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STATEMENT OF
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RESOURCES, COMMUNITY, AND
ECONOMIC DEVELOPMENT DIVISION
BEFORE THE
SUBCOMMITTEE ON AVIATION
OF THE
HOUSE COMMITTEE ON
PUBLIC WORKS AND TRANSPORTATION
ON
FAA'S AIRLINE INSPECTION PROGRAM.

Mr. Chairman and Members of the Subcommittee:

We appreciate this opportunity to appear again before this Subcommittee to discuss an important aviation safety-related issue--the adequacy of FAA's inspections of the nation's airlines.

FAA's inspection program seeks to ensure safety primarily in two ways. The first is to ensure that new and expanding airlines can provide safe service by certifying that they meet safety requirements when they begin or expand operations. The second is to periodically inspect all airlines to make sure they continue to meet safety standards. Both functions are vital to airline safety.

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We have worked with this Subcommittee and with the House Appropriations Subcommittee on Transportation over the past 18 months in evaluating FAA's efforts in this area, and reported to you last summer on variations in the type and frequency of FAA's airline inspections for a random sample of 92 commercial air carriers.¹ That report revealed that some airlines received few or no inspections in 1984 in some categories. For example, 29 of the 92 airlines received no FAA avionics inspections.

Our testimony today follows up on that earlier work. As you requested, we have looked into why the conditions we reported last summer exist, how effective FAA's inspection program is, what actions FAA is taking to improve it, and what more needs to be done to ensure that airlines are complying with FAA's safety regulations. Because we have not yet completed our analysis of the data, the findings and conclusions we present today are preliminary. The report containing our final conclusions and recommendations will be available this summer.

FAA HAS NOT RESPONDED EFFECTIVELY
TO AIRLINE INDUSTRY CHANGES
BROUGHT ON BY DEREGULATION

During the debate that preceded enactment of the Airline Deregulation Act of 1978, the Congress voiced concern that safety would diminish as a result of deregulation. Although FAA stated at the time that safety would not suffer because its inspection program would continue to adequately monitor airline

¹Compilation and Analysis of the Federal Aviation Administration's Inspection of a Sample of Commercial Air Carriers (GAO/RCED-85-157, Aug. 2, 1985).

safety practices, our review shows that FAA has not responded effectively to the changes deregulation brought to the airline industry.

One purpose of deregulation was to encourage new airlines to enter the marketplace and thereby promote healthy competition. FAA and the Congress expected an increase in demand for new airline certifications, although the magnitude could not have been known.

Since deregulation, the number of airlines and aircraft have increased dramatically. In 1978, about 240 scheduled airlines were operating about 3,000 aircraft. By 1984, the number of scheduled airlines had more than doubled to about 500; the number of aircraft had increased to about 4,200.

FAA, however, took few steps to monitor and deal with the impact of these increases on its inspection work load or staffing requirements. FAA did not collect data on what inspections were or were not being performed or what the inspections showed. It lacked standards for how to perform the various kinds of inspections and for how long inspections should take. While some staffing criteria were issued in 1975, they were discarded soon thereafter as being unrealistic. The combination of not knowing what inspections were being done, how effective they were, or how long they should take left FAA without the essential tools it needed to effectively manage its inspection work load. Further, FAA did not officially recognize that a fiercely competitive, deregulated environment highlights aircraft maintenance and other safety-related activities as

controllable expenses that directly affect an airline's financial health--a situation requiring even greater oversight vigilance.

FAA headquarters allowed field managers to decide how to use the inspectors they had without providing either a framework for making those decisions or guidance on the minimum levels of inspections essential to ensure airline compliance with safety standards. In the absence of adequate guidance, local managers, for the most part, gave priority to certifying new and expanding airlines rather than to inspecting existing carriers. In addition, between 1978 and 1983, FAA management cut its inspector staff by 34 percent, from over 2,000 to 1,332. It also made resource decisions without the benefit of adequate staffing standards, resulting in clear instances of staffing misallocation.

As a result, recent FAA studies--as well as those conducted by the Office of the Secretary of Transportation, the Department's Office of Inspector General, and by us--show that FAA's airline inspection and follow-up activities are often insufficient to identify major safety problems or to ensure that problems are corrected once they are identified.² Moreover, several recent National Transportation Safety Board (NTSB) investigations criticized FAA's inspection program and concluded that ineffective FAA inspections contribute to aircraft accidents. In short, Mr. Chairman, FAA at present cannot say with assurance that airlines are complying with safety regulations.

²See attached list of related studies.

FAA HAS INITIATED CORRECTIVE ACTION

Realizing the problems inherent in such a situation, FAA has, in the past few years, begun to respond. FAA has begun to increase the size of its inspector work force, has issued staffing standards and national guidelines that include minimum inspection standards, and has affirmed that inspections are the number one work priority for inspectors--ahead of certification work. It has also instituted a National Inspection Plan using large, specially assembled teams to inspect targeted airlines. In addition, FAA plans to have in place by the end of fiscal year 1988 updated guidance for inspectors, needed revisions to existing hiring and training policies and programs, and an improved system of management oversight.

MORE NEEDS TO BE DONE TO ENSURE AIRLINE COMPLIANCE WITH SAFETY REGULATIONS

While FAA's recent initiatives are a substantial step in the right direction, we found that it must take additional actions and better sequence what it is doing if it hopes to provide appropriate oversight of airline compliance with safety regulations in the next few years.

FAA's new staffing standards set criteria and provide a methodology for determining the number of inspection, supervisory, and clerical personnel needed to accomplish program tasks and they are currently being revised to incorporate FAA's flight standards program guidelines, issued in October 1985. The guidelines provide direction and criteria to FAA field managers for developing and executing annual work programs.

The guidelines identify surveillance inspections as the number one inspection priority and set nationwide minimum standards for the type and frequency of airline inspections, usually one of each type of inspection per carrier per year. While ensuring that each airline will receive at least one of each type of critical inspection yearly is an improvement over the previous hit-or-miss approach, these minimum standards still do not ensure carrier compliance with appropriate FAA regulations or safe operating practices.

In his September 1985 letter to you responding to questions you raised on the basis of our August 1985 report, the FAA Administrator identified the need to take into account the complexity and individual operating characteristics of each airline in determining the minimum necessary number and mix of inspections. He stated that characteristics such as fleet size, type of aircraft, aircraft use rates, age of airline, and the carrier's history of regulatory compliance should all be considered.

We wholeheartedly agree. In addition, FAA's 1984 assessment of carrier compliance with federal standards and safe operating practices (the National Air Transportation Inspection [NATI] study) found that airlines having safety deficiencies usually had one or more of the following characteristics:

- a relatively large amount of contract maintenance and/or training;
- inadequate internal audit procedures;

- a major change in operating scope, such as significant route expansion, fleet expansion, or introduction of a new type of aircraft;
- financial, labor/management, or other corporate problems; and
- management skills and philosophy incompatible with sound safety practices.

None of these characteristics, however, are specifically addressed in FAA's new guidelines. As in the past, decisions on targeting inspection resources above the minimum standards are left to manager and inspector judgment, without guidance from FAA headquarters.

FAA's NATI study found that different inspectors have different ideas about what constitutes adequate numbers and types of inspections. We believe it essential, therefore, that FAA's guidelines be revised to provide inspectors with criteria based on airline characteristics that affect safety compliance so that inspectors have a more consistent basis for making these judgments. This would also help FAA allocate inspector resources among airlines more effectively and improve FAA's ability to determine its inspector staffing requirements.

These criteria could also be used by FAA to target airlines for special, in-depth inspections under its National Inspection Plan established this past February. Inspection resources needed to implement this program and its impact on FAA's routine surveillance must, however, be factored into FAA's staffing standards.

FAA LACKS ADEQUATE INTERNAL
MANAGEMENT CONTROLS

In another area, FAA's October 1985 guidelines also established reporting requirements for developing and executing work programs nationwide. Such oversight is important because FAA's district offices have in recent years given priority to (1) certifying new and expanding carriers instead of ensuring existing carrier compliance with FAA safety regulations and (2) inspecting airlines for which they hold the operating certificate rather than complying with FAA's geographic-area concept, which requires them to inspect all airlines operating within their geographic boundaries.

FAA has recognized that ensuring compliance with the priority assigned to inspections and its geographic-area concept is a necessary prerequisite for developing adequate staffing standards and assigning inspectors within FAA's regions. FAA's system that would allow this--the Work Program Management Subsystem (WPMS)--has experienced problems, however, with computer hardware and software, training, clerical support, and data accuracy ever since its inception in October 1984. Many of the problems remain, and in our opinion it is doubtful that the system will provide usable nationwide data for the next several years. The effect of this is that FAA has no adequate way of knowing if field managers are complying with inspection priorities and minimum inspection standards.

FAA IS NOT PREPARED TO
ABSORB AN INCREASE IN
ITS INSPECTOR WORK FORCE

FAA is also increasing the size of its inspector work force. In 1984, at congressional urging, FAA increased its inspector work force by 166 positions. On the basis of its January 1985 staffing standards, FAA requested additional staff, and the Congress directed FAA to include funding in fiscal year 1986 for an additional 300 inspector and support staff positions above its original budget request. FAA has requested another 138 inspector positions in fiscal year 1987. While we agree that FAA needs more inspectors, it is not well prepared to absorb an increase in its inspector work force.

FAA does not know how its current
work force is being used

FAA does not know, for example, how many of its existing inspectors are now assigned to commercial airlines, commuter airlines, or private and business aircraft.

FAA inspectors fall into two general categories: air carrier and general aviation. Air carrier inspectors monitor airline compliance with federal aviation regulations applying to large passenger and cargo aircraft (Part 121), while general aviation inspectors primarily monitor compliance with regulations applying to smaller aircraft (Part 135), including many commuter airlines and private and business aircraft.

FAA knows that some general aviation inspectors are assigned to scheduled Part 121 airlines, but does not know how many. We believe that before FAA can effectively allocate the

planned increase in its inspector work force, it must first identify how its current work force is being used.

FAA's inspectors do not
always receive needed training

Inspectors often do not receive either mandatory or recommended training before being assigned to perform inspections. For example, our analysis of training records for 17 inspectors in FAA's Northwest Mountain Region showed that none of them had received all of the training needed to properly ensure airline compliance with FAA's safety regulations. Although other studies have found similar training problems, FAA does not know the extent of its training backlog.

In 1985 FAA testified before the Congress that a new training course had been developed to make inspectors aware of the need to consistently apply its requirements, familiarize inspectors with the latest techniques and procedures, and emphasize proper methods of dealing with airlines experiencing compliance problems. Although FAA has developed a prototype course for these subjects, the FAA training academy in Oklahoma City has not scheduled the course because, in August 1985, FAA shifted its priorities to developing an introductory training course. FAA now does not anticipate providing the course to all inspectors who need it until sometime in 1989.

New inspectors may not
receive needed training

Similarly, new inspectors may not receive needed training. To increase its inspector work force and replace inspectors lost through attrition, FAA plans to hire about 700 new inspectors in

the next 2 years. They will comprise over one-third of its inspector work force. This comes at a time when FAA studies--as well as NTSB investigations and our review--have all demonstrated serious weaknesses in FAA's hiring and training of inspectors. Some FAA inspectors, therefore, are not sufficiently qualified, according to FAA's own standards, to carry out their assigned duties.

The studies found that FAA's hiring practices have brought into the agency new employees who do not possess the necessary skills or experience to develop into competent inspectors. They also found that FAA's training courses are deficient in a number of important areas.

In addition, an FAA study found that on-the-job training, considered by FAA to be an integral part of an inspector's development, often amounts to little more than unsupervised reading of regulations and handbooks. The study found that this is because the heavy work load in many district offices prevents experienced inspectors from spending the considerable time required to provide new trainees with personalized instruction and supervision. This problem is compounded by the fact that FAA has a number of inspectors who, not having received all the mandatory or recommended training themselves, may not be in a position to adequately train new inspectors.

FAA's regulations and handbooks have themselves been found to be obsolete, incomplete, or ambiguous, and have resulted in inconsistent interpretation and application of regulations. Meanwhile, studies have found that inspector supervision has

languished because of inadequate guidance, staff shortages, and the low priority given this responsibility by FAA management.

While FAA has initiated actions to improve its hiring and training practices and to revise its regulations and improve its guidance to inspectors and their supervisors, some of its initiatives are years away from fruition. FAA's plans do not, even call for studies in these areas to be completed before 1987-88, let alone full implementation of what the studies recommend. As a result, most will not be in place before FAA hires another 700 inspectors.

Lack of experience may
present problems .

In our opinion, the lack of experience within the inspector work force may, in turn, adversely affect FAA's inspection effectiveness. By fiscal year 1988, about 40 percent of FAA's inspectors will have less than 3 years' experience. According to FAA, it takes between 2 and 4 years for a new inspector to become fully effective.

FAA's staffing standards include uniform time estimates for about 300 technical tasks and allowances for training and other support activities. These standard time estimates assume that all inspectors are capable of fully performing all inspection work and can do so in the same amount of time. As such, they do not fully recognize the training and experience needs of new inspectors or the demand on experienced inspectors' time to train and supervise new trainees. Therefore, FAA will probably reach its staffing goals on paper much sooner than it actually

will in practice, and required inspections may not be performed because of the additional time needed above the standard allowances.

SUMMARY

Let me conclude, Mr. Chairman, by recapping the essence of my testimony.

FAA is ill-prepared to absorb an increase in its inspector work force and it will be years before all the needed internal management controls, inspector training and experience, regulations and guidance, and supervisory and managerial oversight will be in place. Meanwhile, FAA lacks an effective plan for dealing with its shorter term problem of ensuring airline compliance with safety regulations while it puts its long-term strategy into place.

What this means is that FAA will continue to be hard-pressed to identify safety problems or ensure that problems are quickly corrected once they are identified.

Our review to date shows several steps that FAA needs to take to address its short-term problems. These include

- revising its flight standards program guidelines to help inspectors target airlines displaying characteristics that indicate safety deficiencies;
- identifying who is inspecting which airlines and how frequently, so it can better allocate its existing inspector work force and the planned additional personnel;

--ensuring that inspectors have the training and experience necessary to carry out their assigned duties; and

--sequencing its actions to improve its inspection program so that the improvements are in place when they can do the most good.

For example, it would make sense for FAA to know what entry-level knowledge and skills are appropriate for aviation safety inspectors and to have in place a screening program to identify applicants with maximum potential for successful performance as inspectors before it hires many additional inspectors.

Deregulation placed new burdens on FAA, and the agency was slow to respond. Although it now has a long-term strategy for improving its inspection program, new problems must first be overcome.

This concludes my testimony, Mr. Chairman. I will be happy to answer any questions you or other Subcommittee members may have at this time.

LISTING OF REPORTS CONCERNING
FAA AIRLINE INSPECTIONS

United States General Accounting Office

Aviation Safety: FAA's Surveillance of Two Contract Military Carriers (GAO/RCED-86-128FS, March 13, 1986)

Compilation and Analysis of the Federal Aviation Administration's Inspection of a Sample Of Commercial Air Carriers (GAO/RCED-85-157, Aug. 2, 1985)

The Federal Aviation Administration Can Improve the Operation of Its General Aviation District Offices (CED-81-114, June 29, 1981)

Evaluation of Programs in the Department Of Transportation--an Assessment (PAD-79-13, April 3, 1979)

Office of the Secretary of Transportation

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National Air Transportation Inspection Program, Federal Aviation Administration, March 4, 1984 - June 5, 1984, Report for the Secretary

Memorandum on Evaluation of National Air Transportation Inspection Program Inspection Reports, April 1985

Project SAFE: A Blueprint For Flight Standards, September 20, 1985

Resource Requirements, Flight Standards Safety Programs, June 13, 1985

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Department of Transportation, Office of Inspector General

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1985

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No. RO-FA-5-084, FAA Northwest Mountain Region, April 25, 1985

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No. R6-FA-3-093, FAA Southwest Region, May 11, 1983

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AT-FA-79-11.15, FAA Southern Region, September 19, 1979

Report on Audit of Air Carrier Maintenance Operations, Report
No. SF-FA-79-11.27, FAA Western Pacific Region, July 27, 1979

Report on Audit of Air Carrier Maintenance Program, Report No.
CH-FA-79-2.6, FAA Great Lakes Region, July 5, 1979

National Transportation Safety Board

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L-1011, B334EA, Miami International Airport, Miami, Florida
NTSB/AAR-84/04, May 5, 1983

Aircraft Accident Report: Sierra Pacific Airlines, de Havilland
DHC-6-300, N361V, Hailey, Idaho, NTSB/AAR-84/03, February 15,
1983

Aircraft Accident Report: Air Illinois Hawker Siddley,
HS-748-2A, N748LL, Near Pinckneyville, Illinois, NTSB/AAR-85/03,
October 11, 1983

Aircraft Accident Report: Vieques Air Link, Inc.,
Britten-Norman BN-2A-6 - Islander, N589SA, Vieques, Puerto Rico,
NTSB/AAR-85/08, August 2, 1984