



205 H-489

National Transportation Safety Board

Washington, D.C. 20594
Safety Recommendation

Date: May 13, 1987

In reply refer to: H-87-26 through -35

Honorable Edwin Edwards
Governor of Louisiana
Baton Rouge, Louisiana 70804

About 11:25 a.m. on January 28, 1987, a loaded westbound tractor-semitrailer struck the rear and sides of several passenger cars which had slowed for a previous fog-related accident on the I-10 bridge crossing the Bonnet Carre Spillway of Lake Pontchartrain, 4 miles east of La Place, Louisiana. A fire ensued and eight vehicles were consumed. There was patchy fog with limited visibility. Nine separate accidents involving 46 vehicles occurred on the westbound bridge during the foggy condition. There were four fatalities and several injuries.

At 11:49 a.m., a motorist walked into Kenner Fire Station No. 38 and reported a fire on the bridge. At 11:50 a.m., the Kenner Fire Department units were dispatched but were unable to reach the scene of the fire because of the traffic on the bridge. At 11:59 a.m. they had to leave their vehicles and proceed approximately 1/2 mile on foot. At 12:10 p.m. they requested ambulances and a coroner. They used a portable CO2 extinguisher and attempted to use a portable pump, however they could not put out the fire. Meanwhile, at 11:48 a.m. the St. Charles Sheriff's Office requested the La Place Volunteer Fire Department to respond to a fire on the I-10 bridge. A Jefferson Parish Sheriff's Office Prisoner Transport Unit (JP 915) was on the bridge and had radio contact with St. Charles Sheriff's Office dispatcher. He cancelled the request for the fire trucks at 11:53 a.m. and the units returned to the station. Although there was no fire at JP 915's location, there was a serious fire involving eight vehicles less than a mile east of his location. The La Place Fire Department's response was further delayed when they were contacted again and given instructions to respond for a "washdown" rather than a fire. They were finally dispatched to the fire at 12:18 p.m., arrived at the scene at 12:42 p.m., and extinguished the fire. The Kenner Fire Department and the La Place Volunteer Fire Department do not share a common radio frequency.

The first Louisiana State trooper who arrived at the scene was required to leave his patrol car in order to assess the scene on the bridge. While he was away from his unit, he did not have radio contact with his dispatcher or other State troopers and, therefore, information about the overall scene could not be conveyed to Louisiana State Police (Troop B). While making his way through the traffic he called Troop B on a motorist's cellular phone and, at that point, was able to provide information to the dispatcher.

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Two months later, on March 21, 1987, in patchy fog conditions at about 7:45 a.m., an empty eastbound tractor-semitrailer struck the rear of a Volkswagen Rabbit on the I-10 bridge over Lake Pontchartrain 0.6 mile north of the south shore in New Orleans. The truck continued forward, jackknifed, struck the left bridge rail, was redirected to and mounted the bridge rail on the right side, overturned, and fell 15 feet before entering water 12- to 15-feet deep where it came to rest upside down. This accident initiated a chain of nine collisions on the I-10 eastbound bridge and involved about 36 trucks and cars. About 7:45 a.m. on the westbound span, a hit-and-run accident involving a tractor-semitrailer triggered another set of collisions which involved about 17 vehicles. The accidents on both bridges resulted in 4 fatalities and 35 injuries.

The March 21, 1987, accidents also required a multijurisdictional response. The accidents occurred in an area of the bridge under the jurisdiction of the city of New Orleans. However, because traffic was stopped by the accidents in the eastbound lanes, access to the fatal accident site was easier from the east side of the bridge. New Orleans Police Department, Louisiana State Police (Troop L and Troop B), Slidell Fire Department, the U.S. Coast Guard, the New Orleans Health Department, and two private ambulance companies all responded to the accidents. Interviews with various responders indicated that there was confusion about who the incident commander was and where the command post was located.

Although Louisiana State Police have operational authority on the I-10 bridges across the Bonnet Carre Spillway, emergency response authority rests with three jurisdictions: St. Charles Parish, St. John the Baptist Parish, and the incorporated City of Kenner located within the boundaries of Jefferson Parish. The majority of the bridge lies within the boundaries of St. Charles Parish, however, the fire departments in St. Charles Parish must pass through Kenner or La Place to gain entry to the bridges. Because of the additional response time required for St. Charles Parish to reach the bridges, the Kenner Fire Department and the La Place Volunteer Fire Department respond to all fires on the I-10 bridges west of New Orleans.

In its investigation, the Safety Board found there were no coordinated Emergency Response Plans among the local governments to deal with multicasualty emergencies on the bridges that link their jurisdictions. The Safety Board believes that there is a need for area-wide organization and preplanning which would result in emergency plans for highway accidents. In order to evaluate the effectiveness of the plans developed, the Safety Board further believes that accidents which require a multijurisdictional response, such as those that occurred in the New Orleans area on January 28, 1987, and March 21, 1987, should be critiqued by representatives from all the responding agencies and the State of Louisiana.

The National Weather Service (NWS) had issued warnings of fog in New Orleans and surrounding areas before both accidents. At 10:47 a.m. on January 28, 1987, the NWS issued a Special Weather Statement advising of areas of fog in the Orleans and surrounding parishes. This information would have been transmitted on the NOAA (National Oceanic and Atmospheric Administration) Weather Wire and the NOAA Weather Radio as well as to selected agencies by dedicated telephone line. At 4 a.m. on March 21, 1987, the NWS issued a travelers advisory warning for areas of intermittent heavy fog in the Orleans and surrounding parishes.

The configuration of certain highway elements was a factor in each accident. At both accident sites on I-10, there are two separate bridges--one eastbound and one westbound. At the Bonnet Carre Spillway, the twin spans are elevated over a 12-mile segment and are about 129 feet apart. On the east side of Lake Pontchartrain the I-10

twin bridges are 5.35 miles long and are about 60 feet apart. Each span is 40 feet wide and has a 6-foot left shoulder, two 12-foot travel lanes, and a 10-foot right shoulder. There are no emergency crossovers, call boxes, variable message signs, or highway lighting on the bridges. There are no emergency warning systems to alert motorists, of impending inclement weather conditions or traffic conditions on the bridges. Citizens band radio is not normally monitored by police. There is no visual reference system on the highway to help police measure visibility.

The emergency crossovers located on the nonelevated sections just before the bridges on I-10 are very rough and difficult to traverse. Their condition hampers the ability of the police to reroute traffic as well as expedite emergency response vehicles. The Safety Board believes these crossovers should be repaired.

The Louisiana State Police have the responsibility to monitor the interstate, Federal-aid, and State highways and to close such highways when fog and limited visibility problems occur. Under Article V of the Home Rule Charter, Louisiana contracts police authority to municipalities with a population over 500,000. (New Orleans is the only municipality in Louisiana that qualifies under this provision.) Within the boundaries of Orleans Parish (New Orleans) the enforcement of traffic laws, the protection of the traveling public, and the operational authority has been delegated to the New Orleans Police department. The January 28, 1987, accident occurred west of New Orleans in St. Charles Parish where the Louisiana State Police have operational authority. The March 21, 1987, accident occurred in Orleans Parish (New Orleans) where I-10 crosses the east side of Lake Pontchartrain where the New Orleans Police Department have operational authority. However, beginning at the middle of the 5.35 mile bridge the operational authority changes to the Louisiana State Police. The I-10 bridges are maintained by the Louisiana Department of Transportation and Development.

By contrast, the Greater New Orleans Expressway Commission operates the Lake Pontchartrain Causeway that bisects Lake Pontchartrain connecting I-12 and U.S. 190 in St. Tammy Parish to I-10 and U.S. 90 in Orleans Parish. The causeway, a toll facility consists of 24 miles of twin bridges with crossovers about every 3 miles, motorist emergency call boxes, fixed and mobile variable message signs, and its own police force. Each span is 28 feet wide with two 12-foot travel lanes. According to the causeway management, there are three units on patrol on the 48 miles of bridge at all times.

On the morning of January 28, 1987, the causeway stopped normal operation at 8:36 a.m. due to several nonfog related accidents and remained closed to normal operations until 2:00 p.m. due to fog. On the morning of March 21, 1987, the causeway was closed to normal operation from 7:09 a.m. until 11:00 a.m. due to fog. On both days the expressway commission operated convoys or escorts in both directions across the lake. Since fog is difficult to predict, the decision to shut down the bridge is made by monitoring the NWS, local weather service, various police frequencies, citizen band radios, and patrol operations. The expressway commission police measure visibility in fog by counting equally spaced pavement joints. In addition, a wind gage is located on the causeway. When fog limits visibility to less than 300 feet the expressway commission initiates a convoy mode of operation that includes the following:

1. The various surrounding police agencies (State police, Jefferson and St. Tammy Parish Sheriff Offices, Mandeville Police Department) and news media are notified of their intentions;
2. The bridge is cleared of traffic;

3. Pamphlets are distributed at the toll gates to inform motorists of how the convoy works;
4. The convoy travels in the right lane with a lead and rear police escort; and
5. The police patrol the left lane to monitor the speed and flow of the convoy traffic in the right lane.

In a convoy mode of operation, the causeway has 15 to 20 vehicles and sufficient personnel to keep traffic moving on the dual 24-mile bridges. Off-duty sheriff department personnel have been trained in this operation and are also used. The commission has used the convoy system for 15 years.

The Safety Board believes that the State of Louisiana should consider constructing crossovers on long segments of interstate highways which are elevated over swamps and water. The Safety Board is concerned that the access of emergency vehicles to these accidents or any accident on the elevated over water sections of I-10 is hindered by the lack of either interchanges or emergency crossovers. The 1985 20-year plan in the I-10 East Corridor Study, ^{1/} conducted by Howard, Needles, Tammen and Bergendoff, recommends the installation of emergency crossovers at 1 1/3-mile intervals. In the spring of 1987 the Louisiana Department of Transportation and Development has scheduled for bid the construction of I-310 which connects Boutte to I-10 west of Kenner in St. Charles Parish. The Safety Board believes that the State should consider adding emergency crossovers to this project.

The Safety Board believes that if call boxes had been installed on the I-10 bridges notification of these accidents would have been expedited and the mix-up involving the cancelation of the La Place Fire Department might have been avoided. The Federal Highway Administration recommends that they be placed not less than 1/2 mile apart. The Safety Board believes that the State should consider installing call boxes on the long elevated structures.

The Safety Board believes that Louisiana should work with the news media to establish a method for alerting motorists to hazardous fog conditions. A program in operation in California might be helpful as a model. The California Highway Patrol Central Division operates a Fog Condition Report known locally as the "CHP Fog Phone." This program consists of recorded telephone messages using two phone lines and two answering machines. The messages are changed hourly from 5 a.m. to 5 p.m., giving fog condition reports that are accessed by 56 radio stations and 5 or 6 television stations. The Central Division covers the area from Stanislaus County to Kern County in central California, including 500 miles of freeway. The highway patrol relays actual observations back to three dispatch centers which, in turn, send the information to the Central Division where the telephone messages are recorded. The officer in charge uses NWS forecasts to compose the last message of the day recorded at 5 p.m.

The Safety Board examined the Louisiana Driver's Guide, published by the Louisiana Department of Public Safety and Corrections. It does not address the problems of driving in fog or limited visibility. The Safety Board is aware of at least three States, Maryland,

^{1/} Evaluation of System and Proposed Roadway Improvements, I-10 East Corridor Study, Howard, Needles, Tammen and Bergendoff Engineering Planning Group, C & S Consultants, Inc., State Project No. 736-09-34, Federal Aid Project No. PL-0011 (008), November 1985.

South Carolina, and Illinois, whose driver's manuals address driving in fog. The Safety Board believes that at the next scheduled driver's manual revision, the State should include appropriate information regarding the hazards of driving in fog. These revisions should include determining safe driving speeds, passing procedures, use of various lights, and the procedure for leaving a stopped vehicle. The Safety Board believes that the State of Louisiana has a responsibility to educate the motoring public on the hazards of driving in limited visibility conditions and to provide safe traffic operations during hazardous limited visibility conditions.

As a result of its investigation, the National Transportation Safety Board recommends that the State of Louisiana:

Establish, coordinate, and implement a multiparish plan for warning motorists traveling on the elevated structures on I-10, I-55, U.S. 11, and U.S. 90 throughout the metropolitan New Orleans area during adverse weather and limited visibility conditions. The plan should include, but not be limited to, the following:

A program to monitor citizen band radios for traffic emergencies and limited visibility conditions on the elevated structures.

A visual reference system on the I-10 elevated structures to assist police agencies in determining visibility limitations.

Information dissemination on dangerous fog conditions to the broadcast media so that travelers' advisories can be broadcast on the radio in a timely fashion.

(Class I, Urgent Action) (H-87-26)

Assure that law enforcement and other agencies responsible for highway safety are equipped to regularly receive the weather forecasts, advisories, and warnings issued by the National Weather Service or local or regional weather forecasting services to obtain advance warning of weather changes that may seriously effect traffic movement to provide adequate lead time for implementing adverse weather or visibility plans. (Class II, Priority Action) (H-87-27)

Identify other areas throughout the State with a high frequency of adverse weather conditions which seriously affect traffic on major highway routes or traffic corridors. Develop plans for those areas to warn and to guide traffic through affected areas. (Class II, Priority Action) (H-87-28)

Assist local governments in establishing Emergency Response Plans to deal with multicasualty highway accidents involving more than one jurisdiction. Such plans should specifically address the problems of communication, coordination, and on-scene authority. These plans should also provide a means of critiquing the response, identifying problems, and updating the plans. The State of Louisiana should critique the exercise of any plan, which when activated, involves more than one jurisdiction. (Class II, Priority Action) (H-87-29)

Install call boxes on the long elevated highway structures. (Class II, Priority Action) (H-87-30)

Install variable message signs - where needed to inform the motoring public of road and traffic conditions on the I-10 elevated structures in the New Orleans area. (Class II, Priority Action) (H-87-31)

Improve the existing emergency crossovers on I-10 that immediately precede the elevated bridge structures on I-10 in the New Orleans Area. (Class II, Priority Action) (H-87-32)

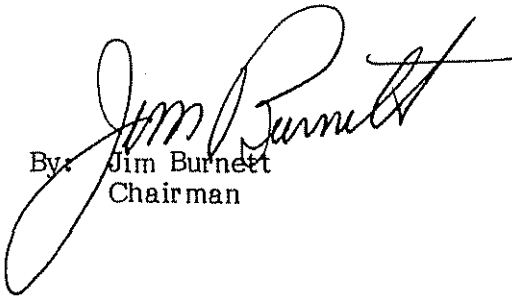
Develop a policy that provides for emergency crossovers in all future construction of long segments of overwater highways. (Class II, Priority Action) (H-87-33)

Develop plans and policies for the inclusion of emergency crossovers during the reconstruction/rehabilitation of existing long overwater highway segments. (Class III, Longer Term Action) (H-87-34)

Develop a set of recommended guidelines for safe driving through fog conditions and include these guidelines in the next revision of the driver's manual. The guidelines should address issues such as determining safe driving speeds, passing procedures, use of various lights, and the procedures for leaving a stopped vehicle. (Class II, Priority Action) (H-87-35)

The National Transportation Safety Board is an independent Federal agency with the statutory responsibility "...to promote transportation safety by conducting independent accident investigations and by formulating safety improvement recommendations" (Public Law 93-633). The Safety Board is vitally interested in any action taken as a result of its safety recommendations. Therefore, it would appreciate a response from you regarding action taken or contemplated with respect to the recommendation in this letter. Please refer to Safety Recommendations H-87-26 through H-87-35 in your reply.

BURNETT, Chairman, GOLDMAN, Vice Chairman, and LAUBER and NALL, Members concurred in these recommendations.

By: 
Jim Burnett
Chairman