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Decision No. 78513

ORIGINAL

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of CALIFORNIA-PACIFIC UTILITIES COMPANY, PACIFIC GAS AND ELECTRIC COMPANY, PACIFIC LIGHTING SERVICE COMPANY, SAN DIEGO GAS & ELECTRIC COMPANY, SOUTHERN CALIFORNIA GAS COMPANY, AND SOUTHWEST GAS CORPORATION, public utility gas corporations, for an order issuing General Order No. 112-C setting forth rules governing design, construction, testing, maintenance and operation of utility gas gathering, transmission and distribution piping systems and superseding General Order No. 112-B.

Application No. 52396
(Filed January 12, 1971)

O P I N I O N

Applicants' Request

This application was filed pursuant to the authority granted in Section 402.1 of the Commission's General Order No. 112-B.^{1/} Applicants request an order from the Commission issuing General Order No. 112-C setting forth rules governing the design, construction, testing, maintenance and operation of utility gas gathering, transmission and distribution piping systems as proposed by applicants in Exhibit "A". The proposed General Order No. 112-C is a major revision to General Order No. 112-B and would supersede the latter General Order.

1/ Section 402.1 of General Order No. 112-B provides:

"402.1. 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 annually on or before June 30 a report 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, or stating that no changes are deemed to be necessary. Gas utilities recommending changes shall, either collectively or otherwise, file appropriate formal applications seeking Commission approval for such changes. 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."

Development of General Order No. 112

On December 28, 1960, the Commission, by Decision No. 61269 (58 CPUC 413), issued General Order No. 112 covering the design, construction, testing, maintenance and operation of both gas transmission and distribution piping systems. The order became effective on July 1, 1961. General Order No. 112, adopted by reference, with modifications, the 1958 edition of Section 8 of the American Standard Code for Pressure Piping, Gas Transmission and Distribution Piping Systems, ASA B31.8-1958 (B31.8 Code), published by the American Society of Mechanical Engineers.

Subsequent to the issuance of the first General Order No. 112, said order was revised twice to reflect changes in the B31.8 Code and to incorporate other applicable amendments. The first revision was made on December 3, 1963, by Decision No. 66399 (61 CPUC 744); at that time, the Commission issued General Order No. 112-A, effective January 1, 1964, adopting the ASA B31.8-1963 Code with modifications. The second revision was made on October 24, 1967, by Decision No. 73223 (67 CPUC 585); the Commission then issued General Order No. 112-B, effective December 1, 1967, adopting the USAS B31.8-1967^{2/} Code with modifications.

Pursuant to the Natural Gas Pipeline Safety Act of 1968, the United States Department of Transportation on August 11, 1970, issued its gas safety standards, Part 192, Transportation

^{2/} The American Standards Association was reconstituted as the United States of American Standards Institute on August 24, 1966.

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of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards, under Title 49 of the Code of Federal Regulations (49 CFR Part 192), effective November 12, 1970. These federal standards prescribe minimum safety requirements for pipeline facilities in the transportation of gas. This Commission by Resolution No. G-1499, ordered that said Part 192 be adopted to supplement General Orders Nos. 112-B and 94-A of the Commission, and that all standards in said general orders, to the extent that they are additional or more stringent than the Minimum Federal Safety Standards, shall remain in effect. This order became effective on November 12, 1970. Resolution No. G-1499 also contained a clause offering the possibility of issuance of a new General Order No. 112-C:

"A review of all gas safety standards of the California Public Utilities Commission is contemplated to identify, restate and publish such additional or more stringent standards. . "

Proposed General Order No. 112-C

The proposed General Order No. 112-C (G.O. 112-C) was prepared for the purpose of combining General Order No. 112-B (G.O. 112-B) and the Minimum Federal Safety Standards (49 CFR Part 192) and to identify and restate the additional and more stringent gas safety standards of this Commission. Any reference to the B31.8 Code has been eliminated in the proposed order. Generally, Chapters I, III and IV of proposed G.O. 112-C (Part I of Appendix A) include the general provisions, record and reporting requirements of this Commission. Chapter II (Part II of Appendix A) contains the Minimum Federal Safety Standards, which became effective on November 12, 1970, and amendments published on November 11, 17, 1970, with revisions necessary to combine G.O. 112-B and the federal standards.

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A number of changes in Chapters I, III, and IV of proposed G.O. 112-C (Part I of Appendix A) are necessary because of new definitions for the terms "pipeline" and "gathering line" contained in Section 192.3 in the federal standards (Part II). The term "pipeline" has been broadened in the federal standards to mean all parts of physical facilities, whereas in G.O.112-B "pipeline" is synonymous with the term "transmission line". The term "gathering line" in the federal standards is defined as being distinct from a transmission line, whereas a gathering line is considered a type of transmission line in G.O. 112-B. Specific additions and changes in the proposed G.O. 112-C are detailed in the following chapters.

Changes in Chapter I (Appendix A, Part I, Subpart A)

Section 103.1 of G.O. 112-B, which describes the scope of the Order, is deleted in Chapter I and incorporated in Section 192.1 in Chapter II of proposed G.O. 112-C. This is done to clearly identify the area of application of this Order and to avoid conflict with the scope of the federal standards.

Section 104.3 of G.O. 112-B which covers applicability of the rules to existing installations, is deleted, because the subject is covered by Section 192.13 of Chapter II of proposed G.O. 112-C and the federal standards are more stringent.

Section 106.1 of G.O. 112-B is revised to include the provisions of Section 107.4 of G.O. 112-B (except for the reference to the B31.8 Code), and to provide for waiving compliance in accordance with Section 3(e) of the Natural Gas Pipeline Safety Act of 1968. Revised Section 106.1 is renumbered as Section 105.1 of G.O. 112-C, and Section 107.4 of G.O. 112-B is deleted.

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Sections 107.1, 107.2 and 107.3 of G.O. 112-B which required compliance with the B31.8 Code are deleted. They are no longer applicable, because G.O. 112-C incorporates the Minimum Federal Safety Standards.

Changes in Chapter II (Part II of Appendix A)

The principal changes in Chapter II (Part II of Appendix A) are for the purpose of incorporating such additional or more restrictive requirements of G.O. 112-B with the minimum federal standards. Other changes result from the proposed revisions to Chapters I, III and IV (Part I of Appendix A) and the adoption of the editorial format of the federal standards. The numbering system in the federal standards has been retained.

The scope of proposed G.O. 112-C is contained in Section 192.1. The section is revised to incorporate the wording in Section 103.1 of G.O. 112-B. In addition, proposed G.O. 112-C encompasses all facilities owned or operated by the utility rather than delineating certain facilities as is done in G.O. 112-B.

Definitions under Section 192.3 are augmented to include "Commission" and "Utility", as in Sections 201.1 and 201.2 of G.O. 112-B.

The filing of inspection and maintenance plans is covered by Section 192.17. The section is revised to direct the operating language specifically to the utilities under jurisdiction of the Commission.

The design factor (F) for steel pipe is covered by Section 192.111. Subparagraph (a) is revised to require due consideration of the possibility of future development of an area

when classifying locations for the purpose of determining the design factor and test requirements and the use of a design factor of 0.50 or less within incorporated areas of cities. These additional requirements are from paragraph 841.016 of the USAS B31.8-1967 Code and Section 210.1 of G.O. 112-B.

Requirements under Section 192.175, covering design of pipe-type and bottle-type holders are revised by adding subparagraph (c) to require that they be designed to all the additional requirements set forth in General Order No. 94-B of the Commission.

Revision of Section 192.233 (a) and (b), which cover miter joints, limits their use to facilities to be operated at less than 20 percent of specified minimum yield stress (SMYS) as set forth in Section 204.1 of G.O. 112-B, rather than the 30 percent permitted by the federal standards.

Section 192.243, which covers nondestructive testing of welds, is revised by changing subparagraphs (d)(1)(2) and (4) to require testing of 20 percent of the welds in Class 1 and Class 2 locations and 100 percent of welds which contain repaired areas in accordance with Section 206.1 of G.O. 112-B.

Section 192.305, which covers inspection of new facilities, is revised to require inspection at sufficiently frequent intervals to ensure the workmanship is of good quality as provided in paragraph 841.222 of the USAS B31.8-1967 Code and modified by Section 202.1 of G.O. 112-B.

Section 192.307, which covers inspection of materials, is revised to include requirements, not contained in federal standards, for careful handling of materials as set forth in paragraph 841.271 of USAS B31.8-1967 Code and modified by Section 202.1 of G.O. 112-B.

Section 192.313, which covers bends and elbows is revised by modifying subparagraph (b) to prohibit bends within 1-1/2 pipe diameters of a circumferential weld of piping systems to be operated at 20 percent or more of SMYS in accordance with Section 205.1 of G.O. 112-B. ✓

Section 192.315, which covers wrinkle bends in pipe, is revised by modifying subparagraph (a) to prohibit their use on steel pipe to be operated at 20 percent or more of SMYS in accordance with Section 204.1 of G.O. 112-B, rather than the 30 percent permitted by the federal standards.

Section 192.361, which covers installation of service lines, is revised by adding subparagraph (g) to provide for protection of the pipe coating when steel service pipe is installed in a bore. This additional requirement is from paragraphs 849.221(b) and (d) of USAS B31.8-1967 Code as modified by Section 202.1 of G.O. 112-B.

Section 192.365(b), which covers location of service line valves, is modified to require an outside shutoff valve in all cases, in accordance with Rule 33 of General Order No. 58-A of the Commission, referred to in Section 213.1 of G.O. 112-B.

Section 192.509(b), which covers the test requirements for pipelines to operate at or below 100 p.s.i.g., is revised by requiring that each main to be operated at or above 1 p.s.i.g. must be tested to 100 p.s.i.g. instead of 90 p.s.i.g. required by federal standards. This requirement is from paragraph 841.44 of the USAS B31.8-1967 Code.

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Section 192.619, which covers maximum allowable operating pressure for steel or plastic pipelines by changing the table in 192.619(a)(2)(ii) to require testing of facilities on Class 1 location to 1.25 times the maximum operating pressure (MOP) as set forth in Section 209.11 of G.O. 112-B instead of 1.1 times the MOP required by the federal standards. The dates shown in the table are also changed to reflect the adoption of the more restrictive requirements by this Commission on July 1, 1961.

Section 192.625, which covers odorization of gas, is revised by changing subparagraphs (a) and (g) to require odorization of gas in all transmission lines and those gathering lines located in Class 3 and Class 4 locations, and an annual leakage survey of gathering lines carrying gas which does not have a distinctive odor, as set forth in Sections 208.1 and 208.5 of G.O. 112-B.

The provisions in Section 192.723(b)(1) of the federal standards were revised to require that distribution systems in the vicinity of schools, hospitals, and churches be surveyed annually for leakage. This addition resulted from discussions with the Commission staff rather than from the combining of requirements of G.O. 112-B with the federal standards.

The lead-in paragraph of Section 192.727, which covers abandonment or inactivation of facilities, is revised to include the requirements for abandonment of services to structures which are destroyed, removed or demolished as set forth in Rule 6 of General Order No. 58-A of the Commission referred to in Section 215.1 of G.O. 112-B.

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Section 192.737, which covers inspection and testing of pipe-type and bottle-type holders, is revised to require the plan for the systematic routine inspection of pipe-type and bottle-type holders to be in accordance with the requirements of General Order No. 94-B of the Commission, referred to in Section 216.1 of G.O. 112-B.

Changes in Chapter III (Appendix A, Part I, Subpart B)

Section 303.2 of G.O. 112-B, which covers changes in maximum allowable operating pressure, is deleted because it is covered by Sections 192.619, 192.621 and 192.623 in Chapter II (Part II of Appendix A).

Changes in Chapter IV (Appendix A, Part I, Subpart C)

The provisions of Sections 401.2 and 401.3 of G.O.112-B have been combined, and the applicability of the combined section has been defined as applying to installations involving expenditures of \$250,000 or more to clearly establish the basis for reporting. Additional provisions have been added requiring that class location, design factors, and estimated cost be reported and that profile sketches indicating maximum and minimum elevations be submitted for each test section.

Section 401.4 of G.O. 112-B is revised to require reporting proposed changes in maximum allowable operating pressure of distribution systems where the change involves uprating from a pressure of 60 p.s.i.g. or less to a pressure over 60 p.s.i.g., or from low pressure to high pressure, since upratings in these ranges require installation of additional facilities and the application of extraordinary precautions during the process. Segments of distribution systems serving less than 300 customers,

where the increase in maximum allowable operating pressure is accomplished by connecting the service lines individually to a higher pressure main, are excluded, because the conversion or uprating of an individual service line requires no extraordinary precautions.

Section 401.5 of G.O. 112-B, which covers surveillance of pipelines and mains, is deleted, because the subject is covered by Section 192.17 in Chapter II (Part II of Appendix A).

Section 401.8 of G.O. 112-B, which covers proposed installation of material not covered in the USAS B31.8 Code, is deleted as it is no longer appropriate.

Findings

Upon consideration of the evidence, the Commission finds that:

1. It is in the best interest of the consuming public and the public utility corporations that General Order No. 112-B covering the design, construction, testing, maintenance and operation of both distribution and transmission pipeline systems be revised to combine the requirements of G.O. 112-B and the Minimum Federal Safety Standards, 49 CFR Part 192, to eliminate ambiguity and conflict between state and federal requirements.

2. Applicants' proposed G.O. 112-C, Chapter II of the Table of Contents, outlining the additions and amendments to federal standards is not necessary in the new G.O. 112-C, since Chapter II (Part II of Appendix A) already contains the combined rules of G.O. 112-B and federal standards. These rules will be used for the State of California, and there is, therefore, no longer a need for separating the state and federal standards.

3. Proposed G.O. 112-C, Chapter II (Part II of Appendix A), Section 192.7(b) covers documents incorporated by reference, all of which are available for inspection in the Office of Pipeline Safety, Washington, D.C.; it is, therefore, not appropriate for inclusion in the Commission's general order. This section shall be deleted from the new G.O. 112-C.

4. Proposed G.O. 112-C, Chapter II (Part II of Appendix A), Section 192.11, covers the safety standards for petroleum gas systems. The petroleum gas-air mixture system is not included in Section 192.11(c). From a safety standpoint, this heavier-than-air fuel transported by a pipeline system should be subject to the same regulation under Section 192.11 as other fuels listed. Therefore, this Commission finds that it is reasonable and in the public interest that Section 192.11(c) be revised, to include the petroleum gas-air mixture system. The revised text should read as follows:

192.11(c) For the purpose of this section, petroleum gas means propane, butane, mixture of these gases or a gas-air mixture, other than a gas-air mixture that is used to supplement supplies in a natural gas distribution system.

5. All other deletions, additions and revisions contained in proposed G.O. 112-C, as set forth in Exhibit "A" of the application, have been fully discussed with the Commission staff. The proposed revisions are reasonable and should be adopted in the revised General Order.

6. It is advantageous to combine Chapters I, III and IV of proposed G.O. 112-C into one part so that all the general

provisions are not separated by different chapters. The new G.O. 112-C, Appendix A, should have two parts as follows:

Part I, entitled "General Provisions", which consolidates the requirement of Chapters I, III and IV of proposed G.O. 112-C covering the general scope, records and reports.

Part II, entitled "Gas Pipeline Safety Standards", which covers the combined rules of G.O. 112-B and federal standards.

The following table tabulates the corresponding changed section numbers for G.O. 112-B, proposed G.O. 112-C, and the new G.O. 112-C as shown in Appendix A:

<u>G.O. 112-B</u>	<u>Proposed G.O. 112-C by Applicants</u>	<u>G.O. 112-C Appendix A</u>
Chapter I	Chapter I	Part I, Subpart A
Sec. 104, 104.1,	103, 103.1, 103.2	103, 103.1, 103.2
104.2, 104.4	103.3, 103.4	103.3, 103.4
104.5		
105, 105.1	104, 104.1, 104.2	104, 104.1, 104.2
105.2		
106, 106.1	105, 105.1	105, 105.1
Chapter II	Chapter II	Part II
Chapter III	Chapter III	Part I, Subpart B
Sec. 301, 301.1	301, 301.1	121, 121.1
302, 302.1	302, 302.1	122, 122.1
303, 303.1	303, 303.1	123, 123.1
Chapter IV	Chapter IV	Part I, Subpart C
Sec. 401, 401.1	401, 401.1	141, 141.1
401.2, 401.3	401.2	141.2
401.4	401.3	141.3
401.6	401.4	141.4
401.7	401.5	141.5
402, 402.1	402, 402.1	142, 142.1

7. The rules governing the design, construction, testing, maintenance and operation of utility gas gathering, transmission and distribution piping systems set forth in the attached G.O. 112-C, Appendix A, have met the goal contemplated by

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Commission's Resolution No. G-1499 by restating and publishing such additional or more stringent standards than the Minimum Federal Safety Standards.

8. It is recognized that no code of safety rules, no matter how carefully and well prepared, can be relied upon to guarantee complete freedom from accidents. Moreover, the adoption of precautionary safety rules does not remove or minimize the primary obligation and responsibility of gas corporations to provide safe service and facilities in their gas operations. Officers and employees of the gas corporations must continue to be ever conscious of the importance of safe operating practices and facilities and of their obligation to the public in that respect.

9. The rules set forth in the attached G.O. 112-C, Appendix A, are reasonable and necessary to and will promote public safety in the construction and operation of gas piping facilities and also will promote the continuity of gas service to the public in California. A public hearing is not necessary, and G.O. 112-C, Appendix A, should be adopted, superseding G.O. 112-B.

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The Commission having found as hereinabove set forth concludes that it should issue its order as follows:

O R D E R

IT IS ORDERED that:

1. General Order No. 112-C is hereby adopted, to read as shown in Appendix A, attached to this order and made a part hereof, to be effective on and after April 30, 1971, superseding General Order No. 112-B.

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

3. All gas corporations shall comply with the rules and provisions of General Order No. 112-C on and after its effective date.

Dated at San Francisco, California, this 23rd day of APRIL, 1971.

Chairman

Commissioners

Commissioner Thomas Moran, being necessarily absent, did not participate in the disposition of this proceeding.

Commissioner D. W. Holmes, being necessarily absent, did not participate in the disposition of this proceeding.