

# National Transportation Safety Board

Washington, D. C. 20594

Safety Recommendation

Log R-609  
I-90

Date: October 24, 1988

In reply refer to: I-88-3 and -4  
and R-88-55

Honorable Sidney J. Barthelemy  
Mayor, City of New Orleans  
1300 Perdido Street  
Suite 2E-10  
New Orleans, Louisiana 70112

On September 8, 1987, a New Orleans Terminal (NOT) crew moved six tank cars of butadiene from the NOT's Oliver Yard in New Orleans, Louisiana, and at 7:35 p.m. placed them on track 3 of the CSX Transportation's (CSXT) Terminal Junction Interchange Yard (interchange yard) for delivery to the CSXT. About 1:50 a.m. on September 9, 1987, butadiene leaking from one of the tank cars was ignited and the resulting flames rising about 100 feet into the air engulfed both bridge spans of Interstate 10. The fire receded to the leaking tank car where it burned beneath the tank car until 1:55 p.m. on September 10, 1987. During the emergency, more than 200 city blocks were evacuated affecting 800 to 1,000 residents.<sup>1</sup>

New Orleans was not notified in a timely manner about the escape of butadiene from the tank car. Timely notification would have provided increased opportunity for the New Orleans Fire Department (NOFD) to evacuate the citizens in the threatened area and then to initiate action for minimizing the spread of the butadiene and for eliminating sources of ignition. The first indication of a leak in the area was detected more than 4 hours before ignition occurred, but it was not reported because the unusual odor detected was considered insignificant. About 2 hours before ignition occurred, the odor had increased, but because it was believed that escaping natural gas was the source of the odor, a report was made at 1:14 a.m. to the local natural gas company, New Orleans Public Service, Inc. (NOPSI). The NOPSI did not immediately dispatch an employee to investigate the odor, nor did it notify the NOFD of the report and seek assistance even though it had a direct telephone communication link with the NOFD for such purposes.

<sup>1</sup>For more detailed information, read Hazardous Materials/Railroad Accident Report--*Butadiene Release and Fire from GATX 55996 at the CSX Terminal Junction Interchange, New Orleans, Louisiana, September 8, 1987* (NTSB/HZM-88/01).

The NOFD initially received notice of a "possible gas leak" in the general area of the tank cars about 25 minutes before the ignition occurred. Although this was a report of a gas leak, the NOFD did not advise the NOPSI of the report or request the gas company to use its detection equipment to aid in the search for the reported gas leak. Had either the NOPSI or the NOFD coordinated with the other at this time, it might have become evident that a dangerous situation was occurring, particularly after the NOFD received its second report. With the three complaints of gas being reported within minutes of each other and with knowledge of the wind direction, the National Transportation Safety Board believes it is reasonable to expect that with an early response, the NOFD and/or NOPSI could have identified the source of the leak. However, it is not possible to conclude that the ignition could have been prevented given the time of the ignition and the uncertainty about the amount of butadiene being released initially. However, early recognition of the problem would have provided time for the NOFD to begin evacuating citizens from the area. The Safety Board concludes that the lack of coordination between the NOFD and NOPSI relative to the reports of gas leaks clearly indicates that New Orleans and the NOPSI need to improve their procedures for handling complaints of gas leaks and for communicating with each other when assistance is needed. The NOFD should routinely notify NOPSI of any gas odor reports it receives.

After the butadiene was ignited, reports of the fire were quickly reported to city response agencies, 911, the NOFD, and the New Orleans Police Department (NOPD). Emergency operators performed their duties well for most of the calls they received. However, after receiving several calls and recognizing that they all were reporting the same event, 911 and NOFD operators should have questioned callers to gather additional information about the emergency which might have been of assistance to responding NOFD personnel. Additionally, at least for one call made to the NOPD, the caller was told to hang up and then to call the NOFD by using 911. The emergency response operators should have recognized that a caller, who attempted to tell the operator that he was in view of the fire and attempted to report that rail cars were on fire, would have been a source of specific information for the emergency in progress that could have been useful to the NOFD before personnel arrived on scene. Also, city personnel receiving a report of an emergency should be aware that emergency information should be recorded and then passed to the appropriate agency rather than directing a caller to dial another emergency response agency. The Safety Board recognizes that during an emergency operators are very busy; yet each call must be answered since another emergency may occur. These operators must be alert to identify and question those callers who may be able to provide specific, essential information that can affect the safety of responding emergency personnel. Appropriate information gathering by emergency operators could have identified, before any NOFD personnel arrived on scene, the specific location of the emergency and that tank cars were involved in the fire. The Safety Board believes that operators of city emergency agencies should be trained to identify and question callers who can provide useful information to responding emergency personnel.

Preparedness for handling hazardous materials transportation emergencies must begin with effective planning. The city, through the NOFD superintendent, recognized in the early 1970s that it was a major transportation center through which hazardous materials are transported by rail, highway, and marine vehicles. However, it was not until 1982 that the city began to assess the hazards posed to its citizens by such transportation and how it would develop a coordinated, effective response for minimizing the threats presented by the transportation of hazardous materials. This initial effort was supported by a Federal grant of \$53,000 from the

Department of Transportation (DOT) as one of seven demonstration projects it funded for hazardous materials contingency planning.<sup>2</sup> The city's Hazardous Materials Advisory Council was appointed to support this effort and the city's Hazardous Materials Incident Response (HMIR) Plan was a product of this effort.

The NOFD's HMIR Plan and related plans developed by other city agencies were a result of the initial planning actions. However, city management never analyzed or tested through drills if the plans were adequate for providing an efficient, coordinated response to hazardous materials emergencies. Additionally, the planning efforts of the city and the use of its Hazardous Materials Advisory Council have been ineffective for identifying special needs for specialized equipment and specific training of personnel who respond to hazardous materials emergencies or who perform overall command management of such emergencies. Furthermore, since the city was not aware of the CSXT and the NOT emergency response plans for handling emergencies in railyards and were not aware of the response capabilities of each, it is obvious that the city has not performed an effective assessment of available technical resources that could be used to assist the city during responses to hazardous materials emergencies.

The city should initiate communication with the railroads to solicit cooperation in handling emergencies that involve hazardous materials. New Orleans, like most large cities, has several railyards operated by different companies in its boundaries that may endanger the lives and health of adjacent populations should an accident occur. Each railyard generally has different operating procedures for carrying out the interchange and movement of rail cars, each has a different physical plant and configuration, and each has different capabilities and planning for handling hazardous materials emergencies. For cities that have multiple railyards in their boundaries, individual coordination by railyards with city emergency response officials likely would be a less effective and efficient means of preparing for handling an emergency in a railyard. Individual coordination with each railyard also would be ineffective for identifying areas where railyards could provide mutual assistance during hazardous materials emergencies and for maintaining emergency preparedness current with changes that occur in the individual railyards. The Safety Board continues to believe that operators of railyards have a primary responsibility for mitigating the harmful effects to lives and property that may occur should hazardous materials be released from rail cars; however, where multiple railyards are present within a city, the most effective preparedness level could be achieved by bringing together into a common planning effort representatives of all railyards and of all affected city response agencies. The Safety Board believes that this can best be accomplished by the cities rather than by the individual railyards.

On June 15, 1988, the Safety Board was pleased to learn that the city has placed new emphasis on hazardous materials accident preparedness and has initiated a new program that will provide a state-of-the-art hazardous materials response team. Also, the city has reported that a byproduct of the tank car accident is a new spirit of cooperation among State and local agencies, the U.S. Coast Guard, and railroads and that response units of these agencies now routinely train together. There have been several planning meetings held, and fire department personnel have visited area railyards to learn the problems they may encounter during firefighting. As a result

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<sup>2</sup>*Lessons Learned: A Report of the Lessons Learned From State and Local Experiences in Accident Prevention and Response Planning for Hazardous Materials Transportation*, DOT and EPA, December 1985.

of these actions, prefire plans on all area railyards are now being prepared. Additionally, the city has established a Local Emergency Planning Committee consisting of representatives of most city, State, and Federal agencies and of representatives of several major industries. This committee will develop plans for handling hazardous materials emergencies and establish an Incident Command System. The plan will establish specific responsibilities for each agency, will designate one incident commander, and will provide for better use of available resources.

While the Safety Board believes this action is commendable, it also believes that it is necessary to revise the HMIR's initial planning document to better define the command and control functions, to define the training required of the person assigned overall command responsibility, to determine the emergency response capabilities and technical assistance available from local transportation entities, and to assign responsibility to and provide authority for carrying out periodic assessments and tests of individual city agency plans and capabilities for supporting the city policy on response to hazardous materials emergencies.

Further, the Safety Board recommends that the city's Office of Emergency Management plan and conduct emergency preparedness exercises with appropriate city agencies and local industries involved with the manufacture and transportation of hazardous materials. In addition, the procedures of each city agency for responding to hazardous materials emergencies should be reviewed to determine if they are consistent with the HMIR Plan.

Therefore, the National Transportation Safety Board recommends that the city of New Orleans:

Establish a procedure between the city's police and fire departments and between the city and public utility companies for coordinating reports of emergency conditions that may involve the release of hazardous materials. In addition, operators who receive reports of emergencies should be trained to identify and question callers who are capable of providing information useful to emergency personnel. (Class II, Priority Action) (I-88-3)

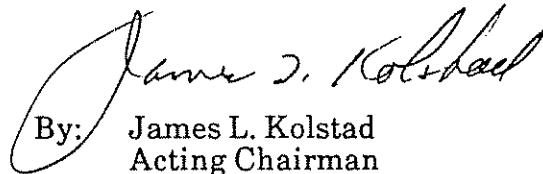
Revise the Hazardous Materials Incident Response Plan to clearly define the role of all agencies expected to respond to hazardous materials emergencies; to define explicitly the duties and authority of the incident commander; to require appropriate, periodic training for all personnel responsible for implementing the plan; to incorporate an Incident Command System to aid in providing unity of command and making optimum use of available resources; to require periodic emergency preparedness exercises that involve all affected city agencies and appropriate, local hazardous materials transportation-related companies; and to require the evaluation of preparedness exercises with the resultant data being used to modify and refine procedures. (Class II, Priority Action) (I-88-4)

In coordination with local railroads, review and revise emergency response procedures to make them applicable for handling releases of hazardous materials from railroad vehicles. At a minimum, these procedures should address initial notification procedures, response actions for the safe handling of releases of the various types of hazardous materials transported, identification of key contact personnel, conduct of emergency drills and exercises, and identification of the resources to be provided and of actions to be taken by the railyard operators and the community. (Class II, Priority Action) (R-88-55)

Also as a result of its investigation, the Safety Board issued Safety Recommendations R-88-56 and -57 to the Norfolk Southern, I-88-5 to the New Orleans Public Service, Inc., R-88-58 through -64 to the Federal Railroad Administration, R-88-65 to the General American Transportation Corporation, R-88-66 and -67 to the Mitsui & Company (USA) Inc., R-88-68 to the GATX Terminals-Corporation, I-88-6 to the Research and Special Programs Administration, R-88-69 to the National League of Cities, and R-88-70 to the National Governors' Association.

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 recommendations in this letter. Please refer to Safety Recommendations I-88-3 and -4 and R-88-55 in your reply.

KOLSTAD, Acting Chairman, and BURNETT, NALL, and DICKINSON, Members, concurred in these recommendations. LAUBER, Member, did not participate.

  
By: James L. Kolstad  
Acting Chairman