

STATEMENT OF RONALD E. MORGAN, DIRECTOR OF AIR TRAFFIC,
FEDERAL AVIATION ADMINISTRATION, BEFORE THE COMMITTEE ON
TRANSPORTATION AND INFRASTRUCTURE, SUBCOMMITTEE ON
AVIATION, ON RUNWAY INCURSIONS. NOVEMBER 13, 1997.

Mr. Chairman and Members of the Subcommittee:

Good morning. It is a pleasure to appear before you this morning to discuss the FAA's efforts to reduce runway incursions at the United States' 476 towered airports. As Director of Air Traffic for the Federal Aviation Administration, I am responsible for the safety and efficiency of the Air Traffic Control System in the United States, sharing this responsibility with the 24,000 men and women air traffic control professionals at our air traffic facilities in the United States. I am also a pilot and former air traffic controller myself, and currently have the responsibility for overseeing the FAA's efforts to reduce runway incursions.

The number of runway incursions reported to the FAA has been rising. There have also been reports of runway incursion "hotspots" in the United States. Although I believe that other factors, such as increased awareness of the issue and a more rigid application of the definition, may be partially responsible for the increases in the numbers of runway incursions, we must do more to try and reduce them.

FAA has taken many positive steps to address those things that factor into the incidence of runway incursions -- human error, runway and taxiway lighting and markings, airport design, procedures, and technology. We have completed some 75 percent of the actions set forth in the 1995 Runway Incursion Action Plan. We

have also sent teams out to airports that have seen higher numbers of incursions to develop on-the-spot action plans and implement fixes. Nonetheless, we can do a better job of following through on specific projects. I will highlight for you the actions taken to date and tell you where we plan to go from here in response to our own, as well as outside, evaluations of the effectiveness of our program.

Before I do that, I would like to help frame this morning's discussion by providing a somewhat oversimplified definition of "runway incursion." Generally speaking, FAA says a runway incursion has happened when something -- for example, an aircraft, a vehicle, a person -- creates a collision hazard or comes too close to an aircraft landing, taking off, or trying to land. That object is generally on the runway or a taxiway intersecting a runway that is active. Runway incursions generally happen when one of three things occurs: the pilot doesn't follow FAA regulations, the air traffic controller doesn't follow FAA regulations, or a vehicle driver or pedestrian doesn't follow FAA regulations and ends up on an active runway. The key to a runway incursion is loss of separation or the occurrence of a collision hazard; the aircraft landing or taking off and the object that shouldn't be on the runway or taxiway have to come within a certain distance of each other for the FAA to count the incident as an actual runway incursion. Statistics are kept only for airports with FAA towers.

As you know, one of the National Transportation Safety Board's top ten recommendations for several years running has been that FAA expedite the development and installation of a conflict alert system that will help promote safe surface movement by generating visual and audible aids to alert controllers to respond to potential conflicts. This system, known as AMASS, or the Airport

Movement Area Safety System, works to notify controllers of conflicts on the ground, just as the conflict alert feature in the ARTS, the Automated Radar Terminal System, notifies controllers of airborne conflicts. AMASS will work in concert with the Airport Surface Detection Equipment, or ASDE-3's, that we are installing at airports nationwide. ASDE-3's are ground radars that aid air traffic controllers in tracking the movement of aircraft and ground vehicles on the airport surface during low- or no-visibility conditions.

Problems that led to delays in the development of ASDE-3 have now been resolved, and we have delivered 34 of 40 systems, 27 of which are commissioned at airports. The remaining systems will all be operational by November of 1999. AMASS, the system the NTSB has been urging us to expedite, will go into every airport with an ASDE-3. Currently, we have an AMASS system undergoing operational evaluation in San Francisco, and issued a production contract for the system in January of this year. The first full-scale development AMASS was delivered to Detroit in August, and we expect deliveries and commissioning to continue through August of the year 2000. After some frustrating delays in both of these projects, I believe we are on target to meet our revised deadlines.

We also continue to evaluate a low-cost ASDE, which would be a viable alternative for some airports that do not meet the ASDE-3 cost-benefit criteria, with a system installed and under review at Milwaukee. Evaluation of one system, installed at Salt Lake City, has been completed, and another unit has been installed at Norfolk. We will keep the Subcommittee informed on these efforts.

Although the technological solutions appear to be largely on track at this point, we continue to recognize that runway incursions are a problem with many causes. To get a handle on these causes and implement appropriate solutions, the FAA issued Runway Incursion Action Plans in 1991 and 1995, and has implemented many of the measures contained in these plans, for example, airport charting, reflective paint standards research, updating lighting standards, and completing proof-of-concept testing of runway status lights.

This year, FAA sent a Runway Incursion Action Team to the six airports with the highest numbers of runway incursions to make an on-site assessment from which to develop recommendations designed to fix the problems. Plans were developed for each of the airports (Merrill Field, Alaska, Las Vegas, Newark, Los Angeles, Long Beach, and St. Louis), and actions are underway. In October, in response to disturbing reports about the high numbers of runway incursions at Cleveland's Hopkins airport, FAA sent a Runway Incursion Action Team to work with Airport and City officials to develop and implement solutions to the Airport's problem. Actions underway or planned include closure of a problematic taxiway, lighting improvements to highlight holdlines and improve taxiway guidance, the immediate implementation of the standard taxi procedures I will mention in a moment, as well as updating of Airport maps. We plan to reconvene the team at Cleveland in late January 1998 to ensure proper follow-through.

In response to a rising incidence of surface errors early this year, FAA convened a Surface Error Prevention Workshop in Dallas in May of 1997. Surface errors are operational errors by controllers involving aircraft on runways or taxiways. The workshop resulted in a report that recommended the implementation of

strategies to eliminate surface errors, including requiring each facility to update operational error/deviation prevention plans; improving supervisory coverage of air traffic control positions; clearly defining expectations for controllers; and mandating the use of memory aids. I accepted the Workgroup's recommendations, and in September, sent a memorandum to all regional air traffic managers requesting the immediate implementation of those measures. I have asked that each region report on its progress in implementing the recommendations in September of 1998.

As recommended by the NTSB, FAA has also contracted with the MITRE Corporation to conduct a survey of terminal air traffic controllers to obtain their input on the causes and prevention of runway incursions. Controller interviews were conducted in March, and the study is expected to be completed in January of 1998. The results, combined with a similar survey of pilots already completed, will be useful data for the ongoing effort to develop an updated Runway Incursion Action Plan in 1998. I will speak more to this effort in a moment.

Based on successful demonstration at Chicago O'Hare and Detroit, FAA has established standardized taxi routes for nationwide implementation. We hope to have such standards in place by early 1998. When the standardized taxi routes were employed at O'Hare, that airport experienced just two runway incursions in 900,000 operations. We are hoping to see similar improvements at Cleveland, where the procedures were recently implemented.

FAA is also in the process of evaluating the results of a human factors analysis of runway incursions caused by pilot deviations. This preliminary analysis, completed last month, tells us that general aviation pilots deviate from course

and can cause runway incursions when there are inadequate or inappropriate communications, when they are not familiar with the airport at which they are operating, and when there are inadequate or ineffective cockpit procedures for maintaining orientation. We will continue to study these issues and expand on the initial analysis with an eye toward preparing educational and training materials for pilots and controllers. This is an area in which I believe we must focus our efforts.

To make real headway in reducing the number of incursions will require continued participation from across the aviation spectrum, including pilots, controllers, airport designers and managers; the issuance of an updated action plan; and appropriate follow-through and monitoring of the success of efforts to carry out that plan. FAA has ongoing efforts to ensure these things happen.

In October, FAA convened a two-day safety roundtable on runway incursion prevention. Senior officials from government and the aviation industry, including representatives of airlines, airport operators, pilots, controllers, FAA, NTSB, NASA, the Office of the Inspector General, and the military, participated in discussions on the causes and prevention of runway incursions. The roundtable focus was on the need to prioritize areas for improvement, develop realistic solutions to the identified problems, and determine appropriate responsibility and accountability for implementing solutions.

The discussion of this group will serve as one starting point for actions that will lead us to the development of a new Runway Incursion Action Plan in 1998. Building on the results of the safety roundtable, the 1995 Runway Incursion Action Plan, pilot and controller surveys, and other previously completed

studies, the R, E&D Runway Incursion Subcommittee was convened for the first time on October 20. This group, a subcommittee of the R,E&D Advisory Committee, has been created to begin drafting an updated Runway Incursion Action Plan, taking into account recent developments in new technology, human factors, and innovative procedures. The group will present its report to the full Committee at the end of January 1998, and an updated Plan will be issued by the Agency in June of next year.

Mr. Chairman, while I believe FAA has taken many positive steps, I am mindful of the criticism we have heard from user groups and auditors that we suffer from a lack of follow-through. This is one of the Inspector General's observations in the draft report he has issued. While we are still in the process of evaluating the IG's recommendations, clearly we need to change that perception. To the extent the perception is reality, we will change the way we do business. Administrator Garvey, I, and other top FAA executives have made it clear that we are committed to making real progress in reducing the numbers of runway incursions.

Again, thank you for providing us with the opportunity to update you on our efforts and respond to the observations of other key stakeholders in the National Airspace System.

I would be pleased to answer any questions you may have at this time.