



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: March 24, 1987

In reply refer to: P-87-1

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On April 27, 1985, natural gas under 990 psig ruptured the No. 10 pipeline of the Texas Gas Pipeline Company system. The rupture was in an area weakened by atmospheric corrosion that was located within the pipeline's casing under Kentucky State highway 90 near Beaumont, Kentucky. The ensuing fire killed five persons in a house located north of the rupture, injured three persons as they fled from their house located south of the rupture, and destroyed substantial amounts of property.

On February 21, 1986, natural gas under 987 psig ruptured the No. 15 pipeline of the Texas Eastern Gas Pipeline system. The rupture was in an area weakened by galvanic corrosion and was located south of Kentucky State highway 52 near Lancaster, Kentucky. The force of the escaping gas and the ensuing fire injured three persons as they fled from their houses, resulted in the evacuation of 77 other persons, and destroyed substantial amounts of property. 1/

The gas company's program for training its compressor station personnel and for reviewing these employees' knowledge about actions to take during emergencies apparently was adequate in that these employees did take prompt, effective action in responding to both the Beaumont and Lancaster accidents. Additionally, during the Beaumont accident the implementation of its procedures for coordinating with response personnel during the emergency was effective.

There were, however, deficiencies which were identified in other procedures and employee activities. The gas company emergency procedures were not followed explicitly during the emergency at Lancaster apparently because the compressor station supervisor did not understand why emergency response personnel needed the requested information and because he was concerned that the information provided would be made available to the news media. He knew that according to the gas company procedures, providing information to the news media was reserved for higher level company representatives.

1/ For more detailed information, read Pipeline Accident Report--"Texas Eastern Gas Pipeline Company Ruptures and Fires at Beaumont, Kentucky, on April 27, 1985, and Lancaster, Kentucky, on February 21, 1986" (NTSB/PAR-87/1).

This failure to provide the requested information to emergency response personnel did not in this instance cause or contribute to any greater loss; however, it did greatly hamper the civil agencies in carrying out their duties to assure the safety of their own personnel and it did nothing to ease the concern of the evacuated citizens about the safety of their homes and possessions and their inconvenience in having to find temporary shelter. It does demonstrate that the gas company should improve its training and testing of supervisory personnel to be certain that they know what types of information should be provided to emergency response agencies and that they understand why full cooperation should be extended to these agencies.

Additionally, the gas company did not train its corrosion technicians in making critical assessments about the affect of corrosion damage on its pipelines rather, the gas company relied heavily upon the undefined and differing experiences of its corrosion technicians for making judgments about the effect of corrosion-damaged areas on the continued safety of its pipelines. As demonstrated by the actions taken by these technicians before the accident at Lancaster, the experience of these gas company personnel was not adequate to access the danger posed by the corrosion of the excavated pipe. While this specific deficiency may have been corrected by implementing new procedures and training for its corrosion technicians, this and the previously discussed training deficiency indicates that improvement is needed in the area of employee qualifications and training. To assist the gas company in making necessary improvements, it should develop proper selection and qualification criteria to implement effective training and testing programs on normal and emergency operations.

The need for improvements in a gas company's employee selection, training, and testing programs has been addressed frequently in Safety Board reports of pipeline accidents. The reason deficiencies in employee qualification and training continue to be identified during the investigations of accidents is because the Office of Pipeline Safety (OPS) has not yet fully developed and incorporated comprehensive requirements for the qualification and training of pipeline operator employees who perform the various functions required by the regulations. The most complete requirement about training included in the regulations applies to the gas company's emergency plans. Section 49 Code of Federal Regulations Part 192.615 requires the gas company to train appropriate operating personnel on the procedures to be used during emergencies, to verify in some manner that the training was effective, and to review employee activities after an emergency to determine if the procedures were effectively followed.

Proper planning for emergencies, training of employees responsible for carrying out actions during emergencies, and a review of activities after the emergency all are important tasks. However, preventing emergencies from occurring through proper operation and maintenance of pipeline systems is equally important. Therefore, the OPS should require for all activities addressed by the regulations that employee qualifications be developed through job/task analyses, that employees be trained in the proper performance of assigned tasks, and that employees be periodically tested to demonstrate that they understand and are able to perform their assigned responsibilities.

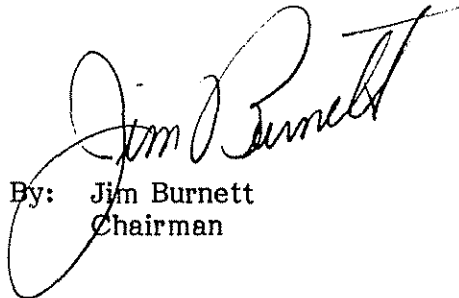
As a result of its investigation, the National Transportation Safety Board issued the following recommendation to the Texas Eastern Gas Pipeline Company:

Develop and conduct selection, training, and testing programs to annually qualify employees for correctly carrying out each assigned responsibility which is necessary for complying with the requirements of 49 CFR Part 192 and 195. (Class II, Priority Action) (P-87-1)

Also, as a result of its investigation, the Safety Board issued Safety Recommendations P-87-2 through -9 to the Research and Special Programs Administration of the U.S. Department of Transportation, P-87-10 and -11 to the National Association of Corrosion Engineers, and P-87-12 to the American Society of Mechanical Engineers Gas Piping Standards Committee.

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 actions taken as a result of its safety recommendations and 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-87-1 in your reply.

BURNETT, Chairman, GOLDMAN, Vice Chairman, LAUBER and NALL, Members, concurred in this recommendation.



By: Jim Burnett
Chairman