

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: October 2, 1976

Forwarded to:

Honorable William T. Coleman, Jr. :
Secretary :
Department of Transportation :
Washington, D. C. 20590 :

SAFETY RECOMMENDATION(S)

P-76-73

Honorable C. C. Whatley :
President :
Alabama Public Service Commission :
P. O. Box 991 :
Montgomery, Alabama 36130 :

At 7 a.m. on March 27, 1976, a two-story building that housed Phenix Cutting and Sewing, Inc. in Phenix City, Alabama, exploded and burned. The explosion and fire killed the six persons in the building. 1/

The National Transportation Safety Board's investigation of the accident disclosed that natural gas at 20-psig pressure had leaked from a cracked 3-inch cast iron main, which was located 12 feet from the building under concrete steps which led from the street up to the sidewalk. The 3-inch pipe was cracked circumferentially and gas which leaked from this crack was trapped from above by the concrete steps. Consequently gas seeped into a vaulted area under the sidewalk and into the basement of the building through holes in the wall, where it was ignited by an unknown source.

The 3-inch cast iron pipe was located under, and at points touching, the concrete steps, at about the same elevation as the street. Also installed under the steps were a 6-inch cast iron gas main and a 24-inch storm sewer line at depths of 2 feet and 4 feet, respectively. From an inspection made by the Phenix City Building Department on March 13, 1975, the City was aware that during heavy rains, water entered the building either from the storm

1/ The National Transportation Safety Board will not issue a full report on this accident.

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sewer or from cracks in the sidewalk. Water from either source had the potential to undermine the pipe's foundation, and thus enable the vibrations from traffic on this major artery between Columbus, Georgia, and Phenix City to stress the pipe. Neither the City's Building Official's Office nor the Public Works Department notified the Utilities Department of the problem since they did not realize that the water flow could undermine the gas main.

On numerous occasions, the Alabama Public Service Commission has identified operations of the Phenix City Utilities Board that do not conform to 49 CFR 192 and has required corrective action. Although the Utilities Board corrected the deficiencies, the corrections were short-lived because management of the gas operations changed frequently. The deficiencies included infrequent and inadequate leak surveys, inadequate response to repair leaks found, inability of the gas system personnel to find leaks found by the surveys, and inadequate repair of leaks. The most recent leak survey (April 1975) detected a Class III leak over a 2-inch cast iron main across the street from the accident site. Although gas system personnel recorded on December 12, 1975, that no leak could be found, the Alabama Public Service Commission located a leak on March 28, 1976, in the area of the original report which appeared to be the Class III leak originally detected.

On April 1, 1975 a flame ionization leak survey was performed in front of the Phenix Cutting and Sewing Company which detected gas under the eastern portion of the steps. Gas system records show that a leak at a joint on the 3-inch main was recaulked east of the steps (no leak clamp was installed 2/) There is no record that a leak check was performed after the joint was recaulked to assure that the source of the gas which was detected under the steps had been eliminated the repair.

Public Law 90-481 authorizes the Secretary of the Department of Transportation (DOT) to monitor State enforcement practices and other inspections and investigations that would aid in the enforcement of the provisions of the Act. Through selective use of this provision, DOT can ascertain the effectiveness of an operators compliance with DOT's regulations.

Therefore, the National Transportation Safety Board recommends that the Department of Transportation in conjunction with their State Agent, the Alabama Public Service Commission:

Monitor actions taken by Officials of Phenix City, Alabama, to determine the degree of compliance and to institute necessary corrective action.
(P-76-73) (Class II, Priority Followup)

2/ Leak clamps required by 49 CFR 192.753(b).

TODD, Chairman, BAILEY, Vice Chairman, McADAMS, HOGUE,
and HALEY, Members, concurred in the above recommendation.

A handwritten signature in cursive script, appearing to read "Webster B. Todd, Jr.", written in dark ink.

By: Webster B. Todd, Jr.
Chairman