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NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: March 10, 1980

Forwarded to:

Mr. Julius Moris
County Administrator
Board of Supervisors
Stanardsville, Virginia 22973

SAFETY RECOMMENDATION(S)

P-80-8 and -9

At 10:11 a.m., c.d.t., on October 24, 1979, an explosion and fire destroyed the county clerk's office building and the adjoining courthouse building, gutted a connecting building which was under construction, and damaged the adjacent houses in Stanardsville, Virginia. Thirteen persons were injured and property in the area was damaged extensively.

The Safety Board's investigation revealed that natural gas had leaked from a break in a 1 1/4-inch coated steel service line, which had been snagged by a backhoe which was being used to dig a footing for an addition to the county clerk's office building. The contractor, owner of the backhoe, was working for Greene County, Virginia.

The backhoe bucket hit the service line and pulled it out of the building wall approximately 3 inches. The tension on the pipe at the gas meter caused the pipe to crack at an elbow which connected the gas meter to a valve located inside the wall.

The service line was owned by Columbia Gas of Virginia, Inc. (Columbia) and was approximately 48 1/2 feet long. The service line was operated at 15 psig pressure and was buried under approximately 24 inches of cover. The line was connected to the gas main with a weld-on tapping tee and extended from the main, located under the street pavement, to the inlet side of a valve at the curb, and from there to the inlet side of the customer's meter. The service line was not marked by Columbia before the excavation began because the contractor did not ask the gas company to do so.

The investigation disclosed that the Greene County authorities did not invite Columbia to preconstruction meetings or to meet onsite with them to specify which service lines might be subject to damage. At the time of the accident, the "one call" system was not in operation in Greene County; however, it is in

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use in the adjacent counties of Madison and Culpeper and other counties of Virginia. Approximately 44 of the 90 Virginia counties are now using the "one-call" notification system. The State of Virginia has enacted the Underground Utility Damage Prevention Act (Chapter 10.3), to become effective on July 1, 1980, which will require excavators to notify operators of underground utilities before excavation is commenced. Compliance with that act should provide an impetus for the further adoption of "one-call" notification systems.

The most effective method of preventing excavation-caused damage to underground facilities is to notify the operators of utility companies in advance of the proposed excavation work to allow the operators to mark the location of their facilities before excavation begins. The most efficient and convenient method for excavators to make this notification is through a "one-call" system. A "one-call" system establishes a center to which an excavator can make one telephone call to effect notification to all the participating underground facility operators of the date and location of a proposed excavation project. The center then alerts each operator so that each of their underground facilities near the work area can be located and marked. There are now 106 "one-call" systems operating in 41 States. Some systems provide statewide coverage. In a 1978 special study, ^{1/} the Safety Board reported that a 1977 survey of "one-call" systems found a markedly downward trend in damage to underground facilities after the "one-call" systems were established. The greatest number of accidents to underground facilities after the "one-call" system was established was attributed to excavators who did not notify the operators of underground facilities before undertaking excavation.

Throughout the country, the "one-call" notification system has been effective in reducing accidents and damage involving underground facilities. As an example, in 1972, the first year that the system was used by the gas, electric, telephone, and water utilities serving the two Maryland counties adjacent to the District of Columbia, there were 2,103 incidents of damage to their underground facilities. During 1976, the last year these statistics were recorded by the "one-call" center, the number of incidents had been reduced by 1,299 -- a reduction of 61.8 percent. In that same period, "one-call" notifications had increased tenfold.

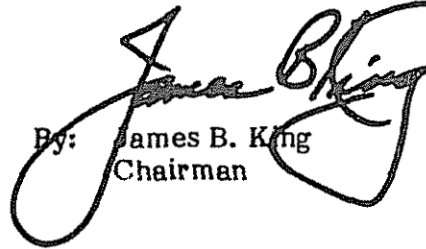
The Safety Board believes that similar accidents can be prevented if the parties involved in an excavation project communicate effectively. Therefore, as a result of its investigation of this accident, the National Transportation Safety Board recommends that the Board of Supervisors of Greene County, Virginia:

Pending the establishment of a "one-call" system, adopt an ordinance to require contractors, utilities, the public, and other excavators to make notification of planned excavation to gas companies whose facilities might be affected by such work. (Class II, Priority Action) (P-80-8)

1/ "Safe Service Life for Liquid Petroleum Pipelines" (NTSB-PSS-78-1).

Cooperate with the utility companies serving the State of Virginia to expand the Central Virginia 'one-call' excavation notification system to include Greene County. (Class II, Priority Action) (P-80-9)

KING, Chairman, DRIVER, Vice Chairman, McADAMS and BURSLEY, Members, concurred in these recommendations. GOLDMAN, Member, did not participate.


By: James B. King
Chairman