



# National Transportation Safety Board

Washington, D.C. 20594

## Safety Recommendation

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Date: OCT 7, 1999

In reply refer to: R-99-53

Honorable Jolene M. Molitoris  
Administrator  
Federal Railroad Administration  
400 Seventh Street, S.W.  
Washington, D.C. 20590

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About 2:15 a.m., July 2, 1997, westbound Union Pacific Railroad (UP) freight train NP-01, operating on a siding track, proceeded past a wayside stop signal at the end of the siding and collided with the side of eastbound UP freight train ME-29, which was operating on a mainline track on the UP railroad near Delia, Kansas.<sup>1</sup> The NP-01 train engineer was killed, and the NP-01 train conductor sustained minor injuries.

Based on its investigative findings, the National Transportation Safety Board determined that the engineer of the striking train probably fell asleep sometime after his train entered the siding. When he failed to dim his train's headlight, the operating crew of the on-coming train responded by flashing their train's headlight and repeatedly attempting to contact him by radio. However, he did not respond at all to the repeated radio calls and did not respond timely to the flashing headlight beam. He possibly awoke upon hearing the eastbound train's horn sounding and dimmed his train lights in reaction to meeting an oncoming train, but was either not sufficiently alert or too startled or disoriented to realize that he needed to apply the brakes.

The lead locomotive unit of the striking train in this accident was not equipped with an alerter or alertness device to help the crew maintain vigilance.

Computer-aided dispatching records show the striking train took 9 minutes 24 seconds to cover the distance between the control point signal at the entry to the siding and the signal at the end of the siding. If the NP-01 cab had been equipped with an alerter, depending on the set timing intervals of the device and the time that the engineer began to fall asleep, the device may have sensed a lack of movement and awakened him sooner, which may have enabled him to stop the train or at least avoid being fatally injured. The Safety Board concluded that had the striking locomotive been equipped with an alerter, it may have helped the engineer stay awake while his train traveled through the siding.

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<sup>1</sup> For additional information, read *Collision between Union Pacific Freight Trains MKSNP-01 and ZSEME-29 near Delia, Kansas, July 2, 1997*, Railroad Accident Report NTSB/RAR-99/04 (Washington, D.C.: National Transportation Safety Board 1999).

As a result of its investigation of the collision of two Norfolk Southern freight trains near Sugar Valley, Georgia, on August 9, 1990, the Safety Board issued Safety Recommendation R-91-26, urging that the FRA, in conjunction with the fatigue study of train crewmembers, explore the parameters of an optimum alerter system for locomotives. In an August 12, 1997, response to the recommendation, the Administrator stated that the FRA had initiated research to develop a retrofit for existing alerters to negate the ability of locomotive engineers to reset them while dozing and had approved funding for a prototype and testing. However, the contractor subsequently had withdrawn its proposal, citing the lack of a market for the technology, based on the advent of positive train separation (PTS) systems. The Administrator further stated:

The FRA has initiated a major project involving rail labor and management to attack the root cause of the fatigue issue....In addition, we are making major strides toward the implementation of a PTS system. These activities address the core issues in the 1990 accident and recommendation 91-26. Our work has superseded the need for the action in recommendation 91-26 and we have decided not to allocate further scarce resources to it. I ask the NTSB to reconsider the recommendation and close it based on our alternative action to address its intent.

On November 4, 1997, the Safety Board responded:

While we applaud the FRA's rail labor and management project, the Safety Board continues to believe that a successful countermeasure to fatigue in the transportation workplace is an optimum alerter system that cannot be reset by reflex action. For the foreseeable future, the implementation of PTS will not be so widespread as to negate the need for such an alerter on locomotives. Since the FRA has declined to act on this recommendation and requested closure, the Safety Board has classified Safety Recommendation R-91-26 "Closed—Unacceptable Action."

The Safety Board still believes that the FRA should revise these Federal regulations.

The Safety Board therefore recommends that the Federal Railroad Administration:

Revise the Federal regulations to require that all locomotives operating on lines that do not have a positive train separation system be equipped with a cognitive alerter system that cannot be reset by reflex action. (R-99-53)

Also, the Safety Board issued safety recommendations to the Union Pacific Railroad, the Brotherhood of Locomotive Engineers, and the United Transportation Union.

The Safety Board is 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 Recommendation R-99-53 in your reply. If you have any questions, you may call (202) 314-6436.

Chairman HALL, Vice Chairman FRANCIS, and Members HAMMERSCHMIDT, GOGLIA, and BLACK concurred in this recommendation.

By: Jim Hall  
Chairman