

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: September 27, 1977

Forwarded to:

Mr. G. H. Lawrence
President
American Gas Association
1515 Wilson Boulevard
Arlington, Virginia 22209

SAFETY RECOMMENDATION(S)

P-77-26

At 2:34 p.m., on May 25, 1977, an explosion and fire destroyed a building at 65-67 Arch Street in Greenwich, Connecticut. Two adjacent buildings were also destroyed and another building was heavily damaged. Firemen evacuated residents from a two-block area 30 minutes after the explosion. The resulting fire was extinguished at 5:31 p.m. Ten persons required medical treatment for injuries caused by the accident.

Before the accident, a Connecticut Natural Gas Corporation crew was in the area to install an insulating tapping sleeve on a 2-inch gas main. The sleeve is used to electrically isolate a section of pipe without interruption of service, and is commonly used by the industry.

When the gas company crew exposed the gas main, they found that the pipe was 3 inches in diameter instead of 2 inches. The crew leader radioed the dispatch office requesting additional information from its records. The main atlas did not show any detail of the area, however. Even though a 2-inch shutoff valve for the line was 12 feet away, the crew was not aware that the 3-inch pipe they exposed was not the gas main itself but actually was a sleeve containing the 2-inch gas main. The gas company is aware of its incomplete records and has begun a 3-year program to verify and update its records.

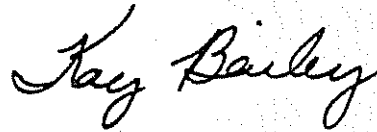
A gas company supervisor went to the site and advised the work crew to use a 3-inch insulating tapping sleeve and to proceed with the task. While cutting through the 3-inch sleeve with a drilling machine, the 2-inch carrier pipe was also cut. This allowed natural gas at 30-psig pressure to fill the annular space between the 3-inch sleeve and the 2-inch pipe and to escape from the unsealed ends of the sleeve, 11 feet away.

The escaping gas was capped by the pavement above and migrated through the soil. It leaked through cracks in the stone foundation of the Arch Street building, 5½ feet from the severed gas main, and entered the basement where it was ignited by some undetermined source and exploded. Two supervisors in the vicinity responded independently to an emergency radio call and began to shut off valves on each side of the leak 16 minutes after the explosion.

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 keep accurate records of facilities and to instruct maintenance crews in the importance of verifying these facilities before working on them. (Class II, Priority Followup) (P-77-26)

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



By: Kay Bailey
Acting Chairman