



National Transportation Safety Board

Washington, D.C. 20594

Railroad Accident Brief

Accident No.: DCA-06-FR-002
Location: Texarkana, Arkansas
Date: October 15, 2005
Time: 4:56 a.m., central daylight time¹
Railroad: Union Pacific Railroad
Damage: \$2.4 million
Injuries: 0
Fatalities: 1
Type of Accident: Collision

Synopsis

At 4:56 a.m., central daylight time, on October 15, 2005, westbound Union Pacific Railroad (UP) train ZYCLD 13² collided with the rear of standing UP train MPBHG 15 in the UP rail yard in Texarkana, Arkansas. The collision resulted in the puncture of a railroad tank car containing propylene, a compressed flammable gas. The propylene was heavier than air and flowed near the ground into a nearby neighborhood. The flowing gas reached a house where an unknown ignition source ignited the gas, and the house exploded. The single occupant was killed. The fire moved quickly along the flowing gas back to the punctured tank car. A second, unoccupied, home was destroyed in the fire, and a wooden railroad trestle burned completely. Approximately 3,000 residents within a 1-mile radius of the punctured tank car were advised to evacuate the area. The two crews and the employees working at the Texarkana yard were not injured, and they evacuated the area safely. Between 5:00 a.m. and 7:00 a.m., the wind was calm, the visibility was 10 miles, and the temperature was approximately 59° F. Total damage was \$2.4 million, including \$325,975 in equipment damage and \$2,053,198 in track damage.

Accident Narrative

The engineer and the conductor of train ZYCLD were scheduled to go on duty at 10:00 p.m. for a planned 260.9-mile trip from Pine Bluff, Arkansas, to Big Sandy, Texas.³ The crew was experienced over the territory. The engineer and the conductor arrived at the Pine Bluff yard office at 9:45 p.m. and 9:50 p.m., respectively. They gathered the

¹ All times in this brief are central daylight time.

² Each train will be identified by the letters in its identifier without the number.

³ The accident occurred 158.2 miles into the trip, at Texarkana, Arkansas.

necessary paperwork for the trip, read the required notices, and conducted a safety briefing to discuss the trip. They were transported to their train at 11:00 p.m. The engineer performed an air test on the train, and the conductor checked the hand brakes. An employee from the mechanical department performed a successful air brake test on the train before the train departed at 11:34 p.m. The train consisted of 2 locomotive units and 57 loaded cars. The train was 5,598 feet long and weighed 3,961 tons.

When train ZYCLD reached McNeil, Arkansas, 104.5 miles from Pine Bluff, the crew encountered a red signal, which was an indication that the train was following a train (MPBHG). The conductor told investigators that the trip was normal and the crew was not surprised to be following another train. The signal changed from red to yellow and then to flashing yellow. The train left McNeil on a flashing yellow signal, which meant that the train was at least two signal blocks behind the preceding train.⁴ At Stamps (two stations and 17.8 miles later), the crew encountered flashing yellow signals at both ends of the siding, meaning that they were still approximately two block signals behind the preceding train. At Lewisville (4.5 miles beyond Stamps) the crew observed a red signal that changed to yellow before the train had to stop. The signal at control point (CP)⁵ CB 414 (East Texarkana) remained red, and the crew said that they stopped the train and waited for a more favorable signal. According to the electronic signal records from the dispatching system, this signal (CP CB 414) went from red to yellow about 4:13 a.m. and from yellow to flashing yellow about 4:24 a.m. The event recorder on the lead locomotive indicated that train ZYCLD started moving at 4:45 a.m., 21 minutes after the signal had changed to flashing yellow. When investigators asked the crew why they did not proceed when the signal changed from yellow to flashing yellow, the crew could not provide a reason. The crew said that they did not call anyone on the radio while the train was stopped, but they did have a personal conversation. UP rules allow napping by one crewmember when the train is stopped if the other crewmember stays awake. The conductor and the engineer said that they did not nap during that time. The crew reported having extensive conversations during the trip.

The next signal that train ZYCLD encountered was at CP CB 416. The signal had displayed a yellow aspect since 4:24 a.m., and the train passed this signal at 4:51 a.m. When the train passed the Texarkana rail yard limits at milepost (MP) 416.4, its speed was approximately 19 mph, according to the event recorder. The territory inside the yard limits was not controlled by the train dispatcher and did not have signals to indicate the presence of other trains. Within this territory, all trains were required to be operated at restricted speed.⁶ The engineer was controlling the train speed by using the power of the

⁴ The signal directly behind a train, which protects it from a following train, is red. The signal before the red is yellow, which tells the following train that it may proceed but must be prepared to stop at the next signal. In territories with higher speeds, a flashing yellow signal warns a following train of the upcoming yellow and red signals. Block signals are commonly spaced 1 to 2 miles apart.

⁵ *Control points* are locations where the signals are controlled by the train dispatcher.

⁶ Restricted speed was defined by operating rules, which required the train to be operated at a speed that would allow the train crew to stop the train in one-half the range of vision, but not exceeding 20 mph.

locomotives against the braking force applied on the cars of the train.⁷ He applied more braking at MP 416.77, at 18 mph with the engine at throttle 4. The train slowed to 17 mph; and at MP 417.02, the engineer increased to throttle 5.

Between MP 417.02 and MP 417.51, the engineer sounded the horn for a grade crossing and maintained the train speed at 17 mph. At MP 417.86, train ZYCLD collided with the rear car of train MPBHG. (See Figure 1.) After the collision, the event recorder showed the speed falling, a throttle reduction, a dynamic brake application, and an engineer-induced emergency brake application.



Figure 1. Aerial view of Texarkana accident.

While the crew had worked all night, and their circadian rhythms were at a low point when the collision occurred, the engineer was actively operating the train shortly before the accident. He had blown the whistle at a grade crossing approximately 1/3 mile (70 seconds) before the collision and controlled the train's speed by making brake and throttle adjustments only 1 mile before the collision. Further, during interviews, the crew told investigators that they had recognized a "dogleg" track configuration ahead of their train shortly before the point of impact. They both said that they had observed the standing train on their track with just enough time to brace themselves before impact.

⁷ This is referred to as power braking or stretch braking. It can be an effective method of controlling a train if it may have to be stopped quickly. Because brakes are already applied, the normal delay in the air brake system is avoided, and simply reducing the power decelerates the train almost immediately.

When train ZYCLD struck the rear car of train MPBHG, neither the locomotives nor the cars on train ZYCLD derailed. The forces of the striking train derailed the rear three cars of train MPBHG, but the cars remained upright. Then the forces were transmitted through the next 12 cars without derailling them. As a result of the collision, the 18th car was forced out of train MPBHG completely, and the 17th car⁸ continued forward until it struck the end of the 19th car (tank car TIMX 33429) and punctured the head of the tank car with its uncoupled coupler. (See Figure 2.) The tank car was loaded with liquefied propylene gas,⁹ and immediately after it was punctured, about half of its propylene load was released. The propylene tank car was equipped with a tank-head puncture-resistance system and jacketed thermal insulation. Performance standards for tank-head puncture-resistance systems are contained in 49 *Code of Federal Regulations* 179.16. The regulations require that a tank-head puncture-resistance system on a standing tank car be capable of sustaining, without any loss of lading, the impact from a coupler on a single freight car that weighs at least 263,000 pounds and is moving 18 mph. Train ZYCLD weighed more than 8.7 million pounds.



Figure 2. Punctured tank car.

⁸ The UP numbers the cars in a train from the rear of the train; therefore, the 17th car was behind the 18th car.

⁹ Propylene is regulated under the U.S. Department of Transportation's hazardous materials regulations, 49 *Code of Federal Regulations* 173.115, as a Division 2.1 flammable gas, which is defined as any material that is a gas at 68° F or less and 14.7 per square inch, gauge, of pressure and has a flammable range of at least 12 percent.

The propylene did not ignite immediately. Eyewitnesses said that after the collision they saw fog-like conditions near the track in the ditches and low points of the surrounding area. A local law enforcement officer stated that he saw a fog-like substance reach a residence, which then exploded. He then saw a bluish flame follow the ground-level fog to the train, and then he saw another explosion near the derailed tank car.

Emergency Response

At the time of the accident, the yardmaster and eight other persons were on duty in the Texarkana yard during the evening work shift. In addition to these nine yard employees, there was a two-member crew in each of the arriving trains, MPBHG and ZYCLD. Shortly after the 4:56 a.m. collision of the two trains, the crew of standing train MPBHG notified the yardmaster that their train had been struck. About 5:00 a.m., the crew of the striking train advised the yardmaster that at least two cars at the rear of the train in front of them had derailed and were on the ground.

The Texarkana, Arkansas, 911 communications center¹⁰ received several calls between 4:56 a.m. and 4:59 a.m. from residents complaining of a chemical odor adjacent to the Texarkana rail yard. The Texarkana 911 police dispatcher received the initial notification.¹¹ The Texarkana fire and police departments then dispatched units, and the Texarkana Office of Emergency Management was notified about 5:00 a.m. Within the next several minutes, a police unit responding to the initial complaint (in the area of Hobo Jungle Park, across the street from the accident) reported to the 911 police dispatcher a chemical smell and a white cloud drifting south. During this time, the 911 police dispatcher received additional calls from residents in the Hobo Jungle Park area complaining of breathing difficulties. As the responding fire units established the initial command post within 1/4 mile of the yard, they encountered several residents with respiratory complaints.

About 5:04 a.m., the 911 police dispatcher contacted the UP yardmaster. The yardmaster told the dispatcher that at least two cars at the rear of a train had derailed and that they might contain vinyl acetate residue. The dispatcher told the yardmaster about reports of a chemical odor at the scene. Reading through the train consist, the yardmaster told the dispatcher that the 19th car from the end of train MPBHG was a tank car containing propylene, a flammable gas. The yardmaster also told the dispatcher that he did not know whether the propylene tank car had derailed. He did not mention that the six cars ahead of the propylene tank car were also tank cars loaded with propylene.

¹⁰ The center had both police and fire dispatchers.

¹¹ The incoming calls were taken initially by the police 911 dispatcher, who then coordinated on-line with the fire dispatcher to notify fire department personnel.

About 5:05 a.m., the yardmaster contacted the manager of rail operations for the Texarkana yard—the senior management official for the yard—and reported the derailment.¹²

In a subsequent call to the 911 police dispatcher, the yardmaster recommended a 1-mile evacuation radius. The yardmaster told investigators that he had recommended the 1-mile evacuation radius because it would afford the “best and safest course of action because of the multiple numbers of cars involved” and because his consist showed a chlorine tank car in train MPBHG that was a potential poison inhalation hazard.

About 5:08 a.m., emergency response units reported a large explosion and a massive fireball at a house adjacent to Hobo Jungle Park. Immediately afterward, a police officer reported that flames roughly 3 feet high with a blue-colored base ran back across the park to the train, where a second explosion and similar fireball ignited. The residential electricity in Hobo Jungle Park went out as the surrounding area was engulfed in extremely heavy black smoke. All police and fire units withdrew and established a new command post.

Immediately following the explosions, the manager of rail operations, by telephone, directed the yardmaster to evacuate all yard employees and the four train crewmembers to Wadley Regional Hospital. The manager of rail operations later stated that he had ordered the evacuation because of the size of the event and his desire to have all railroad employees at one location. The manager of rail operations also said he had known that at the hospital the crew of the striking train would be tested in accordance with Federal Railroad Administration (FRA) postaccident toxicology procedures.

By 5:15 a.m. the fire department chief arrived at the new command post and assumed incident command. The chief noted at that time that the only information the 911 fire dispatcher had provided to the command post was that a “residue vinyl acetate tank car had derailed.” The chief and other responders did not yet know that propylene tank cars were on the train.

By 5:20 a.m., the immediate area around the accident site, including Hobo Jungle Park, was evacuated. At 5:30 a.m., the emergency operations center established a 1-mile evacuation radius around the accident site.¹³

About 5:25 a.m., the manager of rail operations arrived at the scene. Without checking in with the incident commander, he went directly to the yard office to obtain a copy of the train consist for train MPBHG.

¹² During the emergency, the manager of rail operations and the yardmaster communicated only by telephone. Afterward, neither could remember precisely the number or times of conversations they had.

¹³ The evacuation concentrated on areas to the south and southeast of the rail yard. Police dispatchers had already started to assemble a reverse 911 notification list at 5:04 a.m. At 5:35 a.m., the incident command recommended that nearby jail facilities shelter in place and at 7:15 a.m. ordered the evacuation of a convalescent center. By 8:44 a.m., the incident command ended further evacuations but maintained the evacuations then in place.

At 5:28 a.m., the fire department operations chief requested the train consist from on-scene UP personnel. Shortly afterward, the incident command directed the 911 dispatcher to contact the yard to obtain the train consist. However, with the yard tower evacuated, the dispatcher was unable to contact any of the UP personnel at the yard.

Working with the consist for train MPBHG, the manager of rail operations began a damage assessment of the yard. By 6:00 a.m., he had worked his way along train MPBHG from the head end and marked the printed train consist with the locations of the derailed cars. He told investigators that he had seen the propylene cars and determined that only one of them, car 19, was leaking and burning at one end. Once he completed his preliminary assessment of the yard and damages, he reported this information to UP headquarters.

At 7:15 a.m., the Texarkana emergency operations center coordinator, the incident commander, and the operations chief finally received the yard copy of the consist at the command post. No other information or assistance in interpreting the consist, such as the derailed car numbers or the manager of rail operations' damage assessment, was provided by the UP, nor did the incident commander request additional information.

When he received the consist, the fire department operations chief began to identify the tank cars containing hazardous materials that might be involved in the accident. Using binoculars and the train consist, he determined that the product in the burning tank car was propylene and that there were six additional loaded propylene tank cars. About 7:30 a.m., the fire department training chief and two firefighters (each using a self-contained breathing apparatus) entered the derailment site to assess the damage to all of the tank cars in the train, including the other six propylene tank cars. The training chief determined that there were no other leaks from any of the other cars.

Upon completion of the fire department's damage assessment, the incident commander ordered a water monitor (to cool the burning tank car without extinguishing the propylene flare on the end of the car) and a master stream (to cool a 6-inch natural gas line beside a burning trestle). Other fire suppression activities included extinguishing fires involving two houses and a nearby highway wooden bridge and putting out grass fires along the tracks. Fire department personnel also searched the two burning homes for additional victims.

About 10:30 a.m., the UP's contractor, the Center for Toxicology and Environmental Health, deployed air-monitoring equipment to evaluate the area surrounding the vinyl acetate tank cars. All readings later indicated that there were no leaks. Shortly afterward, additional UP contractors arrived, conducted a detailed assessment of the damaged tank cars, and developed a plan for removing those tank cars.

At 1:30 p.m., the incident commander and all the parties agreed to dispose of the propylene in the punctured tank car by allowing it to burn in place. About 2:00 p.m., the incident commander reduced the evacuation zone to the immediate area at the site and allowed people to return to their homes. By 6:30 p.m., all fire suppression activities were completed; the propylene from the tank car was allowed to continue to burn. By

10:30 p.m., wreck-clearing equipment raised one end of car 19 to drain the remaining propylene from the tank car. After the drained propylene was burned off and the tank car fire was extinguished, the emergency was concluded about 12:00 a.m. on October 16, 2005.

Emergency Preparedness

General guidance for hazardous material emergencies throughout the UP rail system was in the *UP Hazardous Materials Emergency Plan* dated October 15, 2000. The plan stipulated, in part, that local UP officials were to contact local emergency responders, meet emergency response personnel arriving at UP property, provide copies of shipping papers and emergency response information, and guide local emergency response personnel to an appropriate staging area.

Under the *UP Hazardous Materials Emergency Plan*, the UP Texarkana yard was identified as a site requiring a specific hazardous materials emergency response plan. The manager of rail operations stated that copies of the *UP Texarkana Yard Emergency Plan* were in his office, in the yardmaster tower, and on all bulletin boards. The *UP Texarkana Yard Emergency Plan* lists the actions to take in a hazardous materials emergency, the telephone numbers of local and area public agencies including hospitals, the UP emergency response personnel at corporate headquarters and in the Texarkana area, and the hazardous materials equipment resources in the yard.

The *UP Texarkana Yard Emergency Plan* requires a tabletop hazardous materials exercise every 5 years. The manager of rail operations stated that about 3 years ago, before he arrived in Texarkana, there was a simulated drill involving the fire department and the UP. Details of the scope of the exercises were not available, and no drills had been conducted since the manager of rail operations arrived. Before this accident, the UP had held some classes in Texarkana to familiarize first responders with the basics of rail tank cars.

With several railroads, major highways, pipelines, and chemical facilities in the greater Texarkana area, the city's hazardous materials response plan provides general guidance on policy and organizational responsibilities. In November 2005, Miller County, where Texarkana is located, conducted a multi-jurisdictional preparedness exercise that involved a simulated terrorist attack on a local rail yard; the training scenario also involved the release of chlorine from a tank car. Based on the lessons learned from the Texarkana accident and the training exercise, the city plans to have the entire fire department take technical hazardous materials responder training and to require hazardous materials awareness training for all the police and fire dispatchers in the communications center.

Damage

As a result of the collision, approximately 300 feet of track was disturbed. As a result of the fire, the railroad trestle was burned completely.¹⁴ Eight cars derailed on train MPBHG, one of which, a tank car, was destroyed. Four cars on the adjacent track maintenance train were also destroyed by the fire. Total equipment damage was \$325,975, and track damage was \$2,053,198.

Two houses (one vacant), a shed, and a nearby highway bridge were also destroyed by explosion and fire. At least three highway vehicles that were parked near the tracks were burned completely. Fire destroyed the rear tires of a semitrailer parked near Hobo Jungle Park. The fire also burned approximately 4 acres of grass, brush, and trees.

Personnel Information

The Missouri Pacific Railroad hired the engineer of train ZYCLD as a switchman on April 17, 1978. In 1980, he was promoted to conductor. In 1986, he became a UP employee when the UP acquired the Missouri Pacific Railroad. In 1992, he was promoted to engineer. He passed his last operating rules examination in July 2004.

The engineer had a total time on duty of 184 hours 24 minutes for the 28 days before the accident. In that period, he had worked approximately 17 days, with an average of 10 hours 51 minutes on duty per shift. He had been off duty for 44 hours 5 minutes before he went on duty on October 14, 2005.

The conductor of train ZYCLD was hired by the Missouri Pacific Railroad as a brakeman on March 25, 1971, and he was promoted to conductor on September 1, 1975. Like the engineer, he became a UP employee in 1986. He passed his most recent operating rules examination in November 2004.

The conductor had a total time on duty of 135 hours 35 minutes for the 28 days before the accident. He worked off the extra board¹⁵ and had worked 11 days during the first half of October. He was averaging 10 hours 26 minutes per day on duty and had been off duty for 17 hours before he went on duty on October 14, 2005.

The train crew was experienced and qualified on the territory. After the accident, both crewmembers of the striking train were toxicologically tested as required by 49 *Code of Federal Regulations* Part 219. The test results showed no evidence of any impairing substances.

¹⁴ At the time of the accident, the wooden trestle, built in 1947, was scheduled for replacement. Within 3 days after the accident, the UP was preparing pilings for the replacement bridge.

¹⁵ The *extra board* is a pool of employees not assigned to regular runs who may be assigned to train crews to fill vacancies when regular employees take days off or are on vacation.

Equipment

Train ZYCLD originated in Chicago, Illinois, on October 13, 2005. The train received a Class I mechanical inspection and an initial terminal air brake test before departure. No mechanical defects were reported. The train received an additional Class I mechanical inspection and a Class IA 1,000-mile air brake inspection at Pine Bluff, Arkansas, on October 14, 2005. No mechanical defects were reported. Air brake leakage was recorded at 40 cubic feet per minute, which falls within the requirements of the FRA. No mechanical defects were reported during the trip from Pine Bluff to Texarkana. The locomotive engineer stated that the train had handled as anticipated during acceleration and deceleration.

Operations Information

At the time of the accident, the general written instructions covering these train movements were in the General Code of Operating Rules (GCOR), Fifth Edition, effective April 3, 2005. Supplementing the GCOR was the UP's North Little Rock Area Timetable No. 2, effective June 3, 2001, and the revised Special Instructions, effective April 3, 2005.

Train movements on the Pine Bluff Subdivision of the North Little Rock Area of the UP were authorized by a train dispatcher in Omaha, Nebraska, using a centralized traffic control system. However, just before trains reached Texarkana, at MP 416.4 they left the controlled territory and entered nonsignaled yard limits. Trains operating within rail yard limits, as in this accident, are required by the operating rules to be operated at restricted speed to prevent collisions.

UP Oversight of Operating Rules Compliance

One of the methods the UP used to monitor the effectiveness of and compliance with its operating rules was to conduct compliance field audits, called efficiency tests in the railroad industry. As required by Title 49 *Code of Federal Regulations* Part 217, this operational testing program and the results of the program were available for review by the FRA.

In the 365 days before the accident, railroad supervisors had observed the engineer of train ZYCLD on 10 different occasions. The supervisors noted 30 individual operating or safety rules that the engineer followed. The tests indicated no failures. On two occasions the engineer was observed complying with the restricted speed rule.

In the 365 days before the accident, railroad supervisors had observed the conductor of train ZYCLD on 24 separate occasions. The supervisors recorded only one failure, which was not related to operating at restricted speed. The conductor demonstrated proper rules compliance on the other 23 occasions, including 1 occurrence of complying with the restricted speed rule.

Since the accident, the UP has provided the Safety Board with information about several measures that it has taken to reduce collisions at restricted speed. At Texarkana, the UP installed a signalized traffic control system on the main track through the yard. The UP removed yard limits at 28 locations by adding signalized control systems or track warrant controls and plans to eliminate yard limits at 121 additional locations. In addition, operational testing of train crews by supervisors has been improved, and the use of a red flag to stop trains while operating at restricted speed has been emphasized. As a result of these changes, there have been only three restricted speed collisions during the first 6 months of 2006. There were 12 restricted speed collisions in 2005.

Sight-Distance Tests

Investigators conducted sight-distance tests to investigate what the train ZYCLD crew would have been able to see at varying distances at the time of the accident. On October 17, 2005, investigators conducted reenactments between 4:45 a.m. and 5:45 a.m. with the same level of darkness before sunrise as on the day of the accident. The UP provided a locomotive similar to the locomotive on train ZYCLD and placed similar cars at the same locations as in the struck train.

The first test was performed with the headlights on bright and the ditch lights turned off, as on the accident train. The end-of-train device on the parked train was illuminated. Visibility from the engineer's seat was 3,272 feet, and from the conductor's seat it was 3,228 feet. This test was performed a second time without the end-of-train device illuminated and with the flashing lights at the grade crossing activated. The visible distances were the same. The calculated stopping distance was approximately 1,500 feet at 20 mph.

Postaccident Emergency Response Actions

On October 25, 2005, the Texarkana Office of Emergency Management conducted a postaccident debriefing with all of the responding agencies, including the UP. Following this meeting, the Office of Emergency Management prepared a report containing recommendations addressing the lessons learned in this accident. The report identified specific problems that occurred during the incident in which communications broke down between the police and fire dispatchers and the UP tower. For example, initial observations of a vapor cloud and chemical odor by the responding police units were not passed by the dispatchers to the responding fire units, a dispatcher put the yardmaster on hold to answer other 911 calls, and the dispatchers were told to recall off-duty police department personnel during a time when the number of 911 calls was extremely high. In response to the findings in the report, the city of Texarkana has modified its communications center protocols for dispatcher assignments and hazardous materials training and has revised its communications center protocols for recalling off-duty personnel.

In response to Texarkana's requests following this accident, the UP provided in March 2006 the UP *Hazardous Materials Emergency Plan*, dated October 15, 2000. Furthermore, the UP has assured Texarkana that the UP Risk Management Communications Center in Omaha, Nebraska, will immediately provide on-line train consists in emergencies.

Probable Cause

The National Transportation Safety Board determines that the probable cause of the October 15, 2005, collision of Union Pacific Railroad train ZYCLD 13 with Union Pacific Railroad train MPBHG 15 in Texarkana, Arkansas, was the failure of the crew of train ZYCLD 13 to remain attentive and alert and thereby able to stop short of an observable standing train. Contributing to the severity of the accident was the puncture of a tank car during the collision, which resulted in the release of propylene and a fire.

Recommendations

As a result of its investigation of the Texarkana, Arkansas, railroad accident, the National Transportation Safety Board makes the safety recommendations listed below. For more information about these recommendations, see the safety recommendation letters¹⁶ to the recipients.

To the city of Texarkana:

Coordinate with all regional and local transporters of hazardous materials, such as railroads and trucking companies, to establish effective communications and response plans and conduct periodic joint emergency response drills and exercises. (I-06-01)

To the Union Pacific Railroad:

Implement measures to ensure that all of your field personnel understand and comply with your procedures for responding to hazardous materials incidents, with particular emphasis on timely notifications and appropriate coordination with local emergency responders. (R-06-23)

To the International Association of Fire Chiefs:

Notify your members about the circumstances of the accident in Texarkana, Arkansas, on October 15, 2005, and urge them to coordinate with all regional and local transporters of hazardous materials, such as railroads and trucking companies, to establish effective communications and coordination through joint emergency response drills and exercises. (I-06-02)

To the Association of American Railroads and the American Short Line and Regional Railroad Association:

Notify your members about the circumstances of the accident in Texarkana, Arkansas, on October 15, 2005, and urge them to coordinate with all communities adjacent to their railroad yards and along their hazardous materials routes to establish effective communications and coordination through joint emergency response drills and exercises. (R-06-18)

¹⁶ These letters are available on the National Transportation Safety Board's web site.

BY THE NATIONAL TRANSPORTATION SAFETY BOARD

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