

P-147

NATIONAL TRANSPORTATION SAFETY BOARD  
WASHINGTON, D.C.

ISSUED: November 14, 1979

Forwarded to:

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SAFETY RECOMMENDATION(S)

P-79-40

At 11:36 a.m., e.s.t., on October 30, 1979, a natural gas explosion demolished a townhouse at 215 Third Street SE., in Washington, D.C., and damaged several nearby buildings. No one was in the townhouse at the time, but three persons passing by in a car were injured when debris from the explosion shattered glass in the car.

The National Transportation Safety Board's continuing investigation of this accident has revealed that natural gas leaking from a 1-inch low-pressure plastic service line, which had been inserted into an old 1 1/4-inch steel service line, migrated into the townhouse and was ignited by an unknown source. Two contractors had been working near the house for 4 to 6 weeks; some of the work involved the use of mechanized excavation equipment. An inspection of the service line after the accident revealed that it had been struck by excavation equipment. The steel line had been partially broken at that point and the plastic line apparently had been pulled out of a compression coupling under the alley near where the service line entered the house. The Washington Gas Light Company (WGL), the operator of the gas line, had not been notified by either contractor of the projected work before the accident.

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FAR-80-4

The most effective method of preventing excavation-related accidents to underground facilities is to notify the operators of the utility companies of the proposed excavation work so that the operators can mark the location of their facilities before work begins. The most efficient and convenient method for contractors to make this notification is through a "one-call" system. In a "one-call" notification system, the operators of the utilities establish a center to which an excavator can make one call to notify all the participating operators. The center then alerts each operator to the need for marking the location of facilities near the work area. There are now 106 "one-call" systems throughout the country in 40 States. Some systems cover entire States or regions. 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 systems were established. The greatest number of incidents of damage to underground facilities after the "one-call" systems were established was attributed to excavators who did not notify the operators of underground facilities before undertaking excavation.

An effective "one-call" system, "Miss Utility," has been operating in the Maryland and Virginia suburbs of the District of Columbia since 1972. There is no system in the District of Columbia, and it is necessary for contractors to notify each utility operator separately, which they frequently fail to do. Attempts were made to expand "Miss Utility" to the District of Columbia in 1976. Since a bill had been proposed to require notification of proposed excavation work which endorsed the use of the "one-call" system, the operators of "Miss Utility" decided to await passage of the legislation before implementing the "one-call" system in the District of Columbia. The bill 2/ was passed by the City Council on September 15, 1976. However, it was vetoed by Mayor Washington. While the Mayor endorsed the purpose of the legislation, he believed the bill was vague and imprecise. No "one-call" system was ever implemented in the District of Columbia.

"Miss Utility" has been effective in reducing accidents and damage involving underground facilities. In 1972, the first year that the system was used, the gas, electric, telephone, and water utilities serving the two Maryland counties adjacent to the District of Columbia had a total of 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.

In particular respect to the hazards associated with damage to gas lines, WGL's records from 1972 to 1978 show that incidents of damage to its underground facilities in all areas served by it in Maryland and Virginia, which are covered by the "one-call" system, have been reduced by 57 percent, while the number of incidents involving its facilities in the District of Columbia have remained steady.

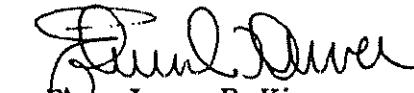
1/ "Safe Service Life for Liquid Petroleum Pipelines" (NTSB-PSS-78-1).

2/ Enrolled Original Bill 1-295

Therefore, the National Transportation Safety Board recommends that The Washington Gas Light Company, The Potomac Electric Power Company, and The Chesapeake & Potomac Telephone Company:

In cooperation with the District of Columbia Government, expand the "Miss Utility" "one-call" system now serving areas of Maryland and Virginia to include the District of Columbia. (Class II, Priority Action) (P-79-40)

KING, Chairman, DRIVER, Vice Chairman, McADAMS, GOLDMAN, and BURSLEY, Members, concurred in this recommendation.

  
By James B. King  
Chairman