

Decision 95-08-053 August 11, 1995

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application )  
of PACIFIC GAS AND ELECTRIC COMPANY )  
(U 39 G), SAN DIEGO GAS & ELECTRIC )  
COMPANY (U 902 G), SOUTHWEST GAS )  
CORPORATION (U 905 G), WASHINGTON )  
WATER POWER COMPANY (U 907 G), )  
SOUTHERN CALIFORNIA EDISON COMPANY )  
(U 338 G), Public Utility Gas )  
Corporations, for an order modifying )  
General Order No. 112-D, adopted )  
June 5, 1979, in Decision No. 90372, )  
in order to conform with the changes )  
to the Minimum Federal Safety )  
Standards, issued by the Department )  
of Transportation, Research and )  
Special Programs Administration. )

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Application 93-08-053  
(Filed August 26, 1993)

O P I N I O N

Background

This application was filed on August 23, 1993 pursuant to Section 142.1 of General Order (GO) 112-D by Pacific Gas and Electric Company (PG&E) on behalf of PG&E, San Diego Gas & Electric Company, Southern California Gas Company, Southwest Gas Corporation, Washington Water Power Company and Southern California Edison Company, seeking an order modifying GO 112-D, in order to conform with the changes to the Federal Pipeline Safety Regulations, specifically provisions of Title 49 of the Code of Federal Regulations (49 CFR), issued by the United States Department of Transportation (DOT), Research and Special Programs Administration (RSPA), to which states are required to conform.

Section 142.1 of GO 112-D states:

"For the purpose of keeping the provisions, rules, standards, and specifications of this General Order up-to-date, the gas utilities subject to these rules, either individually or collectively, shall file an application setting

forth such recommended changes in rules, standards, or specifications as they deem necessary to keep this General Order up-to-date in keeping with the purpose, scope, and intent thereof. However, nothing herein shall preclude other interested parties from initiating appropriate formal proceedings to have the Commission consider any changes they deem appropriate, or the Commission from acting upon its own motion."

The modifications proposed by the applicants would:

- a. Incorporate the appropriate requirements from GO 94-B, so that GO 94-B may be cancelled.
- b. Revise the format but not content of Subsection 192.704 to match the format used in the balance of the GO.
- c. Revise the dates of several pages in the November 1988 issue of the GO to correct errors, and to incorporate changes previously ordered.
- d. Incorporate a Final Rule issued by the RSPA as Amendment 192-65 to 49 CFR Part 192. This final rule updates the incorporation by reference of American Petroleum Institute Specification 5L, "Specification for Line Pipe," to include the 1988 edition of that specification.
- e. Incorporate modified requirements for reporting of gas incidents that are currently specified in Commission letters dated April 9 and 10, 1986, September 4, 1986, and October 31, 1989.
- f. Remove the restrictions on use of plastic pipe over six inches in diameter.

The application also seeks to replace GO 94-B by updating and incorporating it into the revised GO 112-E.

Originally, the application proposed a routine, periodic revision to GO 112-D to reflect changes in 49 CFR. In the past, there has been a substantial lag in revising GO 112 to be

consistent with those changes. Because of this, the Utilities Safety Branch of the Commission's Safety and Enforcement Division recommended that the new GO 112 be revised to automatically adopt relevant 49 CFR changes as they are adopted at the federal level. This avoids both the inherent lag time in conforming GO-112 to those changes, and to avoid duplication between federal standards and Commission standards, except where different or more stringent California standards are needed.

The result of this effort is a proposed GO 112-E, which has been agreed to by the Safety Branch and the utilities. In addition to the obvious advantages of currency and conciseness due to eliminating the duplication of federal requirements, we expect that the proposed GO 112-E will eliminate any criticism and confusion resulting from having a Commission GO 112 that periodically is not current due to changes in federal requirements.

Because the new GO 112-E is substantially based on Federal Pipeline Safety Regulations set forth in 49 CFR, this decision will only address additions and variations to 49 CFR.

**Subpart A - General**

The GO is titled "State of California Rules Governing Design, Construction, Testing, Operation, and Maintenance of Gas Gathering, Transmission, and Distribution Piping Systems," and is hereinafter referred to as "these rules." These rules also cover liquefied natural gas (LNG) facilities.

In order to maintain currency of these rules, the Commission will automatically adopt all revisions to 49 CFR Parts 190, 191, 192, 193, and 199, effective on the date of the final order as published in the Federal Register. The regulations contained in these parts cover pipeline safety program procedures, reports, minimum Federal safety standards, safety standards for LNG, and drug and alcohol testing.

Other changes deemed necessary may be requested by the gas utilities subject to these rules by filing an application

setting forth the recommended changes and justification for them. Other interested parties may also initiate formal proceedings with the Commission to have changes considered, and the Commission may act on its own initiative.

Utilities are required to maintain necessary records, available for inspection by the Commission, to insure compliance with these rules and the applicable sections of 49 CFR.

These rules are intended for and are adequate under normal conditions; abnormal or unusual conditions not specified may require different measures.

These rules do not supplant existing industrial safety regulations pertaining to work areas, safety devices, and safe work practices.

#### Subpart B - Reports

##### Section 122: Gas Incident Reports

This section sets forth the reporting requirements for gas incidents, based on 49 CFR Part 191.

Telephone reporting is required when gas is released from a pipeline or LNG facility and personal injury requiring hospitalization or death results, or estimated property damage including the cost of gas lost exceeds \$50,000. In addition, events that result in an emergency shutdown of an LNG facility, or that attracted public or significant news media attention must be reported, if they are suspected of involving natural gas, and occur in the vicinity of the operator's facilities, whether or not the operator's facilities are involved.

After complying with the telephonic notification requirements, a fax report must be provided by the end of the following work day.

Fax, but not telephonic, reports are required for less significant incidents involving gas leaks and property damage in excess of \$1,000.

Written reports to the Commission on DOT forms, and further information by accompanying letter, are required for incidents requiring telephonic reporting.

Quarterly reports are required for incidents requiring telephonic reporting, written reporting, and in addition, for incidents involving any property damage with fire, explosion, or underground dig-ins.

**Section 123: Annual Reports**

Annual reports must be filed with the DOT and copied to the Commission, in compliance with 49 CFR §§ 191.11 and 191.17.

**Section 124: Reporting Safety-Related Conditions**

The requirements of 49 CFR §§ 191.1, 191.7, 191.23, and 191.25 for reporting safety-related conditions are incorporated by reference, with a copy of such reports submitted to the Commission concurrently with DOT.

**Section 125: Proposed Installation Report**

Specific criteria are set forth for reports, depending on utility size and cost of project. For qualifying projects, prior to construction of a new pipeline or reconstruction or reconditioning of an existing pipeline to be operated at hoop stresses of 20% or more of minimum yield strength, a report must be filed with the Commission setting forth the location and general specifications of the pipeline.

Justification for using less than the minimum cover specified in 49 CFR § 192.327 must be provided. Protection of pipelines from hazards as indicated in 49 CFR §§ 192.317 and 192.319 must be demonstrated.

Utilities with fewer than 50,000 services in California must submit a Proposed Installation Report for any installation estimated to cost \$1,000,000 or more, while utilities with 50,000 or more services must file that report for installations estimated to cost \$2,500,000 or more.

Failures during strength testing of pipes to be operated at a hoop strength of 20% or more of specified minimum yield strength shall be reported on forms complying with 49 CFR § 191.15.

**Section 126: Change in Maximum Allowable Operating Pressure**

This section sets forth reporting requirements of the Commission for a pipeline to be operated at a hoop stress of 20% or more of the specified minimum yield strength, when uprating a distribution main to greater than 60 pounds per square inch gauge (psig), or when converting a low-pressure distribution main to high pressure.

This requirement does not apply to uprating or conversion of low-pressure distribution mains serving fewer than 300 customers accomplished by connecting service lines individually to a higher pressure main.

**Subpart C - Construction and Safety Standards**

This subpart comprising the 140 series regulations sets forth specific construction, testing, and safety standards in addition to those required by 49 CFR Part 192. These Commission standards supplement and do not supercede the Federal Pipeline Safety Regulations.

**Section 142: Plastic Pipe**

Plastic pipe used for gas transportation shall not have been subject to unprotected outdoor exposure for longer than the time recommended by the manufacturer.

**Section 143: Distribution Systems**

A gas detector survey must be conducted in specified areas considered to be at risk and valves must be serviced, at intervals not exceeding 15 months.

**Section 144: Testing of Pipelines Operating Below 100 PSIG**

Specific testing requirements for leaks are set forth depending on operating pressure.

**Subpart D - LNG**

**Section 161.1: General**

Each operator shall comply with the requirements of 49 CFR Part 193 for LNG facilities. This section addresses specific standards for design construction, testing, operation, and maintenance of LNG facilities in addition to those in 49 CFR Part 193, and is supplemental to them.

**Section 162: LNG Facilities**

Operators that store, treat, or transfer LNG must use pipeline facilities that also meet the requirements of the National Fire Protection Association (NFPA) Standard No. 59A.

**Subpart E - Gas Holders**

This subpart comprising the 180 series regulations sets forth specific standards for design construction, testing, operation, and maintenance of gas holders, which supplement and do not supercede 49 CFR Part 192.

**Section 182: Pipe-Type and Bottle-Type Holders: Design and Construction**

Specific requirements in addition to the requirements of 49 CFR § 192.175 are set forth, especially with regard to placement of the facilities.

Electrical equipment and wiring at holders must comply with National Electrical Code, NFPA-70, as applicable.

Clearances from buildings and electrical transmission lines are specified.

Holders must have overpressure protection systems complying with the requirements of 49 CFR § 192.195.

**Section 183: Pipe-Type and Bottle-Type Holders:  
Plan for Inspection and Testing**

This section sets forth requirements for repair, inspection, and maintenance to insure continued safe operation.

**Subpart F - Petroleum Gas  
Vessel Stations**

This subpart sets forth requirements of design, operation, maintenance, and inspection of vessels used for storage and not transportation of gas, and with a capacity of 200 or more gallons. Appendix A to GO 112-E provides details of operation, maintenance, and inspection that must be followed. Operators must also comply with 49 CFR Part 192.

**Discussion**

The proposed GO 112-E is the result of considerable effort by Safety Branch and the utilities. The application was filed on August 26, 1993. As a result of many meetings, and granting of delays in the hearing schedule, the parties ultimately reached agreement and a hearing was held on January 17, 1995.

The stated purpose for the substantial delays was the need to agree on a new GO 112-E that would eliminate the inherent delay in the Commission adopting new or changed Federal Pipeline Safety Regulations for gas pipelines and facilities. In the past, due in large part to personnel constraints and other demands on staff, significant delays frequently occurred, which resulted in criticism of the Commission, since our order was not always current with Federal Pipeline Safety Regulations. Those procedures change at varying and sometimes unpredictable frequencies that do not lend themselves to the long-term scheduling of staff needed to revise our GOs. As a result, at times in the past there have been delays before our staff could prepare revisions to GO 112 to accommodate the changes. California's order was then out-of-date to the extent that changes had been made at the federal level.



In adopting the proposed GO 112-E, that delay should be eliminated in the future. As soon as the final order adopting such changes is published in the Federal Register, the changes will automatically be effective in California. The Commission will be in compliance with Federal Pipeline Safety Regulation and have the ability to enforce these safety requirements in a timely and efficient manner. The gas utilities will also know at the same time that the changes will immediately be in effect, and will not be committing as much time to periodically update GO 112-E.

We commend the Safety Branch and the gas industry for developing this concept for automatic changes.

A further advantage to adopting this new GO 112-E is that the Commission no longer will need to maintain what has to a large degree been a separate, but nearly identical set of pipeline safety standards.

In specific instances where federal standards do not satisfy our particular needs or do not cover areas of Commission jurisdiction, such as requirements relating to accident reports, service definitions, master meter rules and mobile home park standards, the proposed GO 112-E supplements and augments the federal regulations.

The Commission continues to retain the ability to develop its own specific requirements. In no instance does a separate California requirement reduce the federal standard. California standards must be either the same as or more stringent than the federal standards. Generally, where separate California standards were previously adopted, they remain, except in certain instances where they were found not to be necessary, such as reporting level requirements for incidents. In those cases the only requirement is that of 49 CFR, which based on our experience has proven to be adequate.

Comments

No comments have been filed by any party to this proceeding. However, we have become aware of several inadvertent typographical errors that have been corrected.

Findings of Fact

1. It is in the interest of the gas customers and gas corporations and will promote public safety in California for GO 112-D to be revised to GO 112-E.

2. Automatically adopting changes in federal standards will eliminate the lag time in changing California requirements to conform.

Conclusion of Law

The application should be granted as revised by the document entitled "General Order No. 112-E."

ORDER

IT IS ORDERED that:

1. General Order (GO) 112-D is replaced by GO 112-E, attached to this decision.

2. A copy of this decision shall be mailed to each gas corporation under the jurisdiction of this Commission.

This order becomes effective 30 days from today.

Dated August 11, 1995, at San Francisco, California.

DANIEL Wm. FESSLER  
President  
P. GREGORY CONLON  
JESSIE J. KNIGHT, JR.  
HENRY M. DUQUE  
Commissioners

**APPENDIX A**

**GENERAL ORDER No. 112-E**

**PUBLIC UTILITIES COMMISSION OF THE  
STATE OF CALIFORNIA**

**RULES GOVERNING DESIGN, CONSTRUCTION,  
TESTING, MAINTENANCE AND OPERATION OF  
UTILITY GAS GATHERING, TRANSMISSION AND  
DISTRIBUTION PIPING SYSTEMS**

Adopted August 11, 1995

Effective September 11, 1995

Decision No. 95-08-053

A.93-08-053

GENERAL ORDER NO. 112-E  
PUBLIC UTILITIES COMMISSION of the  
STATE OF CALIFORNIA

RULES GOVERNING DESIGN, CONSTRUCTION, TESTING, MAINTENANCE  
AND OPERATION OF UTILITY GAS GATHERING, TRANSMISSION AND  
DISTRIBUTION PIPING SYSTEMS

Adopted August 11, 1995 effective September 11, 1995

Decision No. 95-08-053

CHANGE LIST--FOLLOWING IS THE LIST OF DECISIONS AND RESOLUTIONS  
WHICH AUTHORIZED CHANGES TO THIS ORDER APPLICABLE TO GAS UTILITIES:

Decision or Resolution No.	Date Effective	Sections Herein Modified, Amended or Added
Decision No. <u>95-08-053</u>		101, 101.2, 101.3, 101.4, 102.1, 102.2, 103.1, 104.1, 105, 121.1, 122.1, 122.2, 123.1, 124.1, 125.1, 125.2, 126.1, 141.1, 142.1, 143.1, 143.2, 144.1, 161.1, 162.1, 162.2, 162.3, 181.1, 182.1, 182.2, 182.3, 182.4, 182.5, 182.6, 182.7, 182.8, 183.1, 183.2, 183.3, 183.4, 183.5, 201.1, 202.1, 202.2, Appendix A and Appendix B

January 1980

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GENERAL PROVISIONS**

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## **SUBPART A – GENERAL**

### **101 PREAMBLE**

**101.1** This General Order shall be known as the "State of California Rules Governing Design, Construction, Testing, Operation, and Maintenance of Gas Gathering, Transmission, and Distribution Piping Systems." It will be referred to herein as "these rules."

**101.2** These rules are incorporated in addition to the Federal Pipeline Safety Regulations, specifically, Title 49 of the Code of Federal Regulations (49 CFR), Parts 190, 191, 192, 193, and 199, which also govern the Design, Construction, Testing, Operation, and Maintenance of Gas Piping Systems in the State of California. These rules do not supercede the Federal Pipeline Safety Regulations, but are supplements to the Federal Regulations.

**101.3** There shall be no deviation from this General Order except after authorization by the Commission. If hardship results from application of any rule herein prescribed because of special circumstances, application may be made to the Commission to waive compliance with such rule in accordance with Section 3(e) of the Natural Gas Pipeline Safety Act of 1968. Each request for such waiver shall be accompanied by a full and complete justification.

**101.4** The utilities shall maintain the necessary records to ensure compliance with these rules and the Federal Pipeline Safety Regulation, 49 CFR, that are applicable. Such records shall be available for inspection at all times by the Commission or Commission Staff.

### **102 PURPOSE**

**102.1** The purpose of these rules is to establish, in addition to the Federal Pipeline Safety Regulations, minimum requirements for the design, construction, quality of materials, locations, testing, operations and maintenance of facilities used in the gathering, transmission and distribution of gas and in liquefied natural gas facilities to safeguard life or limb, health, property and public welfare and to provide that adequate service will be maintained by gas utilities operating under the jurisdiction of the commission.

**102.2** These rules are concerned with safety of the general public and employees' safety to the extent they are affected by basic design, quality of the materials and workmanship, and requirements for testing and maintenance of gas gathering, transmission and distribution facilities and liquefied natural gas facilities.

### **103 INTENT**

**103.1** The requirements of these rules, in addition to the Federal Pipeline Safety Regulations, are adequate for safety under conditions normally encountered in the gas industry. Requirements for abnormal or unusual conditions are not specifically proscribed. It is intended that all work performed within the scope of these rules shall meet or exceed the safety standards expressed or implied herein.

**103.2** Existing industrial safety regulations pertaining to work areas, safety devices, and safe work practices are not intended to be supplanted by these rules.

**103.3** Compliance with these rules is not intended to relieve a utility from any statutory requirements.

**103.4** The establishment of these rules shall not impose upon utilities, and they shall not be subject to any civil liability for damages, which liability would not exist at law if these rules had not been adopted.

### **104 PROCEDURES FOR KEEPING GENERAL ORDER UP-TO-DATE**

**104.1** It is the intent of the California Public Utilities Commission to automatically incorporate all revisions to the Federal Pipeline Safety Regulations, 49 CFR Parts 190, 191, 192, 193, and 199 with the effective date being the date of the final order as published in the Federal Register.

**104.2** In those instances where additional or more stringent state-specific rules are appropriate, the gas utilities subject to these rules may file an application to update provisions, rules, standards and specifications of the General Order as they deem necessary to keep this General Order up-to-date in keeping with the purpose and intent thereof. However, nothing herein shall preclude other interested parties from initiating appropriate formal proceedings to have the Commission consider any changes they deem appropriate, or the Commission from acting upon its own motion.

### **105 DEFINITIONS**

Commission means the Public Utilities Commission of the State of California.

Holder means any structure used to store gas, which either has a displacement of 500 or more cubic feet, or will contain 10,000 or more standard cubic feet of gas at its maximum design pressure, except that a pipeline which is used primarily for transmission or distribution of gas, but which also serves a storage function, is not a holder for purposes of this General Order.



Inert Gas means a gas which will not burn or support combustion, such as nitrogen, carbon dioxide or mixtures of such gases.

Utility means any person, firm, or corporation engaged as a public utility in transporting natural gas, hydrocarbon gas or any mixture of such gases for domestic, commercial, industrial, or other purposes.

## **SUBPART B – REPORTS**

### **121 GENERAL**

**121.1** In order that the Commission may be informed concerning the operation and the status of the more important facilities of the utilities, the following information shall be filed with the Commission.

### **122 GAS INCIDENT REPORTS**

**122.1** Each operator shall comply with the requirements of 49 CFR Part 191, for the reporting of incidents to the United States Department of Transportation (DOT). The operator shall submit such reports directly to the DOT, with a copy to the California Public Utilities Commission (CPUC).

**122.2** Requirements for reporting to the CPUC.

- (a) Each operator shall report by telephone to the CPUC as follows:
- (1) Incidents which require DOT notification.
    - (i) An event that involves a release of gas from a pipeline or of liquefied natural gas (LNG) or gas from an LNG facility and
      - A death, or personal injury necessitating in-patient hospitalization; or
      - Estimated property damage, including cost of gas lost, of the operator or others, or both, of \$50,000 or more.
    - (ii) An event that results in an emergency shutdown of an LNG facility.
  - (2) Incidents which have either attracted public attention or have been given significant news media coverage, that are suspected to involve natural gas, which occur in the vicinity of the operator's facilities; regardless of whether or not the operator's facilities are involved.
- (b) Each operator shall execute the following procedures for notifying the CPUC Safety Branch Staff in the event of incident listed in 122.2(a) above:
- (1) If the utility is notified of the incident during its normal working hours, the telephonic report should be made as soon as practicable but no longer than 2 hours after the utility is aware of the incident and its personnel are on the scene.

- (2) If the utility is notified of the incident outside of its normal working hours, the telephonic report should be made as soon as practicable but no longer than 4 hours after the utility is aware of the incident and its personnel are on the scene.
  - (3) The report is to be made to one of the inspectors listed in the CPUC reporting list, either at their office number during normal office hours, or their home numbers outside of normal office hours. If a CPUC inspector cannot be reached personally, leave a message on the office recorder stating the time of incident, time of call, location of the incident, a detailed description of the incident, and the name and telephone number of a utility company contact that a CPUC inspector can reach immediately at any time. Also, if calling outside of normal office hours, and a CPUC inspector cannot be reached immediately, leave a message on at least one home recorder of a CPUC inspector briefly describing the incident and a telephone number and name of the utility person to be called for more information.
  - (4) All telephonic reports required by this section shall be followed by the end of the next working day by a telefacsimile (fax) of the standard reporting form, "Report of Gas Leak or Interruption," CPUC File No. 420 (see attachment).
- (c) Each operator shall report by fax to the CPUC as follows:
- (1) All incidents involving escaping gas from the operator's facilities and property damage including loss of gas in excess of \$1,000.
  - (2) Reports should be made by the end of the next working day using the standard reporting form, "Report of Gas Leak or Interruption," CPUC File No. 420 (see attachment).
- (d) Written Incident Reports
- (1) The operator shall submit to the CPUC on DOT Form RSPA F7100.1 for distribution systems and on DOT Form RSPA F7100.2 for transmission and gathering systems a report describing any incident that required notice by telephone under Items 122.2(a)(1) or (2).
  - (2) Together with the form required by d(1) above, the operator shall furnish a letter of explanation giving a more detailed account of the incident unless such letter is deemed not necessary by the CPUC staff. The operator may confirm the necessity of a letter of explanation while making the telephonic report. If, subsequent to the initial report or letter, the operator discovers significant additional information related to the incident, the operator shall furnish a supplemental report to the CPUC as soon as practicable, with a clear reference by date and subject to the original report. These letters,

forms, and reports shall be held confidential under the provisions of Paragraph 2, Exclusions, of General Order 66-C and Public Utilities Code Section 315.

- (3) The operator of a distribution system serving less than 100,000 customers need not submit the DOT forms required by paragraph (1) above; however, such operator must submit the letter of explanation required by (2) above, subsequent to any telephonic report to the CPUC, unless such letter is deemed unnecessary by the CPUC staff.
- (e) Quarterly Summary Reports. Each operator shall submit to the CPUC quarterly, not later than the end of the month following the quarter, a summary of all CPUC reportable and non-reportable gas leak related incidents which occurred in the preceding quarter as follows:
- (1) Incidents for which either a telephonic report, a letter of explanation, or a DOT Form RSPA 7100.1 or 7100.2 were submitted.
  - (2) Incidents which involved escaping gas from the operator's facilities and property damage including loss of gas in excess of \$1,000.
  - (3) Incidents which included property damage between \$0 and \$1,000, and involved fire, explosion, or underground dig-ins.

## **123 ANNUAL REPORTS**

**123.1** Each operator shall submit to the DOT, with a copy to the CPUC, annual reports required by sections 191.11 and 191.17 of 49 CFR Part 191. Such reports shall be submitted in the manner prescribed in 49 CFR Part 191.

## **124 REPORTING SAFETY-RELATED CONDITIONS**

**124.1** The requirements of paragraphs 191.1, 191.7, 191.23, and 191.25 in 49 CFR Part 191, to report specified safety-related conditions, are incorporated by references as part of these rules. Copies of all reports submitted to the Secretary of Transportation pursuant to the foregoing requirements shall be submitted to the Commission concurrently.

## 125 PROPOSED INSTALLATION REPORT

**125.1** At least 30 days prior to the construction of a new pipeline, or the reconstruction or reconditioning of an existing pipeline, to be operated at hoop stresses of 20 percent or more of the specified minimum yield strength of the pipe used, a report shall be filed with the commission setting forth the proposed route and general specifications for such pipeline. The specifications shall include but not be limited to the following items:

- (a) Description and purpose of the proposed pipeline.
- (b) Specifications covering the pipe selected for installation, route map segregating incorporated areas, class locations and design factors, terrain profile sketches indicating maximum and minimum elevations for each test section of pipeline, and, when applicable, reasons for use of casing or bridging where the minimum cover will be less than specified in 192.327.
- (c) Maximum allowable operating pressure for which the line is being constructed.
- (d) Fluid and pressure to be used during proof strength testing.
- (e) Protection of pipeline from hazards as indicated in 192.317 and 192.319.
- (f) Protection of pipeline from external corrosion.
- (g) Estimated cost with supporting detail.

For utilities with less than 50,000 services in the state of California according to the Annual DOT Report, Form RSPA F 7100.1-1 that is required by 49 CFR 191.11, the Proposed Installation Report shall be submitted to the Commission for any installation that is estimated to cost \$1,000,000 or more. The Annual DOT Report referenced above shall be the report for the previous year to the proposed installation.

For utilities with 50,000 services or more in the state of California according to the Annual DOT Report, Form RSPA F 7100.1-1 required by 49 CFR 191.11, the Proposed Installation Report shall be submitted to the Commission for any installation that is estimated to cost \$2,500,000 or more. The Annual DOT Report referenced above shall be the report for the previous year to the proposed installation.

**125.2** During strength testing of a pipeline to be operated at hoop stresses of 20 percent or more of the specified minimum yield strength of the pipe used, any failure shall be reported on appropriate forms established by the Secretary of Transportation to comply with the requirement of 191.15, Part 191, Title 49 of CFR.

**126 CHANGE IN MAXIMUM ALLOWABLE OPERATING PRESSURE**

**126.1** Except as provided in (126.2) below, at least 30 days prior to an increase in the maximum allowable operating pressure of a pipeline, a report shall be filed with the Commission for:

- a) A pipeline operating at or to be operated at a hoop stress of 20 percent or more of the specified minimum yield strength of the pipe being uprated.
- b) 2,500 feet or more of distribution main which is to be uprated from a MAOP less than or equal to 60 psig to a MAOP greater than 60 psig.
- c) The conversion of 5,000 feet or more of low pressure distribution main to high pressure distribution main.

The report shall include:

- i) the new maximum allowable operating pressure
- ii) the reasons for the change
- iii) the steps taken to determine the capability of the pipeline to withstand such an increase

**126.2** The requirements of (126.1) above do not apply to the uprating or conversion of low pressure distribution mains serving less than 300 customers accomplished by connecting the service lines individually to a higher pressure main.

## SUBPART C – CONSTRUCTION & SAFETY STANDARDS

### 141 GENERAL

**141.1** Each operator shall comply with the requirements of 49 CFR part 192 – Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards. This section of the General Order addresses specific construction, testing, and safety standards in addition to those included in 49 CFR Part 192. These rules do not supercede the Federal Pipeline Safety Regulations, but are supplements to them.

### 142 PLASTIC PIPE

**142.1 Plastic Pipe Storage** - At the time of installation, plastic pipe to be used for gas transportation, shall not have been subjected to unprotected outdoor exposure longer than the time recommended by the manufacturer.

### 143 DISTRIBUTION SYSTEMS

**143.1 Leakage Surveys and Procedures** - A gas detector survey must be conducted in business districts and in the vicinity of schools, hospitals and churches, including tests of the atmosphere in gas, electric, telephone, sewer and water system manholes, at cracks in pavement, and sidewalks, and at other locations providing an opportunity for finding gas leaks, at intervals not exceeding 15 months, but at least once each calendar year.

**143.2 Valve Maintenance** - Each valve, the use of which may be necessary for the safe operation of a distribution system, must be inspected, serviced, lubricated (where required) and partially operated at intervals not exceeding 15 months, but at least once each calendar year.

### 144 TEST REQUIREMENTS FOR PIPELINES TO OPERATE BELOW 100 p.s.i.g.

**144.1** Except for service lines and plastic pipelines, each segment of a pipeline that is to be operated below 100 p.s.i.g. must be leak tested in accordance with 49 CFR 192.509 and the following:

- (a) Each main that is to be operated at less than 1 p.s.i.g. must be tested to at least 10 p.s.i.g.
- (b) Each main to be operated at or above 1 p.s.i.g. but less than 60 p.s.i.g. must be tested to at least 90 p.s.i.g.
- (c) Each main to be operated at or above 60 p.s.i.g. but less than 100 p.s.i.g. must be tested to a minimum of 1.5 times the proposed MAOP.

## SUBPART D – LNG

### 161 GENERAL

**161.1** Each operator shall comply with the requirements of 49 CFR part 193 – Liquefied Natural Gas Facilities: Federal Safety Standards. This section of the General Order addresses specific standards for the design, construction, testing, operation, and maintenance of liquefied natural gas facilities in addition to those included in 49 CFR Part 193. These rules do not supercede the Federal Pipeline Safety Regulations, but are supplements to them.

### 162 LIQUEFIED NATURAL GAS FACILITIES

**162.1** Except for a pipeline facility in operation or under construction before January 1, 1973, no operator may store, treat, or transfer liquefied natural gas in a pipeline facility unless that pipeline facility meets the applicable requirements of this part and of NFPA Standard No. 59A.

**162.2** No operator may store, treat, or transfer liquefied natural gas in a pipeline facility in operation or under construction before January 1, 1973, unless—

- (a) The facility is operated in accordance with the applicable operating requirements of this part and of NFPA Standard 59A; and
- (b) Each modification or repair made to the facility after December 31, 1972, conforms to the applicable requirements of this part and NFPA Standard 59A, insofar as is practicable.

**162.3** The operator, who is planning to build a LNG facility in the state of California, shall notify the Utilities Safety Branch 90 days prior to commencing construction on that LNG facility.



## **SUBPART E – GAS HOLDERS**

### **181 GENERAL**

**181.1** Each operator shall comply with the requirements of 49 CFR part 192 – Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards. This section of the General Order addresses specific standards for the design, construction, testing, operation, and maintenance of gas holders in addition to those included in 49 CFR Part 192. These rules do not supercede the Federal Pipeline Safety Regulations, but are supplements to them.

### **182 PIPE-TYPE AND BOTTLE-TYPE HOLDERS: DESIGN AND CONSTRUCTION**

**182.1** All holders shall comply with the requirements of 49 CFR 192.175 and 192.177.

**182.2** Electrical equipment and wiring installed at holders must conform to the National Electrical Code, NFPA-70, so far as that Code is applicable.

**182.3** Any holder designed and constructed in accordance with the requirements for location class 1 or 2, but not 3, shall be installed at least 75 feet from a flammable building or adjoining property that may have a flammable building constructed thereon in the future, or from the nearest rail or a track on a railroad private right-of-way. Also, no utility shall construct or install a flammable building within fifty feet of a holder. (A flammable building shall be understood to be a building, roof or siding of which consist of wood or other readily combustible material.)

**182.4** Each vent line that exhausts gas from a pressure relief valve or blowdown valve must extend to a location where the gas may be discharged without hazard.

**182.5** A device which will maintain a continuous pressure record shall be installed at the inlet or outlet of each holder, except that where a group of holders are jointly connected and are all filled from the same gas source and all empty into a common line or system, only one device will be required. A pressure indicating device shall be installed on each container in the holder.

**182.6** Each holder facility must have adequate fire-protection facilities.

**182.7** Holders shall be provided with overpressure protection systems complying with the requirements of 192.195.

**182.8** When a holder is constructed adjacent to any existing electric transmission line normally carrying voltages in excess of 50,000 volts, the holder shall be located no nearer to the lines than the height of the poles carrying them.

**183 PIPE-TYPE AND BOTTLE-TYPE HOLDERS: PLAN FOR INSPECTION AND TESTING**

**183.1** All leaks of any consequence in gas pipeline, valves and equipment in the vicinity of a holder must be promptly repaired upon discovery, or as soon as practicable. All hazardous leaks must be remedied at once.

**183.2** In addition to other inspections required by this Part, after a high pressure holder has been in service for a period of ten years, and at intervals not exceeding ten years thereafter, a complete and thorough internal and external inspection shall be made and reported upon by competent inspectors who are selected by the utility and are agreeable to the Commission. A copy of the report shall be provided to the commission.

**183.3** In lieu of an internal inspection, when it is not practical to enter the holder, a sufficient number of plugs shall be cut from, or holes bored in, the shell at points believed most subject to internal corrosion, to enable examination for corrosion can be made. The interior of at least one container of a holder constructed entirely of pipe and fittings shall be inspected by removing the end closures and entering the container.

**183.4** As an alternative to the above requirements to enter the container, or to cut plugs or bore holes in the holder, a nondestructive test procedure such as ultrasonic testing may be used. The test instrument must be calibrated to measure the wall thickness of the steel plates so that the error of indication shall not vary more than plus or minus two thousandths ( $\pm 0.002$ ) of an inch.

**183.5** When such inspections determine that the holders are in a defective and hazardous condition, they shall be taken out of service until repaired and placed in a safe workable condition. All others in the same group shall immediately be inspected and repaired if found defective. If any portion of the shell of a high pressure holder is located underground and exposed to the soil, inspection of its exterior for corrosion and leaks shall be made by suitable representative excavations at the time of the inspection.

## **SUBPART F – PETROLEUM GAS VESSEL STATIONS**

### **201 GENERAL**

**201.1** Each operator shall comply with the requirements of 49 CFR part 192 – Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards. This section of the General Order addresses specific standards for the design, construction, testing, operation, and maintenance of petroleum gas vessel stations in addition to those included in 49 CFR Part 192. These rules do not supercede the Federal Pipeline Safety Regulations, but are supplements to them.

### **202 PETROLEUM GAS VESSEL STATIONS**

**202.1** For the purpose of this section, vessel shall refer to any structure with a capacity of two hundred gallons or more used for the storage of petroleum gas, but shall not refer to those vessels used for transporting purposes.

**202.2** Each operator having a vessel station shall establish a plan for the systematic routine inspection and testing of these facilities in accordance with Appendix A – Petroleum Gas Vessel Stations: Operation, Maintenance, and Inspection, and shall provide for:

- (a) Effective training of all personnel associated with the maintenance and operation of the facilities.
- (b) Specification of appropriate safe work practices and assurance that those practices are followed.
- (c) Effective liaison with local fire departments and other emergency response agencies to assure that these agencies are familiar with the operating facilities to the extent necessary to assure that any required response from them in an emergency is effective, and to assure that the operator of the facilities is adequately informed of the services that those agencies will provide.

## APPENDIX A

### PETROLEUM GAS VESSEL STATIONS: OPERATION, MAINTENANCE AND INSPECTION

#### I. Operation and Maintenance

1. Before work which might bring about admission of air is performed on any Petroleum Gas vessel, such as removing the vessel from service for internal inspection, internal repairs or dismantling, all inlet and outlet gas connections, except those opening to the atmosphere, shall be physically removed and the vessel shall be purged with inert gases. The closing of inlet and outlet valves or the blanking off of inlet and outlet flanges shall not be considered sufficient precaution against the formation of an explosive mixture while the vessel is out of service.

Before work which might bring about the admittance of air is performed on a petroleum gas vessel, all possible liquid shall be drained therefrom before purging is begun. A sufficient quantity of steam shall be used to supplement the inert gases used for purging in order to assure the removal of all petroleum gas before the admittance of air. Before workmen are allowed to enter a vessel removed from service and purged with inert gases, the inert gases shall be purged with air, or in lieu thereof, the workmen entering the vessel shall be equipped with self-contained breathing apparatus meeting the requirements of NFPA 19B and maintained in accordance with manufacturer's recommendations.

When the interior of a vessel that has been removed from service and purged of flammable vapors is scraped, brushed, sprayed, painted, or otherwise worked on in a manner that might bring about the formation of an explosive mixture, an adequate and continuous circulation of outside air through the vessel by means of fans or other devices is required.

The circulation of air shall continue until there is no reasonable probability of the formation of an explosive mixture. While engaged in such work, workers must be provided with a safe supply of air to breathe. If conditions warrant, they shall be provided with appropriate respiratory protection.

Upon returning a purged vessel to service, the air shall be purged from the vessel with inert gases before gas or liquid is allowed to reenter the vessel.

All tests to determine the presence of an explosive mixture in connection with the purging of a vessel with inert gases or air, shall be conducted by competent operators by means of adequate specifications and gas analysis apparatus. When gas detection equipment is used, the operator shall calibrate and verify it is in good working order.

Except as herein otherwise provided, it is recommended that all operations set forth in this paragraph, including gas analyses, be performed in accordance with the latest procedure

recommended by the American Gas Association Publication, "Purging Principles and Practice."

2. Whenever a vessel is painted, all seams on that portion of the vessel being painted, which are subject to gas pressure, shall be inspected for leaks.
3. Except as herein otherwise provided, all vessels of this type shall be maintained and operated in accordance with the Unfired Pressure Vessel Safety Orders, issued by the Division of Industrial Safety, Department of Industrial Relations of the State of California, and in effect at the time; however, no reconstruction of vessels is required in order to comply with said Unfired Pressure Vessel Safety Orders, if the vessels were acquired prior to April 1, 1940.
4. All valves, fittings, regulators, and pressure relief devices shall be kept in working order and reasonably protected from trespass.
5. The maximum safe operating pressure of the vessel shall be known to the operator. This pressure can be determined from the inspection reports of the State Division of Industrial Safety or other qualified inspectors.
6. All drips and drain lines shall be kept free of obstruction and in proper working order at all times.
7. In order to provide for liquid expansion with temperature, Petroleum Gas storage vessels shall not be filled to a greater fraction of their volumes than is permitted by said Unfired Pressure Vessel Safety Orders, in effect at the time.
8. At stations where equipment is employed for vaporizing the gas, the vaporizer shall be located outside of buildings, unless those buildings are devoted exclusively to Petroleum Gas and distribution operations, are of approved fireproof construction, and are well ventilated from points near the floor and roof.

Any device supplying the necessary artificial heat for producing the steam, hot water, or other heating medium for the gas vaporizers shall be equipped with a full safety shutoff control.

When such devices are located under a common roof with the gas vaporizers, they shall be located in a separate compartment or room, which shall be separated from compartments or rooms containing liquified petroleum gas vaporizers, pumps, or central gas mixing devices by a fire wall containing no openings through which free vapors might flow. Vaporizers employing artificial heat shall be provided with a safety relief valve of adequate capacity at or near the outlet of the vaporizer. Direct-fired Petroleum Gas vaporizers and heaters shall only be allowed after special authorization has been granted by the Commission.

## II. Inspection Procedures

1. Each utility shall employ a standard set of inspection forms prescribed by the Commission for recording data obtained at the time inspections are made.
2. The annual inspection reports for all vessels shall contain a general summary of the operating condition of the vessel and indicate any changes, repairs, or improvements that appear advisable.
3. The annual general inspection report of each vessel shall include a description and typical analysis of the gas or gases stored therein during the past year. Analyses shall particularly indicate the content of hydrogen sulfide, carbon dioxide, oxygen, and other corrosive impurities.
4. Whenever the internal inspection of a vessel is contemplated, it shall first be removed from service and entered in accordance with the provisions of I. 1.
5. The following minimum inspections shall be made and recorded.

### Annual General Inspection:

General inspection of aboveground vessels for condition, indications of corrosion, and need of painting. Check yard for cleanliness and fencing.

The exposed piping, valves, and fittings of buried vessels shall be examined for general condition, undue strain caused by settlement, and need of painting. All exposed connections, manholes and fittings on vessels, as well as mechanical joints in all exposed piping within fifty feet of any vessel, shall be tested for leaks. All leaks and their disposition shall be shown on the report form. Known or suspected leaks on buried vessels, connections, and fittings shall be uncovered and repaired as soon as practicable. Hazardous leaks shall be repaired at once.

Examination shall be made of foundations and supports for all above ground vessels to ascertain if all saddles and piers are fully supporting the vessel. Any settlement which will produce uneven and excessive strain shall be corrected as soon as practicable to minimize risk to the health and safety of the public.

Check accuracy of liquid gauging equipment. Check operation of vaporizer relief devices. Inspect condition and operation of safety shutoff control on vaporization heating equipment.

### Inspection of Underground Vessels for External Corrosion:

Where a storage vessel is underground and exposed to the soil, inspection of its exterior for soil corrosion and leaks shall be made by suitable representative excavations at least once each ten years.

### Additional Inspections:

Except as hereinafter provided, after a Petroleum Gas vessel has been in service for a period of twenty years, and at intervals not exceeding twenty years thereafter, a complete and thorough internal and external inspection shall be made and reported upon by qualified inspectors, who are selected by the utility and are agreeable to the Commission. For groups of two or more vessels, of the same type of materials and design, built at the same time and subjected during the interval to identical service conditions, no less than twenty percent, nor less than one of the vessels in any such group shall receive the internal inspection after each twenty years of service. If the utility uses the above exception, the vessel or vessels inspected shall be regularly rotated in order that eventually all vessels will have been examined.

When the vessel is buried and/or cannot be entered for an internal inspection, a sufficient number of plugs shall be cut from, or holes bored into, the shell at points believed most subject to internal and/or external corrosion, to enable examination for corrosion.

As an alternative to entering the vessel or to cutting plugs or boring holes in the vessel, a nondestructive test procedure such as ultrasonic testing may be used. The test instrument must be calibrated to measure the wall thickness of the steel plates so that the error of indication shall not vary more than plus or minus two thousandths ( $\pm 0.002$ ) of an inch.

Any vessels found to be in a defective and hazardous condition shall be taken out of service until repaired and placed in a safe workable condition, and any other vessels in the same group shall immediately be inspected and repaired if found necessary.

In the years that the inspections described above are made, the utility will not be required to make the regular annual general inspection.

**END OF APPENDIX A**



- APPENDIX B  
**CALIFORNIA PUBLIC UTILITIES COMMISSION**  
 Report of Gas Leak or Interruption\*  
 CPUC File No. 420

**Part I: CPUC CONTACT INFORMATION**

Utility Name: \_\_\_\_\_ CPUC Contact: Name \_\_\_\_\_ Recorder  FAX   
 Contact Person \_\_\_\_\_ Date \_\_\_\_\_ Time: (24hr) \_\_\_\_\_  
 \_\_\_\_\_ CPUC Information Request: Written Report  Sketch/Photo  FD Report   
 Phone: ( ) \_\_\_\_\_ DOT Notified - Yes  No  DOT Report Number: \_\_\_\_\_

**Part II: INCIDENT DETAILS**

<b>Incident Location</b> City/County: _____	<b>Incident Time</b> Date: _____	<b>Reported to the Utility</b> Date: _____ Time: (24hr) _____
Address/Location: _____	Time: (24hr) _____	Reported by: _____

**Reason(s) for Reporting** (check all that apply)

<b>Gas leak associated with:</b>		<b>Emergency action required:</b>	
Death <input type="checkbox"/>	Injury <input type="checkbox"/>	\$\$\$Damage <input type="checkbox"/>	Media Coverage <input type="checkbox"/>
Service Interruption <input type="checkbox"/>	Operator Judgement <input type="checkbox"/>	Traffic Rerouted <input type="checkbox"/>	Area Blocked Off <input type="checkbox"/>
Transmission Line Test Failure <input type="checkbox"/>	Required Transmission Line Shutdown <input type="checkbox"/>	Building Evacuated <input type="checkbox"/>	Other Emergency actions (describe) _____

**Incident Cause** Dig In  Fire/Explosion  Construction Defect  Material Failure  Corrosion  Vehicle Impact  Suicide   
 UNKNOWN - MORE INFORMATION TO FOLLOW  Other (describe) \_\_\_\_\_

**Escaping Gas Involvement** (check all that apply) Leak Only  Fire  Explosion  None

**Summary** (Briefly describe the incident and the probable cause.)

<b>Gas Equipment Affected</b> (check all that apply)	<b>Specification of Failed Equipment</b>	<b>Injuries and Fatalities</b>
Main <input type="checkbox"/> Regulator <input type="checkbox"/> Meter <input type="checkbox"/> Valve <input type="checkbox"/>	Material: Steel <input type="checkbox"/> Cast Iron <input type="checkbox"/>	None <input type="checkbox"/>
Service Line <input type="checkbox"/> Controls <input type="checkbox"/> Service Riser <input type="checkbox"/>	Plastic <input type="checkbox"/> Copper <input type="checkbox"/>	Injuries _____ Fatalities _____
Customer Facility <input type="checkbox"/> Transmission Line <input type="checkbox"/>	Other <input type="checkbox"/> _____	Company: [ ] [ ]
Other (describe) _____	Pipe Size _____ in Operating Pressure _____ psig	Other: [ ] [ ]

<b>Dig In Information</b>	<b>Estimated Damage</b>
USA notification required: Yes <input type="checkbox"/> No <input type="checkbox"/> Name of Excavator: _____	Damage to gas facilities: \$[ ] [ ]
USA notified: Yes <input type="checkbox"/> No <input type="checkbox"/> Excavator Contact Person: _____	Other damage involving gas: \$[ ] [ ]
Facilities properly marked: Yes <input type="checkbox"/> No <input type="checkbox"/> Phone: ( ) _____	Total: \$[ ] [ ]

<b>Recovery from Incident</b>	<b>Public Agencies on Scene</b>	<b>Customer Outage</b>
Date _____ Time (24hr) _____	Media <input type="checkbox"/> Police <input type="checkbox"/>	Customers out of service [ ] [ ]
Co Personnel on Scene [ ] [ ]	Fire <input type="checkbox"/> Ambulance <input type="checkbox"/>	Customer-hours outage [ ] [ ]
Gas flow stopped [ ] [ ]		
Service restored [ ] [ ]		

**Part III: CPUC INVESTIGATION**

Is further investigation warranted? Yes  No  Signature of CPUC Engineer \_\_\_\_\_  
 Date incident investigated: \_\_\_\_\_ Field report attached? Yes  No  CPUC Inspector: \_\_\_\_\_

\*The information contained in this report is provided solely for the confidential use of the Commission and its staff and is not open to public inspection (PUC GO 66-C, Public Utilities Code, Sections 315 and 583).