

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: June 28, 1978

Forwarded to:

Mr. George A. Fischer
Secretary
Louisiana Department of Transportation
and Development
P.O. Box 44245, Capitol Station
Baton Rouge, Louisiana 70804

SAFETY RECOMMENDATION(S)

H-78-46 and H-78-47

About 2:15 p.m. on December 28, 1977, Louisiana & Arkansas freight train Extra 4102 North collided with a log-laden tractor-semitrailer at the Vine Street (Louisiana State Route 479) crossing in Goldonna, Louisiana. A "jumbo" tank car loaded with liquefied petroleum gas (LPG) ruptured and the gas ignited. The resultant fireball enveloped the train's locomotive units and parts of Goldonna's business and residential districts. Two train crewmembers were killed; the truckdriver, a train crewmember, and eight bystanders were injured. Property damage was estimated to be \$1,256,000. 1/

The Safety Board's investigation disclosed that the train was moving about 50 mph when it struck the tractor-semitrailer. Because of obstructions, the truckdriver could not see the train until the truck was within 90 feet of the crossing. Although moving at about the posted 25 mph speed limit, the vehicle required a minimum of 104 feet to stop short of the crossing with 100 percent braking capability. The train's engineer sounded a proper crossing warning signal, but this was probably masked by the obstructions and by the sound of the truck's engine. There are no train-activated warning signals at the crossing and there is no alternate crossing that the truckdriver could have used.

1/ For more detailed information about this accident read: "Railroad/ Highway Accident Report--Collision of a Louisiana & Arkansas Railway Freight Train and a L. V. Rhymes Tractor-Semitrailer at Goldonna, Louisiana, December 28, 1977." (NTSB-RHR-78-1.)

Louisiana motor vehicle law requires the operator of a motor vehicle to stop within 50 feet of, but no closer than 15 feet from, a railroad crossing whenever an approaching train is plainly visible and by reason of its speed or nearness is a hazard. The law relies on the driver's judgment and, in this instance, the truckdriver had to make an instantaneous decision based on the speed of the train and its distance from the crossing. The driver was experienced and competent, but the almost dead-ahead approach of the train made it difficult to accurately judge the train's speed. He did not attempt to stop, but accelerated the truck in order to clear the crossing before the train reached it.

The Goldonna crossing was surveyed by the Louisiana Department of Transportation and Development in 1973 and this survey developed inadequate sight distances in three of the four crossing quadrants. In January 1974, the State project control engineer recommended installation of train-activated warning signals and the railroad later agreed to the improvements. However, in the interim, the State adopted a new hazard index formula which does not consider inadequate sight distances and other hazard parameters. The warning signals were not installed and nothing was done to reduce or eliminate the known hazards at the crossing.

Had Louisiana adopted the "Operation Lifesaver" concept of improved engineering, public education, and enforcement, the crossing's hazards could have been thoughtfully analyzed for intermediate remedial action until train-activated warning signals could be installed. Such action could include clearing sight obstructions, reducing speed limits, or installing stop signs.

Therefore, the National Transportation Safety Board recommends that the State of Louisiana Department of Transportation and Development:

Improve quadrant sight distances at the Vine Street crossing in Goldonna so that they will permit heavy vehicles operating at the posted speed limit to stop within such distances, and install train-activated warning devices at the crossing.
(Class II, Priority Action) (H-78-46)

Include in its grade crossing safety criteria the evaluation of existing quadrant sight distances. Include in its grade crossing safety program provision for intermediate remedial action to eliminate hazards at crossings where there are no train-activated warning devices. (Class II, Priority Action)
(H-78-47)

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

By: James B. King
Chairman

