Improved Procedures Needed For Implementing Safety Recommendations

Federal Aviation Administration
Department of Transportation
National Transportation Safety Board

BY THE COMPTROLLER GENERAL OF THE UNITED STATES

RED-75-334

MARCH 6, 1975

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

B-164497(1)

The Honorable Ralph H. Metcalfe
House of Representatives

Dear Mr. Metcalfe:

Pursuant to your request of March 25, 1974, we reviewed the Federal Aviation Administration's responsiveness to safety recommendations made by the National Transportation Safety Board. We also reviewed the Board's procedures for following up on its recommendations.

As your office requested, we did not obtain written comments from the Department of Transportation or the National Transportation Safety Board on the matters discussed in this report. During our review, however, we discussed these matters with officials of these organizations and have included their views in the report where appropriate.

As agreed with your office, we are sending copies of this report to the Department of Transportation, the National Transportation Safety Board, and the House and Senate Committees on Appropriations and Government Operations.

Sincerely yours,

Comptroller General
of the United States

Contents

ABBREVIATIONS

GAO	General Accounting Office
FAA	Federal Aviation Administration
NTSB	National Transportation Safety Board

COMPTROLLER GENERAL'S
REPORT TO
THE HONORABLE RALPH H. METCALFE
HOUSE OF REPRESENTATIVES

IMPROVED PROCEDURES NEEDED FOR IMPLEMENTING SAFETY RECOMMENDATIONS

Federal Aviation Administration
National Transportation Safety Board
Department of Transportation

D I G E S T

WHY THE REVIEW WAS MADE

GAO was asked to review the Federal Aviation Administration's (FAA's) responsiveness to safety recommendations made by the National Transportation Safety Board to determine whether they are being implemented, if not, why, and what the Board does when FAA does not respond in an affirmative manner.

FINDINGS AND CONCLUSIONS

The Board investigates accidents involving civil aircraft, determines the cause or probable cause of these accidents, and makes recommendations intended to prevent accidents and promote transportation safety.

The Board's recommendations are advisory rather than mandatory, and its aviation recommendations are usually addressed to FAA. FAA promotes civil aviation safety by prescribing mandatory safety rules and regulations for aircraft, equipment, and airmen.

During fiscal years 1970-74, the Board made 655 aviation safety recommendations to FAA. As of August 29, 1974, 222 of these recommendations were classified by the Board as open, that is monitoring or followup needed.

In December 1974, a Subcommittee of the House Committee on Interstate and Foreign Commerce issued a report on FAA's air safety activities. GAO's report corroborates some Subcommittee findings and contains recommendations for correcting some of the problems both GAO and the Subcommittee identified.

FAA's responsiveness

FAA does not always take prompt and effective action on the Board's recommendations. Initial response to most recommendations indicates that FAA

--will study the problem or the need for revising the Federal Aviation Regulations,

--has taken or will take some action, such as initiating a regulation change or issuing nonregulatory information, or

--disagrees with the recommendation and explains why.

FAA has not adequately monitored the status of the actions promised. As a result, actions may be dormant for long periods or may be forgotten entirely. (See p. 3.)

For example, after an accident in which passengers were thrown from their seats despite having their seatbelts fastened, the Board recommended that FAA eliminate, within a reasonable time, the use of fabric-to-metal buckles for seatbelts.

In October 1970 FAA responded that it had a study underway on this

Coordination between FAA and the Board

FAA's failure to adequately respond to Board recommendations and the Board's inadequate followup have been due partly to a lack of effective coordination. As a result, the records of FAA and the Board do not agree on the number of recommendations accepted by FAA and the extent of compliance.

For example, of the 117 recommendations made in calendar year 1974, FAA closed 40 that the Board had not closed and the Board closed 12 that FAA had not closed. Also the Board classified 11 recommendations as accepted which FAA had classified as rejected.

In September 1974 FAA and the Board agreed to hold quarterly meetings to discuss the status of open recommendations, and at the first meeting they discussed uniform criteria for determining the status of recommendations. These meetings, if held regularly, should help to improve coordination. (See p. 18.)

RECOMMENDATIONS

To improve its responsiveness to Board recommendations, the Secretary of Transportation should require FAA to:

--Systematically monitor the actions promised in response to recommendations to insure that they adequately address the recommendation and are completed in accordance with the timetable submitted to the Board or that delays are brought to the attention of FAA and Board officials.

--Review its responsiveness to previous recommendations to determine whether more action is warranted and whether ongoing actions are preceeding promptly.

--Establish controls over its regulation activities to insure that regulation changes are completed expeditiously.

--Review its use of internal directives and public issuances to determine whether they are meeting their objectives and establish procedures to insure that adequate feedback is obtained on the effectiveness of such nonregulatory actions. (See p. 12.)

AGENCY ACTIONS AND UNRESOLVED ISSUES

As requested by the Congressman, GAO did not obtain written comments from FAA or the Board. GAO did, however, discuss the matters in this report with officials of both organizations, and their views have been considered in this report.

CHAPTER 1

INTRODUCTION

At the request of Congressman Ralph H. Metcalfe, we reviewed the Federal Aviation Administration's (FAA's) responsiveness to safety recommendations made by the National Transportation Safety Board (NTSB). We reviewed FAA's and NTSB's system for implementing and following up on recommendations to insure proper action. We also reviewed pertinent policies and procedures and records dealing with NTSB recommendations and interviewed FAA and NTSB officials. We also visited a number of FAA field offices, as shown in appendix I.

In December 1974 the Special Subcommittee on Investigations, House Committee on Interstate and Foreign Commerce, issued a report on selected FAA air safety activities. The results of our review corroborate some of the Subcommittee's findings and conclusions, as discussed in subsequent chapters of this report. Our report updates one of the Subcommittee's findings and contains specific recommendations for correcting some of the problems we both identified.

NTSB was established by the Transportation Act of 1966 (49 U.S.C. 1654) as an independent agency in the Department of Transportation to promote transportation safety. Title III of the Transportation Safety Act of 1974 (Public Law 93-633, approved Jan. 3, 1975) provides that on April 1, 1975, NTSB will become an independent agency of the United States. NTSB is headed by five members appointed by the President and confirmed by the Senate, one of whom serves as Chairman. Most of its efforts concern aviation safety. NTSB

--investigates accidents involving civil aircraft,

--determines the cause or probable cause, and reports facts and findings of such accidents, and

--makes recommendations which will tend to prevent transportation accidents and promote transportation safety.

NTSB's Bureau of Aviation Safety submits recommendations to its members for approval. After approval, the recommendations are sent to the particular addressee involved, usually in letter form, although some are transmitted as part of an accident report. Recommendations generally are made to the Department of Transportation and its Administrations; they may, however, be made to industry, States, local

agencies, and organizations involved in transportation safety. In all cases, NTSB safety recommendations are advisory, and there is no legal requirement for their implementation.

FAA is the primary addressee of NTSB aviation recommendations. During fiscal years 1970-74, NTSB approved and transmitted 655 aviation safety recommendations to FAA.

FAA, under the Federal Aviation Act of 1958, (49 U.S.C. 1421), has the authority and the responsibility to promote flight safety of civil aircraft in air commerce by prescribing and revising minimum standards (Federal Aviation Regulations) governing aircraft, equipment, and airmen; and such other practices, methods, and procedures it deemed necessary.

CHAPTER 2

NEED FOR BETTER RESPONSE TO RECOMMENDATIONS

FAA does not always take prompt and effective action on NTSB recommendations. FAA's procedures permit promised actions to be dormant for extended periods or to be forgotten. Also FAA studies and changes in the Regulations have taken extended periods to complete. Sometimes it has issued nonmandatory pronouncements in response to NTSB recommendations which apparently were not adequate to achieve the recommendations' objectives. According to FAA, NTSB recommendations do not always consider the balanced needs of the entire transportation industry and thus recommendations must be carefully weighed before acceptance.

The Special Subcommittee on Investigations' December 1974 report noted that FAA's response to NTSB recommendations needed to be improved. The Subcommittee reported that FAA did not fully consider NTSB's July 1972 recommendations for improvements to the DC-10 aircraft until after the March 1974 crash of a Turkish DC-10 near Paris, France.

Title III of the Transportation Safety Act of 1974, approved January 3, 1975, requires the Secretary of Transportation to respond, in writing, to each NTSB recommendation submitted to him within 90 days. The response must contain either a timetable for implementing the recommendation or parts of it or a detailed explanation of why the recommendation or parts of it will not be implemented.

FAA ACTIONS ON NTSB RECOMMENDATIONS NOT EFFECTIVELY MONITORED

Department of Transportation procedures require FAA to respond to NTSB recommendations within 10 days. These initial responses usually state that FAA plans further action. For example, the initial responses to NTSB recommendations during 1973 included 53 percent where FAA stated that it either was already satisfying the recommendation or would initiate some action, such as issuing a bulletin or revising the Regulations; 25 percent where FAA stated it either was studying or would study the problem or need for a regulation change; and 22 percent where FAA disagreed.

FAA has not adequately monitored the status of the actions promised in the initial response or routinely told NTSB of progress. As a result, the recommendations have not been resolved promptly and have been forgotten.

For example, after an accident in May 1970, NTSB recommended in September 1970 that FAA eliminate, within a reasonable period, the use of fabric-to-metal seatbelt buckles and require metal-to-metal seatbelt buckles on U.S.-registry aircraft. In its investigation of this accident, NTSB found that seven passengers had been thrown from their seats, despite having their seatbelts fastened. In making its recommendation, NTSB also cited other instances in which fabric-to-metal buckles had failed.

In October 1970 FAA said it was studying this matter. In September 1974, 4 years after NTSB recommended action "within a reasonable period," FAA was still studying fabric-to-metal seatbelt buckles. This matter was scheduled for review at FAA's first Biennial Airworthiness Review in December 1974 where most regulations were to be reviewed.

In November 1970 NTSB made another recommendation relating to fabric-to-metal seatbelts. An NTSB Air Safety Investigator, while acting as an instructor, had his fabric-to-metal seatbelt release while performing inverted flight. The belt was in excellent condition and had been checked for tightness just before the aircraft entered inverted flight. NTSB recommended that FAA take steps to insure that no aerobatic aircraft are certified or operated in the aerobatic category unless equipped with metal-to-metal seatbelts.

In December 1970 FAA said that it was proposing a change to the Regulations to require replacement of fabric-to-metal seatbelts in certain aerobatic aircraft. In May 1972 FAA took corrective action on the one model of aerobatic aircraft involved in the incident reported by NTSB. Even though the use of fabric-to-metal seatbelt buckles was not unique to this model aircraft, FAA did not take action on aerobatic aircraft in general.

In another case NTSB found in its investigation of a ditching of a privately operated aircraft that, although in this case flotation gear was available, there was no FAA requirement for flotation gear on not-for-hire aircraft. As a result, NTSB recommended in April 1970 that flotation gear be required on not-for-hire aircraft operating beyond gliding distance from land. At first, FAA did not agree with the recommendation but, after obtaining more data from NTSB, agreed to analyze the data and reevaluate the recommendation. We could find no evidence of further FAA action on this recommendation, and apparently it had been forgotten. After our inquiries in May 1974, FAA said that it was going to request additional data on this recommendation from NTSB and reevaluate its response.

Recent changes in FAA monitoring procedures

The FAA Administrator testified in March 1974 before the Subcommittee on Aviation, Senate Committee on Commerce, that he would review all NTSB recommendations over the previous 2 years to determine whether any really valid safety suggestions were either ignored or not thoroughly considered. This task was assigned to an FAA committee investigating the crash of a Turkish DC-10 in March 1974.

This committee was dissolved on April 19, 1974, after its investigation and report; however, it never completed the study of NTSB recommendations. The task was then assigned to FAA's Flight Standards Service. Instead of reviewing FAA's response to all 200 NTSB recommendations for the last 2 years, the Service reviewed only the 41 recommendations FAA had classified as rejected. The review resulted in four recommendations being reclassified as alternate actions being taken. Not reviewed, however, were the recommendations for which FAA originally said it was already satisfying the recommendation, would take alternate action, or would study the problem.

Before dissolving, the FAA committee on the DC-10 crash submitted an interim report to the Administrator on April 5, 1974, which stated that FAA's control system did not follow the status of actions in response to NTSB recommendations and that NTSB generally was not advised when a recommended action had been completed.

After this report, the Service's Accident Investigation Staff revised its procedures to require a monthly status report beginning July 1, 1974, on actions taken in response to NTSB recommendations. These reports are to be used as a ready reference by the staff in responding to congressional and other inquiries relating to NTSB recommendations. The Accident Investigation Staff said the report also would be used to monitor the status of action on NTSB recommendations by forwarding the report to the appropriate officials.

In June 1974 we asked FAA to tell us of the actions taken or considered in response to a number of recommendations which, we and NTSB believed, could be critical to aviation safety. Originally FAA intended to respond by forwarding the status report for each of the recommendations but upon reviewing the status sheets, it found numerous cases where the information was erroneous or lacked detail. Therefore it had to validate the information for each recommendation through the cognizant office before it could respond to our inquiry. On September 12, 1974, FAA gave us

information showing the status of these recommendations. As of January 1975, the status report still did not contain the detailed information on which to base a complete response to an inquiry.

DELAYS IN CHANGES TO FEDERAL AVIATION REGULATIONS

FAA's current procedures for processing changes to the Regulations need improvement to eliminate unnecessary delays. Since NTSB recommendations for a regulation change are processed in the same manner as any other FAA regulatory project, implementing these recommendations can require long periods.

Regulation change procedure

Suggestions for changes to the Regulations come from many sources--within FAA, private citizens, Government agencies (such as NTSB), or other concerned groups.

Upon receipt of a proposed regulation change, regardless of source, FAA initiates a study of the proposed change termed a "project" with an assigned number.

FAA's Flight Standards Service's Regulations Staff monitors the progress of regulation changes. Suggestions for regulation changes received from non-Government sources are monitored from the time of receipt, and, if rejected, FAA regulations require FAA to explain the reasons for rejection.

Suggestions from Government sources, including NTSB, are treated as having been internally generated within FAA. The Regulation Staff does not monitor a proposed regulation change resulting from a NTSB recommendation until the cognizant FAA office has studied it and determined that a regulation change is warranted. If it is determined that a change is not warranted, thus rejecting the recommendation, neither the Regulations Staff nor NTSB is usually told.

The Regulations Staff approves the regulation change project and forwards it to the cognizant office for review and preparation of a report of findings and recommended action. If a regulation change is recommended, the project is forwarded through the Regulations Staff to FAA's Chief Counsel for review and preparation of the proposed change.

Under the Administrative Procedures Act of 1946 (5 U.S.C. 553), the public must be allowed to comment on proposed revisions to the Regulations unless the Administrator determines that it is contrary to public interest and is impracticable or unnecessary to obtain comments.

Usually, however, FAA publishes a Notice of Proposed Rule Making on which the public comments. These comments are then evaluated and the notice is revised, if necessary, before becoming a final regulation.

The average processing time for a regulation change, once the project had been approved, was 28 months for changes implemented during fiscal year 1974. In addition, a proposed regulation change can be under study within the operating divisions for a year or more before it is decided that a change is justified.

Problems in rulemaking process

During 1973 FAA's Office of Management Systems reviewed regulatory procedures and found problems which were causing delays in implementing regulation changes. As of September 1974 the report still was not issued, but facts gathered during the FAA review indicated the following delays in the regulatory process.

A lengthy delay in the overall process occurs in the Office of the Chief Counsel where a project can remain for an extended period without action. A major reason for this delay is the higher priority given to applications to be exempt from a part of the Regulations.

According to the Regulations Staff, which assigns priorities for regulatory projects, applications for exemptions normally receive preference over all but the most important regulation change projects because FAA has established a 60-day time frame for processing applications for exemptions but has not established a time frame for preparing regulation changes. FAA officials also said that staff shortages were a major cause of these delays but that recent increases in staff should correct this problem.

To illustrate the delay which can occur, in December 1970 a commercial airline 737 was extensively damaged by a fire which occurred while the oxygen tanks on board were being refilled and while the aircraft was on the loading ramp. Although there were no passengers involved, NTSB was concerned with the possible tragic consequences and in April 1971 recommended that FAA institute a regulation change to prohibit the servicing of aircraft oxygen systems with passengers on board. In December 1971 FAA authorized a project which resulted in a recommendation to the Office of the Chief Counsel in June 1972, that a notice of proposed rulemaking be developed.

The notice was issued for public comment in June 1974. During the 2 years it took to develop this notice, we found that for 11 months (December 1972 to November 1973) the Chief Counsel's Office did not have anyone assigned to the project because of higher priority work. As of October 1974 comments received were still being evaluated.

Other major findings of the study follow.

--Flight Standards Service's Maintenance Division does not have a full-time regulatory staff. In addition, accurate data on individual projects was not maintained.

--Flight Standards Service's Flight Operations Division does not have a uniform system for controlling projects being worked on. At the time of the review, 12 projects had no action taken on them during the previous year, 2 had been lost and the project folders could not be located, and some reported project managers did not know they had been assigned the responsibility for the projects.

Of the 12 projects on which there had been no action, 1 was initiated because of a May 1972 NTSB recommendation that underwater locators be required for cockpit voice recorders. At the time of the FAA review of regulatory procedures, the last action taken on this project was in October 1972. After the FAA review, the cognizant FAA division recommended in January 1974 that a regulation change be initiated and sent the project to the Chief Counsel's Office for drafting the notice of proposed rulemaking. In September 1974 the Chief Counsel's Office said that nothing further had been done on this project because of its low priority.

NONREGULATORY PROGRAMS NOT EFFECTIVE

FAA often responds to NTSB recommendations through its nonregulatory programs of internal directives or informative public issuances. We found that FAA did not routinely determine the effectiveness of these directives and issuances and that these directives and issuances did not always accomplish their objectives.

In its December 1974 report, the Special Subcommittee on Investigations recommended that FAA stop using nonregulatory procedures in matters affecting air safety. The report noted that voluntary compliance had been relied on to correct problems with the DC-10 cargo door.

Internal directives

Internal directives are used to alert FAA field personnel to potential safety problems and may request that the field personnel inform the affected parties. These directives usually suggest corrective action but are not mandatory on the aviation public--examples are maintenance or operations bulletins.

We visited a number of FAA field offices (see app. I) to determine whether specific directives issued in response to NTSB recommendations were being used and to determine what kind of corrective actions were being taken by the aviation public. Except in isolated cases, field personnel were not asked to report on the extent to which they informed affected parties and usually were unaware that a particular directive even related to an NTSB recommendation.

Most FAA directives require that field personnel not only bring the subject matter to the attention of the affected parties but also suggest corrective actions. Air carriers and air taxi operators are easily identified, and FAA field personnel usually bring the directives to their attention, either orally or in writing. Informing the general aviation public, however, is a formidable task because it includes all aircraft owners and operators and over 700,000 active pilots and 190,000 mechanics.

Although FAA has the capability to identify pilots and aircraft owners in certain geographic areas, we were told that it was impractical for the FAA district offices to individually contact all the affected parties and therefore this capability was seldom used. Informing the aviation public about general aviation matters is usually done informally by FAA personnel during public meetings and seminars conducted by FAA and by FAA inspectors during their routine surveillance activities.

Regardless of whether the directive is aimed at air carriers, air taxi operators, or the general aviation public, the directives are not mandatory and the field personnel cannot force corrective action. FAA field personnel said that they did what they could but had no responsibility for reporting back on their actions and on the rate of acceptance by the affected parties.

For example, during an investigation of an accident in December 1972, NTSB found that the captain and the first officer had not been wearing their shoulder harnesses. Both were killed in the crash and, although the first officer's seat had been destroyed by impact and fire, the captain's

seat was intact and sustained only minor fire damage. A "fasten shoulder harness" item was not included in the crew's before-landing and takeoff checklists.

NTSB believed that protecting the flight crew, as well as cabin attendants, was of vital importance since their availability to guide and aid passengers during evacuation may make the difference between survival and disaster. In June 1973 NTSB recommended that FAA take steps to insure that all air carrier pilots' checklists contain a "fasten shoulder harnesses" item. FAA agreed and issued an air carrier operations bulletin in December 1973 which required its field personnel to "review their assigned operator's takeoff and landing checklists to assure that the fastening of the shoulder harness is included."

FAA personnel told us that the carrier whose aircraft was involved in the accident leading to the recommendation would not alter its checklist. The field personnel, after bringing the directive to the attention of the carrier, did nothing further and did not report to FAA headquarters on the lack of action by the carrier.

FAA is aware of the need for feedback on directives. In May 1974 the Director of FAA's Flight Standards Service issued a memorandum to FAA headquarters offices which emphasized that, when directives relate to a potential safety problem, it is important that the headquarters office know what conditions were found and what actions were taken to correct any identified deficiencies. The memorandum required that, in the future, directives issued to FAA field offices, where appropriate, include a provision for reporting back on the conditions found and actions taken.

Public issuances

FAA has no system for determining whether public issuances are meeting their objectives. Therefore, when made in response to an NTSB safety recommendation, it is not possible to easily verify that the issuance fulfills the intent of the recommendation.

Two public issuances FAA used are the Airman's Information Manual and advisory circulars. The manual is, essentially, a handbook for pilots, and is sold on a subscription basis, except for some free distribution by FAA to new pilots. As of September 1974, there were about 20,000 subscribers to the manual.

FAA uses advisory circulars to tell the public of nonregulatory material of interest. They are either distributed

free or sold, depending primarily on the cost incurred by FAA. The number of subscriptions range between 10,000 and 38,000 for the various classes of circulars. Also circulars can be purchased individually.

The exposure rate to both of these issuances is somewhat higher than indicated by the number of subscribers because of subscriptions by aviation publishers, pilot clubs, schools, etc., where many pilots might have access to them. It appears unlikely, however, that, with a universe of over 700,000 pilots, these issuances are reaching a large proportion of them.

For example, in 1972 NTSB conducted a special study on "Carburetor Ice in General Aviation" and found that during the 5-year period 1965-69, there were 360 general aviation accidents in which carburetor ice was a factor. NTSB expressed concern about carburetor icing being an unnecessary causal factor in accidents because the means to prevent icing were available. In April 1972 NTSB recommended that FAA develop an advisory circular on this subject and mail it to all general aviation pilots, flight schools, and instructors.

FAA agreed with the recommendation and later issued an advisory circular on February 28, 1973, but it was not mailed according to NTSB's recommendation. Of the 54,400 copies printed, only 46,700 of them were distributed--36,400 to the public and 10,300 to FAA employees. There is no way of determining how much of the aviation public was reached.

CONCLUSIONS

FAA lacks procedures to insure that its responses to NTSB recommendations are made promptly and that actions address the subject of the recommendations. FAA's review of its responsiveness to all NTSB recommendations was not completed because (1) the committee originally assigned the task of the review was abolished and (2) a subsequent review was limited to those recommendations rejected by FAA, thus failing to consider most of NTSB's recommendations.

FAA's new procedure to maintain a status report on actions promised in response to a recommendation is useful as a ready reference to identify the type of actions underway. The report does not contain enough information, however, to determine actions that had been taken and the extent of the current actions. As a result the status report is not adequate to monitor actions to see that they are promptly taken.

Because of FAA's lack of a systematic followup, some actions promised have taken longer than necessary and some, apparently, have even been forgotten. Problems in FAA's procedures for changing the Regulations can also delay changes in regulations recommended by NTSB.

The Transportation Safety Act of 1974 requires the Secretary of Transportation to establish timetables for implementing NTSB recommendations, but procedures will be needed to insure that the timetable is followed or to show which recommendations are not being implemented on time.

FAA often responds to a recommendation by making an internal directive or a public issuance. There is no followup, however, to determine if these are achieving their objectives and satisfying the recommendations.

RECOMMENDATIONS

We recommend that, to improve its responsiveness to NTSB recommendations, the Secretary of Transportation require FAA to:

--Systematically monitor the actions promised in response to recommendations to insure that they adequately address the recommendations and are completed in accordance with the timetable submitted to NTSB or that delays are brought to the attention of FAA and NTSB officials.

--Review its responsiveness to previous recommendations to determine whether more action is warranted and whether ongoing actions are proceeding promptly.

--Establish controls over its regulation activities to insure that regulation changes are completed expeditiously.

--Review its use of internal directives and public issuances to determine whether they are meeting their objectives and establish procedures to insure that adequate feedback is obtained on the effectiveness of such nonregulatory actions.

CHAPTER 3

IMPROVEMENTS IN NTSB'S FOLLOWUP ON RECOMMENDATIONS

Before September 1974, NTSB's procedure for evaluating and following up on FAA's responses to NTSB recommendations was not effective in determining whether the response was adequate. NTSB did not have guidelines for evaluating and following up on FAA responses, and the persons performing these activities had other duties of a higher priority. As a result NTSB was not aware that actions FAA promised in response to some of the NTSB recommendations were not being implemented promptly.

According to the December 1974 report of the Special Subcommittee on Investigations, NTSB should followup on its air safety recommendations more energetically. The Subcommittee noted that FAA had not satisfactorily responded to NTSB's July 1972 recommendations for modifying the DC-10 aircraft and that NTSB did not press for a definitive answer from FAA on implementing the recommendations.

In September 1974 NTSB transferred the responsibility for evaluating and following up on FAA responses to NTSB recommendations to the Safety Recommendation Manager, a new position.

EVALUATION PROCEDURE

Personnel within NTSB's Bureau of Aviation Safety who investigated and reported on the accident or incident leading to each recommendation were given the responsibility for evaluating FAA's response to the recommendation. There were no criteria on when to make this evaluation. Also, depending on the individual evaluator and his workload, a recommendation might or might not have been monitored for promised future resolution by FAA.

NTSB evaluated proposed FAA actions on its recommendations in terms of responsiveness, degree of compliance, and acceptability. Within these categories, the evaluation form listed several options, and the evaluator checked the one he deemed appropriate. For example, under the category of responsiveness, the evaluator made his choice from the following classifications.

1. Subject fully treated.
2. Treated adequately.
3. Treated, but not in depth.
4. Treated, but inadequately.
5. Subject missed and/or untreated.

The choice was dependent on the views of the evaluator, since the Bureau had not established criteria for the various categories.

The evaluator, in addition to evaluating the response according to responsiveness, compliance and acceptability, determined whether a recommendation should be closed. If a recommendation was closed, NTSB usually took no further action. If the recommendation was considered open, however, the evaluator recommended followup action which could include requesting additional information from FAA, providing more information to FAA, or monitoring FAA's future actions.

Accordingly each recommendation was classified as (1) closed--rejected, (2) closed--accepted, or (3) open-monitor or followup. The category of closed--rejected was used to show cases in which FAA disagreed and NTSB either accepted FAA's position as valid or disagreed but did not have a strong enough case to sustain the recommendation.

There was a disagreement within NTSB, however, on what constituted a closed--accepted recommendation. Some believed that a recommendation should not be closed until the promised action had been actually implemented, whereas others believed that it could be closed once FAA promised that action would be taken. If a recommendation was closed under the last circumstance, it was possible for a recommendation to be classified as closed--accepted, but for FAA not to take the promised action. For example, during its investigation of a glider (sailplane) accident, NTSB found that an applicant for a glider pilot rating was not required to have a medical certificate issued under FAA's Regulations. Although not a cause of this accident, NTSB recommended, in June 1970, that the Regulations be revised to require medical certification for glider pilots. FAA responded that it was already developing revisions to the applicable regulations and was considering the inconsistency by which medical certification was not required for glider pilots.

In August 1970 NTSB closed this recommendation as accepted on the basis that FAA apparently was going to propose a change in the regulation on this subject. The NTSB evaluator did note, however, that, when the notice of proposed rulemaking was issued, NTSB should comment on it. One apparent problem in NTSB's closing a recommendation is that it can be forgotten. In this case the proposed change failed to require glider pilot medical certification and, when NTSB commented on the notice in July 1972, it made no mention of its prior recommendation or of the need for medical certification for glider pilots.

NTSB reviews and frequently comments on FAA's proposed regulation changes, but it does not have a system for categorizing recommendations by subject so that FAA's proposed regulation changes can readily be compared with previous NTSB recommendations. Whether past recommendations are considered when reviewing proposed regulatory changes is dependent on the reviewer's familarity with the subject.

FOLLOWUP ON FAA ACTIONS

Classifying a recommendation as open means NTSB intends to monitor and/or followup on the actions FAA promised to take in response to the recommendation. The extent and frequency of the followup was determined by each NTSB evaluator.

The evaluators were also the personnel responsible for ongoing investigations and reporting and said that their followup responsibility received low priority because of the high priority they gave to accident investigations and reports. The result was that many recommendations were carried as open for long periods with no followup actions.

For example, during its investigation of a general aviation accident in October 1971, NTSB found that the aircraft operator was authorized to use average, assumed, or estimated passenger weights in computing the weight and balance of the aircraft. NTSB noted that, although not a factor in this accident, past history showed that small aircraft were extremely sensitive to weight and balance variations. Therefore, in May 1972, NTSB recommended that, for small aircraft (i.e. under 12,500 pounds), FAA require that air taxi and commercial operations use actual or passenger-declared weights rather than average, assumed, or estimated passenger weights. FAA said that it would look into this matter further, and NTSB later evaluated FAA's response in June 1972 as open-monitor. We could find no evidence of any further action, and, as of September 1974, the recommendation still was carried by NTSB as open.

On August 29, 1974, the Acting Director, Bureau of Aviation Safety, expressed concern over the large number of recommendations' being carried as open--222--with many needing evaluation. Thirty percent of these open recommendations were made during fiscal years 1970, 1971, and 1972. In an effort to reduce the backlog, the Bureau's Acting Director requested that all the open recommendations be reviewed and evaluated. As of September 1974, these reviews and evaluations were in process.

ACTION BY NTSB

Problems in NTSB's recommendation process have been recognized and improvements have been actively discussed since August 1973 or earlier. Specific improvements have been suggested in all areas, including validity of recommendations, evaluations, followup, and correlation of recommendations to regulation changes.

On July 3, 1974, NTSB approved the establishment of two positions--a Safety Recommendation Manager in the Bureau of Aviation Safety and a Safety Recommendation Officer in the General Manager's Office. The Bureau was responsible for implementing improvements in the safety recommendation process, and in September 1974 its Acting Director outlined new responsibilities and procedures for the safety recommendation process.

The Safety Recommendation Manager is responsible for overall Bureau management of safety recommendation activities and will report directly to the Bureau Director. The Manager will actively participate in forming recommendations, will evaluate all responses (with input from technical staff if needed), will initiate followup action when responses do not satisfy NTSB's intent, and will initiate status inquiries when corrective action is a long-term project. The Manager will also correlate previous NTSB recommendations with NTSB comments on proposed changes in the Regulations. He will also be the Bureau's liaison with FAA and meet quarterly with FAA to review the status of open recommendations.

A new evaluation form was developed which no longer lists multiple-choice classifications. Instead, the responses will be evaluated as either acceptable or unacceptable and the rationale for the evaluation explained. Criteria were outlined for determining the status of recommendations as follows:

Open--A recommendation that is unreconciled and being monitored. Followup action is intended or some responsive action is awaited.

Closed--A recommendation that has been (1) implemented to NTSB's satisfaction, (2) rejected and, based on staff reassessment, NTSB accepts rejection, or (3) superseded by another recommendation.

In September 1974 the 5-member Board began requiring that it concur before a recommendation is closed.

The Acting Director, Bureau of Aviation Safety, also provided for an ad hoc safety recommendation council, with membership appropriate to the technical and functional nature of the issues involved, to be convened periodically to resolve differences of opinion on (1) propriety and feasibility of proposed safety recommendations and (2) evaluation of responses to NTSB's recommendations.

The responsibilities of the Safety Recommendation Officer within the General Manager's Office include (1) independently conducting a nontechnical review of proposed recommendations and adequacy of responses to recommendations and (2) auditing and coordinating safety recommendation programs in terms of their effectiveness in fulfilling NTSB's objectives and interests.

CONCLUSIONS

NTSB has not adequately evaluated and followed up on FAA's responses to its recommendations to insure that they are being implemented promptly.

The new position of Safety Recommendation Manager should solve most of the problems in the evaluation and followup processes by bringing together all the recommendations' responsibilities under one office. This should essentially free the accident investigators from evaluating responses and followingup on actions on recommendations, a responsibility that was given a low priority. In addition, the evaluations will consistently reflect the opinion of one individual, the Safety Recommendation Manager, rather than the many individuals who previously evaluated responses. Differences of opinion can be resolved by the ad hoc safety recommendation council.

The tasks assigned to the Safety Recommendation Officer should also provide the nontechnical evaluation of NTSB's recommendations and adequacy of responses which is needed before disclosure of this information to the Congress and the public.

CHAPTER 4

BETTER COORDINATION BETWEEN NTSB AND FAA

FAA's failure to adequately respond to recommendations and NTSB's inadequate followup has been due, partly, to a lack of effective coordination. In September 1974 FAA and NTSB agreed to meet quarterly to discuss the status of open recommendations.

Before this agreement a formal letter of understanding was being considered, which would have provided for these meetings and also would have established uniform criteria for determining the status of recommendations.

The letter was developed in June 1973 by personnel in FAA's Accident Investigation Staff and NTSB's Bureau of Aviation Safety. Although the FAA Administrator agreed to the letter in December 1973, NTSB wanted a procedure established including other modes of transportation and therefore, according to NTSB's General Manager, would not approve the agreement. In September 1974, however, the NTSB Chairman met with the FAA Administrator, and as a result FAA's Associate Administrator for Aviation Safety and NTSB's Director of Bureau of Aviation Safety (both with appropriate staff) were instructed to hold quarterly meetings. In addition, FAA plans to provide NTSB with copies of its monthly status report on actions being taken in response to NTSB recommendations.

DISPARITIES IN EVALUATING FAA RESPONSES

The letter of understanding originally was developed to eliminate the disparity between FAA and NTSB on the number of recommendations shown as accepted by FAA and the degree of compliance. FAA and NTSB were critized on this disparity in a magazine article on July 24, 1973, which pointed out discrepancies in the status of recommendations made during 1970 to 1972.

Originally the disparity was caused by FAA's closing recommendations when the initial letters of response were sent. We found, however, that, although FAA's status reports now indicate the status of the promised actions as well as the initial responses, there still are discrepancies between NTSB and FAA in classifying the status of actions and their responsiveness.

Of the 117 recommendations NTSB made in calendar year 1973, for example, FAA closed 40 that NTSB had not closed and NTSB closed 12 that FAA had not closed. Also NTSB