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PG&E

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

SAFETY AND ENFORCEMENT DIVISION
UTILITIES SAFETY BRANCH

RESOLUTION SU-34
September 7, 1995

R E S O L U T I O N

DEVIATION FROM GENERAL ORDER 112-E, SECTION 192.150 (a) OF THE FEDERAL REGULATIONS TO ALLOW THE INSTALLATION OF A LINING IN A STEEL PIPE WHICH PRECLUDES STEEL TO STEEL CONTACT WHEN PERFORMING INTERNAL INSPECTION OF THE PIPE

S U M M A R Y

1. General Order (GO) 112-D became GO 112-E in August of 1995. GO 112-E adopts the federal code which requires the internal inspection of natural gas transmission lines.
2. Pacific Gas and Electric Company (PG&E) wishes to line 11,400 feet of a 26-inch steel pipe with a "Paltem" cured-in-place-lining on a section of Line 109 located along Alemany Boulevard in San Francisco. Once this pipe lining is installed, the steel pipe cannot be inspected with a metal-to-metal internal inspection device (pig). This appears to be in violation with the Code of Federal Regulations (CFR), Title 49 as stated in section 192.150 (a).
3. PG&E plans to maintain the original steel pipe in accordance with federal regulations and testing procedures. PG&E claims that the liner itself is capable of holding the proposed line pressures without failing.
4. The Utilities Safety Branch (USB) recommends that the waiver be granted for this specific project. USB believes the new technology has been adequately tested by PG&E, and this is an appropriate project for evaluating the merits of using this technique. USB recommends, for any and all future applications, that this lining technique be authorized through the deviation request process until such time when the technique is adopted as an approved pipeline rehabilitation method.

B A C K G R O U N D

1. PG&E would like to begin rehabilitating transmission pipelines in lieu of pipeline replacement. The rehabilitation process proposed by PG&E consists of a thin wall liner made of composite materials, such as polyester elastomer woven with kevlar, which is bonded to the inner wall of the pipeline (host pipe) with epoxy resins. Several variations of this process, classified as a cure-in-place liner, are now patented by various manufacturers and are available to the gas industry.

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2. PG&E has tested various lining processes, and in fact, has applied this process in the field on distribution piping. The host pipe for the "Paltem" continues to be maintained under the applicable rules for the steel host pipe material. In this project, PG&E plans to line a transmission pipe which will operate at a pressure of 150 psi. The host pipe will remain under the applicable rules for buried steel pipe, and cathodic protection will be maintained on the steel pipe indefinitely.

3. In preparation for lining the transmission pipe, PG&E and the Utilities Safety Branch (USB) raised common concerns regarding two facts: 1) the composite materials which compose the liner, and the resins which are the bonding agents for attaching the liner to the inner wall, are not recognized materials within Code of Federal Regulations (CFR) 192; and 2) as the liner is composed of insulating material, it would restrict the operation of internal inspection devices (pigs) which require metal-to-metal contact.

4. USB believes a waiver is not necessary for the installation of the liner because the steel pipe being lined is fully capable of containing the operating pressure without the liner and will be maintained under the applicable rules.

5. According to CFR Subpart 192.150(a), "...each new transmission line and each line section of a transmission line where the line pipe, valve, fitting, or other line component is replaced must be designed and constructed to accommodate the passage of instrumented internal inspection devices." Due to the pigging restrictions discussed above, PG&E has requested a waiver from Subpart 192.150(a). DOT does not object to the Commission granting this waiver.

6. PG&E will monitor the installation of the liner, inspect the liner before putting the line in operation, continue periodic tests to ensure the pipe is operating properly and internally video the liner one year after its installation.

FINDINGS

1. GO 112-E adopts the federal code which requires internal inspection of natural gas transmission lines.

2. PG&E's use of the liner for its transmission pipeline along Alemany Boulevard in San Francisco will not jeopardize public safety.

3. The use of the "Paltem" liner may significantly improve the gas pipelines' ability to withstand seismic events.

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4. Using the liner for pipeline rehabilitation is far more economical than outright replacement of the line, thereby allowing the ratepayers to benefit from reduced capital construction requirements.

THEREFORE, IT IS ORDERED THAT;

1. A deviation from General Order 112-E, which refers to the Code of Federal Regulations, Title 49, Section 192.150(a), for the internal inspection of a transmission line, is granted.
2. PG&E and USB shall closely monitor this liner project to ensure public safety.
3. This Resolution is effective today.

I hereby certify that this Resolution was adopted by the Public Utilities Commission on September 7, 1995. The following Commissioners approved it:



WESLEY M. FRANKLIN
Acting Executive Director

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