



National Transportation Safety Board

Washington, D. C. 20594

Safety Recommendation

Log P-291A

Date: November 21, 1988

In reply refer to: P-88-10

Honorable Mayor Wayne A. Corpening
City of Winston-Salem
Post Office Box 2511
Winston-Salem, North Carolina 27102

On January 18, 1988, a natural gas explosion destroyed the building housing the K&W Cafeteria and the lobby of the Sheraton Motor Inn at 380 Knollwood Street, Winston-Salem, North Carolina. Two adjoining motel wings suffered structural damage. Of the four persons in the lobby/cafe building at the time of the explosion, three sustained minor injuries. The fourth person sustained a fractured ankle. One motel guest also sustained minor cuts but refused treatment.¹

The command post was established quickly and suitably identified. The incident commander took immediate control by implementing a predesignated emergency response plan that established proper communications and initiated the notification of the Piedmont Natural Gas Company (Piedmont), the electric company, and other emergency response agencies within the Winston-Salem

Although the incident commander had some knowledge of the dangers of natural gas, he was not sufficiently knowledgeable about the flammability limits and migration potential of natural gas. His decision to use firefighters to check for gas odors in adjacent buildings was not prudent since the firefighters were not adequately equipped or trained to detect migrating gas. The incident commander's decision to delay gas detection tests along the service line until there was sufficient light to see the building rubble was made because he did not perceive the dangers to the firefighters from possible gas leaks and the potential for subsequent explosions. Had the incident commander been knowledgeable of the potential dangers to firefighters, he would have recognized the importance of directing Piedmont to conduct the gas survey tests. The incident commander also would have found a way to illuminate the areas in which gas detection tests needed to be made and to satisfy his concerns for the safety of gas company personnel.

¹For more detailed information, read Pipeline Accident Report--Piedmont Natural Gas Company, Natural Gas Explosion and Fire, Winston-Salem, North Carolina, January 18, 1988 (NTSB/PAR-88/01).

Although the incident commander knew Piedmont crews had gas detection equipment on hand, he did not direct them to conduct the surveys of the adjacent buildings. The Piedmont crews conducted these surveys because their emergency plan required it. Other than directing Piedmont to turn off the gas to the Sheraton, the incident commander did not have any other expectations of assistance Piedmont could provide. Other fire department officials, including the fire chief, indicated that the fire department's policy was to defer to the gas company in natural gas emergencies.

The fire department, when assuming control of an accident scene involving natural gas, must actively assert that control. The incident commander must be aware of the capabilities and assistance that can be provided by the gas company and other supporting agencies and organizations. The incident commander and the firefighters also must be knowledgeable about the properties of natural gas that are likely to be encountered under emergency conditions. While the incident commander should seek the advice of the gas company, the incident commander must have the proper training and knowledge to be able to actively direct the resources available in the most effective manner. If the incident commander involved in the accident had used gas company personnel more effectively, the potential exposure of firefighters and their equipment to explosive concentrations of gas would have been quickly assessed with necessary protective action taken.

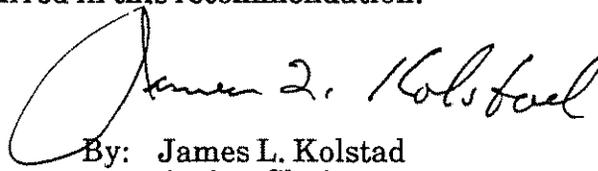
Therefore, the National Transportation Safety Board recommends that the city of Winston-Salem, North Carolina:

Develop and coordinate emergency response preparedness plans with local gas company officials to identify and fulfill the knowledge and training needs of the emergency response agencies for incidents that involve natural gas. (Class II, Priority Action) (P-88-10)

Also, as a result of its investigation, the Safety Board issued Safety Recommendations P-88-4 through -9 to the Piedmont Natural Gas Company; P-88-11 and -12 to the North Carolina Utilities Commission; P-88-13 to the Research and Special Programs Administration of the U.S. Department of Transportation; and P-88-14 to the American Gas Association.

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. Please refer to Safety Recommendation P-88-10 in your reply.

KOLSTAD, Acting Chairman, and BURNETT, LAUBER, NALL, and DICKINSON, Members, concurred in this recommendation.



By: James L. Kolstad
Acting Chairman