



National Transportation Safety Board
Washington, DC 20594

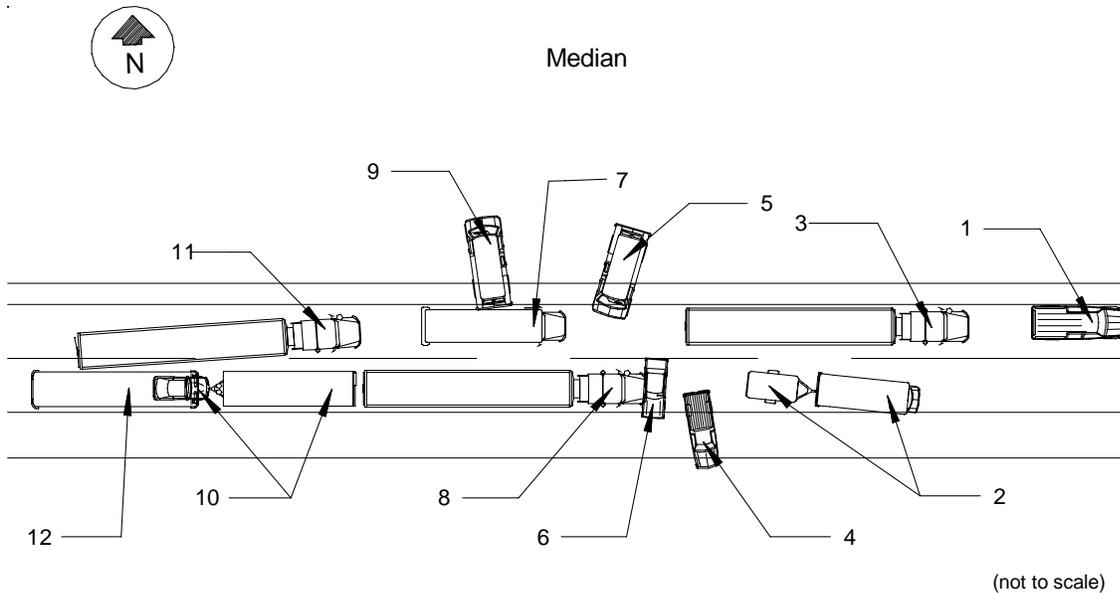
Highway Accident Brief

Accident No.: HWY-02-FH-012
Accident Type: Multiple-vehicle collision and fire
Location: Interstate Highway 40, eastbound at milepost 290.7
Cuervo, New Mexico
Date and Time March 8, 2002, 1:18 p.m.
Vehicles: 3 truck tractor-semitrailers
2 straight trucks
1 pickup truck
4 passenger vehicles
1 school bus
1 motor home
Owners/Operators: U.S. Express LSG, Inc.
Kurtz Trucking Ltd.
Zimmerman Truck Lines, Inc.
Atlanta Peach Movers, Inc.
Fatalities/Injuries: 7 fatalities
3 serious and 13 minor injuries

Accident Description

On March 8, 2002, about 1:18 p.m., a Union Pacific Railroad (UP) work crew was replacing rail near the town of Cuervo, New Mexico. Open-flame track-mounted torches were being used to heat the new rail before attaching it to crossties. As the work crew proceeded eastbound on the track, a smoldering railroad crosstie ignited a large, fast-moving brush fire. High winds drove the fire and smoke in a southeasterly direction toward Interstate 40 (I-40). The smoke eventually blew across the highway, reducing visibility in all four lanes. Twelve vehicles on the roadway collided, resulting in 7 fatalities, 3 serious injuries, and 13 minor injuries. (See figure 1.)

I-40 is a four-lane rural principal arterial highway, which runs parallel to the rail track and is located 7/10 mile to the south. An 80-foot-wide grassy median separates the two eastbound and two westbound lanes of I-40; the posted speed limit is 75 mph. According to witnesses and drivers on I-40, the density of the smoke varied along the highway. An eastbound 1999 Jeep sport utility vehicle and a 1989 U-haul straight truck towing a passenger car drove into the smoke near milepost (MP) 290.7, where—according to one driver—both vehicles slowed because of reduced visibility. A 1999 Kenworth truck tractor-semi-trailer, owned by Kurtz Trucking Ltd. (Kurtz), and traveling behind the slower moving U-haul truck and Jeep, entered the area of thickened smoke and collided with both vehicles. The Kurtz truck then stopped in the right lane, partially blocking the left lane. The ensuing fire engulfed all three vehicles.



Key:	
1. 1999 Jeep	7. 1999 International straight truck (Atlanta Peach)
2. 1989 U-Haul straight truck towing car	8. 2001 Freightliner truck tractor-semi-trailer (U.S. Express)
3. 1999 Kenworth truck tractor-semi-trailer (Kurtz)	9. 1988 Plymouth van
4. 1992 GMC pickup truck	10. 1994 motor home towing 1990 Suzuki
5. 2001 GMC van	11. 1999 International truck tractor-semi-trailer (Zimmerman)
6. 1999 Buick sedan	12. 1989 Blue Bird school bus

Figure 1. Accident scene eastbound.

Subsequent collisions occurred as other eastbound vehicles entered the smoke and struck the wreckage. The additional vehicles included a 1992 General Motors Corporation (GMC) pickup truck; a 2001 GMC van; a 1999 Buick sedan; a 1999 International straight truck, owned by Atlanta Peach Movers; a 2001 Freightliner truck tractor-semi-trailer, owned by U.S. Express; a 1988 Plymouth van; a 1994 motor home and a 1990 Suzuki (towed); a 1999 International truck tractor-semi-trailer, owned by Zimmerman Truck Lines; and a 1989 Blue Bird Corporation school bus, operated by the Logan Municipal School District, New Mexico.

Rail Replacement Operations

The UP work crew, consisting of 108 workers, was replacing the rails over several miles of track, an operation that was scheduled to take more than a week. The process involved using 63 rail relay-type machines to remove old rail and replace it with new continuous-welded rail. Additionally, several support trucks, water trucks, and fire extinguishers equipped with both foam retardant and water were present. The rail replacement operation involved removing the track and rail; buffing the old tie for a smoother tie plate placement; placing the new rail; heating the rail, cutting excess rail, and welding; grinding the welded area; anchoring and spiking the rail; tamping the track; and establishing the correct rail geometry.

The UP foreman said that the crew took the routine precaution of having fire extinguishers at the ready when performing the grinding and welding operations, which normally produce sparks. The work crew members reported that during the morning hours, they extinguished several small fires that consumed brush and rail ties.

Meteorology

On March 8, the National Weather Service issued a weather advisory indicating that high winds were expected throughout the day and into the evening hours. Wind speeds of 25 to 35 mph were predicted, and wind gusts of up to 50 mph were also forecast. Witnesses described wind conditions as ranging from “mild” to “very strong,” and all witnesses agreed that the wind was very strong by noon. Although they could not estimate wind speed, some witnesses stated that they had to take precautions to avoid being blown off their feet.

Management Oversight

On the morning of the accident, the UP work foreman held a routine crew meeting before starting work. According to the foreman, the meeting focused on safety-related issues, rules of the day, and special circumstances. The foreman described the morning as “breezy,” but indicated that he did not mention the windy conditions during the meeting.

UP management stated that all members of rail work crews receive UP pamphlets annually. The pamphlets provide general fire suppression information, including the classes of various fires and techniques for spraying water or chemicals at the base of a fire. UP officials stated that this particular work crew was equipped with shovels for firefighting and with various sources of water, but that they were not trained to fight large brush fires.

At the time of the accident, UP had no formal risk assessment policy that addressed all fire-related issues affecting the rail replacement operation. UP representatives indicated that they rely on the crew foreman to make decisions regarding fire hazards on the job site. According to UP management, at the time of the accident, the company restricted rail-grinding procedures in windy conditions but had no written policy to this effect. On August 1, 2003—about 15 months after the Cuervo accident—the UP Engineering Department issued a “Fire Prevention Plan” to prevent loss of life, property, and natural resources and “to prevent disruption of train operations as the result of fires caused by the work activities of Union Pacific’s engineering employees.” The plan contains guidelines for job briefings and fire control measures, including specific instructions for welding, grinding, and cutting operations.

Probable Cause

The National Transportation Safety Board determines that the probable cause of this accident was the work crew foreman's failure to consider the effects of high winds on the open-flame rail replacement activity. Contributing to the accident was the lack of specific guidance for the work crew on the fire hazards of welding, grinding, or cutting operations. The failure of the motorists to slow their vehicles sufficiently as they entered the area of reduced visibility contributed to the severity of the accident.

Adopted: March 7, 2005