

SP-20
Log P. 237

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

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Forwarded to:

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SAFETY RECOMMENDATION(S)

P-83-29

At 10 a.m., c.s.t., on February 1, 1983, a natural gas explosion and flash fire destroyed a house, killed two persons, and injured three persons at 705 S.W. First Street, in Pryor, Oklahoma, and damaged an adjacent house. Natural gas, escaping from a corroded 1/2-inch residential service line located beneath the house, filled the enclosed crawl space, and migrated through the floor and into the house where it was ignited by one of several appliance pilot lights.

The city of Pryor, which owns the gas system, distributes natural gas to its customers by providing service lines to gas meters located at the residential property line. The gas pressure is reduced at the property line regulator from 15 to about 1/4 psig, about 7-inches of water column, for use in various indoor gas appliances. The gas company owns the service lines up to and including the meters. Beyond the meters, the service lines are the property and the responsibility of the building owners.

During the investigation, pressure tests were performed from the gas main to about 3 feet inside the crawl space under the house; no leakage was detected. An inspection of the noncompany-owned piping revealed that the 1-inch residential service line entered the crawl space underground and emerged near the center of the crawl space as a 1/2-inch steel pipe. Corrosion was found on the pipe at the point where it emerged from the ground. Examination of the corroded segment revealed a hole located at an

elbow, which was about 5 inches below ground surface. Further inspection of the area indicated that the aboveground crawl space piping and the connecting piping to the indoor appliances were a mixture of galvanized and steel piping. Company records indicated that the portion of the service line upstream of the gas meter was installed in 1972. Records did not indicate the installation date of the downstream residential service line or the appliance piping.

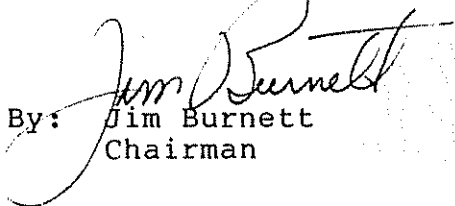
The provisions of 49 CFR 192, Subpart I -- Requirement for Corrosion Control, do not extend to noncompany-owned piping and the gas company acknowledges no responsibility for the residential service lines or the indoor house piping. Consequently, periodic gas leakage surveys or other tests to determine the condition of customer piping similar to those required by 49 CFR Section 192.723, Distribution systems: leakage surveys and procedures, for company-owned piping are not performed.

The Safety Board is concerned about the potential for similar accidents. Numerous buildings nationwide are served with natural gas through buried customer-owned, noncathodically protected service lines, none of which are required by Federal regulations to have periodic gas leakage surveys or other tests to determine their condition and few of which are actually surveyed or tested. Therefore, the National Transportation Safety Board recommends that the American Gas Association and the American Public Gas Association:

Notify its member companies of the circumstances of this accident and urge them with respect to customer owned service lines not subject to Federal inspection requirements (1) to encourage their customers to arrange for periodic inspections of buried gas service lines for corrosion and (2) to encourage local governments to institute requirements for periodic inspections of buried gas service lines for corrosion. (Class II, Priority Action)
(P-83-29)

The National Transportation Safety Board is an independent Federal agency with the statutory responsibility ". . .to promote transportation safety by conducting independent accident investigations and by formulating safety improvement recommendations" (P.L. 93-633). The Safety Board is vitally interested in any actions taken as a result of its safety recommendations and would appreciate a response from you regarding action taken or contemplated with respect to the recommendation in this letter.

BURNETT, Chairman, GOLDMAN, Vice Chairman, and McADAMS, BURSLEY, and ENGEN, Members, concurred in this recommendation.


By: Jim Burnett
Chairman