



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: January 23, 2002

In reply refer to: R-01-25

Honorable Jennifer L. Dorn
Administrator
Federal Transit Administration
Washington, D.C. 20590

In 2000, the Maryland Transit Administration (MTA)¹ experienced two similar accidents in the same location just 6 months apart. Both accidents involved the failure of an MTA light rail vehicle (LRV) train to stop at the designated stopping point at the Baltimore-Washington International Airport Light Rail Station (BWI Airport Station). In both cases, the train struck a hydraulic bumping post apparatus at the end of the track. The National Transportation Safety Board's investigation of the two accidents indicated that, although the direct cause of each accident was different, aspects of the MTA rail transit operation common to the two accidents influenced both their outcomes. Consequently, the Safety Board developed a special investigation report to address the safety factors affecting both accidents.²

The first accident occurred about 2:37 p.m. (eastern standard time) on February 13, 2000, when MTA train 24 (composed of a single LRV), en route from Baltimore to the BWI Airport, struck the hydraulic bumping post at the terminus of track No. 1 at the BWI Airport Station and derailed. The force of the collision detached the bumping post from the track, and the front of the train, which was lodged against the bumping post, was elevated about 3 1/2 feet into the air. Train 24 carried 26 people (25 passengers and 1 operator), 18 of whom were injured. Five of those injured had serious injuries. The MTA estimated the cost of the accident at \$924,000.

The Safety Board determined that the probable cause of the February 13, 2000, accident at the Baltimore-Washington International Airport rail transit station was the train 24 operator's impairment by illicit and/or prescription drugs, which caused the operator to fail to stop the train before it struck the bumping post at the terminus.

The second accident occurred about 7:14 a.m. (eastern daylight time) on August 15, 2000, when MTA train 22 (composed of two LRVs), en route from Baltimore to the BWI Airport, struck the hydraulic bumping post at the terminus of track No. 2 at the BWI Airport Station and derailed. The bumping post separated from its attachment to the track and came to

¹ In 2000, when the accidents occurred, the MTA was called the Mass Transit Administration. On October 1, 2001, the MTA changed its name to the Maryland Transit Administration.

² For additional information, see forthcoming Railroad Special Investigation Report NTSB/SIR-01/02: *Maryland Transit Administration Light Rail Vehicle Accidents at the Baltimore-Washington International Airport Transit Station near Baltimore, Maryland, February 13 and August 15, 2000.*

rest in an inverted position. The leading LRV of the train came to rest on top of the overturned bumping post and about 4 1/4 feet up in the air. The roof of this LRV was partially embedded into the ceiling structure of the terminal building. Train 22 carried 22 people (21 passengers and 1 operator), 17 of whom were injured. None had life-threatening injuries. The MTA estimated the cost of the accident at \$935,000.

The Safety Board determined that the probable cause of the August 15, 2000, accident at the Baltimore-Washington International Airport rail transit station was the train 22 operator's severe fatigue, resulting from undiagnosed obstructive sleep apnea, which caused the operator to fall asleep so that he could not brake the train before it struck the bumping post at the terminus.

Among the safety issues considered by the Safety Board in the course of these investigations was the adequacy of requirements governing the use of prescription and over-the-counter medications by LRV operators. During these investigations, the Safety Board learned that, although the MTA had substance abuse requirements addressing the use of alcohol and illicit drugs, it did not specifically require that safety-sensitive employees report their use of prescription and over-the-counter medications before operating equipment. Rule 1.6.2 of the MTA *Interim Rules and Instructions for Employees* prohibited employees from reporting for duty or being, while on duty, under the influence of "intoxicants, including alcohol, or Controlled Substances, or any other substance which may impair job performance." (Italics added.) The MTA, however, did not define "any other substance which may impair job performance" as including prescription or over-the-counter medications, many of which have side effects that can impair alertness and other job performance factors.

Both operators in the BWI 2000 accidents had been on medical leave for extended periods shortly before their respective accidents. Both had been prescribed medications that had possible side effects that included fatigue and drowsiness. Regarding the MTA's policy about employees who had been on medical leave, the MTA light rail superintendent stated in a June 12, 2000, letter to the Safety Board that the MTA does "not positively know whether a safety-sensitive employee is on medication when they return to work."

Prescription and over-the-counter medications can significantly affect the performance of people taking them. Many such medications can make the patient drowsy or dizzy, affect vision or hearing, or bring about other physical conditions that could reduce the effectiveness of a safety-sensitive employee. It appears that the MTA's policy regarding prescription and over-the-counter medications was to allow the employee to make the final determination whether he or she was fit for duty while taking a medication. But the MTA itself had no mechanism by which it could review the appropriateness of the employee's decision.

The physical condition of an employee who carries out safety-sensitive duties should be of vital interest to any rail transit system management. Management is responsible not only for the well-being of that employee but of the passengers and coworkers the employee's actions affect. Some medications, even when they are taken as prescribed or recommended, may have the effect of degrading employee performance. In some cases, legal substances such as over-the-counter and prescription drugs can impair the condition of an employee nearly as readily as illegal drugs. Consequently, the Safety Board concluded that because the MTA did not require safety-sensitive employees to report their use of prescription and over-the-counter medications, it

lacked information that could have had a bearing on the condition and performance of such employees.

The chief of the MTA benefits section told the Safety Board that the MTA followed applicable Federal Transit Administration (FTA) regulations pertaining to substance abuse and that, consistent with those regulations, the MTA had no specific requirement that employees in safety-sensitive positions inform the MTA about their use of prescription and/or over-the-counter medications. The Safety Board reviewed the FTA drug regulations at 49 *Code of Federal Regulations* (CFR) Part 653 and found no explicit reference to the use of prescription and/or over-the-counter medications by safety-sensitive employees.³ Other rail transit organizations may also infer from the lack of FTA regulations concerning the use of prescription and/or over-the-counter medications that they do not need to require their employees to report their use of prescription and over-the-counter drugs.

In contrast to the FTA's lack of such requirements, the Federal Railroad Administration (FRA) regulations at 49 CFR 219.103 specifically address the use of prescription and over-the-counter medications by employees covered under FRA rules. The regulations permit covered employees⁴ to use such medications, as determined by a physician or treating medical practitioner, if "use of the substance by the employee at the prescribed or authorized dosage level is consistent with the safe performance of the employee's duties." The FRA regulations also require that, in the event that more than one medical practitioner is treating the employee, at least one practitioner must be informed of all medications the employee is taking and must conclude that the use of the medications is consistent with safe employee performance. Moreover, the FRA regulations explicitly state "This subpart does not restrict any discretion available to the railroad to require that employees notify the railroad of therapeutic drug use or obtain prior approval for such use."

The Safety Board is concerned about the disparity between the FTA and FRA regulations concerning substances liable to cause employee impairment. Because FTA regulations do not specifically address the use of prescription and over-the-counter medications by safety-sensitive employees, rail transit operations, unlike railroad operations under the jurisdiction of the FRA, may not consider that they have the authority to monitor medication use by safety-sensitive employees. In contrast to the railroads regulated by the FRA, which may carry both freight and passengers, the rail transit systems regulated by the FTA are responsible primarily for the transport of passengers. The Safety Board concluded that, in the interests of passenger safety, rail transit systems should be at least as rigorous as FRA-regulated systems concerning possible sources of operator impairment. In the view of the Safety Board, the need for rail systems to be aware of medication use by operators is more pressing than ever when passenger safety is at risk.

Therefore, the National Transportation Safety Board makes the following safety recommendation to the Federal Transit Administration:

³ At the time of the accidents in 2000, 49 CFR Part 653, "Prevention of Prohibited Drug Use in Transit Operations," was in effect. Effective August 2001, Part 653 was superseded by 49 CFR Part 655, "Prevention of Alcohol Misuse and Prohibited Drug Use in Transit Operations." The Safety Board's review of the new FTA regulations at 49 CFR Part 655 found that they are also silent on the use of prescription and over-the-counter medications by safety-sensitive employees.

⁴ In this context, *covered employees* are those who have been assigned to perform service subject to the Hours of Service Act.

Authorize and encourage rail transit systems to require their employees in safety-sensitive positions to inform the rail transit system about their use of prescription and over-the-counter medications so that the rail transit system can have qualified medical personnel determine the medication's potential effects on employee performance. (R-01-25)

The Safety Board also issued safety recommendations to rail transit systems and the Maryland Transit Administration.

Please refer to Safety Recommendation R-01-25 in your reply. If you need additional information, you may call (202) 314-6607.

Chairman BLAKEY, Vice Chairman CARMODY, and Members HAMMERSCHMIDT, GOGLIA, and BLACK concurred in this recommendation.

By: Marion C. Blakey
Chairman