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REPORT BY THE

Comptroller General

OF THE UNITED STATES

RELEASED

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Need For Improved Action On Railroad Safety Recommendations

The National Transportation Safety Board has not been prompt in evaluating responses to its railroad safety recommendations or following up on proposed action. The Board has recognized this problem and recently took steps to correct it.

In many cases the Federal Railroad Administration has not responded to recommendations within 90 days or provided timetables for carrying them out as required by law. Further, it has not adequately kept track of action promised by its operating units and does not inform the Safety Board of important changes or delays to promised actions.

As a result, GAO could not determine if all Board recommendations to the Federal Railroad Administration were pending for justifiable reasons.



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DECEMBER 29, 1978





COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-164497(5)

The Honorable Bennett Stewart
Representative-Elect
House of Representatives


Dear Mr. Stewart:

Pursuant to a November 17, 1977, request by your predecessor, the Honorable Ralph H. Metcalfe, and subsequent meetings with his office, we are reporting on (1) Federal Railroad Administration actions taken in response to railroad safety recommendations made by the National Transportation Safety Board, (2) the Safety Board's followup procedures on railroad safety recommendations, and (3) the Railroad Administration's use of its own accident investigations to promote railroad safety.

We obtained written comments on this report from the National Transportation Safety Board and the Department of Transportation. Both generally agreed with our information.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until January 15, 1979. At that time we will send copies of the report to appropriate Senate and House Committees; the Director, Office of Management and Budget; the Secretary of Transportation; the Chairman of the National Transportation Safety Board; and other interested parties.

Sincerely yours,


Comptroller General
of the United States



COMPTROLLER GENERAL'S REPORT
TO THE HONORABLE BENNETT STEWART
REPRESENTATIVE-ELECT
HOUSE OF REPRESENTATIVES

NEED FOR IMPROVED
ACTION ON RAILROAD
SAFETY RECOMMENDATIONS

D I G E S T

The Federal Railroad Administration does not respond promptly to the National Transportation Safety Board's railroad safety recommendations. In many cases it has not responded to the Board within 90 days or provided timetables for implementing recommendations, although required by law. (See p. 12.)

The Railroad Administration also does not adequately monitor actions promised by its operating units to carry out Board recommendations and does not inform the Board or the Office of the Secretary of Transportation of important changes or delays to promised action. (See p. 15.)

For example, an October 1975 passenger train derailment injured 31 people and caused over \$1 million worth of damage. The Safety Board investigation showed that it was extremely hard to get passengers out of cars that were not upright, and it recommended in July 1976 that the Railroad Administration require passenger coaches to be equipped with roof hatches. About 2 months later than the law specifies, the Railroad Administration told the Safety Board it would conduct a test program to investigate the merits of the recommendation but did not provide a timetable for completing the investigation. In June 1977 the Railroad Administration revised its originally proposed testing program to include all recommendations related to rail passenger car safety. As of December 1978 the Railroad Administration expected to complete its revised testing program in early 1981, almost 5 years after the Safety Board recommendation concerning roof hatches was issued. The Railroad Administration did

not inform the Safety Board of its new plan of action until August 1978 when the Safety Board followed up on its recommendation for the first time. (See p. 17.)

The Office of the Secretary of Transportation is responsible for assuring that the Department's operating administrations comply with statutory requirements related to the Board's recommendations. Although the Office is aware of problems in meeting these requirements, it does not monitor responses to recommendations and has not vigorously pursued corrective action. (See p. 14.)

In addition, the Office of the Secretary's annual report on the Board's recommendations does not explain the status of past open recommendations or disclose delays in carrying out recommendations. (See p. 18.)

The Department and the Board use different criteria for determining the status of recommendations. Thus, the agencies do not always agree on whether the Railroad Administration has completed action on Board recommendations. (See p. 19.)

The Secretary of Transportation should require the Railroad Administration to:

- Improve its internal procedures for handling Board recommendations.
- Monitor actions promised in response to recommendations systematically and make sure that actions are completed in accordance with the timetable submitted to the Board.
- Issue periodic status reports to the Board and the Office of the Secretary that will describe what has been accomplished and any changes that have occurred and estimate when the proposed action will be completed.

To further improve the Department's monitoring of its operating administrations'

actions on Board recommendations, the Secretary of Transportation should:

- Require the Office of the Assistant Secretary for Policy and International Affairs to review periodically Railroad Administration responses to Board recommendations and, when warranted, take corrective action.
- Revise Department requirements to specify that the annual report to the Secretary include the status of all open Board recommendations without regard to the year in which they were made.
- Revise Department criteria for evaluating Board recommendations as open or closed, so that both agencies will have the same classification for each recommendation. (See p. 23.)

SAFETY BOARD IMPROVES FOLLOWUP ON RECOMMENDATIONS

As of July 24, 1978, the Board considered as open 90 of the 205 railroad safety recommendations it had made to the Federal Railroad Administration since 1968; these require monitoring and/or followup until action is completed. (See p. 6.)

Before September 1977, the Board had not effectively evaluated the Railroad Administration's responses to its recommendations or followed up on proposed action to carry out recommendations. As a result, the Board delayed closing some recommendations for which corrective action was completed and, more importantly, had not made sure that the Railroad Administration was taking proper action on other recommendations. Most of the Board's current followup is to determine what was done on past recommendations. This hinders its ability to monitor current railroad safety recommendations. (See p. 5.)

The Board recognized that its evaluation and followup process needed improvement, and in September 1977 it began to take action which should correct the problem. The Board

stated that if the recipients of past recommendations respond promptly to letters of inquiry, the status of all railroad safety recommendations should be resolved by late 1978. (See p. 8.)

BETTER USE MADE OF RAILROAD ACCIDENT INFORMATION

In the past, the Railroad Administration has not used its information on railroad accidents as effectively as it should to monitor railroad accident trends or identify potential safety problems. (See p. 28.)

Recognizing its deficiencies in analyzing accident reporting data, the Railroad Administration allocated funds in fiscal year 1978 to establish a hazard analysis and priority determination system. This system should help the Railroad Administration identify and place priorities on areas needing regulatory change and allocate its resources most effectively. (See p. 29.)

AGENCY COMMENTS

The Department of Transportation and National Transportation Safety Board generally agreed with most of GAO's conclusions and recommendations. The Department has already corrected many of its deficiencies. It noted, however, that GAO's analysis of Railroad Administration responsiveness to Safety Board recommendations was based on correspondence and did not consider followup actions to accidents.

The Department believed that a reader may conclude wrongly that the Railroad Administration had allowed unsafe conditions to exist because it did not respond to Safety Board recommendations.

GAO tried to determine what followup actions to recommendations were taken but could not because the Railroad Administration did not monitor its actions or keep adequate records. GAO also asked the Safety Board to determine the timeliness and adequacy of Railroad

Administration action on Class I (urgent followup) recommendations; however, the Board could not do so accurately because the Railroad Administration did not always inform the Board of actions taken and the Board had not always followed up on its recommendations.

GAO believes that until the Railroad Administration improves its accountability for actions it takes in response to Safety Board recommendations, there will be no assurance that the Board's safety recommendations have been properly dealt with and that unsafe conditions have been eliminated. (See pp. 9, 24, and 30.)



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ABBREVIATIONS

ASF	Office of Aviation Safety
DOT	Department of Transportation
FAA	Federal Aviation Administration
FRA	Federal Railroad Administration
GAO	General Accounting Office
NTSB	National Transportation Safety Board
ORD	Office of Research and Development
OST	Office of the Secretary of Transportation
RORAC	Railroad Operating Rules Advisory Committee

CHAPTER 1

INTRODUCTION

On November 17, 1977, the late Congressman Ralph H. Metcalfe asked us to review certain aspects of railroad safety activities conducted by the National Transportation Safety Board (NTSB) and the Federal Railroad Administration (FRA). The Congressman expressed concern about railroad safety in the United States and about FRA's compliance with its statutory responsibilities. Based on the request and a subsequent meeting with the Congressman's office, we agreed to:

- Evaluate FRA actions taken in response to railroad safety recommendations made by NTSB.
- Evaluate NTSB's followup procedures on railroad safety recommendations.
- Determine whether FRA adequately uses its accident investigations to promote railroad safety.

NTSB'S ROLE IN RAILROAD SAFETY

NTSB was established as an independent Federal agency by Public Law 93-633, the Independent Safety Board Act of 1974 (49 U.S.C. 1901). NTSB's mission is to improve transportation safety by issuing recommendations to Federal agencies or any other transportation organizations based on findings of NTSB accident investigations and studies of safety problems. NTSB is specifically charged with, among other things:

- Investigating any major railroad accident involving a fatality, substantial property damage, or a passenger train.
- Determining the cause or probable cause of accidents and reporting facts and findings of such accidents.
- Recommending actions to prevent recurrence of accidents and promote railroad safety.

Most NTSB railroad safety recommendations result from accident investigations, but they may also result from special studies and investigations. NTSB safety recommendations are advisory; they are not legally binding. However, Public Law 93-633 requires that any safety recommendation

submitted to the Secretary of Transportation be answered in writing within 90 days. The Secretary must also submit a timetable for any actions taken in response to the recommendation or set forth in detail the reasons for rejecting a recommendation.

Most of NTSB's railroad safety recommendations are addressed to FRA. However, they may also be made to industry, States, local agencies and other organizations involved in transportation safety.

NTSB classifies each of its recommendations according to the urgency of the action it seeks:

Class I--urgent followup

Class II--priority followup

Class III--longer term followup

NTSB monitors the progress of its safety recommendations and if it believes a particularly significant safety recommendation has not been acknowledged, or effectively implemented, it will reiterate the recommendation in subsequent accident reports dealing with the same problem.

During the 5-year period 1973-77, NTSB issued 115 railroad safety recommendations to FRA as the result of 37 accident investigations and 8 special studies and investigations. There were at least 99 fatalities and 2,374 injuries in these 37 accidents. In addition, an estimated \$71.3 million of property damage was incurred in 28 of the 37 accidents. Data on property damage was not available in the remaining 9 NTSB accident investigation reports issued during that period.

NTSB only began to classify its recommendations during 1975. Of the 76 railroad safety recommendations NTSB addressed to FRA from 1975 through 1977, 8 were Class I, 53 Class II, and 4 Class III. The remaining 11 recommendations were issued in early 1975 and were not classified by NTSB.

FRA'S ROLE IN RAILROAD SAFETY

FRA was created by the Department of Transportation Act of 1966 (49 U.S.C. 1652). One of its goals is to minimize fatalities, injuries, and property damage relating to passenger and freight operations through the development of railroad safety action programs. The

Accident Reports Act of 1910, as amended, (45 U.S.C. 40) and the Federal Railroad Safety Act of 1970 (45 U.S.C. 437) authorize FRA to investigate railroad accidents resulting in serious injury to persons or railroad property. The Accident Reports Act also requires every common carrier engaged in interstate or foreign commerce by railroad to report monthly to FRA all accidents resulting in death or injury or damage to equipment or roadbed. These reports indicate the nature, cause, and circumstances of the accidents, and FRA sorts and tabulates the data and prepares summary listings.

Both NTSB and FRA are responsible for investigating railroad accidents. NTSB investigates accidents to determine the probable cause and proposes recommendations to reduce the likelihood that such accidents will recur. FRA investigates accidents to determine if all Federal regulations and standards have been properly complied with and to determine what additions or improvements should be made to existing standards and regulations in order to improve safety. When NTSB is investigating an accident and FRA desires to investigate the same accident, both agencies participate with NTSB assuming control of the joint Federal effort.

FRA's policy is to investigate accidents in which a railroad employee is killed or five or more persons are injured, but it may investigate any accident. FRA classifies its accident investigations as follows:

- "A" accidents are full investigations, generally conducted by two or more investigators, which most likely will result in a published report.
- "B" accidents are joint investigations with NTSB which result in a factual report with minimum backup data. (Before December 1976, a "B" accident was defined as a full investigation, generally conducted by one investigator, and not likely to be the subject of a printed report.)
- "C" accidents are investigations generally conducted by one investigator which result in memorandum reports.
- "FE" accidents are investigations of employee fatalities which result in two-page narrative reports.

The FRA accident investigations develop detailed factual information on the conditions and circumstances surrounding the accident as well as its probable cause.

During 1973 through 1976, FRA investigated 890 accidents of which 73 were "A" accidents, 39 were "B," 392 were "C," and 406 were "FE." The 484 "A," "B," and "C" accidents resulted in 4,019 injuries, 238 fatalities, and \$84.3 million 1/ in railroad property damage. Similar data for the "FE" accidents is not readily available. Data on FRA accident investigations conducted during 1977 was not available at the time of our review.

SCOPE OF REVIEW

We obtained general statistical information on railroad safety recommendations made by NTSB from 1968 through 1977. We determined what actions FRA had taken to implement some of the recommendations NTSB issued during this period. We also determined FRA's compliance with statutory requirements for NTSB recommendations issued from 1975 through 1977. We evaluated NTSB's and FRA's system for implementing and following up on recommendations to insure proper action and the adequacy of FRA's use of its own accident investigations to promote railroad safety. We examined pertinent policies, procedures, and records dealing with NTSB recommendations and held discussions with NTSB officials and Department of Transportation (DOT) officials from FRA, the Federal Aviation Administration (FAA), and the Office of the Secretary of Transportation (OST).

1/FRA's practices for reporting property damage are much more conservative than NTSB's. As a result, although FRA investigated many more accidents than NTSB, the dollar value per accident investigated was much less.

CHAPTER 2

IMPROVEMENTS IN NTSB FOLLOWUP ON RECOMMENDATIONS

Before September 1977, NTSB's procedures for evaluating and following up on FRA responses and actions on railroad safety recommendations were not effective. As a result, NTSB delayed closing some recommendations on which corrective action was completed and, more importantly, had not provided timely followup on other recommendations to assure that proper action was being taken. Since September 1977, NTSB has taken actions that should improve its evaluation and followup.

EVALUATION PROCEDURE

NTSB's procedures (part 8 of NTSB Order 6200.1) require that all responses to railroad safety recommendations be evaluated within 5 working days after they are received. If the evaluation shows corrective action has been taken, NTSB closes the recommendation. If additional action is needed, NTSB keeps the recommendation open and may either follow up immediately or monitor the case for future action.

We found that NTSB did not promptly evaluate responses to railroad safety recommendations. NTSB issued eight Class I (urgent followup) recommendations to FRA during 1975 through 1977. NTSB required an average of 10 months to formally evaluate FRA's responses to these high-priority recommendations.

For example, in August 1975 a commuter train crashed into the rear of another train, injuring 154 people and causing an estimated \$425,000 in damages. As part of its investigation, NTSB reviewed stopping-distance tests to determine if the transit cars' braking capability contributed to the accident. These tests indicated that problems did exist, and in September 1975 NTSB issued a Class I recommendation that FRA require the responsible State transit authority to check periodically that specified emergency braking capability is maintained. Under the law, FRA was required to respond by December 1975. On June 15, 1976, 9 months after receiving the recommendation, FRA responded that the transit authority had established a scheduled testing program. NTSB did not complete its evaluation until November 8, 1977--more than 16 months after it received FRA's response. NTSB's evaluation stated that the completed action fulfilled the objective of the recommendation which was formally closed on February 2, 1978. NTSB carried the open recommendation more than 19 months after it should have been closed.

As a result of the same accident, NTSB issued another Class I recommendation to FRA on September 19, 1975, requesting that FRA determine whether the problem of inadequate emergency braking systems exists in similar rapid transit cars in other parts of the country and take whatever corrective action is necessary. FRA's June 15, 1976, response stated that FRA had delayed surveying other transit systems until the original problem was accurately defined and corrected. FRA said that as of June 1976 it was surveying all other transit systems to determine if adequate emergency braking systems exist on their cars.

NTSB records indicated that as of April 1978 no formal evaluation of this response was ever completed. NTSB did not ask FRA whether it completed its survey of other transit systems until November 2, 1977--almost 16 months after it received FRA's response. As of April 18, 1978, NTSB had not received a reply from FRA. Because FRA did not provide a timetable for completing its survey and NTSB did not adequately monitor the status of FRA's promised action, NTSB had no assurance that FRA was taking proper corrective action.

FOLLOWUP ON FRA ACTIONS

NTSB's classification of a recommendation as open means that NTSB intends to monitor and/or follow up on actions the recipient has promised to take. NTSB determines the extent and frequency of the followup in its evaluation of the recipient's response.

As shown below, NTSB still considers almost half of the railroad safety recommendations it has made to FRA open as of July 24, 1978.

NTSB Status of Safety Recommendations Made to FRA as of July 24, 1978

<u>Year</u>	<u>Number of recommendations</u>	<u>Open</u>	<u>Closed</u>
1968	11	0	11
1969	16	0	16
1970	13	0	13
1971	26	3	23
1972	24	9	15
1973	17	7	10
1974	22	12	10
1975	20	15	5
1976	36	25	11
1977	20	19	1
Total	<u>205</u>	<u>90</u>	<u>115</u>

Before September 1977, evaluation and followup received low priority within NTSB because the people responsible for evaluation of responses and followup functions were also responsible for accident investigations and reporting, which received a higher priority. In addition, NTSB did not have systematic followup procedures until October 1977 when it issued Order 6400.1A. As a result, many railroad safety recommendations were carried as open for long periods with no followup activity to assure that proper corrective action was being taken.

For example, in October 1976, NTSB recommended that FRA revise the Code of Federal Regulations to insure that train wheels exposed or suspected of being exposed to critical temperatures are removed from service. In its investigation of a May 1976 accident, NTSB found that a train carrying automobiles derailed at about 72 miles per hour (mph) when a wheel fractured. The wheel had been overheated previously by dragging brakes. Although no one was injured, total property damage was estimated at more than \$1.7 million. FRA acknowledged receipt of the recommendation on December 2, 1976, but did not provide a substantive reply until April 22, 1977--almost 5 months later and 3 months over what the law requires.

FRA stated in its April 22, 1977, response that it was investigating the merits of several concepts to determine their reliability in detecting whether a wheel has been subjected to critical wheel temperatures and would consider the need to revise the Code of Federal Regulations to require the use of temperature detectors when research was completed and results verified. FRA did not say when it would complete its survey. Although this was a Class I recommendation, NTSB did not ask FRA whether it had completed the promised action until April 1978, 1 year after FRA's response. As of June 26, 1978, FRA had not responded to NTSB's letter of inquiry.

In another case NTSB investigated a January 1975 rear end collision of two commuter trains which injured 265 persons. NTSB found that even though the railroad company had requirements for annual physical examinations, one engineer involved in the accident had not been examined for almost 10 years. In July 1975, NTSB issued a Class II (priority followup) recommendation requesting that FRA issue regulations to establish minimum physical standards and require periodic examinations of all crewmembers responsible for movement of trains. On December 5, 1975, FRA responded that the question of minimum physical standards and periodic physical examination of all crewmembers

was under discussion by its Railroad Operating Rules Advisory Committee (RORAC). FRA did not tell NTSB when the discussion would be completed.

NTSB did not follow up on the status of FRA's study until August 12, 1977--21 months after FRA's response. At that time, FRA stated that RORAC was dissolved in October 1976 and no action had been taken on the recommendation. FRA and NTSB discussed this recommendation in October 1977, and in November 1977 NTSB sent a letter of inquiry to FRA. In February 1978, more than 29 months after the recommendation was issued, FRA informed NTSB that it did not presently have data which would justify establishing minimum Federal physical standards for all crewmembers responsible for the movement of trains and therefore could not justify such a regulation. As of June 1978 NTSB was in the process of closing the recommendation even though it does not agree with FRA that a regulation is not justifiable. NTSB cannot require anyone to implement a recommendation. Therefore, when FRA declines to take a recommended action, NTSB closes the recommendation. The recommendation can reappear as background reference or, if appropriate, can be reissued.

NTSB CORRECTIVE ACTIONS

NTSB officials stated that their evaluation and followup activities were not adequate in the past because they did not have sufficient staff or systematic followup procedures. As a result, they have had to devote most of their current effort to determining what actions have occurred on past recommendations. The officials stated that this effort has hindered their ability to adequately evaluate and monitor current railroad recommendations, but they expect to complete all "catch up" activity by late 1978 if FRA and other recipients of past recommendations promptly respond to NTSB letters of inquiry.

In September 1977 NTSB's Office of Safety Recommendations added a railroad transportation safety specialist whose principal duties include (1) evaluating the quality and completeness of responses to railroad safety recommendations, (2) following up all recommendations until reconciled, and (3) establishing a day-to-day liaison with FRA technical and policy personnel responsible for handling NTSB recommendations.

On October 21, 1977, NTSB issued Order 6400.1A to establish formal, systematic procedures for formulating,

implementing, and following up NTSB safety recommendations. Also during October 1977, NTSB and FRA staff officials began holding quarterly meetings to discuss the progress and problems encountered in implementing NTSB's railroad safety recommendations.

In May 1978 NTSB computerized all railroad recommendations, recipient responses, and other related data.

In July 1978 NTSB revised its procedures for processing safety recommendations by providing additional detailed guidance and procedures for the safety recommendations process, including evaluation and followup activities.

CONCLUSIONS

NTSB had not adequately evaluated and followed up FRA's responses to its recommendations to insure that they were being implemented promptly. As a result, NTSB had delayed closing some recommendations on which corrective action was completed and, more importantly, had not provided timely followup on other recommendations to assure that proper action was being taken.

NTSB has recognized its problems and has taken action it believes will correct them. However, much of NTSB's current activity is being used to catch up on old recommendations, hindering its ability to adequately monitor current railroad safety recommendations. NTSB officials stated that if FRA and other recipients of past recommendations promptly respond to letters of inquiry, this catchup effort should be completed in late 1978.

We believe that if NTSB aggressively implements its corrective actions, evaluation and followup procedures will function as intended.

AGENCY COMMENTS AND OUR EVALUATION

NTSB stated that our report accurately summarized the Board's activities and procedures concerning issuance of and followup on railroad safety recommendations. (See app. I.)

NTSB agreed that its current activity is focused on following up old open recommendations and noted that its revised procedures require that an evaluation of the adequacy of FRA's response be provided to it within 10 days after NTSB receives that response. NTSB believes these new procedures will completely eliminate the backlog of

unevaluated recommendation responses by the end of 1978 without interfering with monitoring current recommendations.

We agree with NTSB that these new procedures should eliminate the backlog of unevaluated responses. However, until all old open recommendations are closed, we believe NTSB will have difficulty in adequately monitoring and/or following up both old and new railroad safety recommendations because it does not have enough staff to perform this function.

CHAPTER 3

NEED FOR IMPROVED ACTION BY FRA ON NTSB RECOMMENDATIONS

FRA does not have adequate internal operating procedures for responding to NTSB recommendations and was not complying with statutory requirements covering its responses to NTSB.

--In most cases, FRA did not respond to NTSB recommendations within the 90-day period required by law.

--In most cases, FRA did not provide NTSB with timetables for corrective action on recommendations to be implemented, although the law requires it to do so.

--FRA did not keep NTSB or the Office of the Secretary of Transportation informed of the status of actions taken on recommendations and did not tell NTSB of changes or delays to promised actions.

--FRA did not adequately monitor actions promised by its operating units.

--OST did not adequately monitor or take sufficient corrective action to assure FRA compliance with statutory requirements.

Because of deficiencies in FRA's handling of NTSB recommendations and NTSB's inadequate followup procedures (see ch. 2), we could not determine whether FRA is promptly implementing all appropriate NTSB safety recommendations.

NEED FOR BETTER AND MORE TIMELY RESPONSES

Although there is no legal requirement for DOT to comply with NTSB safety recommendations, section 307 of the Independent Safety Board Act of 1974 states that any safety recommendation submitted to the Secretary of Transportation must be answered, in writing, within 90 days. If the Secretary plans to implement the recommendation, either in whole or in part, he must also submit a timetable for his actions with the response.

In order to establish uniform procedures within DOT for acting upon and responding to NTSB recommendations,

DOT issued Order 2000.1A, as revised on November 21, 1975. In addition to outlining statutory obligations, the order requires operating administrations to acknowledge receipt of a recommendation within 10 working days and assigns responsibility to the Office of the Assistant Secretary for Policy and International Affairs for monitoring operating mode compliance with the order.

Inadequate control over responses to NTSB

FRA does not have formal internal operating procedures for handling NTSB recommendations. As a result, responses to NTSB are handled like general correspondence with no assurance that compliance with internal and statutory requirements will be achieved.

When an NTSB recommendation is received by the FRA Administrator's office, it is recorded and assigned a control number to assure that a response is provided, but no due date is assigned to assure the response is prepared within a given time. Generally, the recommendation is then sent to FRA's Office of Standards and Procedures for assignment to a specific division with responsibility and technical knowledge in the area addressed by the recommendation. The division then prepares a draft response which is reviewed by the Office of Standards and Procedures and various other offices within FRA before it is signed by the Administrator.

The Office of Standards and Procedures has assigned an employee to act as a "central clearinghouse" for all NTSB recommendations and related correspondence. The duties of this position include acknowledging receipt of recommendations and coordinating all draft responses submitted by FRA's division personnel. However, this position has no authority to assure that responses are prepared within appropriate time frames. Once a response leaves the Office of Standards and Procedures, no one in FRA assures compliance with Public Law 93-633 or DOT Order 2000.1A.

FRA does not comply with internal and statutory requirements

From 1975 through 1977, NTSB issued 76 recommendations to FRA to improve railroad safety. We reviewed these recommendations to determine if FRA was (1) acknowledging receipt within 10 working days, (2) providing a substantive response to NTSB within 90 days, and (3) including timetables for promised actions for those recommendations which FRA in whole or in part agreed to implement.

Delays in acknowledging receipt
of recommendations

FRA was responsible for acknowledging receipt for 65 of NTSB's 76 recommendations, and the Office of the Secretary acknowledged the other 11. FRA did not acknowledge receipt of 27 of the 65 recommendations within 10 working days. The FRA employee responsible for this function stated that acknowledgement letters are drafted immediately upon receipt of the recommendation by the division. However, in many cases, recommendations are not acknowledged until after the 10 working-day requirement has expired, because they are handled by various FRA offices as general correspondence. FRA required over a month to acknowledge receipt of eight NTSB recommendations.

Delays in providing substantive
response within 90 days

FRA was responsible for providing NTSB with a substantive response within 90 days on all 76 recommendations. They did so in only 15 cases. In the remaining 61 cases, FRA required an average of 247 days before providing a response. The longest response time was 610 days.

FRA officials cited a number of reasons for not complying with the 90-day requirement. These included (1) a lack of staff at the division level to write timely, technical responses, (2) the pressure and obligations of other FRA activities, and (3) the many review levels which each response must clear before it can be signed by the Administrator.

FRA told us its correspondence control system also delayed substantive responses. For example, on September 19, 1975, NTSB issued three Class I recommendations to FRA resulting from an investigation of a collision of rapid transit trains. For one recommendation FRA took immediate action which NTSB later evaluated as fulfilling the objective of the safety recommendation. However, FRA did not inform NTSB of this corrective action until June 15, 1976, almost 6 months after the problem was corrected. FRA officials stated they did not inform NTSB of the corrective action when it occurred because the three recommendations were transmitted to FRA in a single report and were assigned a single correspondence control number by the Administrator's office. A single control number necessitates a single response, and difficulties encountered in responding to the other recommendations delayed response to all three recommendations.

An FRA official stated that as a result of our inquiry, recommendations are now being responded to singularly with statements that responses to other recommendations which were transmitted at the same time would be forwarded at a later date.

Timetables not provided with responses

In addition to not regularly meeting the 10-day and 90-day required responses, FRA has not been including timetables for proposed action in the majority of its responses. FRA agreed to take some implementing action on 52 of the 76 recommendations it received from NTSB from 1975 to 1977. On 10 of the 52 recommendations, FRA's initial substantive response indicated that corrective action had already been completed. FRA should have submitted a timetable for completing its proposed action in its 90-day response to the other 42 recommendations. FRA did not comply with this statutory requirement in 33 of the 42 recommendations we reviewed.

FRA officials stated that they have not, as a matter of habit, provided timetables for action to NTSB. They stated that although FRA has not been meeting response deadlines or including timetables in all responses, it has not been deficient in the nature or timeliness of its safety action. Further, FRA officials stated that specific timetables should not be required; however, if FRA agrees to take action on a recommendation, that action should reflect NTSB's classification of the recommendation as follows:

- Class I (Urgent): FRA would take immediate action.
- Class II (Priority): FRA would program action according to FRA priorities.
- Class III (Long term): FRA would take action when and if it could obtain the necessary resources.

However, we found that without prompt responses that included timetables, there is no way of knowing when action has been or will be taken on a recommendation.

OST monitoring inadequate

The Assistant Secretary for Policy and International Affairs within DOT's Office of the Secretary is responsible for monitoring the actions of all operating administrations to assure compliance with DOT Order 2000.1A. This office has not systematically monitored FRA responses on NTSB recommendations. OST officials stated that they have only been able to monitor FRA actions when they received a

specific inquiry because they lack sufficient staff, the workload is heavy, and high priority is assigned to monitoring NTSB recommendations directed to the Federal Aviation Administration while lower priority is given to monitoring NTSB recommendations directed to FRA. Although OST was aware that FRA had not been meeting the statutory requirements of section 307 of Public Law 93-633, it had not vigorously pursued corrective action other than to bring it to FRA's attention. The officials stated that they had hoped FRA would correct the situation internally when notified of the problem.

OST established a computerized safety recommendation reporting system during 1976 to improve its ability to monitor responses and actions to be taken by DOT operating administrations. This system is designed to provide and insure timely consideration and adequate responses by operating administrations and offices to NTSB recommendations. OST is also in the process of obtaining a computer terminal which will provide it with the capability of informing operating administrations of the need to provide responses on NTSB recommendations before time has lapsed on statutory requirements. OST officials stated that improved monitoring should help improve FRA's compliance with statutory requirements but additional enforcement action may still be necessary.

NEED FOR IMPROVED MONITORING AND REPORTING ON PROPOSED ACTION

As of July 1978, NTSB considers almost half of all railroad safety recommendations it made to FRA still open, pending completion of FRA corrective action. As shown in chapter 2, final resolution of some recommendations has not been completed in over 7 years. Extended periods may be necessary in some cases to complete the required research and rulemaking procedures requested by an NTSB recommendation. However, as shown below, without adequate monitoring or reporting on proposed action, it is impossible to determine if all open recommendations are pending for justifiable reasons.

When FRA informs NTSB that it will implement a recommendation in whole or in part, the implementing action can be immediate or may be delayed until FRA does additional research or studies. In either case, the FRA office or division having jurisdiction over the areas

addressed by the recommendation is responsible for assuring that the promised action is completed.

Generally, if FRA determines that there is a need to do additional research on a recommendation, the work is assigned to FRA's Office of Research and Development (ORD). However, the office or division requesting the work remains responsible for assuring the work is completed and ultimately informs NTSB of the results of the research and FRA's final action on the recommendation.

FRA does not adequately monitor or inform NTSB of actions taken on recommendations

As mentioned earlier, FRA told NTSB it would take some implementing action on 52 of the 76 NTSB recommendations it received during 1975 through 1977. However, on 33 of the 52 recommendations, FRA responded that the NTSB recommendation would require research or study and that it would inform NTSB of any corrective action taken by FRA based on the results of these studies.

FRA's offices and divisions do not formally monitor the progress made on these promised actions for implementing NTSB recommendations. FRA officials stated that ORD sets its own priorities as to when requested work should be done and that generally the first time they receive any information on the status of a research project is when the division is provided a copy of a draft report for comment. An FRA division chief told us he did not monitor promised action on NTSB recommendations because of a lack of staff and the low priority that could be assigned to this task, depending on NTSB's classification of the recommendation and FRA's concurrence with that classification.

Status of action not provided NTSB

FRA does not regularly inform NTSB when the proposed course of action on implementing a recommendation is substantially changed or when a timetable for implementation is adjusted. As a result, NTSB has had to write approximately 75 letters of inquiry to FRA since September 1977 in an attempt to determine what action, if any, FRA has taken on various recommendations.

There will always be a number of recommendations NTSB considers open for which FRA has completed corrective action because of the time NTSB needs to consider FRA responses and action before it can formally close the recommendation. In addition, other recommendations

will be classified as open until FRA completes timely corrective action. However, because of FRA's failure to adequately monitor or inform NTSB of changes to promised actions combined with its lack of timetables in many responses and NTSB's inadequate followup efforts, we were not able to tell whether FRA's promised actions are being implemented promptly or that all open recommendations are still pending for justifiable reasons.

For example, in October 1975 a passenger train derailed, injuring 31 of the 69 people aboard and causing an estimated \$1,067,000 worth of damage to property and equipment. NTSB noted in its investigation that evacuation of passengers from cars, which were not upright, was extremely complicated. As a result, NTSB issued a Class II recommendation on July 5, 1976, stating that FRA should require that rail passenger equipment be fitted with roof hatches so that passengers could escape through the ceiling of a car which is on its side. On November 30, 1976, FRA responded that it and Amtrak had agreed to investigate jointly the merits of the NTSB recommendation. Amtrak agreed to make two retired passenger coaches available for testing at FRA's Transportation Test Center in Pueblo, Colorado. FRA stated that it would notify NTSB of the results of the testing and advise it of any regulatory action deemed appropriate.

FRA did not provide a timetable for completing the proposed testing program in its response to NTSB. We contacted the FRA division chief responsible for assuring that action was taken on the recommendation in June of 1978 to determine its status. The official stated that although he did not know why, FRA had not accepted Amtrak's offer and to his knowledge FRA had taken no action to implement the recommendation. We were later told by FRA's Office of Research and Development that the original testing program had been canceled because FRA did not want to conduct such testing without further analyzing the merits of this and related rail passenger car safety recommendations. To resolve this problem, FRA contracted with a consulting firm in June 1977 to examine the state of the art of rail passenger car safety and identify existing solutions to safety problems and to develop a research and testing program for recommendations made in this area. The consulting firm submitted its draft report in October 1978 and FRA was still reviewing it as of December 12, 1978. FRA told us it expects to implement the research and testing program during 1979 with results expected in early 1981. Under these circumstances it appears likely that 5 years will have passed before FRA decides what action to take on the NTSB recommendation. FRA had not informed NTSB of any change to its

originally proposed testing program until NTSB followed up on the recommendation in August 1978, over 2 years after it was issued.

In another case, NTSB found in its investigation of a December 1973 train collision which killed three crewmembers and caused damages estimated at \$873,000, that the accident occurred because of the unauthorized operation of a switch by persons unknown. NTSB recommended in July 1974 that FRA sponsor a program to develop and test devices for securing manually operated switch stands so that they are more resistant to operation by unauthorized persons. In December 1974 FRA responded that it would sponsor such a study in fiscal year 1976. NTSB did not follow up on the recommendation until May 1978, over 3 years after FRA's last response. At that time NTSB asked FRA the status of its action on the recommendation. FRA stated that the proposed switch stand protection study was not instituted in 1976 because funds were not available and that as of June 1978 FRA had not acted on this recommendation. FRA did not inform NTSB of this delay until after it had inquired.

INADEQUATE REPORTING TO OST

In connection with its monitoring responsibilities discussed on page 14, OST is to (1) assure that FRA actions consider completely each NTSB recommendation and (2) prepare an annual report for the Secretary of Transportation discussing the status of recommendations and the relationship between NTSB and DOT operating administrations. This is the only report the Secretary receives that discusses NTSB recommendations, and it is used as a basis for identifying problems. However, the report does not inform the Secretary of the status of past recommendations or of delays incurred in implementing actions because it only provides the previous year's data and does not reflect the status of action taken on each recommendation.

OST officials told us they obtain their information on FRA efforts to implement NTSB's safety recommendations from copies of correspondence provided by FRA to NTSB. As shown above, FRA does not inform NTSB when the proposed course of action on implementation substantially changed or when a timetable for implementation is adjusted. As a result, OST is not aware of the status of FRA actions or lack of action on many recommendations.

For example, OST was unaware that NTSB had been writing letters of inquiry to FRA to determine the status of actions on recommendations. OST stated that it had

not received copies of any such letters and believed that NTSB was knowledgeable and aware of FRA actions.

NEED FOR BETTER COORDINATION

DOT and NTSB do not agree on the number of FRA recommendations that are open and the degree of compliance which justifies closing a recommendation. DOT and NTSB use different criteria to determine whether a recommendation is open or closed, and DOT closes recommendations it has determined to be unwarranted without NTSB's concurrence.

Disparities in criteria

The Congress has held a continuing series of hearings on DOT's responsiveness to NTSB recommendations, using NTSB's current list of open recommendations as a reference document. In addition, section 305 of the Independent Safety Board Act of 1974 requires an annual report by NTSB to the Congress to include

"* * * a survey and summary, in such detail as the Board deems advisable, of the recommendations made by the Board to reduce the likelihood of recurrence of such accidents together with the observed response to each such recommendation."

DOT's uniform procedures for acting upon and responding to NTSB recommendations include criteria for when an NTSB recommendation is to be considered open or closed by operating administrations.

Under DOT criteria, an NTSB recommendation that asks for initiation of research or study projects is closed when the suggested research has been initiated regardless of the action or lack of action that results from the research. NTSB, however, does not believe a recommendation can be closed until research is concluded and DOT completes action that is suggested by the results of that research.

Also under DOT criteria, an NTSB recommendation may be closed by providing it a written statement showing that the recommended action is either unwarranted or unsuitable to correct the problem. DOT closes the recommendation regardless of NTSB's views on the validity of these statements or the necessity of the recommendation.

For example, during October 1975 a passenger train struck the rear of another passenger train which had made

an unscheduled stop because of an equipment malfunction. Twenty-five persons were injured and property damage exceeded \$800,000. During its investigation NTSB found that the stopped train did not have emergency flagging equipment and it was not always available at passenger train terminals. As a result, on July 30, 1976, NTSB recommended that FRA require that trains be equipped with emergency flagging equipment. On August 22, 1977, FRA responded that a current regulation dealing with flag protection provided the protection necessary to ensure safe train operation and that any additional requirement would impose superfluous restrictive procedures that could not be justified with available data. Based on this response, the recommendation was considered unwarranted and closed by DOT. NTSB however, did not concur with the FRA response and in February 1978 asked FRA to clarify the intent of its regulation and reiterated its belief that an unsafe condition exists until all trains are required to be equipped with emergency flagging equipment. As of June 1978 FRA has not responded to NTSB's inquiry, and NTSB still considers this recommendation to be open.

The difference in criteria for classifying a recommendation as open or closed also can result in recordkeeping disparities. Thus, DOT records may indicate that it has completed action on recommendations when NTSB records show that additional action is needed.

For example, the 1976 annual report to the Secretary stated that FRA received 36 safety recommendations from NTSB during the year and as of December 31, 1976, 13 of these recommendations were closed. More than a year later, NTSB records showed that only 7 of the 36 safety recommendations made to FRA during 1976 were closed.

In part this disparity is due to the time consumed by NTSB in evaluating FRA responses and actions to recommendations and completion of formal closeout action by the Board. However, part of the disparity is also due to the use of different criteria.

FAA PROCEDURES FOR HANDLING NTSB RECOMMENDATIONS

In contrast to FRA's deficiencies in handling NTSB recommendations, FAA has established specific operating procedures for handling NTSB recommendations and, for the most part, achieved compliance with internal and statutory requirements. We recommended in a March 6, 1975, report entitled "Improved Procedures Needed For Implementing

Safety Recommendations" (RED-75-334), several ways that FAA could improve its responsiveness to NTSB recommendations.

FAA procedures for responding to NTSB

FAA receives the majority of NTSB recommendations made to the Department of Transportation. To assure compliance with internal and statutory requirements, FAA in July 1977 established specific uniform procedures for action on safety recommendations (FAA Order 1220.2D). This order made the Office of the Administrator responsible for controlling responses to assure that recommendations are acknowledged within 10 working days and that formal responses are transmitted to NTSB not later than 90 days after the recommendation is received.

Specifically, the order requires FAA's Office of Aviation Safety (ASF) to serve as the focal point for NTSB recommendations. A member of the ASF staff receives copies of NTSB recommendations almost concurrently with the Administrator and immediately prepares acknowledgement correspondence to NTSB.

After acknowledging receipt of the recommendation, ASF assigns action to the appropriate office or service to draft a formal response. This response must be returned to ASF within 60 days. ASF must then review and forward the response to the Administrator for signature not later than 70 days after receipt of the recommendation. ASF is also responsible for maintaining files and a status log on all recommendations and related correspondence.

An FAA official stated that since the Office of Aviation Safety was established as the focal point concerning NTSB recommendations and specific internal control procedures were issued, FAA has not failed to acknowledge receipt of a recommendation within 10 working days or provide NTSB with a formal response within 90 days.

FAA monitoring and reporting on proposed actions

FAA procedures require that the office or service responsible for taking action on an NTSB recommendation submit to ASF a monthly status report. This report includes a description of the action being taken, the progress or changes since the previous report, and the estimated completion date. When an action office finds it necessary to initiate a research project as a result of an NTSB recommendation, the research office is

required to comply with the monthly status reporting requirement until the research project is completed and a report/product is forwarded to the original action office. The action office is also required to prepare interim status reports for ASF on all recommendations for which implementation action has been initiated whenever the proposed course of action is modified substantially or the timetable for implementation has been adjusted.

FAA also believes that NTSB and DOT should be consistent in determining the number of open and closed recommendations. In his March 1977 annual report, the FAA Administrator stated that the premature labeling of a recommendation as closed while the Board continues to consider it open is unrealistic. FAA believes that open or closed judgments should be made by the Board based on the premise that only the Board can officially close one of its recommendations.

CONCLUSIONS

FRA lacks adequate internal operating procedures to insure that it responds promptly to NTSB recommendations. FRA currently handles responses to NTSB recommendations as it handles general correspondence, and no one in FRA assures compliance with Public Law 93-633 or DOT Order 2000.1A. As a result, in many cases FRA has not provided responses to NTSB within 90 days, or provided timetables for implementing recommendations as required by law. In contrast, FAA has established specific operating procedures for handling NTSB recommendations and, for the most part, achieved compliance with internal and statutory requirements. OST is responsible for assuring compliance with statutory requirements and, although aware of these problems, does not monitor all FRA responses to NTSB recommendations and has not pursued sufficient corrective action.

FRA does not adequately monitor actions promised by its operating units and does not inform NTSB or OST of substantial changes or delays to promised action. FRA's failure to include timetables for action combined with NTSB's inadequate followup made it impossible for us to determine whether all open recommendations are pending for justifiable reasons.

In addition, OST's annual report to the Secretary of Transportation on the relationship between NTSB and DOT operating administrations does not provide the status of past recommendations or disclose delays incurred by FRA in implementing recommendations.

DOT and NTSB use different criteria for determining the status of recommendations. Thus, DOT and NTSB records do not always agree on whether FRA has completed action on NTSB recommendations.

RECOMMENDATIONS

We recommend that to improve FRA's responsiveness to NTSB recommendations, the Secretary of Transportation require FRA to:

- Improve its internal procedures for handling NTSB recommendations to better insure compliance with the statutory requirements of section 307 of the Independent Safety Board Act of 1974 and DOT Order 2000.1A.
- Systematically monitor the actions promised in response to recommendations and insure that actions are completed in accordance with the timetable submitted to NTSB.
- Issue periodic status reports to NTSB and OST that will include a description of the action taken, the progress or changes that have occurred, and the estimated completion date of the proposed action.

We also recommend that, to further improve the monitoring and compliance of operating administrations' actions on NTSB recommendations, the Secretary of Transportation:

- Require the Office of the Assistant Secretary for Policy and International Affairs to periodically review FRA responses to NTSB recommendations to assure compliance with DOT Order 2000.1A and, when warranted, take appropriate corrective action.
- Revise DOT Order 2000.1A to specify that the annual report to the Secretary on the relationship between NTSB and the operating administrations includes data on the status of actions taken on all open NTSB recommendations without regard to the year in which they were made.
- Revise DOT criteria for evaluating NTSB recommendations as open or closed so that both agencies will have the same classification for each recommendation.

AGENCY COMMENTS AND OUR EVALUATION

DOT officials agreed with us that FRA needs to improve its responses to National Transportation Safety Board recommendations. (See app. II.) DOT stated that FRA has assigned a railroad accident analyst to the Office of Safety to be responsible for promptly processing responses to NTSB recommendations. DOT stated that FRA also has established internal operating procedures for handling NTSB recommendations consisting of (1) acknowledging immediately all NTSB recommendations when received and (2) establishing a logbook of all internal actions on NTSB recommendations. We believe these actions will implement our recommendation that FRA improve its internal procedures for handling NTSB recommendations to better insure compliance with section 307 of the Independent Safety Board Act of 1974 and DOT Order 2000.1A.

DOT agreed that there is a need to improve the monitoring and reporting of operating administrations' actions on NTSB recommendations and stated that the Office of the Assistant Secretary for Policy and International Affairs has planned corrective action which will include (1) reminders to the operating administrations after 45 days have expired from the issuance of NTSB recommendations, (2) informal meetings concerning administration activity on certain recommendations, and (3) informal review of formal responses to NTSB before transmittal. In addition, DOT stated that a closer relationship will be maintained with the NTSB staff to ascertain the status of NTSB recommendations and more man-hours and resources will be dedicated to these overview and monitoring responsibilities.

DOT also agreed that the annual report to the Secretary of Transportation should include data on the status of actions taken on all open NTSB recommendations without regard to the year in which they were issued and that the annual report to the Secretary for calendar year 1978 will reflect this recommendation.

DOT agreed in principle with our recommendation that for accounting purposes departmental criteria for evaluating NTSB recommendations as open or closed should result in DOT and NTSB having the same classification for each recommendation. Toward this end, DOT has agreed to examine the possibility of changing its status of recommendation categories to agree with NTSB's and work with NTSB to develop mutually acceptable objective guidelines and/or criteria so that both agencies know what is expected.

We believe that these DOT actions, when completed, will implement our recommendations to improve DOT's monitoring and compliance of operating administration actions on NTSB recommendations.

DOT also stated that we relied only on correspondence to determine FRA's responsiveness to NTSB recommendations and did not consider its actions following accidents. As a result, DOT believed that a reader may erroneously infer that FRA is not responsive and that unsafe conditions exist. DOT stated that for the Class I (urgent followup) recommendations mentioned in the report, "while FRA may not have met various statutory deadlines for responding in writing to NTSB, FRA took immediate appropriate action from a safety standpoint after the accidents to correct the situation," unless FRA did not agree with NTSB about the priority of the recommended action.

We tried to determine what actions FRA took in response to specific NTSB recommendations but could not because FRA did not keep such records. We also asked NTSB to determine what actions FRA had taken on Class I recommendations and evaluate them for timeliness and adequacy, but NTSB told us they could not do so accurately because FRA did not always inform NTSB of actions taken and NTSB had not always followed up on its recommendations.

DOT used Class I recommendations to illustrate its point that FRA does take timely corrective action. However, Class I recommendations account for only 8 of the 205 railroad safety recommendations NTSB issued to FRA. As of July 1978 NTSB still considered almost half of the recommendations open, pending completion of FRA corrective action. Some of these recommendations have not been resolved in over 7 years. Additionally, an analysis of FRA actions on the 8 Class I recommendations provided by DOT in exhibit I of their comments shows that FRA took immediate corrective action on only four recommendations. FRA disagreed with the priority assigned to two recommendations (FRA took almost 30 months to complete action on one of them and 13 months to inform NTSB that it would not act on the other) and has not completed action on another recommendation although almost 2 years have elapsed. (FRA did not dispute the recommendation's priority.) NTSB revised the remaining recommendation requiring no FRA action.

We agree that we could not determine FRA's timeliness or responsiveness to NTSB recommendations. However, we believe that until FRA improves its accountability for actions taken in response to these recommendations, there is no assurance that NTSB safety recommendations have been

properly dealt with and that unsafe conditions have been eliminated.

DOT chose not to comment specifically on two of our recommendations on improving FRA's responsiveness to NTSB recommendations. These recommendations would require FRA to (1) monitor its actions promised in response to recommendations systematically and insure that they are completed in accordance with the timetable submitted to NTSB and (2) issue periodic status reports to NTSB and OST on actions taken in response to safety recommendations.

CHAPTER 4

FRA USE OF RAILROAD ACCIDENT INFORMATION

In fiscal year 1978, FRA allocated funds to develop a hazard analysis and priority determination system which will establish methodology for improved analysis of railroad accident information obtained from carrier monthly accident reports and FRA's own accident investigations.

In the past FRA has not used its information on railroad accidents as effectively as it should to identify and address critical railroad safety issues. It has not adequately analyzed monthly accident reporting data submitted under the Accident Reports Act or data obtained from its own accident investigations to monitor accident trends or identify potential safety problems.

FRA DATA ON RAILROAD ACCIDENTS

FRA obtains railroad accident information mainly from two sources: (1) monthly accident reports submitted by every common carrier engaged in interstate or foreign commerce by railroad, and (2) its own investigation of railroad accidents.

FRA states that it gathers monthly accident reports to disclose hazards arising in rail transportation. The Accident Reports Act requires railroads to file monthly reports of accidents in all aspects of railroad operations. These reports state the cause of the accident, casualties and damage resulting from the accident, and other information concerning the circumstances of the accident.

During the period 1973-76, there were 38,681 train accidents reported to FRA. These accidents resulted in 4,171 injuries, 528 fatalities, and \$747.4 million in railroad property damage. The general causes of these accidents were as follows.

Causes of Train Accidents Reported to FRA During 1973-76

<u>Cause</u>	<u>Number</u>	<u>Percentage</u>
Human factors	8,727	23
Mechanical and electrical failures	8,247	21
Track, roadbed, and structure	15,256	39
Miscellaneous	6,451	17
Total	<u>38,681</u>	<u>100</u>

FRA's policy is to investigate train accidents in which a railroad employee is killed or five or more persons injured. Because accidents caused by human factors resulted in more deaths and injuries to people than accidents resulting from other causes, FRA investigated more of this type of accident than any other.

During the years 1973-76, FRA investigated 484 accidents which resulted in 4,019 injuries, 238 fatalities, and \$84.3 million in railroad property damage. The general causes of these accidents were as follows.

Causes of Accidents Investigated
by FRA During 1973-76

<u>Cause</u>	<u>Number</u>	<u>Percentage</u>
Human factors	143	30
Track, roadbed, and structure	115	24
Mechanical and electrical failures	79	16
Miscellaneous	<u>147</u>	<u>30</u>
Total	<u>484</u>	<u>100</u>

FRA's safety program is built around issuing regulations and monitoring railroads for compliance with the regulations. Information gathered from the monthly accident reports submitted by the carriers is often used in support of regulatory change. In addition, the information developed from FRA's accident investigations is used to supplement the monthly data provided by the carriers.

ANALYSIS OF ACCIDENT DATA

FRA sorts and tabulates monthly railroad accident data and publishes an annual accident bulletin and other summary listings of accidents. The bulletin contains selected historical railroad accident trends; detailed tabulations of injuries, fatalities, and damages by accident cause; and details of accidents and casualties by railroad.

FRA accident investigations develop detailed factual information on the conditions and circumstances surrounding the accident as well as its probable cause. FRA uses this information to assist its operating divisions in developing Federal rules and standards for railroad safety. Although both the accident bulletin and the accident investigation reports disclose railroad safety hazards, FRA currently does not adequately analyze this accident data to monitor changing accident trends and identify potential railroad

safety problems. Such trend analysis could help FRA identify and place priorities on areas needing regulatory change and allocate its resources most effectively.

In a May 1978 report issued pursuant to the Federal Railroad Safety Authorization Act of 1976 (Public Law 94-348), the Office of Technology Assessment concluded among other things that FRA has not adequately used accident data in determining the nature, extent, or reasons for specific safety problems or in setting priorities for addressing problems prior to initiation of Federal activity.

The Association of American Railroads (AAR) issued a report in 1976 entitled "Analysis of Nine Years of Railroad Accident Data." AAR analyzed FRA accident data from 1966 through 1974 to identify the significant causes of accidents and to provide a basis for developing a more responsive rail safety research and action program. The report ranked accident cause categories year by year based on an index which took into account the frequency or number of accidents in each cause category and the severity of the accidents in that category. AAR's objective was to identify significant problems that warrant closer examination. AAR recommended among other things that the analytic procedures it developed be applied to accident data for 1975 and beyond by FRA or some other interested party.

FRA stated that until fiscal year 1978, it did not have adequate funds to develop a system which would analyze railroad accident data to identify changing accident trends and potential railroad safety problems.

ACTION BY FRA

Recognizing its deficiencies in performing indepth analysis of accident reporting data, FRA allocated approximately \$900,000 in fiscal year 1978 to establish a hazard analysis and priority determination system. The system, which will take about 3 years to fully develop, will assist FRA in more effectively reducing railroad hazards. Methods will be developed to (1) analyze accident data by cause, (2) rank each cause by risk, (3) determine the effectiveness of each remedial action being considered, (4) determine the cost of implementing each remedial action, and (5) determine the optimal mix of remedial actions for resource allocation purposes.

CONCLUSIONS

FRA does not now adequately analyze the data submitted monthly under the Accident Reports Act or data obtained from its investigation of railroad accidents to monitor railroad accident trends or identify potential safety problems.

During fiscal year 1978, FRA allocated funds to develop the hazard analysis and priority determination system to provide the capability to analyze monthly accident reporting data and accident investigation data and quantitatively determine effective resource allocation. We believe that if FRA develops the system as proposed, it should assist FRA in monitoring accident trends and identifying potential safety problems.

AGENCY COMMENTS

DOT officials stated that the Department agrees completely with us that developing a hazard analysis and determination system should receive high priority within FRA's Office of Safety. DOT stated that it will continue to develop such a system during fiscal year 1979 and hopes to have a comprehensive system in place during fiscal year 1980. (See app. II.)



Office of the
Chairman

National Transportation Safety Board

Washington, D C 20594

22 SEP 1978

Mr. Henry Eschwege
Director
Community and Economic
Development Division
General Accounting Office
Washington, D.C. 20548

Dear Mr. Eschwege:

As you requested in your letter of August 22, 1978, the Board has reviewed the proposed report, "Need for Improved Action on Railroad Safety Recommendations."

This report accurately summarized the Board's activities and procedures relative to issuance of and followup on railroad safety recommendations. In addition to the actions cited in the report which the Board has taken since September of 1977 to assure timely and effective followup on the implementation of its recommendations, I have personally met with FRA since becoming Chairman of the Safety Board to discuss recommendation implementation. I believe that, with the Board evaluation and followup procedures now in effect, we will be obtaining more prompt and responsive action on our railroad safety recommendations than has ever been the case in the past.

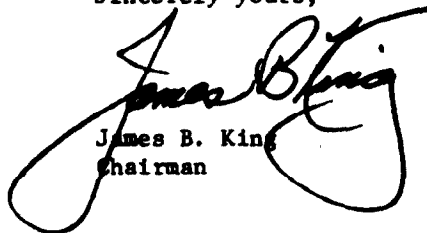
The report points out correctly that the Board's current activity is focused on following up on old open recommendations. Our revised procedures placed into effect in July of 1978 and mentioned in the report, however, call for an evaluation of the adequacy of FRA's response to our recommendations to be provided to them within 10 days of our receipt of that response. Thus, we believe these new procedures will enable us to completely eliminate the backlog of unevaluated recommendation responses by the end of this calendar year without interfering with the monitoring of current recommendations.

With respect to your recommendations on improved monitoring or compliance, we believe that DOT criteria for evaluating Safety Board recommendations as open or closed should be the same as those used by the Board. Any other alternative would tend to remove the incentive for close cooperation on the status of recommendations. If other modal agencies were permitted to adopt individual criteria for defining the status of safety recommendations, the statutory annual survey and summary on safety recommendations would be meaningless.

-2-

The Safety Board appreciates the objective research and findings of your agency and believes that mutually desired improvements in recommendation followup will result. The Board is making every effort to insure that its recommendation evaluation and followup procedures meet both the letter and the spirit of our Congressional mandate in this area, and we believe that those efforts are succeeding. We invite the General Accounting Office to reassess our progress and reevaluate the operation of our recommendation followup system next year. We would also welcome a GAO evaluation of the responsiveness of other DOT agencies, such as the Materials Transportation Bureau, in implementing critical safety recommendations of the National Transportation Safety Board.

Sincerely yours,



James B. King
Chairman



ASSISTANT SECRETARY
FOR ADMINISTRATION

OFFICE OF THE SECRETARY OF TRANSPORTATION
WASHINGTON, D.C. 20590

October 12, 1978

Mr. Henry Eschwege
Director
Community and Economic
Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Eschwege:

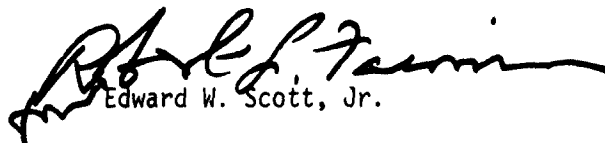
We have enclosed two copies of the Department of Transportation reply to the General Accounting Office draft report "Need For Improved Action on Railroad Safety Recommendations."

We agree with the GAO that improvement is needed within the Department for responding to the National Transportation Safety Board's recommendations. Action has been taken or is planned in the Office of the Assistant Secretary for Policy and International Affairs, as well as the Federal Railroad Administration's (FRA) Office of Safety to correct the problems noted.

The Department is in complete agreement with GAO on the high priority that should be assigned to the development of a hazard analysis and determination system within FRA's Office of Safety. We will continue to develop such a system during fiscal year 1979 and hope to have a comprehensive system in place during fiscal year 1980.

If we can further assist you, please let us know.

Sincerely,


Edward W. Scott, Jr.

Enclosure

DEPARTMENT OF TRANSPORTATION REPLY
TO
GAO REPORT ENTITLED
NEED FOR IMPROVED ACTION
ON RAILROAD SAFETY RECOMMENDATIONS

SUMMARY OF GAO FINDINGS AND RECOMMENDATIONS

The National Transportation Safety Board (NTSB) has not been effective in evaluating responses to its railroad safety recommendations or following up on proposed implementing action. The Board has recognized this problem and recently taken corrective action.

In many cases the Federal Railroad Administration (FRA) has not responded to the Safety Board's railroad recommendations within 90 days or provided timetables for their implementation as required by law. Further, FRA has not adequately monitored implementation action promised by its operating units and does not inform the Safety Board of substantial changes or delays to promised actions. As a result, GAO could not determine if all open railroad safety recommendations addressed to FRA were pending for justifiable reasons.

GAO recommends various actions that the Secretary of Transportation should take to improve the Department's responsiveness to the Safety Boards' recommendations.

DEPARTMENT OF TRANSPORTATION POSITION STATEMENT

We agree that improvements are needed within the Department for responding to NTSB railroad recommendations. Action has been taken or is planned in the Office of the Assistant Secretary for Policy and International Affairs, as well as FRA's Office of Safety to correct the problems noted.

We would like to point out however, that because the auditors relied only on correspondence to determine FRA's responsiveness and did not consider actions taken by FRA following accidents, a reader of the report may obtain an erroneous connotation of a lack of responsiveness and possibly of unsafe conditions. For example, for the 8 class I (urgent followup) recommendations mentioned in the report, it is clear

that while FRA may not have met the various statutory deadlines for responding in writing to NTSB, FRA took immediate appropriate action from a safety standpoint after the accidents to correct the situation. In some cases action was taken even before a recommendation was received from NTSB. In other cases, FRA did not agree with NTSB as to the priority of the recommendation and implementation of the recommendation was delayed. It should be pointed out that NTSB's primary focus is on specific accidents whereas FRA monitors all railroad accidents on a continuous basis and is therefore in a better position to assess priorities. A listing of the accidents, action taken by FRA and disposition of the recommendations is included as Exhibit I. We strongly believe the digest and the body of the report should be changed to reflect the distinction.

As to the specific GAO findings that FRA did not have adequate internal operating procedures and was not complying with statutory requirements, FRA recognizes this fact and has assigned a highly qualified railroad accident analyst to the Office of Safety, to be responsible for the processing of FRA responses in a timely manner. Furthermore, FRA has established rigid internal procedures consisting of:

1. Immediately acknowledging all NTSB recommendations when received; and,
2. Establishing a logbook of all internal actions on NTSB recommendations.

With regard to GAO's findings concerning the need for improved monitoring and reporting on proposed actions, the Office of the Assistant Secretary for Policy and International Affairs has initiated action to improve the overview and monitoring of NTSB recommendations as required in the Independent Safety Board Act of 1974 and DOT Order 2000.1A. Actions planned include: (1) reminders to the operating administrations after 45 days have expired from the issuance of NTSB recommendations; (2) informal meetings concerning administration activity on certain recommendations; and, (3) informal review of formal responses to NTSB prior to transmittal. In addition, a closer relationship will be maintained with the NTSB staff to ascertain the status of NTSB recommendations and more man-hours and resources will be dedicated to these overview and monitoring responsibilities.

The Office of the Assistant Secretary for Policy and International Affairs also agrees that the annual report to the Secretary on the relationship between NTSB and the operating administrations should include data on the status of actions taken on all open NTSB recommendations without regard to the year in which they were issued. The report to the Secretary for calendar year 1978 will reflect this recommendation and a copy will be provided to GAO.

In addition, the Office agrees in principle with the recommendation that, for accounting purposes, Departmental criteria for evaluating NTSB recommendations as "open" or "closed" should result in both the Department of Transportation (DOT) and NTSB having the same classification for each recommendation. At the time that DOT Order 2000.1A was developed, however, it was not known what criteria the NTSB used in voting on whether or not DOT action on any specific recommendation was acceptable. DOT believed that some definitive, objective criteria was necessary to make a determination as to the status of a recommendation. Therefore, the provisions of DOT Order 2000.1A were written to clearly establish what constituted "open" or "closed" status. We believe our present criteria are still valid. However, in the interest of achieving compatible accounting records, the Office of the Assistant Secretary will examine the possibility of changing its status of recommendation categories to agree with those of NTSB. In addition, we will work with NTSB to develop mutually acceptable objective guidelines and/or criteria so that both agencies know what is expected to more adequately respond to the recommendations. At such time as this is accomplished, GAO will be informed.

Exhibit I

Listing of Eight Class I, NTSB Recommendations
During the Period 1975-1977 and
FRA Action Taken

MBTA Collision, August 1, 1975

As a result of this accident, FRA received three recommendations from NTSB on August 19, 1975. FRA acknowledged the recommendations on October 2, 1975, and formally responded on June 15, 1976.

1. NTSB Recommendation 75-39

NTSB recommended that FRA check the train-brake testing methods of the Massachusetts Bay Transit Authority (MBTA). However, FRA had taken such action on August 10, 1975, before receipt of the recommendation. FRA field inspectors worked very closely with MBTA officials and inspection personnel to ensure that brake systems would in the future be maintained in accordance with the manufacturer's specifications.

2. NTSB Recommendation 75-40

NTSB recommended that FRA check periodically to ensure that MBTA test and adjust by-pass values, under various loads, during every 5,000 mile car inspection. MBTA instituted such a program on August 27, 1975, and FRA performed its check on that day and periodically thereafter.

3. NTSB Recommendation 75-41

NTSB recommended that FRA survey the braking systems of various types of rapid transit cars throughout the country. FRA did not consider this to be a Class I type recommendation. In June 1976, FRA instituted the survey and completed it 18 months later. The survey disclosed that the rapid transit braking systems are adequate provided they are maintained in accordance with specifications prescribed by the manufacturer or more stringent requirements.

The monitoring and followup actions that FRA had instituted for all three recommendations above were discontinued on June 16, 1976, following a decision by the U. S. Court of Appeals that FRA had no jurisdiction over rapid-transit rail companies.

Penn Central Collision, February 4, 19764. NTSB Recommendation 76-15

NTSB recommended on April 28, 1976, that FRA ensure that switches and signal territory are so protected that related signals governing train movements will display their most restrictive aspects if the switch points did not close properly. FRA acknowledged the recommendation on May 6, 1976, but did not consider the recommendation to be a Class I type. FRA responded on October 26, 1976, stating that a detailed analysis and followup was made. On June 24, 1977, FRA informed NTSB that existing signal rules in conjunction with railroad operating rules adequately and effectively provide protection in the normal operation of the railroad. It was determined that the switch in the subject accident had been destroyed by the train after passing a red signal which required the engineer to bring that train to a stop. FRA concluded that it was not feasible to provide signal protection in any instance in which switch fittings or rods are bent or broken through vandalism or employee negligence. NTSB was informed of these conditions on June 24, 1977, and the file was closed.

Auto Train Derailment5. NTSB Recommendation 76-55

NTSB recommended on November 19, 1976, that FRA revise the Code of Federal Regulations to ensure that wheels exposed or suspected of being exposed to critical temperatures be removed from service. FRA acknowledged the recommendation on December 2, 1976. On April 22, 1977, FRA informed NTSB that it planned to test several wheel safety device projects at the Transportation Test Center in a three stage testing program but that until positive research results were obtained, no regulatory action would be taken.

Unsafe Track on the C&O New River Subdivision6. NTSB Recommendation 76-58

FRA received a recommendation from NTSB on January 6, 1977, to restrict train speeds over the Subdivision. A meeting was held that day between FRA and NTSB representatives and it was agreed that before any action was taken to reduce the maximum authorized speed, a joint FRA/NTSB on-the-ground inspection would be made to determine if track conditions warranted a 30 M.P.H. slow order. The inspection was scheduled to start on January 10, 1977, but NTSB postponed the inspection on January 7 because of weather conditions. FRA responded formally on January 31, 1977, on the status and on April 12, 1977, FRA informed NTSB that the joint inspection made on March 22, 1977, revealed no evidence to support a slow order.

AMTRAK Derailment January 16, 19777. NTSB Recommendation 77-1

NTSB recommended on February 3, 1977, that FRA investigate the interaction of two types of passenger train locomotives and track conditions to determine the causes of widening of track gauge and act to correct the causes. Prior to receipt of the NTSB recommendation, FRA had requested AMTRAK to analyze the problem. As a result FRA reported the results of the analysis to NTSB on February 3, 1977, the same day the recommendation was received. In addition to increasing the monitoring of the locomotives, FRA has conducted extensive instrumented tests and as a result, imposed speed restrictions. Test data related to the locomotives is still being analyzed at the Department's Transportation System Center for possible further action.

8. NTSB Recommendation 77-2

On April 6, 1977, NTSB revised recommendation R-77-1 above to encompass only one type of the locomotives included in the original recommendation. FRA advised NTSB that only the speeds of passenger trains with that type of locomotive were restricted and therefore believed that its earlier closed response was still current and applicable. FRA closed the file on May 2, 1977.

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