



# National Transportation Safety Board

Washington, D. C. 20594

## Safety Recommendation

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Date: May 17, 1991

In reply refer to: R-91-09

Mr. Harry Lombardo  
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Transport Workers Union  
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At 0821 on March 7, 1990, westbound Southeastern Pennsylvania Transportation Authority (SEPTA) Market-Frankford Subway Elevated (MFSE) train 61 derailed in a tunnel 238 feet west of the 30th Street station platform in Philadelphia, Pennsylvania.

Train 61 had 2 crewmembers and about 180 passengers aboard when the derailment occurred. Extensive car damage, together with darkness, cramped wreckage conditions, and debris in the tunnel complicated rescue efforts that took about 5 hours to complete. Four passengers were killed, and 158 were injured. One crewmember and a firefighter sustained minor injuries. Damage to the equipment and track was estimated by SEPTA to have been about \$2 million.<sup>1</sup>

Postaccident inspection of the track and switch 7E at the 30th Street station revealed no deficiencies in the track structure that were causal to this accident. The extent of crashworthiness was not, as a practical matter, a factor in the severity of this accident. Also, the train crew complied with SEPTA rules in operating train 61.

After leaving the 30th Street platform, train 61 continued to travel west to a remote-controlled interlocking switch (7E) that was 238 feet from the platform. The first two cars proceeded through the switch and remained on the rails. At the same time, the No. 2 traction motor on the A end of the third car dropped to the track, striking the ties. It passed over the switch, damaging the switch mechanism. The third car and the lead truck of the fourth car continued over the damaged switch and remained on the track. But the traction-motor had bent the switch points to the open position, allowing the rear truck of the fourth car to be diverted. The body of

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<sup>1</sup>For more detailed information, read Railroad Accident Report--"Derailment of Southeastern Pennsylvania Transportation Authority (SEPTA) Commuter Train 61, Philadelphia, Pennsylvania March 7, 1990," (NTSB/RAR-91/01)

the fourth car was directed sideways as westbound movement continued until the car derailed and struck the steel H-columns between the eastbound and westbound right-of-ways. The side of the car struck the columns, which penetrated 30 feet into the car, resulting in injuries and fatalities. The lead truck of the fifth car derailed in the crossover switch as it followed the fourth car. The sixth car derailed but remained coupled to the fifth car.

Based on the available evidence, the motorman's performance was not a factor in the accident. The passengers and other SEPTA employees did not see the motorman behave in an unusual way either before the accident or during the emergency response and evacuation. Eyewitnesses stated that there was no warning before the accident. A statement from a towerman about a 1975 incident in which a motor separated entirely from a SEPTA subway car also indicated motor separation could occur without any warning to the motorman. However, this incident could not be located in SEPTA records.

Postaccident toxicological testing showed high concentrations of cocaine and the metabolite of cocaine in the motorman's urine specimen. While not causal to this accident, the levels suggest that the motorman was a frequent or heavy user of cocaine, that this level of use was not a new practice, and that this use may be associated with the motorman's absenteeism problem.

Although we do not have conclusive evidence that the motorman was under the influence of cocaine at the time of the accident, it is troubling that this motorman was apparently operating trains for some time while using cocaine. In this case and undoubtedly in most circumstances, the accident sequence developed quickly, leaving little possibility that the motorman could have known of the failure until it occurred. Thus, the motorman had little time to respond. Nevertheless, no matter what scenario develops, the motorman must be alert, possess good judgment, and be prepared to respond quickly to a myriad of situations presented to him in the conduct of his duties. Indeed, in many accident situations, the severity can well depend on the ability of an operator to respond to emergencies.

SEPTA had an active drug testing program that included preemployment, random, reasonable suspicion, and postaccident testing. It was one of the first and most comprehensive programs in the transit industry. According to testimony at the public hearing, SEPTA began drug testing in September 1985 and added random testing in September 1989. Its random testing program was among the first in the transit industry. However, the accident motorman had not been tested for drugs before the accident because the SEPTA program was relatively new. The motorman was hired before SEPTA had preemployment screening, and he had experienced no other accidents that would have qualified him for postaccident testing. In addition, his long absences occurred after the return-to-work testing requirement had been struck down in court. At the time of the accident, the random testing program had been in effect for 6 months; and no more than 20 percent of the employees had been tested.

Furthermore, the MFSE assistant general manager was a passenger on train 61 on the accident morning and stated that he spoke briefly to the motorman. Such senior managers are an important part of the drug program, since reasonable suspicion testing is performed when a supervisor trained in the detection of drug and alcohol use recognizes and substantiates specific behavioral, performance, or physical indicators of probable drug or alcohol use. This assistant general manager had received 4 hours of substance-abuse training from the SEPTA office of safety and

training. However, cocaine can be very difficult to detect, especially during a brief encounter.

Although the motorman's record showed that his attendance had been so poor that he had been disciplined, he had never been tested for cause based on his performance record. As determined by union agreement, discipline is based on the number of work days an employee misses. In 1984 the motorman had received an "involuntary termination" for substandard attendance. He had been suspended once in 1988 and twice in 1989 for substandard attendance and for being AWOL. Poor attendance can often be an indicator of a drug abuse problem. However, under the current SEPTA drug program, poor attendance is not a basis for reasonable cause drug testing.

The Safety Board recognizes that it may be difficult, due to court challenges and resistance from labor unions, to devise a program in which drug testing is triggered solely because of poor attendance. Although an effective drug program cannot be based solely on one factor, such as poor attendance, a program based on a combination of factors, such as absenteeism (tardiness, extended weekends, AWOL, and unsubstantiated use of sick leave), driving records, rules violations, and other indicators, should be viable. SEPTA's current drug testing program could be improved by developing a program based on a combination of these factors to corroborate the possibility of a drug or alcohol problem. Such a change might lead to the early detection of drug problems before they become the cause of serious safety violations.

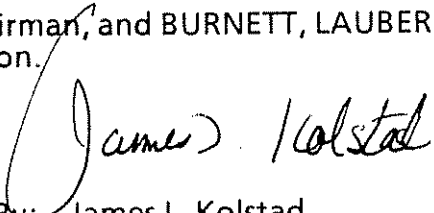
Therefore, the National Transportation Safety Board recommends that the Transport Workers Union:

In conjunction with the Southeastern Pennsylvania Transportation Authority, modify existing programs for testing employees for drug or alcohol use when the attendance record is poor, in combination with rules violations, changes in work habits, and motor vehicle driving violations. (Class II, Priority Action) (R-91-9)

Also, as a result of its investigation, the Safety Board issued Safety Recommendations R-91-1 through -8 to the Southeastern Pennsylvania Transportation Authority and R-91-10 to the city of Philadelphia Fire Department. Also, the Safety Board reiterated Safety Recommendation R-87-38 to the governor of Pennsylvania.

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 recommendation in this letter. Please refer to Safety Recommendation R-91-9 in your reply

KOLSTAD, Chairman, COUGHLIN, Vice Chairman, and BURNETT, LAUBER, and HART, Members, concurred in this recommendation.

  
By: James L. Kolstad  
Chairman