

SP-20
Ray P-271

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: July 1, 1985

Forwarded to:

Ms. Carmel Marr
Chairperson, Committee on Gas
National Association of
Regulatory Commissioners
c/o New York Public Service Commission
Empire State Plaza
Albany, New York 12223

SAFETY RECOMMENDATION(S)

P-85-20

At 3:30 a.m. on September 25, 1984, an explosion followed by an intense natural gas-fed fire destroyed two apartments at 3022 North 37th Street in Phoenix, Arizona. Of the 12 persons injured in the fire, 5 persons later died. After the fire was extinguished, the 1 1/4-inch-diameter plastic gas main supplying gas to the destroyed apartments was excavated and a 3-inch-long longitudinal split was discovered in the bottom of the pipe 18 feet from the gas meters on the apartment building. Gas at 30 psig had escaped through the longitudinal split, migrated into and under the apartments, ignited, exploded, and burned. ^{1/}

Shortly before midnight on September 24, 1984, five persons entered apartment No. 9, one of 10 apartments at 3022 North 37th Street. They smelled the odor of natural gas in the apartment, but because their telephone was out of service, because they were tired and had early appointments the next day, and because once, a year before, they had contacted the gas company about gas odors and had to wait several hours before the gas company arrived, they did not notify the gas company or the fire department about the gas odors. They opened some windows in the apartment to dissipate the odors, later closed the windows, and went to bed.

After the accident, the gas company records for gas odor complaints from the accident area were reviewed; no gas odor complaints had been received. The residents of apartment Nos. 5, 6, 7, and 8 located east of the destroyed apartments, Nos. 9 and 10, stated that they did not smell any gas odors at any time before the explosion. A resident of 3031 North 36th Street, immediately west of the destroyed apartments, stated that she did not smell any gas odors when she arrived home from work at 1 a.m. on September 25, 1984. However, she stated that she had smelled gas odors during the afternoon of September 24, 1984, but she had not reported the gas odors to the gas company or to the fire department.

^{1/} For more detailed information read Pipeline Accident Report--"Arizona Public Service Company Natural Gas Explosion and Fire, Phoenix, Arizona, September 25, 1984" (NTSB/PAR-85/01).

The gas company periodically mails to its customers information concerning natural gas odorization, what to do when gas odors are detected, and who to call. The gas company also periodically places notices in newspapers to disseminate similar information. Handbills and pamphlets containing the same information are available at gas company offices.

of natural gas, how to identify it, and what to do if gas is detected. They both were aware of the natural gas odors and knew who to contact. In fact, they had contacted the gas company about a year before the accident when they had detected gas odors, and the gas company had responded; no gas leak was located at that time.

In this accident the gas was odorized adequately, as indicated by the heavy odors noticed when excavating for the leak and when tests were made after the accident at adjacent residences. The gas migration through the soil did not filter out much, if any, of the odorant because the people in apartment No. 9 were well aware of it at midnight as was the resident of an adjacent apartment earlier that day. Although no one telephoned the gas company or the fire department, they later said they were aware of the gas odors and were knowledgeable of what to do when odors were detected.

Even though gas companies have public awareness programs as prescribed by Federal regulations, the Safety Board continues to find cases involving a poorly informed or otherwise unresponsive general public.^{2/} Perhaps by their nature company awareness programs cannot be strong enough, and the programs should be fostered or reinforced by Federal or State agencies to bring home the seriousness of the hazard of leaking gas. Gas companies are in business to sell natural gas and do not want to unduly alarm their customers and the general public about the potential hazards of escaping natural gas. For whatever reasons, they use low-key programs. State agencies having gas pipeline safety jurisdiction, together with the National Association of Regulatory Commissioners (NARUC), could make the awareness programs stronger, make them uniform nationwide, make them repetitive, and use a variety of media to reach all concerned. Such a program was undertaken by the Florida Public Service Commission in early 1979. The Safety Board believes that injuries might well have been prevented had the gas company or fire department been notified of gas odors. If the persons in apartment No. 9 or their neighbor who smelled gas had reported the gas odors to the gas company or to the fire department, this accident probably would not have occurred. There was ample time available to evacuate the area, to ventilate the buildings, and to shut off the gas supply before the explosion.


Therefore, the National Transportation Safety Board recommends that the Committee on Gas of the National Association of Regulatory Commissioners:

Develop programs to educate gas customers and the general public about the hazards of natural gas and actions to be taken during gas emergencies. (Class III, Longer-Term Action) (P-85-20)

^{2/} Pipeline Accident Report—"Columbia Gas of West Virginia, Inc., Explosion and Fire, South Charleston, West Virginia, October 17, 1983" (NTSB/PAR-84/04).

The National Transportation Safety Board is an independent Federal agency with the statutory responsibility ". . . to promote transportation safety by conducting independent accident investigations and by formulating safety improvement recommendations" (Public Law 93-633). The Safety Board is vitally interested in any action taken as a result of its safety recommendations. Therefore, it would appreciate a response from you regarding action taken or contemplated with respect to the recommendation in this letter.

BURNETT, Chairman, GOLDMAN, Vice Chairman, and BURSLEY, Member, concurred in this recommendation.

By: 
Jim Burnett
Chairman