

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: June 8, 1977

Forwarded to:

Mr. Arthur E. Bone
President
UGI Corporation
225 Morgantown Road
Reading, Pennsylvania 19611

SAFETY RECOMMENDATION(S)
P-77-1 through P-77-3

At 2 p.m., on August 8, 1976, a gas explosion destroyed a house at 1127 Oak Street, Allentown, Pennsylvania. The gas migrated from a break in a 4-inch cast-iron main under the street, through loose soil under a concrete sidewalk, and into the building through cracks and openings in its foundation. 1/

At 2:26 p.m., another house exploded across the street from the site of the first explosion. The front brick wall collapsed into the street and trapped two firemen. The street then caved in directly in front of the trapped firemen. The cast-iron gas main within the sinkhole broke into several pieces; flames from the broken main were more than 10 feet high and hampered rescue of the trapped firemen. Two firemen were killed, 14 persons were injured, 4 buildings were destroyed, and several buildings were damaged.

Because of a lack of coordination between UGI personnel and firemen as to the responsibilities of each during this emergency, two gas meters were overlooked and were not shut off. This probably provided the source of ignition for the second explosion.

Gas was allowed to burn after each of the explosions because the firemen had been taught: "Burning gas will not explode"; and "If natural gas is burning outside, the firemen should make no

1/ For more detailed information on this accident read Pipeline Accident Report, UGI Corporation, Natural Gas Explosions and Fires, Allentown, Pennsylvania, August 8, 1976, NTSB-PAR-77-2.

attempt to extinguish a gas fire." These statements, although true under most circumstances, are too simplified to cover all situations and attempts should be made to modify training materials to include provisions for events similar to this accident.

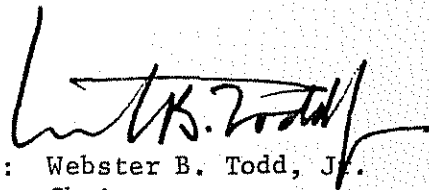
Therefore, the National Transportation Safety Board recommends that UGI Corporation:

Revise its 1968 Guide for Fire Fighters and training program by incorporating instructions on how to deal with events similar to this accident with particular emphasis on the proper use of combustible gas indicators. (Class III, Longer Term Followup) (P-77-1)

Revise its emergency plans to incorporate the revisions that became effective October 1, 1976, to 49 Code of Federal Regulations 192.615, and to insure emergency response coordination with fire and other public officials. Particular emphasis should be placed on the availability and the proper use of combustible gas indicators. (Class III, Longer Term Followup) (P-77-2)

Expedite, in conjunction with equipment manufacturers, the development of a survey unit that could be used to detect the location of sinkholes in the vicinity of cast-iron gas mains. "Downward-looking" radar equipment should be investigated as one possible means of surveying for sinkholes. (Class III, Longer Term Followup) (P-77-3)

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



By: Webster B. Todd, Jr.
Chairman