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NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: August 13, 1982

Forwarded to:

Honorable Ray A. Barnhart
Administrator
Federal Highway Administration
Washington, D.C. 20590

SAFETY RECOMMENDATION(S)

H-82-22 through -24

About 10:25 p.m., on August 27, 1981, a tractor-semitrailer loaded with steel pipe was traveling eastbound across the Calcasieu River Bridge, a 1 1/4-mile long, four-lane divided highway bridge on Interstate 10 at the city limits of Lake Charles, Louisiana. As the truck was descending the east side of the bridge, the tractor's left side fuel tank was struck and penetrated by a dislodged steel plate that had been used to cover a hole in a pavement expansion joint. As a result of about 75 gallons of diesel fuel leaking onto a 1/2-mile section of the bridge, 26 vehicles were involved in a series of skidding collisions. Three persons were killed, and 18 persons were injured; there were no fires. 1/

The expansion joints on the bridge and the joint, which the repair plate was part of, had experienced a long history and increasing frequency of problems that were known or easily seen by Louisiana Department of Transportation and Development (LADOTD) maintenance personnel. A number of other irregularities were found during a detailed inspection of the joint and the steel plate repair. The Safety Board concluded that a number of commonsense mistakes were made in "designing" the repair, and less than optimum welding practices were used by the LADOTD maintenance crew that repaired the joint. However, the repair held for 4 months, long enough to be considered an adequate temporary repair, and it should have provided sufficient lead time to have done something more permanent about the recurring problems at this joint.

LADOTD headquarters and district maintenance personnel reported personnel and budget limitations that may have reduced their ability to do something more permanent at this joint and other repair sites of relatively high priority. The Safety Board is concerned that there may be similar problems nationwide at bridges and all other repair sites.

The LADOTD and the Federal Highway Administration (FHWA) are currently developing a contract to install a television surveillance system on the Calcasieu River Bridge. The proposed system may have allowed earlier official confirmation of driver reports about the diesel spill and more rapid decisions on police patrol response and sign message changes for the remote control signs located on each side of the bridge. Therefore, the Safety Board supports the use of a television system at the bridge, especially given the high State accident rate, the lack of shoulders for vehicle breakdowns, and the high and increasing maintenance activity.

1/ For more detailed information, read Highway Accident Report—"Truck Engine Fuel Tank Puncture by Bridge Repair Plate, Diesel Spill, and Multiple Vehicle Skidding Collisions, Interstate 10, Lake Charles, Louisiana, August 27, 1981" (NTSB-HAR-82-4).

As a result of this investigation, the National Transportation Safety Board recommends that the Federal Highway Administration:

Continue to assist the State of Louisiana in providing a television surveillance system for the section of Interstate 10 which crosses the I-10, Calcasieu River Bridge. (Class II, Priority Action) (H-82-22)

Evaluate the current capability of the Louisiana Department of Transportation and Development to provide timely followup to the type of expansion joint repair that caused this accident and similar repairs of relatively high priority on Federal-aid highways. If necessary, assist the LADOTD in resolving discovered problems. (Class II, Priority Action) (H-82-23)

Advise all State Departments of Transportation of the circumstances of this accident and emphasize the need for repair designs at bridges and all other repair sites that consider operational problems, repair personnel qualifications, and the need for timely followup to temporary repairs. (Class II, Priority Action) (H-82-24)

BURNETT, Chairman, and McADAMS, BURSLEY, and ENGEN, Members, concurred in these recommendations. GOLDMAN, Vice Chairman, did not participate.


By: Jim Burnett
Chairman