

NATIONAL TRANSPORTATION SAFETY BOARD *P-174*
WASHINGTON, D.C.

ISSUED: February 26, 1981

Forwarded to:

Mr. Enrique Jimenez
President
Puerto Rico Telephone Company
G.P.O. Box 998
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SAFETY RECOMMENDATION(S)

P-80-88

At 9:50 a.m., on January 30, 1980, an 8-inch-diameter, refined petroleum products pipeline owned by The Pipelines of Puerto Rico, Inc., and operated by the Shell Oil Company (Puerto Rico) Ltd. was struck and ruptured by a bulldozer during maintenance work on a nearby waterline in the Sector Cana of Bayamon, Puerto Rico, about 10 miles southwest of San Juan. Gasoline from the rupture sprayed downhill and ran off into a small creek. About 1 1/2 hours later, the gasoline vapors were ignited by an undetermined source and exploded; the subsequent fire killed one person and extensively damaged 25 houses and other property. 1/

Earlier that morning, an employee of the Aqueduct and Sewer Authority of Puerto Rico had been using a pavement breaker 2/ during repair work on a 6-inch-diameter waterline. Unable to remove a cement anchor that supported the waterline with the pavement breaker, an Aqueduct and Sewer Authority employee at the site requested help from Highway Authority of Puerto Rico personnel who were working nearby. The Highway Authority contractor moved a bulldozer-ripper 3/ to the site. About 9:50 a.m., the ripper struck and punctured the pipeline which was located approximately 3 inches below the waterline.

The Safety Board believes that good communication between excavators and operators of underground facilities is essential for any successful pipeline damage prevention program and that one of the most effective methods of preventing excavation-caused damage to underground facilities is to insure that excavators notify the owners or operators of utility companies in advance of the proposed excavation work so that operators can mark the location of their facilities before excavation begins. The most convenient method for such notification is a "one-call" system. If an excavator gives reasonable advance notice of his plans, owners of underground facilities can locate and mark their facilities promptly and accurately, or can advise the excavators that there are no facilities in the proposed area of excavation. In all, "one-call" systems operate in 43 States.

1/ For more detailed information, read "Pipeline Accident Report--The Pipelines of Puerto Rico, Inc., Petroleum Products Pipeline Rupture and Fire, Bayamon, Puerto Rico, January 30, 1980" (NTSB-PAR-80-6).

2/ A pavement breaker is a hydraulic or air-operated piece of equipment used to break or fracture pavement.

3/ A ripper is the name given to a bulldozer which has as a part of its excavation equipment a heavy, metal, extendable tooth resembling a plow.

The "one-call" system international committee of the American Public Works Association Utility Location and Coordination Council, located at 1313 East 60th Street, Chicago, Illinois, (telephone 312-947-2520), has appointed nine regional representatives who are available to consult with community officials around the continental United States and its territories to set up "one-call" systems. While the Safety Board fully understands that the "one-call" system is not a panacea for all underground utilities accidents, it believes that an established "one-call" system, with a requirement for contractors to use it, is an extremely valuable tool for the prevention of damage to pipelines. In this case, if such a system had been in operation and if the highway contractor, by his contractual requirements, had been continuously "in contact with the 'one-call' notification system or the individual facilities operators to determine the precise depth and location of any underground facility," this accident might not have occurred.

Therefore, the National Transportation Safety Board recommends that the Puerto Rico Telephone Company:

In cooperation with other operators of underground facilities, help establish an island-wide "one-call" excavation notification system in Puerto Rico. (Class II, Priority Action) (P-80-88)

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


By: James B. King
Chairman