

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

FOR RELEASE: 6:30 A.M., E.S.T., NOVEMBER 12, 1976

(202) 426-8787

ISSUED: November 12, 1976

Forwarded to:
Mr. C. S. McNeer
President
Wisconsin Natural Gas Company
233 Lake Avenue
Racine, Wisconsin 53401

SAFETY RECOMMENDATION(S)
P-76-83 through P-76-86

At 8:53 a.m., on August 29, 1976, an explosion and fire destroyed a house at 6521 20th Avenue in Kenosha, Wisconsin. Two persons were killed, four persons were injured, and two adjacent houses were damaged. The destroyed house was not served by natural gas. However, natural gas, which was escaping at 58 psig pressure from a punctured 2-inch plastic main located 39 feet away, had entered the house through a 6-inch sewer lateral. The gas was ignited by an unknown source. After the accident, the National Transportation Safety Board's investigation disclosed that the gas main had been installed by boring through the bottom of the sewer tile; the gas main was perpendicular to the sewer tile. 1/

In July 1975 the Wisconsin Natural Gas Company (Wisconsin) employed a contractor to construct the gas main parallel to the curb on 20th Avenue. The contractor used a combination of open trenching and pneumatic boring techniques to install the main. Pneumatic boring was done in front of the house at 6521 20th Avenue and at other locations along the avenue. An experienced Wisconsin employee inspected the construction. The inspector's daily log, which was turned in to his supervisor each evening, recorded that a sewer lateral had been broken at 6604 20th Avenue during the construction. Supervisory personnel reviewed the logs to determine the status of construction and to identify any unusual circumstances related to the construction. Construction procedures were not changed, however, as a result of this recorded break.

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

P-76-83 through P-76-86

Shortly after construction was completed, the residents at 6521 20th Avenue experienced some blockage in their sewer lateral. They employed a contractor to clean out the lateral. He inserted an auger with a cutter head into the lateral to clean it. The blockage was not rectified, however, and at 8:30 a.m., on August 29, 1976, a sewer cleaning company employee arrived at the house to clean the sewer lateral again. At 8:50 a.m. the cleaner inserted an auger into the 6-inch sewer lateral; the auger struck and ruptured the 2-inch plastic gas main. When the gas main was excavated after the accident, investigators discovered that the auger from the first cleaning attempt had also struck the gas main, but had not punctured it at that time.

The day after the accident Wisconsin excavated four sewer laterals near the ruptured gas main. Two of these laterals had been damaged during the gas main construction when the gas main was installed partially inside the sewer laterals. Wisconsin is continuing to excavate and inspect sewer laterals along 20th Avenue. Wisconsin purchased an electronic transmitting device which, when inserted into a sewer lateral, determines the depth of the lateral. This device is planned for use at all other locations where boring was performed to determine if other sewer laterals were damaged. Suspect laterals will be excavated and repaired if necessary.

Therefore, the National Transportation Safety Board recommends that Wisconsin Natural Gas Company:

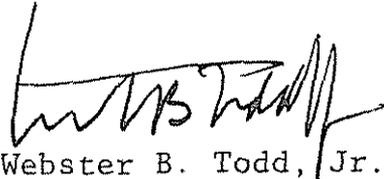
Complete inspection of those locations along the construction route (Drawing No. F-3386-2) where gas mains and sewer laterals may be in proximity to one another and correct any deficiencies. (Class I, Urgent Followup) (P-76-83)

Examine its records to determine other locations where gas lines were installed near existing sewer facilities (including a review of sewer blockage complaints), then inspect these locations and take corrective action where necessary. (Class I, Urgent Followup) (P-76-84)

Revise its construction standards to require that underground facilities be located accurately before construction and to provide protection for these facilities near boring operations. (Class I, Urgent Followup) (P-76-85)

Inform its inspectors and supervisory personnel of the circumstances of this accident, train them to be alert for similar conditions, and advise them of preventive actions. (Class I, Urgent Followup) (P-76-86)

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



By: Webster B. Todd, Jr.
Chairman

THIS RECOMMENDATION WILL BE RELEASED TO THE PUBLIC ON THE ISSUE DATE SHOWN ABOVE. NO PUBLIC DISSEMINATION OF THIS DOCUMENT SHOULD BE MADE PRIOR TO THAT DATE.