

accumulation of natural gas which had leaked from a broken service-line connection with a 6-inch gas main and had migrated up and under the concrete slabs of both houses.

The length of time taken by gas company personnel to find the leak and their failure to close the three valves of the gas main to isolate the affected area contributed to the second explosion and fire.

The delay in the decision to evacuate the houses until after the second explosion and fire was caused by lack of liaison and cooperation between the gas company and the fire department.

VI. RECOMMENDATIONS

The National Transportation Safety Board recommends that:

1. The Office of Pipeline Safety

(a) Amend 49 CFR 192 to include a section based on a review of the suitability of threaded galvanized pipe, or pipe coated with other dissimilar metals, for the transportation of natural and other gas. (Recommendation No. P-72-34)

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(b) Amend 49 CFR 192.615 to include an explicit requirement that pipeline operators notify and coordinate their activities with local fire and police officials when gas leaks create hazardous conditions. (Recommendation No. P-72-35)

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2. The American Society of Mechanical Engineers Gas Piping Standards Committee:

Conduct, in conjunction with the American Gas Association, a study

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of the stress effects of various types of soils and backfill on service line-gas main connections. As a result of this study, guidelines should be issued for installing underground gas-piping systems. (Recommendation No. P-72-36)

3. The Lone Star Gas Company:

(a) Undertake a program acceptable to the Railroad Commission of the State of Texas, to inspect, on a random-sample basis, the service line - gas main connections similar to those at the accident site, to determine their current condition and the existing stress on the piping. The results of this program will determine the action to be taken on other installations in the Lone Star system. Copies of these test results should be forwarded to the Railroad Commission of the State of Texas and the Office of Pipeline Safety of the Department of Transportation. (Recommendation No. P-72-37)

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(b) Establish a line of communications and hold periodic meetings with local fire departments and other interested agencies to inform them of gas company emergency procedures and maintenance operations. (Recommendation No. P-72-38)

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(c) Notify and coordinate its activities with local fire and police officials when gas leaks create hazardous conditions. (Recommendation No. P-72-39)

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