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NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: June 11, 1979

Forwarded to:

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President
American Gas Association
1515 Wilson Boulevard
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SAFETY RECOMMENDATION(S)

P-79-13

At 9:30 p.m., e.s.t., on January 16, 1979, an explosion and fire destroyed five commercial buildings and damaged several other buildings in London, Kentucky. Two persons were injured as a result of the accident. Firefighters, the first emergency personnel on the scene, evacuated the buildings. The local manager and a gas serviceman from the Gas Service Company, Inc., (a subsidiary of the Delta Natural Gas Co., Inc.) arrived about 5 minutes after the explosion. By 9:40 p.m. they had closed a valve which shut off the gas in the service line serving the buildings. Twenty-five fire companies assisted in extinguishing the fire.

Nitrogen pressure testing of the 7-inch O.D., steel distribution main, which had had a recent pressure increase to 17 psig, revealed a corrosion hole in the pipe. Further investigation indicated that the gas which had escaped from the corrosion hole had migrated through a break in an adjacent sanitary sewer and then into the buildings where it was ignited by an undetermined source.

At the time of the accident, the gas company had been in the process of modifying some 1,500 feet of the steel gas main by inserting a 2-inch plastic pipe so the main's operating pressure could be increased to serve a larger load. Most of the existing line being uprated was used, bare, 7-inch O.D., steel, well-casing pipe that had been installed with mechanical couplings in 1930 and 1931. The Gas Service Company was not in compliance with 49 CFR 192.457(b) in that there was no cathodic protection provided for this type of pipe throughout the system. Corrosion holes could exist elsewhere in the system.

The uprating was accomplished by installing regulators at each service and conducting a flame ionization survey. This survey had been conducted in August 1978. At that time all detected leaks were reported to have been repaired. A manhole survey was not included. On Friday, January 12, 1979, pressure on the line, which normally operated at 4 ounces, was increased to 17 psig;and inspectors walked over the line to check for leaks, by smell only, while pilot lights were being relighted. The higher pressure was left on the line throughout the weekend. On Sunday, January 14, 1979, three more walking surveys were completed over this sector of pipeline. As before, no manhole inspection was undertaken, and the walk-over surveys were accomplished through smell only. On Monday, January 15, 1979, customer service was interrupted when the insertion job was commenced. The pilot lights were relighted on Monday evening, and this procedure was repeated on Tuesday, January 16, 1979, and the insertion work continued throughout the day of the accident. The relight was completed on Tuesday at 5:30 p.m.

The National Transportation Safety Board concludes that applicable portions of 49 CFR Subpart K were not complied with, and that the leak could have been detected and the accident prevented if proper uprating procedures had been followed.

Therefore, the National Transportation Safety Board recommends that the American Gas Association:

> Advise its member companies of the circumstances of this accident and urge them to review their actual operating practices for uprating pipelines to assure that they conform to established company procedure, related industry guidelines, and Federal regulations. (Class I, Urgent Action) (P-79-13)

KING, Chairman, DRIVER, Vice Chairman, McADAMS and HOGUE, Members, concurred in this recommendation.

By: James B. King
Chairman