



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: September 26, 2002

In reply refer to: R-02-22

Mr. Frank Kruesi
President
Chicago Transit Authority
120 North Racine
Chicago, Illinois 60607

The National Transportation Safety Board is an independent Federal agency charged by Congress with investigating transportation accidents, determining their probable cause, and making recommendations to prevent similar accidents from occurring. We are providing the following information to urge your organization to take action on the safety recommendation in this letter. The Safety Board is vitally interested in this recommendation because it is designed to prevent accidents and save lives.

The recommendation addresses the adequacy of the Chicago Transit Authority's (CTA's) programs for ensuring compliance with its operating rules and the adequacy of the CTA's system safety program plan and its internal safety audit program for identifying and resolving systemic safety issues. The recommendation is derived from the Safety Board's investigation of two CTA train collisions at Chicago, Illinois, in 2001 and is consistent with the evidence we found and the analysis we performed. As a result of this investigation, the Safety Board has issued five safety recommendations, one of which is addressed to the CTA. Information supporting the recommendation is discussed below. The Safety Board would appreciate a response from you within 90 days addressing the actions you have taken or intend to take to implement our recommendation.

Within a 2-month period in 2001, the CTA experienced two similar rear-end collisions involving CTA rapid transit trains. Both accidents were preceded by the train operators' having failed to comply with operating rules designed to prevent collisions. The investigation of the two accidents highlighted deficiencies in the CTA management's approach to ensuring rules compliance among its operators.¹

The first accident occurred about 11:40 a.m., central daylight time, on Sunday, June 17, 2001, when CTA train 104, en route from downtown Chicago to O'Hare Airport, collided with standing CTA train 207. Each train consisted of four passenger cars. About 75 passengers were

¹ For additional information, see forthcoming Railroad Special Investigation Report—*Two Rear-End Collisions Involving Chicago Transit Authority Rapid Transit Trains at Chicago, Illinois, June 17 and August 3, 2001* (NTSB/SIR-02/01).

on train 104, and about 40 passengers were on train 207. Eighteen passengers, an off-duty CTA employee, and both train operators sustained minor injuries. The CTA estimated damages at \$30,000.

The Safety Board determined that the probable cause of the accident was the failure of the operator of train 104 to comply with operating rules. Contributing to the accident was the failure of CTA's management to exercise adequate operational safety oversight.

The second accident occurred about 9:04 a.m., central daylight time, on Friday, August 3, 2001, when CTA train 416, en route from Kimball to downtown Chicago, collided with standing CTA train 505. Each train consisted of six passenger cars. The accident occurred during morning rush hour, and both trains had standing loads estimated at 90 passengers per car. Chicago Police Department logs indicate that 118 people were transported to area hospitals with minor injuries, none of which were life threatening. The CTA estimated damages at \$136,138.

The Safety Board determined that the probable cause of the accident was the failure of the operator of train 416 to comply with operating rules. Contributing to the accident was the failure of CTA's management to exercise adequate operational safety oversight.

In both accidents, operators knowingly violated operating rules. Both accident operators indicated that they had observed similar rule violations by other employees or managers; and, in fact, Safety Board investigators observed a CTA manager violating a CTA operating rule. Limited field interviews with CTA operating personnel indicated such rules violations were more widespread than the occurrence of two accidents might suggest.

The CTA's system safety program plan not inappropriately assigns primary responsibility for operations rules compliance to the operations department. During the course of the investigation, the Safety Board found that the actual implementation of the CTA's rules compliance program did not match the description in the plan. For example, the primary ways management was supposed to monitor operators' rules compliance was by having rail supervisors and line managers do ride checks and point checks. But the twice yearly monitoring of operators by training instructors described in the plan was not being done. Also, the CTA safety department checks were not being made, at least in the cases of the two accident operators.

But even if the point checks and ride checks had been performed in accordance with the established schedule, the Safety Board is not convinced that they would have been effective in ensuring that operators strictly and consistently adhered to operating rules. For example, point checks are performed at a station and, thus, do not permit an evaluation of most operating rules. Ride checks are performed inside the operating cab, and the operator is aware of the evaluator's presence. Operators may be expected to follow the rules to the letter during such evaluations, but management has no assurance that the operator will exercise the same diligence when he or she is not being observed. The Safety Board concluded that the CTA's program for the enforcement of operating rules was inadequate in design and execution and that, consequently, rules violations, such as those related to these two accidents, were not uncommon.

The CTA does not have unannounced efficiency tests or tests for rules compliance in which the operator is not aware that a test is in progress, nor does the Federal Transit Administration require such tests. In contrast, the Federal Railroad Administration (FRA)

regulations (49 *Code of Federal Regulations* 217.9) specifically address a program of operational tests, inspections, and record-keeping on railroads subject to FRA jurisdiction. Such rules compliance programs typically include check rides and efficiency tests.² Most railroads also periodically review event recorder data to confirm that engineers are following the rules.

Convening an independent panel of experts from other railroads and transit agencies is one of the methods used in the transit industry when an agency, such as the CTA, needs advice on program improvements or has had a significant series of accidents. Such a “peer review” or “blue ribbon panel”³ is a cost-effective way to allow an agency to tap industry experts who have experience with the best industry practices in other organizations. The Safety Board hopes that the CTA will obtain the best advice possible in strengthening its operating rules compliance programs.

In the view of the Safety Board, rules compliance enforcement programs can be as effective in preventing accidents in the transit industry as they are in the railroad industry. Consequently, the Safety Board has previously urged transit agencies to strengthen their rules compliance enforcement programs. As shown by the June 17 and August 3 accidents, the CTA would benefit from a comprehensive program of evaluations and efficiency tests similar to those in the railroad industry and in other transit agencies.

Therefore, the National Transportation Safety Board makes the following safety recommendation to the Chicago Transit Authority:

Develop and implement systematic procedures for performing and documenting frequent management checks to ensure all operating personnel are complying with Chicago Transit Authority operating rules, including speed restrictions and signal rules. (R-02-22)

The Safety Board also issued safety recommendations to the Federal Transit Administration and the American Public Transportation Association. In your response to the recommendation in this letter, please refer to Safety Recommendation R-02-22. If you need additional information, you may call (202) 314-6177.

² Efficiency tests involve setting up a scenario, such as a stop signal, and documenting the operating crew’s actions to verify that applicable rules are complied with.

³ APTA has a program to organize peer reviews at the request of transit agencies, although some agencies organize such reviews on their own or through consultants.

Chairman BLAKEY, Vice Chairman CARMODY, and Members HAMMERSCHMIDT, GOGLIA, and BLACK concurred in these recommendations.⁴

Original Signed

By: Carol J. Carmody
Acting Chairman

⁴ At the time the report was adopted (September 4, 2002), Ms. Marion C. Blakey was the Chairman.