

# NATIONAL TRANSPORTATION SAFETY BOARD WASHINGTON, D.C.

ISSUED: October 25, 1978

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Forwarded to:

Honorable David L. Boren  
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Oklahoma City, Oklahoma 73105

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State of Texas  
State Capital Building  
Austin, Texas 78701  
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SAFETY RECOMMENDATION(S)

P-78-65

In its Special Study "Safe Service Life for Liquid Petroleum Pipelines" (NTSB-PSS-78-1), the National Transportation Safety Board learned that most pipeline carriers regard ruptures of their pipelines by outside excavation equipment used in construction as their biggest current problem. These ruptures caused the most accidents in 1974 and 1976 and caused the most liquid loss from pipelines. They also caused the most casualties.

The frequency of these ruptures has remained relatively constant since 1970 while the number of corrosion-caused ruptures has declined significantly. This reduction is apparently due to the effectiveness of corrosion-prevention measures and suggests that liquid pipeline operators should make a greater effort to participate in and encourage development of damage-prevention programs.

Among the many aspects of an effective damage-prevention program is a "one-call" system -- a communication system established by two or more agencies or companies to provide excavation contractors, utilities, public agencies, and private citizens with one telephone number to call and notify operators of underground facilities of their intent to use equipment adjacent to these facilities for the purpose of excavating, tunneling, demolition, boring, blasting, etc. Placing this telephone call provides notification to all participating members of the system and allows them an opportunity to locate and mark their facilities near the proposed work or to post a construction watch if necessary.

There are currently 106 "one-call" systems in 40 States, and additional systems are planned. Many of the systems are statewide. A survey of "one-call" systems conducted in 1977 claims a markedly downward trend in measured damages in the areas covered by 88 percent of the systems contacted.

The Safety Board, in its report (NTSB-PAR-76-8) of the gasoline pipeline accident in Los Angeles, California, in June 1976, in which nine persons died, noted "... one-call systems are more effective and less costly when all underground facilities operators participate."

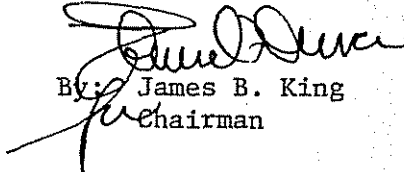
From 1968 to 1976, Texas led all other States with 203 equipment-caused ruptures along its more than 34,000 miles of pipeline.<sup>1/</sup> Oklahoma, the State with the next highest number of accidents, had 88 ruptures reported in that same period on its 8,638 miles of pipeline.<sup>2/</sup> The only "one-call" system operating in either Texas or Oklahoma is a system in the city of Houston. Liquid pipelines do not participate in that system, but planning is now underway to include them. The Safety Board believes that "one-call" systems are needed throughout Texas and Oklahoma, and in other high-accident areas not covered.

The State of Michigan has only 1,978 miles of pipeline, but did not have any reported equipment-caused ruptures in 1974, 1975, and 1976. The damage-prevention program in Michigan has been effective in reducing the frequency of equipment-caused pipeline ruptures. The excellent record in Michigan can be attributed in part to the statewide "one-call" system. The unique feature of the Michigan system is that all operators of underground facilities are required by State law to participate in the system. Currently, 296 operators of underground facilities are participating in the Michigan system as compared to an average of 12 participants for all other "one-call" systems.

Therefore, the National Transportation Safety Board recommends that the Governors of the States of Oklahoma and Texas:

Take action to develop and implement statewide "one-call" excavation notification systems. (Class II, Priority Action)  
(P-78-65)

KING, Chairman, DRIVER, Vice Chairman, McADAMS and HOGUE, Members concurred in the above recommendation.

  
By: James B. King  
Chairman

<sup>1/</sup> Interstate Commerce Commission, Annual Part 6 Pipeline Reports, 1968-1975.  
<sup>2/</sup> Ibid.