements from “siting” to “intending to inject vaporized LNG using” mobile and temporary LNG facilities.
3. This document is part of Change 62.





PART C - ORIGIN OF THE INCIDENT

- 1. Incident occurred on
 - Main Meter Set
 - Service Line Other: _____
 - Pressure Limiting and Regulating Facility
- 2. Failure occurred on
 - Body of pipe Pipe Seam
 - Joint Component
 - Other: _____
- 3. Material involved (*pipe, fitting, or other component*)
 - Steel
 - Cast/Wrought Iron
 - Polyethylene Plastic (complete all items that apply in a-c)
 - Other Plastic (complete all items that apply in a-c)
 - Plastic failure was: a.ductile b.brittle c.joint failure
 - Other material: _____
- 4. Year the pipe or component which failed was installed: / / / /

PART D - MATERIAL SPECIFICATION (if applicable)

- 1. Nominal pipe size (NPS) / / / / in.
- 2. Wall thickness / / / / in.
- 3. Specification _____ SMYS / / / / / /
- 4. Seam type _____
- 5. Valve type _____
- 6. Pipe or valve manufactured by _____ in year / / / /

PART E - ENVIRONMENT

- 1. Area of incident
 - In open ditch
 - Under pavement Above ground
 - Under ground Under water
 - Inside/under building Other: _____
- 2. Depth of cover: _____ inches

PART F - APPARENT CAUSE

Important: There are 25 numbered causes in this section. Check the box to the left of the primary cause of the incident. Check one circle in each of the supplemental items to the right of or below the cause you indicate. See the instructions for this form for guidance.

F1 - CORROSION

If either F1 (1) External Corrosion, or F1 (2) Internal Corrosion is checked, complete all subparts a - e.

- 1. External Corrosion
 - a. Pipe Coating
 - Bare
 - Coated
 - Unknown
 - b. Visual Examination
 - Localized Pitting
 - General Corrosion
 - Other: _____
 - c. Cause of Corrosion
 - Galvanic Stray Current
 - Improper Cathodic Protection
 - Microbiological
 - Other: _____
 - d. Was corroded part of pipeline considered to be under cathodic protection prior to discovering incident?
 - No Yes Unknown
 - Year Protection Started: / / / /
 - e. Was pipe previously damaged in the area of corrosion?
 - No Yes Unknown
 - How long prior to incident: / / / / years / / / / months
- 2. Internal Corrosion

F2 - NATURAL FORCES

- 3. Earth Movement ⇒ Earthquake Subsidence Landslide Other: _____
- 4. Lightning
- 5. Heavy Rains/Floods ⇒ Washouts Flotation Mudslide Scouring Other: _____
- 6. Temperature ⇒ Thermal stress Frost heave Frozen components Other: _____
- 7. High Winds

F3 - EXCAVATION

- 8. Operator Excavation Damage (*including their contractors*) / Not Third Party
- 9. Third Party Excavation Damage (*complete a-d*)
 - a. Excavator group
 - General Public Government Excavator other than Operator/subcontractor
 - b. Type: Road Work Pipeline Water Electric Sewer Phone/Cable/Fiber Landowner Railroad
 - Building Construction Other: _____
 - c. Did operator get prior notification of excavation activity?
 - No Yes: Date received: / / / mo. / / / day / / / yr.
 - Notification received from: One Call System Excavator General Contractor Landowner
 - d. Was pipeline marked?
 - No Yes (*If Yes, check applicable items i - iv*)
 - i. Temporary markings: Flags Stakes Paint
 - ii. Permanent markings: Yes No
 - iii. Marks were (*check one*) Accurate Not Accurate
 - iv. Were marks made within required time? Yes No

F4 - OTHER OUTSIDE FORCE DAMAGE

- 10. Fire/Explosion as primary cause of failure ⇒ Fire/Explosion cause: Man made Natural *Describe in Part G*
- 11. Car, truck or other vehicle not relating to excavation activity damaging pipe
- 12. Rupture of Previously Damaged Pipe
- 13. Vandalism

F5 – MATERIAL OR WELDS

Material

- 14. Body of Pipe ⇒ Dent Gouge Wrinkle Bend Arc Burn Other: _____
- 15. Component ⇒ Valve Fitting Vessel Extruded Outlet Other: _____
- 16. Joint ⇒ Gasket O-Ring Threads Fusion Other: _____

Weld

- 17. Butt ⇒ Pipe Fabrication Other: _____
- 18. Fillet ⇒ Branch Hot Tap Fitting Repair Sleeve Other: _____
- 19. Pipe Seam ⇒ LF ERW DSAW Seamless Flash Weld Other: _____
- HF ERW SAW Spiral

Complete a-f if you indicate **any** cause in part F5.



a. Type of failure:

- Construction Defect ⇒ Poor Workmanship Procedure not followed Poor Construction Procedures
- Material Defect

b. Was failure due to pipe damage sustained in transportation to the construction or fabrication site? Yes No

c. Was part which leaked pressure tested before incident occurred? Yes, **complete d-f, if known** No

d. Date of test: / / / mo. / / / day / / / yr.

e. Time held at test pressure: / / / hr.

f. Estimated test pressure at point of incident: _____ PSIG

F6 – EQUIPMENT OR OPERATIONS

- 20. Malfunction of Control/Relief Equipment ⇒ Valve Instrumentation Pressure Regulator Other: _____
- 21. Threads Stripped, Broken Pipe Coupling ⇒ Nipples Valve Threads Mechanical Couplings Other: _____
- 22. Leaking Seals

23. Incorrect Operation

a. Type: Inadequate Procedures Inadequate Safety Practices Failure to Follow Procedures Other: _____

b. Number of employees involved in incident who failed post-incident drug test: / / / / Alcohol test: / / / /

c. Was person involved in incident qualified per OQ rule? Yes No d. Hours on duty for person involved: / / / /

F7 – OTHER

- 24. Miscellaneous, *describe*: _____
- 25. Unknown
 - Investigation Complete Still Under Investigation (*submit a supplemental report when investigation is complete*)

PART G – NARRATIVE DESCRIPTION OF FACTORS CONTRIBUTING TO THE EVENT (Attach additional sheets as necessary)

PART C - ORIGIN OF THE INCIDENT

- 1. Incident occurred on
 - Transmission System
 - Gathering System
 - Transmission Line of Distribution System
- 2. Failure occurred on
 - Body of pipe Pipe Seam
 - Joint
 - Component
 - Other: _____
- 3. Material involved (*pipe, fitting, or other component*)
 - Steel
 - Plastic (If plastic, complete all items that apply in a-c)
Plastic failure was: a. ductile b. brittle c. joint failure
 - Material other than plastic or steel: _____
- 4. Part of system involved in incident
 - Pipeline Regulator/Metering System
 - Compressor Station Other: _____
- 5. Year the pipe or component which failed was installed: / / / / /

PART D - MATERIAL SPECIFICATION (if applicable)

- 1. Nominal pipe size (NPS) / / / / / in.
- 2. Wall thickness / / / / / in.
- 3. Specification _____ SMYS / / / / /
- 4. Seam type _____
- 5. Valve type _____
- 6. Pipe or valve manufactured by _____ in year / / / / /

PART E - ENVIRONMENT

- 1. Area of incident
 - In open ditch
 - Under pavement Above ground
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PART F - APPARENT CAUSE

Important: There are 25 numbered causes in this section. Check the box to the left of the **primary** cause of the incident. Check one circle in each of the supplemental items to the right of or below the cause you indicate. See the instructions for this form for guidance.

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If either F1 (1) External Corrosion, or F1 (2) Internal Corrosion is checked, complete all subparts a - e.

- 1. External Corrosion
- 2. Internal Corrosion
- a. Pipe Coating
 - Bare
 - Coated
- b. Visual Examination
 - Localized Pitting
 - General Corrosion
 - Other: _____
- c. Cause of Corrosion
 - Galvanic Stray Current
 - Improper Cathodic Protection
 - Microbiological
 - Stress Corrosion Cracking
 - Other: _____
- d. Was corroded part of pipeline considered to be under cathodic protection prior to discovering incident?
 - No Yes, Year Protection Started: / / / / /
- e. Was pipe previously damaged in the area of corrosion?
 - No Yes, How long prior to incident: / / / / / years / / / / / months

F2 - NATURAL FORCES

- 3. Earth Movement => Earthquake Subsidence Landslide Other: _____
- 4. Lightning
- 5. Heavy Rains/Floods => Washouts Flotation Mudslide Scouring Other: _____
- 6. Temperature => Thermal stress Frost heave Frozen components Other: _____
- 7. High Winds

F3 - EXCAVATION

- 8. Operator Excavation Damage (*including their contractors*) / Not Third Party
- 9. Third Party Excavation Damage (*complete a-d*)
 - a. Excavator group
 - General Public Government Excavator other than Operator/subcontractor
 - b. Type: Road Work Pipeline Water Electric Sewer Phone/Cable Landowner Railroad
 - Other: _____
 - c. Did operator get prior notification of excavation activity?
 - No Yes: Date received: / / / / mo. / / / / day / / / / yr.
 - Notification received from: One Call System Excavator Contractor Landowner
 - d. Was pipeline marked?
 - No Yes (*If Yes, check applicable items i - iv*)
 - i. Temporary markings: Flags Stakes Paint
 - ii. Permanent markings: Yes No
 - iii. Marks were (*check one*) Accurate Not Accurate
 - iv. Were marks made within required time? Yes No

F4 - OTHER OUTSIDE FORCE DAMAGE

- 10. Fire/Explosion as primary cause of failure => Fire/Explosion cause: Man made Natural
- 11. Car, truck or other vehicle not relating to excavation activity damaging pipe
- 12. Rupture of Previously Damaged Pipe
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F5 – MATERIAL AND WELDS

Material

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15. Component ⇒ Valve Fitting Vessel Extruded Outlet Other: _____
16. Joint ⇒ Gasket O-Ring Threads Other: _____

Weld

17. Butt ⇒ Pipe Fabrication Other: _____
18. Fillet ⇒ Branch Hot Tap Fitting Repair Sleeve Other: _____
19. Pipe Seam ⇒ LF ERW DSAW Seamless Flash Weld Other: _____
- HF ERW SAW Spiral Other: _____

Complete a-g if you indicate **any** cause in part F5.

a. Type of failure:

- Construction Defect ⇒ Poor Workmanship Procedure not followed Poor Construction Procedures
- Material Defect



b. Was failure due to pipe damage sustained in transportation to the construction or fabrication site? Yes No

c. Was part which leaked pressure tested before incident occurred? Yes, complete d-g No

d. Date of test: / / / mo. / / / day / / / yr.

e. Test medium: Water Natural Gas Inert Gas Other: _____

f. Time held at test pressure: / / / hr.

g. Estimated test pressure at point of incident: _____ PSIG

F6 – EQUIPMENT AND OPERATIONS

20. Malfunction of Control/Relief Equipment ⇒ Valve Instrumentation Pressure Regulator Other: _____
21. Threads Stripped, Broken Pipe Coupling ⇒ Nipples Valve Threads Mechanical Couplings Other: _____
22. Ruptured or Leaking Seal/Pump Packing

23. Incorrect Operation

a. Type: Inadequate Procedures Inadequate Safety Practices Failure to Follow Procedures Other: _____

b. Number of employees involved who failed post-incident drug test: / / / / Alcohol test: / / / /

c. Were most senior employee(s) involved qualified? Yes No d. Hours on duty: / / /

F7 – OTHER

24. Miscellaneous, describe: _____
25. Unknown
 Investigation Complete Still Under Investigation (submit a supplemental report when investigation is complete)

PART G – NARRATIVE DESCRIPTION OF FACTORS CONTRIBUTING TO THE EVENT (Attach additional sheets as necessary)

(This area is intentionally left blank for the narrative description of factors contributing to the event.)