

NATIONAL TRANSPORTATION SAFETY BOARD
Public Meeting of November 28, 2017
(Information subject to editing)

Agricultural Labor Bus and Truck-Tractor Collision
at US-98–SR-363 Intersection
Near St. Marks, Florida
July 2, 2016
NTSB/HAR-17/XX

This is a synopsis from the NTSB's report and does not include the Board's rationale for the conclusions, probable cause, and safety recommendations. NTSB staff is currently making final revisions to the report from which the attached conclusions and safety recommendations have been extracted. The final report and pertinent safety recommendation letters will be distributed to recommendation recipients as soon as possible. The attached information is subject to further review and editing to reflect changes adopted during the Board meeting.

Executive Summary

On Saturday, July 2, 2016, about 5:16 a.m., a 1979 Blue Bird bus, operated by Billy R. Evans Harvesting, Inc., of Belle Glade, Florida, was traveling south on State Road 363 (SR-363), near St. Marks, Florida. The bus was occupied by a 56-year-old driver and 33 passengers, most of whom were migrant agricultural (AG) workers. As the bus driver approached the US Highway 98 (US-98) intersection, he did not stop at the stop sign and overhead flashing red traffic control beacon, entered the intersection, and was struck by a westbound 2005 Freightliner truck-tractor in combination with an enclosed semitrailer. The truck-tractor—occupied by a 55-year-old driver and a passenger—was operated by Verity Van Lines, Inc., of Seaford, New York. An overhead flashing yellow traffic control beacon controlled westbound traffic on US-98 at the intersection.

The front of the truck-tractor struck the left side of the bus slightly behind its front axle, resulting in the rapid counterclockwise rotation of the truck-tractor and the breach of its right side-mounted diesel fuel tank—which ignited a fire. The front of the semitrailer then struck the left side of the bus near its rear wheel area as both vehicles proceeded toward the southwest corner of the intersection. Prior to coming to rest, the vehicles collided with fixed roadside objects, including a utility pole and its supporting cables. As a result of the crash, the truck driver and three bus passengers died. The bus driver, 28 bus passengers, and a passenger in the sleeper berth of the truck sustained injuries of varying degrees.

This crash investigation—along with supporting NTSB investigations in Little Rock, Arkansas, and Ruther Glen, Virginia—identified the following safety issues:

- ***Transportation of AG workers:*** Although many federal and state regulations require the safe transportation of AG workers, motor carriers and farm labor contractors often transport workers in unsafe vehicles and without properly qualified and rested drivers. Federal and state agencies have been ineffective in deterring unsafe operations.

- ***Intersection safety:*** The crash occurred during a repaving project. The roadway had been resurfaced, milled, and repainted, but the raised transverse rumble strips located in advance of the intersection had not yet been reinstalled. Although the Florida Department of Transportation had taken steps to improve the safety of the US-98-SR-363 intersection prior to the crash, it was not using the full complement of intersection safety treatments available.
- ***Heavy truck fuel tank integrity:*** The truck-tractor's right side-mounted fuel tank was compromised during the collision sequence, and a postcrash fire ensued. The location of the tank beneath the truck cab and outside the frame rail made it vulnerable to impact forces and structural failure. Additionally, the lack of protective shielding and the tank's aluminum construction increased its susceptibility to being breached.
- ***Occupant protection:*** Because the truck driver was unrestrained during the collision sequence, he sustained impact injuries that prevented him from exiting the vehicle before it was consumed by the postcrash fire. Proper use of the available lap and shoulder belt would have mitigated the impact forces he experienced and likely reduced his level of injury.

Findings

1. None of the following were factors in the crash: (1) driver qualifications to drive a commercial motor vehicle, (2) driver distractions due to cell phone use, (3) medical condition of either driver, (4) bus driver impairment by alcohol or other drugs, (5) truck driver fatigue, (6) mechanical condition of either vehicle, (7) truck motor carrier operations, or (8) weather.
2. Although ethanol was detected in the truck driver's liver and kidney tissue specimens, it is possible that its presence is the result of postmortem production of ethanol.
3. The emergency response and fire suppression efforts were timely and effective.
4. The bus driver failed to stop at the US Highway 98–State Road 363 intersection, which is controlled by a stop sign and a flashing red traffic control beacon, and proceeded directly into the path of the truck-tractor.
5. Because of the limited sight distance available to the truck driver on his approach to the intersection, he did not have sufficient time to react and take evasive action prior to colliding with the bus.
6. The bus driver's approach to the intersection provided sufficient visual cues and positive traffic control information for an attentive and alert driver to have recognized the intersection and the requirement to stop.
7. The bus driver was unfamiliar with the roadway environment and unaware that his route of travel on State Road 363 was not taking him to his intended destination.

8. The effects of fatigue caused by acute sleep deprivation and circadian factors likely contributed to the bus driver's lack of response to visual cues indicating the required stop at the intersection.
9. Billy R. Evans Harvesting, Inc., failed to follow adequate safety practices and to exercise oversight of its drivers and vehicles.
10. Driver fatigue and the failure of the motor carriers to follow adequate safety practices were key factors in both the Little Rock, Arkansas, and Ruther Glen, Virginia, crashes.
11. The Federal Motor Carrier Safety Administration missed the opportunity provided by the new entrant safety assurance program to ensure that Billy R. Evans Harvesting, Inc., had a programmatic commitment to safety, and the carrier entered the agricultural worker transportation industry without demonstrating an understanding of its safety responsibilities.
12. The US Department of Labor–Wage and Hour Division failed to conduct adequate oversight of Billy R. Evans Harvesting, Inc., operations prior to the crash and likely has insufficient resources, trained investigators, or proactive strategies to adequately ensure the safe transportation of migrant workers.
13. The Federal Motor Carrier Safety Administration and the US Department of Labor–Wage and Hour Division do not routinely collaborate regarding enforcement responsibilities and operations, nor have processes been established for the delivery of safety-critical information related to at-risk agricultural worker transportation carriers.
14. Targeted roadside enforcement campaigns in agricultural areas during peak harvest seasons can be effective in removing unsafe farm labor vehicles and drivers from the roadways.
15. Some motor carriers and farm labor contractors do not manage the fatigue of company drivers transporting agricultural workers, thereby placing workers—and the motoring public—at an unnecessary risk of being injured in a crash.
16. Many states and local jurisdictions have developed programs to improve transportation safety for migrant agricultural workers, and the sharing of best practices would improve safety across the country.
17. Both the American Bus Association and the United Motorcoach Association are in a unique position to provide safe transportation services through outreach and engagement with agricultural employers, farm labor contractors, and the migrant worker population.
18. Had the Florida Department of Transportation reinstalled the transverse rumble strips before the crash or used temporary transverse rumble strips as an interim measure, the strips may have alerted the bus driver of his approach to the stop-controlled intersection ahead.
19. Although the Florida Department of Transportation has taken steps to improve the safety of the US Highway 98–State Road 363 intersection, numerous other countermeasures are available to reduce crashes at the intersection.

20. A safe system approach that incorporates the systemic application of roadway engineering countermeasures can reduce crashes at unsignalized intersections, and transportation agencies would benefit from increased exposure to the *Unsignalized Intersection Improvement Guide* and other similar resources.
21. The structural failure of the truck-tractor's right side-mounted fuel tank caused a dispersal of diesel fuel and initiated a postcrash fire, which resulted in fatal injuries to the truck driver.
22. Because of the construction and location of truck-tractor side-mounted fuel tanks, they are vulnerable to being compromised in a collision, and additional fuel tank integrity standards are needed.
23. Had the truck driver been properly restrained by the available lap and shoulder belt, he would have remained in his seat during the crash sequence and likely avoided the injuries that prevented him from exiting the vehicle before the fire spread to the interior of the cab.
24. The blunt force injuries sustained by the three fatally injured passengers in the bus, as well as the serious injuries to 14 passengers, were most likely related to the occupant seating locations in the area of direct impact and intrusion.

PROBABLE CAUSE

The National Transportation Safety Board determines that the probable cause of the St. Marks, Florida, crash was the bus driver's failure to stop at the intersection due to inattention, likely caused by the effects of fatigue; and his unfamiliarity with the rural roadway, which was dark with limited lighting. Contributing to the crash were the failure of Billy R. Evans Harvesting, Inc., to exercise adequate safety oversight of the bus driver and the lack of effective oversight of the motor carrier by the Federal Motor Carrier Safety Administration and the US Department of Labor. Contributing to the severity of the injuries were the rupture of the truck's right side-mounted diesel fuel tank, leading to a fast-spreading postcrash fire; and the failure of the truck driver to wear his lap and shoulder belt.

RECOMMENDATIONS

New Recommendations

The NTSB makes new safety recommendations to the US Department of Labor, Federal Motor Carrier Safety Administration (FMCSA), National Highway Traffic Safety Administration, Florida Department of Transportation, SAE International, American Association of State Highway and Transportation Officials, National Association of Counties, National Association of County Engineers, National League of Cities, National Association of Towns and Townships, Institute of Transportation Engineers, American Traffic Safety Services Association, American Society of Highway Engineers, American Society of Civil Engineers, American Bus Association, and United Motorcoach Association. The NTSB also reiterates one safety recommendation to the FMCSA and

one to the state of Florida, and reiterates and changes the classification of one recommendation to the FMCSA.

To the US Department of Labor:

1. Audit the Wage and Hour Division oversight processes related to the safe transportation of migrant workers to determine, at minimum, if adequate resources are available to enforce the motor vehicle safety provisions of the Migrant and Seasonal Agricultural Worker Protection Act; if investigators are sufficiently trained to enforce transportation-related regulations; and if additional data-driven strategies are available to better focus limited enforcement resources. Once the audit is complete, require the Wage and Hour Division to resolve any identified issues.
2. Work with the Federal Motor Carrier Safety Administration to outline enforcement responsibilities and to establish a process for the routine sharing of safety-critical information, such as safety measurement system data, compliance review results, and new entrant safety audit information.
3. Develop and disseminate guidelines and training material for agricultural employers and farm labor contractors on the dangers of driving while tired and on strategies for managing driver fatigue.
4. Work with the Federal Motor Carrier Safety Administration to develop and disseminate guidelines for state oversight agencies on how to improve transportation safety for migrant and seasonal agricultural workers. These guidelines should include, at minimum, an overview of regulatory responsibilities, strategies for enhanced inspection and enforcement, suggestions for effective outreach and educational campaigns, and options for alternative transportation services.

To the Federal Motor Carrier Safety Administration:

5. Work with the US Department of Labor to outline enforcement responsibilities and to establish a process for the routine sharing of safety-critical information, such as safety measurement system data, compliance review results, and new entrant safety audit information.
6. Develop and implement a data-driven targeted enforcement plan, in collaboration with state Motor Carrier Safety Assistance Program partners, that incorporates recurring targeted roadside enforcement efforts in high-density agricultural regions during peak harvest seasons.
7. Work with the US Department of Labor to develop and disseminate guidelines for state oversight agencies on how to improve transportation safety for migrant and seasonal agricultural workers. These guidelines should include, at minimum, an overview of regulatory responsibilities, strategies for enhanced inspection and enforcement, suggestions for effective outreach and educational campaigns, and options for alternative transportation services.

8. Work with SAE International and the National Highway Traffic Safety Administration to improve truck-tractor side-mounted fuel tank crashworthiness to prevent catastrophic tank ruptures and limit postcollision fuel spillage, and develop and promulgate an updated standard.

To the National Highway Traffic Safety Administration:

9. Work with SAE International and the Federal Motor Carrier Safety Administration to improve truck-tractor side-mounted fuel tank crashworthiness to prevent catastrophic tank ruptures and limit postcollision fuel spillage, and develop and promulgate an updated standard.

To the Florida Department of Transportation:

10. Revise your *Standard Specifications for Road and Bridge Construction* to include guidance on the timely reinstallation of permanent transverse rumble strips during construction projects or the use of an alternative safety treatment, such as temporary rumble strips, as an interim measure.
11. Conduct an intersection safety analysis at the US Highway 98–State Road 363 intersection; and, if deficiencies are identified, implement safety enhancements.

To SAE International:

12. Work with the National Highway Traffic Safety Administration and the Federal Motor Carrier Safety Administration to improve truck-tractor side-mounted fuel tank crashworthiness to prevent catastrophic tank ruptures and limit post collision fuel spillage, and develop and promulgate an updated standard.

To the American Association of State Highway and Transportation Officials, National Association of Counties, National Association of County Engineers, National League of Cities, National Association of Towns and Townships, Institute of Transportation Engineers, American Traffic Safety Services Association, American Society of Highway Engineers, and American Society of Civil Engineers:

13. Through media and outreach campaigns, inform your members of the prevalence of fatal crashes and serious injuries at unsignalized intersections; encourage them to use a safe system approach that incorporates the systemic application of roadway engineering countermeasures; and increase their awareness of available resources, such as the *Unsignalized Intersection Improvement Guide*, to reduce intersection crashes.

To the American Bus Association and United Motorcoach Association:

14. Initiate an outreach campaign to agricultural employers, farm labor contractors, and the migrant worker community to offer access to safe, reliable, and authorized motor carriers to meet their transportation needs.

Previously Issued Recommendations Reiterated in This Report

As a result of its investigation, the National Transportation Safety Board reiterates the following safety recommendations.

To the Federal Motor Carrier Safety Administration:

As a component of your new entrant safety audits, review with each new entrant motor carrier a structured process, such as the Safety Management Cycle, to (1) identify the root cause of safety risks and (2) maintain an effective safety assurance program. (H-12-31)

To the State of Florida:

Enact legislation that provides for primary enforcement of a mandatory seat belt use law for all vehicle seating positions equipped with a passenger restraint system. (H-15-42)

Previously Issued Recommendation Reiterated and Reclassified in This Report

As a result of this investigation, the National Transportation Safety Board reiterates the following recommendation.

To the Federal Motor Carrier Safety Administration:

Require all new motor carriers seeking operating authority to demonstrate their safety fitness prior to obtaining new entrant operating authority by, at a minimum: (1) passing an examination demonstrating their knowledge of the *Federal Motor Carrier Safety Regulations*; (2) submitting a comprehensive plan documenting that the motor carrier has management systems in place to ensure compliance with the *Federal Motor Carrier Safety Regulations*; and (3) passing a Federal Motor Carrier Safety Administration safety audit, including vehicle inspections. (H-03-2)

In addition, Safety Recommendation H-03-2 is reclassified “Open—Unacceptable Response” in section 2.4.3.1 of this report.