United States General Accounting Office

GAO

Report to Congressional Requesters

November 1989

AVIATION SAFETY

FAA's Safety Inspection Management System Lacks Adequate Oversight

GAO/RCED-90-36

GAO

United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

B-228633

November 13, 1989

The Honorable Norman Y. Mineta
Chairman, Subcommittee on Surface
Transportation
Committee on Public Works and
Transportation
House of Representatives

The Honorable James L. Oberstar
Chairman, Subcommittee on Aviation
Committee on Public Works and
Transportation
House of Representatives

Recent airline accidents involving problems with pilot training and the aging airfleet have focused attention on the Federal Aviation Administration's (FAA) safety inspection program. FAA considers its inspection program an important step in ensuring the safety of the flying public. Through these inspections, FAA can identify a wide spectrum of weaknesses in pilot training or aircraft maintenance that can cause accidents.

As requested, we evaluated FAA's internal controls and management practices, to determine if its national work program guidance on inspection requirements was followed by FAA staff at district offices which conduct the inspections. We performed our review in 6 of 90 district offices located in 4 of FAA's 9 regions (see app. I).

Our review focused on FAA's national inspection work program for fiscal year 1988 and the Work Program Management Subsystem (WPMS). WPMS serves as FAA's management tool for recording both its plan for the inspection program and what was found during the inspections.

WPMS also serves a vital role for program oversight in ensuring that national inspection goals are being met and reported. FAA relies on WPMS data to prepare its legislatively mandated[1] annual report to the Congress concerning its inspection planning strategy and to report on the number of required inspections completed. Additionally, the law requires FAA to report on its internal management controls, to ensure that field managers are complying with FAA policies and procedures, including those regarding inspection types and priorities.

[1] 49 U.S.C. App. 308 note.

FAA staff at the local district offices enter their inspection plan for the year onto the computer-based WPMS showing the number of required inspections to be completed and what is going to be inspected. As each required inspection is completed, information is added to the WPMS computer-based file on what was found during the inspection. To help them in their oversight responsibilities, regional and district managers receive quarterly reports on the district office progress in completing inspections and meeting the required national program goals.

At the end of the year, the WPMS files from all district offices are consolidated into a single file at FAA's national data base. This national data base becomes the historical file for inspections, and FAA management uses information from this file for safety oversight and for FAA's annual report to the Congress.

FAA's Management Oversight of WPMS Is Not Adequate

Although FAA headquarters management provided instructions to local FAA officials on how to calculate and enter national inspection program guidance into WPMS, local FAA staff have not always followed them. For inspections we reviewed, fewer than half the inspections of pilots, aircraft, and aircraft maintenance bases required by national policy were entered as requirements on WPMS. FAA headquarters management responsible for overseeing the inspection program were unaware that their policies were not always followed by FAA staff because reports received by headquarters were summarized and field office discrepancies were not readily apparent. Concerning oversight, the federal standard for supervision states that, "qualified and continuous supervision is to be provided to ensure that internal control objectives are achieved."

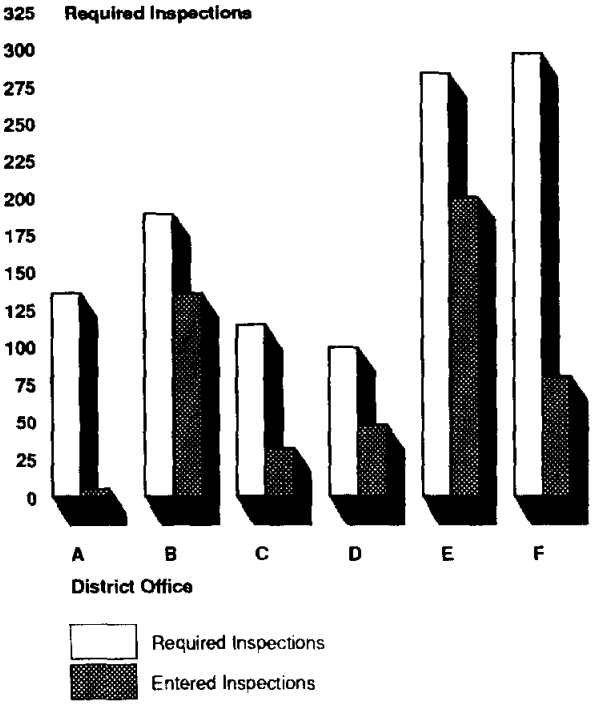
Additionally, we found that all six district offices we reviewed had entered inaccurate and incomplete inspection results information into WPMS. As discussed later, problems with data accuracy were reported in our 1987 report,[3] and more recently by the Department of Transportation's (DOT) Office of the Inspector General (OIG).[4]

[3]Aviation Safety: Needed Improvements in FAA's Airline Inspection Program Are Underway (GAO/RCED-87-62, May 19, 1987).

[4]Final Report on Audit of Flight Standards Inspection Program in Southwest Region (R6-FA-9-078, Mar. 17, 1989).

Figure 1 illustrates how the number of inspections entered in WPMS as required under the national program goals was understated at all six district offices we visited.

Figure 1: Number of Required vs. Entered Inspections at Six FAA District Offices

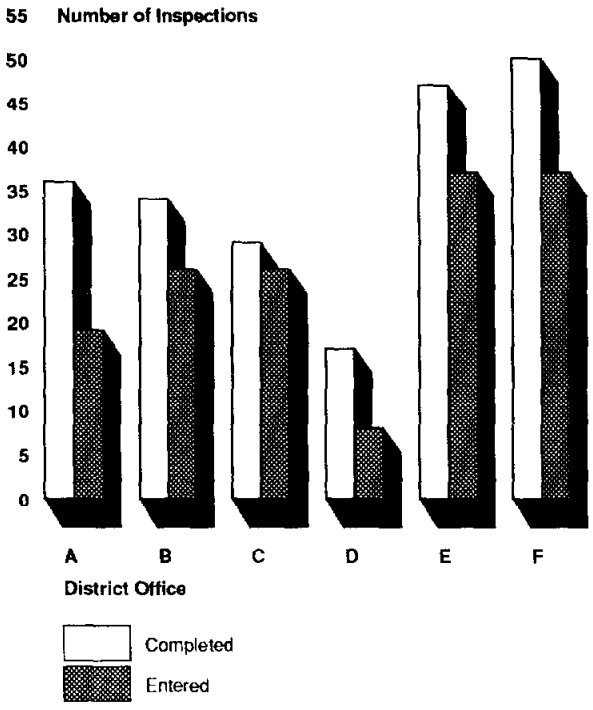


Required inspections - Number of Inspections required under FAA's National Work Program

Entered Inspections - Number of required inspections entered into WPMS

Compounding this problem, FAA district office staff did not always follow required inspection guidance for those inspections that were performed. FAA guidance calls for inspections that provide balanced, rather than repetitive, coverage of pilots, aircraft, and main maintenance bases. However, at four of the six offices we visited, FAA inspectors duplicated required inspections on aircraft or pilots while missing other required inspections. For example, at one office, FAA staff inspected the same aircraft two or more times while not inspecting others. Similarly,

Figure 2: Completed vs. Entered Inspections



Completed - Number of inspections recorded in case files

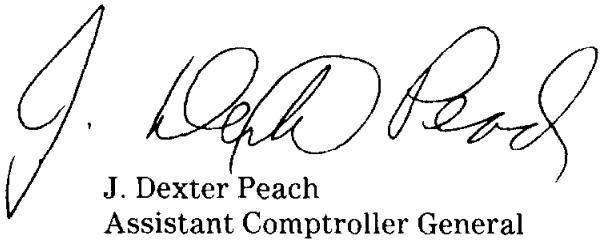
Entered - Number of inspections entered on WPMS

Similar to our findings, in March 1989, the Department of Transportation's OIG found a 9-percent omission and error rate in the recording of inspection results in fiscal year 1987 data from nine FAA district offices in FAA's Southwest Region, which were not in our sample. The OIG also identified problems and made recommendations for training personnel on the use of WPMS, verifying inspection reports for accuracy and completeness, entering data on a timely basis, and retaining backup files. FAA's Southwest Region, which oversees the nine district offices, agreed in February 1989 to take corrective actions to improve (1) the training of data entry clerks, (2) data entry controls, and (3) supervision over the data entry process.

Because they perceive that the data in WPMS are incomplete and cumbersome to use, FAA inspectors and supervisors have lost confidence in the

We discussed the results of our review with agency officials and incorporated their comments where appropriate. As agreed with your office, we did not obtain official agency comments on a draft of this report. Appendix I contains details on our scope and methodology.

Unless you publicly announce its contents earlier, we plan no further distribution of this report until 15 days from the date of this letter. At that time, we will send copies to the Secretary of Transportation and the Administrator, FAA. This work was done under the direction of Kenneth M. Mead, Director, Transportation Issues. If you have any questions concerning this report, please contact Mr. Mead on (202) 275-1000. Major contributors to this report are listed in appendix II.



J. Dexter Peach
Assistant Comptroller General

To determine the accuracy of the completed inspection information on WPMS, we included pilot examiner and written-test examiner renewals at all six locations.

We performed our review in accordance with generally accepted government auditing standards from October 11, 1988, to April 30, 1989.

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Scope and Methodology

In response to the requesters' concerns, we determined if FAA management had established adequate internal management controls so that national FAA safety inspection policies are followed by local FAA staff who implement the required national inspection work program and that information on safety inspections contained in the WPMS data base can be used with reliability. To do this, we reviewed FAA's written policies and procedures and we gathered information regarding planning and budgeting for WPMS. We also interviewed officials at FAA's headquarters in Washington, D.C. and at the computer center in Oklahoma City, Oklahoma.

To assess the reliability of the information on required and completed inspections, we discussed procedures with district office officials and compared output from WPMS with written or hard copy information, where available, contained in files located at 6 of the 90 district offices in 4 of the 9 FAA regions. Based on input from FAA's Office of Airmen and Aircraft Registry, we selected six district offices located in or near New York, Chicago, Los Angeles, Denver, Phoenix, and San Diego[1] that represent a cross-section of FAA activities.

We examined records on FAA inspections from the WPMS data base for fiscal year 1988 on pilots at all six district offices. To determine the accuracy of required inspections, we selected the following inspector activity on pilots from WPMS for review: pilot examiner, written-test examiner, and certified flight instructor inspections at all six locations.

We also examined FAA inspector activity on aircraft maintenance at the Chicago and Denver district offices. We reviewed the following maintenance inspections from WPMS for fiscal year 1988: main maintenance base inspections; ramp inspections (an inspection of an aircraft ready for flight); and spot inspections (an inspection of an aircraft undergoing maintenance while it is not flight ready).

For the types of inspections in our sample, we determined the number of pilots, aircraft, or maintenance facilities that should have been inspected through readily available FAA lists or files maintained either at district offices or at FAA's national data base.

[1]Exact locations: Teterboro, NJ (near New York City); W. Chicago, IL (near Chicago), Los Angeles, CA; Aurora, CO (near Denver); Scottsdale, AZ (near Phoenix); and San Diego, CA.

Contents

Abbreviations

DOT	Department of Transportation
FAA	Federal Aviation Administration
GAO	General Accounting Office
OIG	Office of the Inspector General
WPMS	Work Program Management Subsystem

system as a management tool to plan and record inspections. They have, instead, established their own handwritten or computer systems to perform the functions WPMS should perform. For example, one supervisor has set up his own personal computer to track the inspections of check airmen at a major airline, and his records show twice the number of completed check airmen inspections than are recorded in WPMS. However, these systems are available only at local offices or to the individual managers and do not allow the broad-based management of FAA's inspection program that WPMS was supposed to provide.

Conclusions

FAA has developed both a safety inspection program to help ensure that flying is safe and the computer-based WPMS to assist it in keeping that safety inspection program on track. As required by internal control standards, FAA management should provide adequate supervision of the implementation of these policies to ensure that specific management directives are followed and objectives are achieved. However, these national FAA policies are not always being followed by local FAA staff who implement the inspection program to the extent that a material discrepancy exists between what management required and what staff accomplished. Local FAA staff did not plan for over half the inspections FAA management has set as a priority. Inadequate oversight of the inspection program resulted in (1) FAA headquarters management's being unaware that its inspection policies were not always followed by local FAA staff and (2) inaccurate reporting to the Congress on FAA achievements.

Also, information on inspections contained in WPMS is inaccurate and incomplete to the extent that managers depend on alternative systems of their own making for the information WPMS is supposed to provide. FAA management has not established adequate supervisory checks over data accuracy needed to maintain the integrity of the system.

Recommendations

We recommend that the Secretary of Transportation direct the Administrator, FAA, to provide adequate supervision, as required by internal control standards, to ensure that national FAA inspection policies are followed by the local FAA staff who are responsible for implementing the required national work program. To aid in this supervision, we further recommend that the Secretary direct the Administrator to establish adequate checks of data entered into WPMS to ensure that the information on inspections in the system is complete and accurate.

at two offices, inspectors duplicated required inspections of pilot examiners while missing others.

As a further example, FAA's national inspection policy stipulates that the same check airmen[5] should not be repeatedly inspected while others are infrequently or never inspected. However, at one airline, FAA, contrary to the national policy, repeatedly inspected the same check airmen while never inspecting others. The FAA staff performed 155 inspections during fiscal year 1988 on 16 check airmen, who tested 335 pilots, but during that year never inspected the other 18 check airmen, who tested 269 commercial pilots. In discussing these oversights with district office managers, they could offer no specific reason why these types of problems occurred. But they believe it may reflect inspectors' lack of emphasis on entering accurate and complete data into WPMS.

Incompletely and Inaccurately Entered Inspection Results

In 1987, GAO reported problems with the accuracy of data in WPMS. Despite hardware and software enhancements underway to improve WPMS, we found that past data accuracy problems in entering inspection results into WPMS have not been corrected and will continue until FAA establishes adequate management oversight to ensure that data are accurately entered into WPMS. Subsequent to our 1987 report, FAA provided written instructions on entering data into WPMS, but qualified and continuous supervision required by internal control standards was not provided by local managers to ensure that the instructions were followed and that data were entered completely and accurately into WPMS.

FAA plans, depending on the availability of funds, to implement hardware and software enhancements on WPMS during fiscal year 1990. However, these proposed changes do not address concerns about data accuracy that continue to exist. For example, in the six district offices we visited, we reviewed handwritten records and determined that certification for FAA-designated flight test examiners and examiners who administer written exams had been properly renewed. However, we found that 28 percent of these renewals had not been entered into WPMS because the inspectors either did not complete data entry forms or data entry clerks did not enter the renewal information. The number of inspections completed versus the number of inspections entered in WPMS for these six offices is shown in figure 2.

[5]Check airmen are commercial pilots who, under FAA's authority, periodically test the flying skills, such as the ability to land a plane under emergency conditions, of other commercial pilots who work for the same airline.

FAA District Offices Did Not Adequately Implement National Inspection Guidance

Local FAA staff did not enter into WPMS half the inspections required to meet FAA's national work program. For example, national program work plan goals, if correctly implemented, required eight FAA maintenance inspections of the aircraft and the main maintenance base of one airline in our sample. These included an inspection on the main maintenance base, an inspection on one aircraft undergoing maintenance (spot inspection), and six inspections on aircraft ready for flight (ramp inspections).

However, FAA inspection records, generated from the computer-based WPMS, showed no required FAA inspections planned at that airline for 1988. When we questioned the absence of required inspections, FAA investigated and found that the principal maintenance inspector for this airline had not followed the national program goals when he entered the number of required inspections to be performed during the year. He also did not conduct the required inspections. The inspector stated that he did not want to deal with this airline again so soon because the airline was not very cooperative with him during the previous inspection.

In this instance, FAA's district office management had not provided adequate supervision to ensure that required inspections had been identified and performed by inspectors in accordance with FAA's national program goals. Furthermore, regional officials had provided no feedback on the goals for required inspections submitted to them by the district office. Neither district office nor regional managers could provide a reason for this lack of oversight. The result of inadequate internal controls was that, based on our sample, the district office entered in WPMS only 80 inspections of pilots, aircraft, and main maintenance bases to meet the national program guidelines of 296 inspections.

This understatement of required inspection items existed at the six district offices we visited. Local FAA staff overall identified 55 percent fewer required inspections than were actually needed to meet FAA's national policies. Based on the national work program, these FAA district offices should have set an annual goal of 1,117 required inspections of pilots, aircraft, and maintenance facilities but instead set a goal of completing only 500. District office managers could not provide a reason for this. Because inspection requirements were not accurately identified and entered into WPMS, the subsystem cannot be used as an effective management tool for such things as measuring required inspections against accomplished ones.

Results in Brief

FAA has not provided adequate supervision, as required by government standards for internal controls,[2] to ensure that their policies are being followed by local staff who implement those policies. Furthermore, FAA cannot guarantee the reliability of the information contained in its annual reports to the Congress because of inaccurate and unreliable data in the Work Program Management Subsystem.

Specifically, FAA advised the Congress in its latest report that it had completed over 80 percent of the inspections required by the national inspection work program and had internal controls in place to ensure the integrity of its inspection program. We found, however, that during fiscal year 1988, FAA's national program goals required 1,117 inspections for our sample of pilots, aircraft, and maintenance bases, but only 500 of the required inspections were entered on WPMS as program goals. This difference was caused by inadequate oversight by regional and district office managers.

Background

FAA considers aviation safety inspections highly important for ensuring aviation safety and regulatory compliance. FAA headquarters annually issues a required national work program that includes goals for a minimum level of mandatory inspections of aircraft, pilots, and aircraft maintenance bases by local FAA inspectors to ensure that safety standards are met. By FAA policy, inspections stipulated in the national work program are mandatory and have priority over other work activities. These inspections must be accomplished and any inability to accomplish them must be analyzed to determine the reasons and develop solutions.

While the national work program identifies goals, it does not specify the total number of inspections to be completed to achieve these goals. Instead, the program goals specify minimum numbers of inspections, for example, all main aircraft maintenance bases—a facility where aircraft are overhauled or major repairs are made—should receive one inspection during the year. Local FAA staff then identify the number of airlines with main maintenance bases under their geographic jurisdiction and report to headquarters on the number of inspections that the local offices must complete to meet the national goal.

[2]Internal controls that federal agencies are required to follow are set forth in GAO's Standards for Internal Controls in the Federal Government, published in 1983 pursuant to the Federal Manager's Financial Integrity Act of 1982.