



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

# Annual Report to Congress on Civil Aviation Security

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Report of the Administrator of the  
Federal Aviation Administration to  
the United States Congress  
pursuant to Section 315(a) of the  
Federal Aviation Act of 1958

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TABLE OF CONTENTS

---

I. INTRODUCTION ..... 2

    A. Strategic Goals..... 2

    B. Implementation of the Aviation Security Improvement Act of 1990..... 3

II. PROGRAMS ..... 3

    A. Criminal Acts Against Commercial Aircraft..... 3

    B. Summary of Programs ..... 4

        Federal Air Marshals (FAM) ..... 4

        Federal Security Managers (FSM)..... 4

        Civil Aviation Security Liaison Officers (CASLO)..... 5

        Principal Security Inspectors (PSI)..... 5

        K-9 Explosives Detection ..... 5

        Compliance and Enforcement (C&E)..... 6

        Screening Checkpoint Testing ..... 7

            Plan for New Test Object ..... 8

        Domestic Airport Security Assessments..... 9

        Research and Development Initiatives ..... 10

            Explosives Detection System ..... 10

            Container Hardening ..... 11

            Human Factors ..... 11

        Foreign Air Carrier (FAC) Security..... 12

        Foreign Airport Assessment ..... 13

        Aviation Security Training ..... 13

        Multilateral Activities..... 15

            International Civil Aviation Organization (ICAO) ..... 15

            European Civil Aviation Conference (ECAC)..... 15

III. ACCOMPLISHMENTS..... 16

APPENDIX A. Events Since the Bombing of Pan Am 103 ..... 19

APPENDIX B. Glossary of Civil Aviation Security Terms ..... 31

## **I. INTRODUCTION**

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### **A. Strategic Goals**

This report is submitted pursuant to Sections 315(a), 315(b), 316(k), and 1115(c) of the Federal Aviation Act of 1958, as amended.

The FAA's mission in aviation security is to protect the U.S. traveling public in commercial air transportation against terrorist and other criminal acts. Because terrorists seek to destroy public confidence in the safety of air travel and disrupt this vital segment of the U.S. and world economies, the continued growth of commercial air transportation hinges on the success of aviation security. Protecting aviation's infrastructure-- FAA facilities and equipment, and the employees who manage them--is also part of that same mission. The FAA also assists in interdiction of drugs and narcotics coming into the United States.

The responsibility for aviation security is a shared one, and so are its costs. The FAA continuously assesses threats, assigns measures for both current and increased threat situations through regulations, and works with the aviation industry to implement those measures, using enforcement action where necessary. It is industry --both managers and employees--which implements those measures. Air carriers are responsible for applying security measures to passengers, service and flightcrews, baggage, and cargo--in short, everyone or everything that enters the aircraft. Airports are responsible for maintaining a secure ground environment and providing local law enforcement support. The cooperation

of both passengers and shippers is also needed. Through tax dollars, ticket taxes, and grants, all of these parties share the cost of security.

Aviation security is also both a national and an international mission. The FAA's efforts must be concentrated on U.S. airports, U.S. air carriers wherever they fly, and foreign carriers serving the United States. The FAA also works closely with other governments in raising the minimum level of security provided by all air carriers, regardless of nationality. As carriers share or interchange codes, equipment, personnel, management and investment, global aviation increasingly requires global cooperation in security.

In carrying out its mission, the FAA:

- (1) distinguishes between baseline measures required under "normal" threat conditions and the measures needed to meet increased threats which are contained in the Aviation Security Contingency Plan;
- (2) concentrates its measures--and those of the industry--on the most vulnerable parts of the aviation system in any given situation;
- (3) seeks the optimal mixture of people, equipment and procedures, and to incorporate advanced technology wherever practical;
- (4) involves all parties, groups, or organizations that have a stake in security in the design and application of those measures; finally, and most importantly;
- (5) realistically tests and implements aviation security

measures to ensure that they are working, and to make adjustments where necessary.

***B. Implementation of the Aviation Security Improvement Act of 1990***

The Aviation Security Improvement Act (ASIA) (P.L. 101-604), enacted November 16, 1990, is perhaps the most comprehensive legislative action taken to improve all aspects of aviation security. It mandates many regulatory actions affecting several agencies, requires new reports, creates new organizations and staffing requirements, and empowers the FAA to promote and strengthen aviation security through an expedited, more focused research and development (R&D) program. The FAA identified 38 actions in the law to be taken by the agency. The FAA has completed 34 of these actions, with 4 remaining. The sections in this report that specifically relate to the 1990 law will be identified.

The year 1993 was particularly significant for FAA's implementation of this Act. December 21, 1993, was the fifth anniversary of the bombing of Pan Am 103 over Lockerbie, Scotland. On this occasion, the FAA reaffirmed its determination to do everything within its means to prevent such a tragedy from ever happening again. This goal is shared by other U.S. Government agencies and by many of the Nation's allies overseas.

**II. PROGRAMS**

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***A. Criminal Acts Against Commercial Aircraft***

There were no incidents of explosive devices detonating aboard either U.S. or foreign carrier aircraft in 1993. While there were numerous bomb threats made against aircraft and airports, it is important to note that bomb threats do not directly reflect the number of actual attempts to detonate a bomb. Experience from searches conducted as a result of bomb threats has shown that the vast majority of those are hoaxes.

There were no hijackings recorded either in the United States or on board U.S.-registered aircraft in 1992 or 1993. One incident was recorded each year in 1989, 1990, and 1991. In contrast, during the past 5 years, 119 hijackings of foreign-registered aircraft were recorded worldwide. The greatest number of incidents (39) during this 5-year period occurred in 1990; the fewest (12) were in 1992. Thirty-one hijackings were recorded worldwide in 1993.

Most of the 122 hijackings during the past 5 years (119 foreign carriers and 3 U.S. carriers) took place on domestic, that is, internal flights. Of the 31 hijackings in 1993, 24 involved aircraft on domestic flights. More than one-third of the hijackings in 1993 occurred in the People's Republic of China (PRC).

Few of the hijackings in 1993 were the work of terrorists or organized groups espousing political goals. Rather, the hope of bettering the hijackers' personal circumstances was a significant motivating factor in many of these incidents. It was for this reason that there was a sharp increase in the number of hijackings in the PRC--from none in 1992 to 13 in 1993. (An earlier, and even more vivid, illustration of this occurred in 1990, when more than two dozen Aeroflot domestic flights were hijacked by persons seeking asylum outside the then Soviet Union.)

The overall number of incidents can serve as a rough index of the level of criminal activity involving commercial aircraft. However, because of differences in situations specific to individual countries and varying motivation among perpetrators, any generalizations must be very carefully drawn. Overall, the level of threat of criminal and terrorist acts against U.S. carriers operating in certain locations overseas [those requiring extraordinary security measures] remained at a similar level to previous years. In 1993, the threat level within the United States remained low, although the bombing of the World Trade Center introduced an element of uncertainty into the domestic threat assessment.

#### ***B. Summary of Programs***

##### **Federal Air Marshals (FAM)**

The enactment of P.L.99-83 in 1985, after the hijacking of TWA Flight 847 in June of that year, established an explicit statutory basis for the FAM program. This statute authorized the Secretary of Transportation, upon concurrence of the Attorney General

and the Secretary of State, to provide FAM's on select U.S. air carrier flights with the authority to carry firearms and to make felony arrests without warrants under certain conditions for Federal offenses committed in their presence. The first FAM class completed training in October 1985.

The FAM program provides specially trained armed teams of civil aviation security specialists capable of rapid deployment worldwide to conduct anti-hijacking missions on U.S. air carriers flights. The overall goal is to protect the traveling public, passengers, and flightcrews on U.S. air carriers on selected flights by deterring or preventing hijackings.

A 1992 review of the FAM selection and training program resulted in several program improvements: FAM's are now volunteers who undergo sophisticated and realistic initial and recurrent training, and prior to every deployment, FAM's complete "standardized deployment preparations." All prospective FAM's are subjected to an initial screening process which includes physical fitness standards and other qualifications that must be met in order for a FAM to successfully accomplish the FAM mission.

During 1993, FAM's provided in-flight security on selected flights of all major U.S. air carriers to and from 26 cities in 24 countries.

##### **Federal Security Managers (FSM)**

P.L. 101-604 created federal security managers, who report directly to the Office of the Assistant Administrator for Civil Aviation Security in

Washington. They represent the Assistant Administrator and the regional security division managers on aviation security matters at 19 Category X airports. FSM's have been stationed at the Category X airports since October 1, 1991. An FSM is a civil aviation security special agent, authorized by the Administrator to perform investigations, inspections, and other duties imposed by law and regulation in support of the agency's mission to deter criminal acts against air transportation and to safeguard FAA and national security interests. FSM's are the FAA's designated security presence at these airports and are in direct communication with both the security and intelligence networks.

#### **Civil Aviation Security Liaison Officers (CASLO)**

P.L.101-604 requires that a civil aviation security liaison officer (CASLO) be assigned to cover each airport outside the United States where extraordinary security measures are in place. This law endorsed and accelerated actions begun by the Departments of State and Transportation in 1989 to create and deploy CASLO's overseas. CASLO's report directly to the Office of the Assistant Administrator for Civil Aviation Security. The elevated reporting level for these positions supports the need to have immediate access to information concerning events and changes on the international scene. CASLO's are the primary FAA contact with U.S. Embassies and host governments on civil aviation security matters. Primary responsibilities include assisting U.S. and foreign air carriers to implement FAA security requirements, the exchange of threat

information, and onsite FAA coordination for aviation security incidents.

Prior to the law, 10 security liaison officers were assigned to Europe, Africa and the Middle East. After the law was signed, eight more CASLO's were positioned in Caracas, Buenos Aires, Mexico City, Singapore, Tokyo, Bangkok, Sydney, and Africa (the FAA Representative in Dakar serves as this CASLO).

#### **Principal Security Inspectors (PSI)**

A principal security inspector is assigned to each certificated U.S. air carrier required to adopt a security program under Federal Aviation Regulations (FAR) Part 108 and each foreign air carrier subject to FAR Part 129.25. The PSI serves as a liaison between the FAA and the air carrier's corporate security office, representing the Assistant Administrator and all FAA security field elements. The PSI works closely with the federal security managers and the civil aviation security liaison officers to ensure the carrier's compliance with all FAA requirements and to address areas of concern with the carriers corporate security representatives. The PSI is responsible for approving and issuing amendments to the air carrier's individual security program, as well as providing FAA policy guidance to the air carrier when regulations are developed or revised. The PSI is also responsible for approving and monitoring the air carrier security training curriculum.

#### **K-9 Explosives Detection**

The FAA explosives detection K-9 team program was established in 1972

to improve the response time to explosives threats and incidents. Currently, this national program consists of 32 participating organizations, comprised of airport operators and local police departments. A “K-9 team” is defined as one dog and one handler. There are K-9 teams located at 31 airports (Category X, I, and II). These highly trained K-9 teams are evaluated and certified on an annual basis. The majority of dogs used by participants are DOD-procured, while others are locally procured.

In 1993, the FAA introduced a full-time national K-9 program manager as a result of suggestions made by a Quality Action Team that included FAA, industry, and airport operators/local police department representatives. The national manager’s duties are devoted solely to national program oversight, policy development and coordination with other FAA explosives detection initiatives.

#### **Compliance and Enforcement (C&E)**

Federal Aviation Regulations require the adoption and implementation of security programs by airports and air carriers. These security programs contain procedures which are designed to prevent or deter aircraft hijackings, sabotage, and other criminal acts. The FAA and the aviation industry constantly review the procedure to ensure their effectiveness in countering the threat to civil aviation. Compliance with and enforcement of the FAR are accomplished through FAA inspections.

While striving to achieve compliance through cooperation, the FAA must ensure that the personnel of the air carriers, airports, and other organizations properly comply with the FAR and applicable security programs. FAA civil aviation security special agents inspect the aviation industry’s security operations on a regularly scheduled basis as well as at unscheduled intervals. During these inspections, weaknesses and deficiencies are corrected, security violations are identified, and, if necessary, enforcement action is initiated. These actions may take the form of administrative actions (warnings or letters of correction), civil penalties, certificate revocation, or criminal prosecution. The PSI assigned to each air carrier monitors performance as reported by FAA special agents to identify trends and to evaluate implementation of FAA regulations for effectiveness.

In 1993, there were 221 U.S.-scheduled and public charter air carriers that were required to follow FAA-approved security programs. Each of these U.S. air carriers adopted the Air Carrier Standard Security Program (ACSSP) which was developed by the FAA in consultation with the industry. This program requires each air carrier to implement similar security procedures. The FAA has the authority to amend the ACSSP when safety and the public interest require it after providing carriers a period of time to review and comment on the proposed amendment. In addition, the FAA may issue an emergency amendment, effective upon receipt, if immediate action is required.

There were also 204 foreign scheduled and public charter air

carriers that served airports within the United States. Foreign air carriers are also required to adopt and use security programs. U.S. regulations require foreign air carriers to submit their security programs to the FAA for review and acceptance.

The 425 domestic and foreign-scheduled and public charter air carriers serve 428 airports within the United States regulated under FAR Part 107. Each of these airports is also required to adopt and use a security program that provides a secure operating environment for these air carriers. Of the 428 regulated airports, 19 are designated as Category X, based on passenger traffic, complexity, and other special considerations.

A relatively new approach to C&E, the test object enforcement policy, was approved on September 1, 1991. An interim period from September 1, 1992, to December 1, 1992, was established to give FAA time to train the agents in the field about the best methods to use to implement the policy. Under the revised policy, which went into full effect on September 1, 1992, the FAA and industry work as a team to examine the causes of noncompliance and focus on how the security system may be improved. Tests of the screening system and investigations of the root causes of every failure will continue. The FAA will also continue to pursue enforcement actions firmly and fairly.

Rather than using a purely punitive approach, the new C&E policy places a greater emphasis on addressing the causes of an apparent failure and concentrates on making systemwide improvements to promote compliance. The FAA no longer

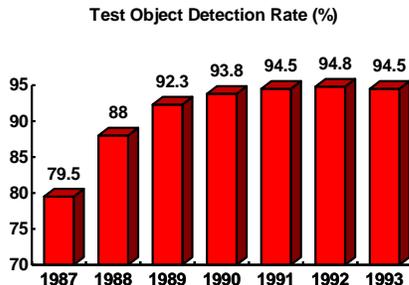
seeks fixed civil penalties based solely on the prior history of test object failure at a checkpoint. The enforcement action for a test object failure may be either an administrative action or a civil penalty based on all mitigating and aggravating circumstances surrounding the failure. In short, the FAA's response could range from counseling to major and repetitive fines depending on the nature, severity, and frequency of the failures.

#### **Screening Checkpoint Testing**

As required by Section 315(a) of the FAA Act of 1958, this section discusses the effectiveness of screening procedures of all passengers and all property intended to be carried in the aircraft cabin in air transportation or intrastate air transportation.

In 1987, the FAA amended the ACSSP to require carriers to detect FAA-simulated weapons and explosive devices. The agency began taking enforcement action for each carrier's failure to detect an FAA test object.

The following data depicts a favorable and steady trend in systemwide weapon and explosives test object detection rates. Improvements were attributed to signage required to be placed in front of the checkpoints helping educate or remind passengers and some policy changes in compliance and enforcement previously discussed.



The FAA realizes that screeners are not trained to detect FAA test objects; they are trained to detect weapons, firearms, and explosive devices. Because they are tested with a small number of approved "test objects," an unintended consequence is that screeners sometimes specifically look for those test objects. New and more challenging test objects are being developed and phased into the testing process to provide variety and more realistically portray the type of weapons, explosives, and techniques used by terrorist groups.

*Plan for New Test Object*

- ◆ Since the implementation of passenger screening in 1973, there has been a requirement for the FAA to conduct tests of the screening equipment to ensure proper operation. The test objects for the metal detector have evolved since the 1970's to the operational test pieces and encapsulated weapons. During this same period, a variety of test

objects for the x-ray were developed. These test objects are still valid. However, since the bombing of Pan Am 103, the FAA has focused on more sophisticated fuse and firing systems and in 1992, developed a test object--the modular bomb set (MBS)--which more realistically simulates a range of improvised explosive devices. All items used in the MBS are real, off-the-shelf working components, although the explosives are represented by simulants (simulated explosives) and the detonators are all inert. The components of the MBS can be altered to achieve different configurations. In 1994, the FAA will introduce the MBS into the system to increase the ability of screeners to detect more sophisticated and diverse terrorist threats. Preceded by field testing to validate performance, which began in 1993, the MBS will be incorporated into the ACSSP, along with any additional training requirements which may be identified during the validation process. Carriers will be allowed a period of time in which to train screeners to better detect the MBS, after which a failure to detect will become enforceable under the terms of the test object enforcement policy.

**Civil Aviation Security Airline Passenger Screening Results  
1989 -1993**

	1989	1990	1991	1992	1993
Persons Screened (In Millions)	1113.3	1145.1	1015.1	1110.8	1150.0
<b>WEAPONS DETECTED:</b>					
Firearms	2879	2853	1919	2608	2798
Handguns	2397	2490	1597	2503	2707
Long guns	92	59	47	105	91
Explosive/ Incendiary Devices	26	15	94	167	251
Other Dangerous Articles*	390	304	275	2341*	3867
<b>PERSONS ARRESTED:</b>					
Carriage of firearms/explosives	1436	1336	893	1282	1354
Giving false information	83	18	28	13	31

\*Beginning in 1992, other dangerous articles include stunning devices, chemical agents, martial arts equipment, knives, bludgeons, and certain other designated items.

**Domestic Airport Security  
Assessments**

As required by P.L.101-604, the FAA and FBI conducted joint vulnerability assessments at all 18 Category X airports in 1991 (since 1991, the 19th Category X airport has been designated). Results of these assessments, along with the recommendations and current FAA initiatives for improvements in security, were submitted to Congress in March 1993. In furtherance of this partnership and in keeping with the intent of Congress as stated in legislation, FAA and FBI conducted joint assessments at 10 Category I airports during 1992. These assessments, like the prior ones, were not limited to routine regulatory inspection. Rather, they focused on identifying actual and potentially vulnerable areas. This report summarizes the major findings of the assessments conducted and initiatives underway for improving the overall

security at the nations airports. At the national level, the areas of concern identified by the assessment are being addressed through FAA policy review, proposed rulemaking, possible amendments to airport or air carrier security programs, or other actions as deemed appropriate. The report on the 1992 assessments was submitted to Congress March 1994.

On September 20, 1993, the Department of Transportation Inspector General (DOT IG) issued a report on the audit of the effectiveness of the FAA security program. The audit focused on FAA's monitoring of the security of aircraft, passengers and property in air operations areas (AOA), and terminals at domestic airports. The audit focused largely on access control issues.

Based upon DOT IG testing at several airports, weaknesses were found in the areas of display of identification

(ID), challenge of individuals not displaying required ID, and circumvention of access controls (specifically "piggybacking," where an authorized person properly enters through a door/gate in accordance with local access control procedures, but allows another individual(s) to also enter without submitting to the system's check). FAA concurred with the findings for the specific airports visited by the audit team and undertook several initiatives to ascertain the true extent of the problem and to take corrective actions.

An aggressive review of access controls and procedures is underway by FAA field elements at all major U.S. airports. Observed violations will result in enforcement actions, and inadequacies are being corrected where found. In addition, changes to the Air Carrier Standard Security Program and airport security programs were made in 1993 (not effective until 2/1/94) to require all persons to display required ID. Additional rule changes will be made to increase personal accountability, and the general effectiveness and efficiency of these important measures.

Throughout, FAA is working with all segments of the industry to jointly eradicate the problems noted by the IG.

### **Research and Development Initiatives**

#### **Explosives Detection System**

FAR Part 108.20 requires air carriers to use an explosives detection system (EDS) approved by the FAA to screen checked baggage on international flights. P.L.101-604 mandates in

Section 108 that prior to a requirement for widespread deployment of EDS, the Administrator must certify, based upon tests using independent test protocols, that EDS performance meets criteria based upon the "amounts, configurations, and types of explosive material which would likely to be used to cause catastrophic damage to commercial aircraft." The industry has raised concerns about the purchase, installation, cost, and operational impact of EDS deployment.

On November 4, 1992, the FAA released for public comment the unclassified portions of the proposed certification criteria for EDS. This established the performance requirements for certification of EDS and performance testing of explosives detection devices (EDD). Comments received were evaluated and a Notice was published in the Federal Register on September 10, 1993, containing the final criteria. Based on bulk testing protocols approved by the National Academy of Sciences in April 1993, the FAA Technical Center has completed a management plan for certification testing of EDS equipment. Notice of the availability of this document was published in the Federal Register in October 1993.

The FAA is prepared to test systems using its new security laboratory facility at the FAA Technical Center when applications for certification are received from manufacturers or vendors. After systems are certified, the FAA will consider the scope and timing of EDS deployment for international flights. Deployment will be phased in, threat based, with the initial systems going into the highest threat locations overseas. The FAA will carefully weigh the costs and

potential benefits of deploying equipment, especially with regard to acquisition, costs, size, and weight. FAA has also continued its demonstration of advanced technology explosives detection equipment.

EDS deployment will not be easy. To help bring it about FAA will simulate and, if necessary, demonstrate an EDS system in an actual airport to develop practical guidance for industry.

In the meantime, two Thermal Neutron Analysis (TNA) devices became operational at San Francisco International Airport to screen checked baggage. Also, explosives trace detection devices were demonstrated for screening of electrical devices at security screening checkpoints at LaGuardia, Washington Dulles, and Atlanta airports. Operational data collected from these demonstrations will be useful in future certification testing and deployment of EDS.

#### Container Hardening

To complement the R&D efforts in explosives detection, an aircraft hardening program is being conducted by the DOT/FAA Technical Center's Aviation Security Research and Development Service (ACA) in Atlantic City in response to recommendations of the President's Commission on Aviation Security and Terrorism and mandates contained in P.L. 101-604.

The specific goal is to reduce the vulnerability of commercial aircraft to terrorist threats by: (1) determining the minimum size of explosive that must be detected; (2) identifying what can be done to the current and future fleet of commercial airliners to make

them less susceptible to explosive sabotage; (3) hardening aircraft cargo and baggage containers to reduce the vulnerability of aircraft to explosive devices; and (4) determining the threat to aircraft from projected energy and/or other electromagnetic-based terrorist acts.

The FAA has also begun a congressionally mandated study on the tradeoffs between explosives detection levels, blast management, blast containment techniques, structural enhancements and the costs and investment levels required. Upon completion of the container-related research at the end of FY94, the FAA will provide Congress with a full report detailing the cost and effectiveness tradeoffs between container hardening and other hardening and blast management techniques. The report will address the explosives detection levels that must be reliably achieved in order to provide adequate protection from explosive effects.

#### Human Factors

The FAA's primary objective in this area is to find ways to enhance human performance in security. In response to the law, FAA established the aviation security human factors program at the DOT/FAA Technical Center in 1991, and the screener proficiency evaluation and report system (SPEARS) concept.

The FAA is focusing on improving performance at the screening checkpoint. SPEARS offers opportunities for raising screener performance through improvements in selection, initial training, recurrent training, screener certification, and operational performance assessment. Combined with enhanced x-ray equipment, or even independently,

SPEARS can lead to a screening checkpoint with improved performance. Also underway, is an attempt to combine technologies and procedures to screen high-risk passengers in the domestic system. Finally, human factors research will also be applied to security R&D products in other program areas that will ultimately be deployed throughout the system, such as explosives detection systems.

### **Foreign Air Carrier (FAC) Security**

The FAA is required by P.L. 101-604 to ensure that passengers are provided a similar level of protection when flying to or from the United States on foreign air carriers as they are when flying on U.S. air carriers from those same airports. FAR Part 129 requires FAC's operating to the United States to submit security programs to the FAA for acceptance for their operations to and from the United States. FAC's may adopt the model security program (MSP) prepared by the FAA, submit their own security programs for review, or refer the FAA to a foreign government that performs security procedures at a last point of departure to the United States.

At the end of 1993, there were 171 FAC's operating to and from the United States. Most of these carriers (74) operated from various countries located in Europe, Africa, and the Middle East, while carriers from Latin America and the Caribbean (42) constituted the largest groups from all other geographical regions. All FAC's have been required since September 1992 to adopt the FAA's MSP when operating from the United States. Most of the FAC's have adopted either the FAA's MSP, both

for flights from or to the United States, or have submitted an acceptable program that meets the performance standards contained in the MSP.

Foreign governments, however, remain concerned about the extraterritorial application of U.S. law and possible infringement of their sovereignty. The concerned foreign governments are signatories of the Chicago Convention and have specifically agreed to apply Annex 17 of the Convention, which contains universally recognized standards and recommended practices for safeguarding international civil aviation against acts of unlawful interference.

Because of these sensitivities and because information on threats and countermeasures are not as easy to obtain, ensuring that a similar level of protection is provided on foreign carrier flights from last points of departure overseas to the United States is inherently difficult. Nevertheless, the FAA has an active program underway to do just that.

The FAA's program is based on the fact that terrorists do not normally strike at random, and the fact that the threat against any carrier is largely a function of its nationality. Countermeasures need to be high only if the threat is also high. In 1993, the FAA evaluated both the threats against and countermeasures imposed by each foreign carrier serving the United States and completed a basic risk analysis of them.

The FAA believes that most foreign carriers provide a similar level of protection. However, the FAA is moving aggressively to initiate discussions with the relatively few

carriers and the concerned governments which the FAA believes may need to impose additional security measures.

Successful negotiations with two foreign carriers were conducted in 1993, and those carriers are now conducting strengthened security measures. Discussions with the other carriers are proceeding on a fast track. The FAA will continuously reassess the threats against all foreign carriers and will not hesitate to discuss and, if necessary, impose the additional security measures needed to meet the threat.

#### **Foreign Airport Assessment**

As mandated by P.L. 99-83, the International Security and Development Cooperation Act of 1985, the FAA performs scheduled, onsite formal evaluations of foreign airports served by U.S. carriers or each last point of departure for foreign air carriers serving the United States, those foreign airports which pose a high risk of introducing danger to international travel, and such other airports as the Secretary of Transportation may deem appropriate. The purpose of the assessments is to determine the extent to which foreign aeronautical authorities effectively maintain and administer security measures.

Approximately 244 foreign airports qualify for assessment under the law. This number fluctuates as changes in air carrier service occur. In recent years, the total number has slowly risen as more airports seek to meet international travel demands, and as more carriers, both foreign and U.S., expand their international routes. The number of FAA assessments at each foreign airport is based on reviews

and analyses of current resources and threat conditions.

In 1993, the FAA conducted 126 foreign airport assessments. As a result of these assessments, the FAA made 534 security recommendations to foreign governments. Recommendations were made in the areas of access control, airport administration, screening, airport emergency planning, national administration, baggage control, and law enforcement support.

Four 90-day notifications were initiated by the Secretary of Transportation as a result of FAA assessments and all deficiencies have been corrected.

On October 8, 1992, an assessment of the airport in Lagos, Nigeria, resulted in an immediate public notification without any 90-day notice. This is the first time ever that the Secretary issued such a public notification. As a result of the public notice, FAA security specialists provided technical assistance and security training for 9 months to the Nigerian Government to assist them in correcting the security deficiencies at the airport. In July 1993, a second assessment was conducted in Lagos. The team reported no corrective actions and several new security deficiencies. On August 11, 1993, the Secretary suspended air service between the United States and Lagos citing the failure of cognizant authorities to satisfactorily correct deficiencies. The suspension remains in effect.

#### **Aviation Security Training**

The FAA develops and manages extensive technical training programs for FAA personnel who are responsible for aviation security. Aviation security training for FAA

special agents are generally conducted as resident training by the Aviation Security Training Division located at the FAA Academy in Oklahoma City, Oklahoma. Other specialized training in communications security, criminal investigations, etc., are provided out-of-agency at various locations throughout the country by the Department of Defense, the General Services Administration, and the Federal Law Enforcement Training Center.

In addition to technical training for FAA special agents, the Aviation Security Training Division develops and conducts special interest seminars for local law enforcement officers; airport and air carrier managers; contract security personnel; Federal and state agency personnel; and, in coordination with the Office of International Aviation, aviation officials from developing countries. This training is conducted at various sites throughout the United States and in foreign countries. Developed countries are also welcome to attend tuition-based courses.

The Office of the Assistant Administrator for Civil Aviation Security works closely with the Office of International Aviation and several offices in the Department of State to promote technical assistance initiatives via the Anti-Terrorism Assistance Program (ATAP). This program provides technical assistance to foreign countries in the form of security surveys of foreign airports and subsequently security training based on the findings of the security surveys.

The FAA's international security assistance program coordinates training and equipment requests worldwide. (The FAA does not

provide equipment, but does provide expertise and advice about aviation-related security equipment to the Department of State.)

## **Multilateral Activities**

### **International Civil Aviation Organization (ICAO)**

ICAO is a specialized agency of the United Nations that was established by the Chicago Convention in December 1944. ICAO establishes international aviation security standards and recommended practices (SARPS) for its 183 member states. Three pertinent conventions (Tokyo-Hague-Montreal) provide the foundation for these SARPS. The Assistant Administrator for Civil Aviation Security works closely with ICAO to strengthen these standards and to ensure compliance with them throughout the international aviation system.

Aviation security continued to be one of ICAO's top priorities in 1993. The ICAO panel of security experts met in July and reviewed the adequacy of the SARPS contained in Annex 17. A number of security upgrades were approved by the panel for possible future incorporation into the Annex. The panel also reviewed proposed changes to the ICAO Security Manual, the implementation document utilized to a great degree by less developed countries. An amendment to the Security Manual is scheduled to be completed by December 1994.

Recognizing the continued importance of aviation security in ICAO and the needs of the expanded aviation security office, the United States continued to provide two FAA security specialists to ICAO at no expense to the organization. These specialists are utilized by ICAO to conduct security surveys and training for countries in need throughout the world.

On March 1, 1991, the United States and 39 other countries signed a "Convention on the Marking of Plastic Explosives for the Purpose of Detection." The convention was the result of 2 years of work by the ICAO ad hoc group of specialists on the detection of explosives and the ICAO legal committee. Submission of the convention to the United States Senate for ratification is planned for 1994. The production of marked plastic explosives in the United States will begin following this ratification. The FAA has been working with the Institute of Makers of Explosives and anticipates the full support of the explosives industry during the ratification process.

### **European Civil Aviation Conference (ECAC)**

The ECAC is an intergovernmental consultative organization that was established in 1955 by the Council of Europe and with the active support of ICAO. ECAC's objectives are to encourage the safe and orderly development of civil aviation to, from, and within Europe. The Conference in 1992 had 28 member states.

In the field of security, ECAC's objective is to ensure the maximum level of security possible both within ECAC and with its partners serving its airports. ECAC member states apply ICAO Annex 17 Standards and Recommended Practices. In addition, supplementary measures, appropriate to the conditions pertaining in Europe, are promulgated by ECAC through its Security Manual which undergoes constant review. While the aviation security measures contained in the manual are not mandatory, the expectation within ECAC is that all member states will comply. The

United States (FAA) and Canada have been granted permanent observer status to the ECAC Security Committee.

### **III. ACCOMPLISHMENTS**

The following is a brief summary of accomplishments achieved by the FAA in aviation security in 1993.

#### **Cargo and Mail Security**

In accordance with Section 112 of P.L. 101-604, a change to the ACSSP was issued that required new, more stringent measures for the carriage of cargo and mail aboard passenger aircraft from both U.S. and foreign locations while at the same time, strengthening security rules for international passenger operations at higher risk airports overseas. The FAA then proceeded to develop an aggressive inspection strategy.

#### **Improved Checked Baggage Screening**

The final explosives detection system performance standard and related testing plans and procedures were published in the [Federal Register](#). These will be used by the FAA to test candidate systems and certify them for use by air carriers. This is the culmination of 2 years of work which defines types, amounts, and configurations of explosives that are likely to be used to cause catastrophic damage to commercial aircraft.

Three prototypes of hardened luggage containers were fabricated and blast-tested with favorable results as part of the effort to develop a certification standard in 1994. The goal is to develop a program to reduce the vulnerability of commercial aircraft to terrorist threats.

The demonstration/operation program of two FAA-owned Thermal Neutron Analysis (TNA) explosives detection systems in San Francisco commenced in 1993. The TNA's were used to screen the checked baggage of flights of over 20 U.S. and foreign air carriers flying from the airport.

#### **Improvement in Security Checkpoint Methods/Processes**

Explosives trace detectors intended to screen carry-on electrical items were deployed at La Guardia, Atlanta, and Dulles airports for operational testing and evaluation. The results will assist in the preparation of performance standards for such devices.

In accordance with Section 105(a) of P.L. 101-604, a change to the ACSSP was issued that implemented the requirements of the Act for minimum standards for hiring, continued employment, and contracting for air carrier and airport employees engaged in security-related activities, especially screeners.

The FAA, Air Transport Association, and Northwestern University Traffic Institute cosponsored the first national conference concentrating on human factors issues in passenger screening. Conference attendees included representatives from screeners, screening companies, screening equipment manufacturers, airport and air carrier representatives with Canadian and U.S. Government officials.

#### **Contingency Plan**

A new Aviation Security Contingency Plan, for both airports and air carriers, was proposed and presented to the regulated parties for comment. The purpose of the revised plan is to implement temporary measures in

response to deteriorating civil or political situations, specific threats against civil aviation, and other changes in threat conditions. The plan will allow government and industry to quickly concentrate countermeasures to meet specific or broad threats of aircraft hijacking, sabotage, and/or related crimes against civil aviation.

#### **Airport Security**

##### *Federal Security Managers*

The FSM program continues to play a pivotal role in domestic aviation security. An FSM position in Orlando, Florida, was established, bringing the total number of FSM's nationwide to 19.

##### *Federal Air Marshals*

In order to achieve the public's and industry's high expectations and maintain the required caliber of this professional team, the FAM training program was upgraded with emphasis on standardized deployment preparations and physical fitness standards.

##### *New Airport Construction*

The FAA published the "Recommended Security Guidelines for New Airport Construction and Major Renovations" in September 1993. The guidelines respond to Section 110 of P.L. 101-604 which charged FAA with developing "guidelines for airport design to allow for maximum security enhancement." The Act specified that the guidelines be developed "in consultation with airport authorities and air carriers".

The guidelines:

- ◆ provide consolidated guidance to airport planners, air carriers, FAA regional security divisions and airports division offices;
- ◆ identify key security concerns to be factored into planning and design in terms understandable to airport architects and designers;
- ◆ designate critical areas requiring special attention; and
- ◆ allow freedom for local development of tailored solutions.

##### *Vulnerability Assessments*

FAA/FBI vulnerability assessments at 28 of 72 major domestic airports were completed, results were analyzed, and a report to Congress was submitted as required by P.L. 101-604.

#### **International Aviation**

With the posting of a liaison officer in Sydney, Australia, a total of 17 civil aviation security liaison officers have been assigned to locations throughout the world to improve communications and serve as a source of onsite expertise.

Security specialists completed 157 foreign airport assessments worldwide and worked closely with the State Department to resolve security concerns at the airport in Lagos, Nigeria. When they were not resolved, U.S. air carrier service to Nigeria was suspended, the first time this option, available under Public Law 99-83, has ever been exercised.

A basic risk assessment of all foreign carriers providing service to the United States was conducted and improved security measures were

successfully negotiated with two carriers.

The Assistant Administrator for Civil Aviation Security co-hosted the Sixth International Civil Aviation Security Conference with the American Society for Testing and Materials. Nearly 400 civil aviation security professionals from 42 countries met to discuss aviation security in the global community. Explosives detection systems and other advanced technology, threats to civil aviation, screening procedures, airport security, the cost of security, and international standards and cooperation were primary topics.

#### **Aviation Security Training**

In June 1993, the FAA transferred the Aviation Security Training Division from FAA headquarters and the Transportation Safety Institute to the FAA Academy located in Oklahoma City, Oklahoma. This relocation saved the FAA \$175,000 in administrative costs for training programs.

A Master Plan for Course Development was published and human resource management handbooks were developed for recruitment, new employee orientation, and career development for FAA security employees.

362 FAA students received training in aviation security programs.

386 non-FAA students attended aviation security training at Oklahoma City or attended aviation security seminars conducted at a local site.

The FAA conducted five technical assistance training seminars, three international civil aviation security courses, and two technical assistance projects for developing and developed countries during 1993. This effort trained 402 international students from Canada, Denmark, the Dominican Republic, Nigeria, Greece, Sweden, Brazil, Mexico, Latvia, Taiwan, Thailand, Argentina, Senegal, Surinam, Spain, the Bahamas, Belize, Romania, Nicaragua, Singapore, Uruguay, and St. Lucia in response to expressed aviation security concerns from these countries.

The FAA conducted aviation security surveys, and followup training needs surveys (Anti-Terrorism Assistance Program), in Portugal, Bulgaria, Argentina, Venezuela, Costa Rica, Trinidad, Tobago, Jamaica, Honduras, and Chile. Six 4-week Airport Security Management Courses were conducted at Oklahoma City, four Aviation Security Seminars were conducted overseas, and four technical assistance projects were performed overseas. This effort resulted in training 463 students from 12 countries.

#### **Drug Interdiction**

A Memorandum of Understanding between the Drug Enforcement Administration, the U.S. Customs Service, and the FAA was signed.

## APPENDIX A. Events Since the Bombing of Pan Am 103

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The bombing of Pan Am 103 resulted in perhaps the largest single redirection of resources mandated by Congress in the world of air transportation since the founding of the FAA itself. The Aviation Security Improvement Act (ASIA) of 1990, developed from recommendations of the President's Commission on Aviation Security and Terrorism, mandated about 38 specific actions that were assigned to the FAA. To date, 37 have been completed or will be completed very shortly.

The most important are:

- ◆ improving the flow of intelligence information to the FAA and improving communications within the agency;
  - ◆ placing FSM's in 19 of FAA's largest and busiest domestic airports, and CASLO's at 17 locations overseas.
  - ◆ implementing new security measures for cargo and mail;
  - ◆ implementing new employment and training standards for screeners at U.S. and overseas airports and other security personnel;
  - ◆ publishing guidelines to help airports build security into new airport construction;
  - ◆ requiring employment investigations and, in some cases, criminal history records checks (final rule scheduled for Winter 1995);
  - ◆ training all LEOs regarding requirements and procedures for flying armed by explaining "need" to fly armed, provide information about aircrew security training, and reduce problems between LEOs and air carriers;
  - ◆ developing new profile criteria to improve upon the current standards which will help identify high risk passengers thereby allowing air carriers to focus resources on these individuals;
  - ◆ developing and placing the AVSEC Contingency Plan in the airport and Air Carrier Security Programs. Contingency plan levels can differ from location to location based on the threat assessment. The declaration of a threat level and
- corresponding measures by the FAA will take into account existing conditions and security provisions. Air carriers and airports will be required to conduct joint annual tabletop exercises of their contingency plans.
- ◆ developing a universal access system which will provide transient airline employees with a single access system for use at airports nationwide;
  - ◆ completing a review of access control systems at regulated airports as a result of a previous OIG audit. This focused inspection included an inventory of access control points and enforcement methods such as challenge procedures. Group access is an FAA project that is currently being reviewed; and
  - ◆ performing Explosives Detection System (EDS) certification testing on initial applicant, Invision Technologies, CTX 5000. As a result, the first FAA certified EDS was announced.

The FAA has devised security measures that provide an adequate level of everyday security, and can be upgraded rapidly in response to increased threats. Though not perfect, civil aviation security is far better now than it was before the tragic destruction of Pan Am 103.

The FAA is committed to completing all of its requirements under the Act. The FAA is also committed to working closely with other Government agencies to ensure that other assigned actions are completed. Finally, the FAA will do everything possible to prevent any terrorist or other criminal act against the civil aviation system, but particularly, a terrible tragedy like Pan Am 103.

## Some key events are:

### 1988

#### March

FAA announced a new policy of stringent fines for persons who try to carry guns past the passenger pre-boarding security checkpoint.

#### December

On December 29, FAA announced a series of security actions designed to prevent any recurrence of the December 21 bombing of Pan Am Flight 103. These included requirements that U.S. airlines in Western Europe and the Mideast X-ray or physically search all checked baggage, conduct additional random checks of passenger baggage, and achieve a positive match of passenger and bags to keep unaccompanied bags off airplanes.

### 1989

#### January

FAA published a rule in the Federal Register requiring airports to install computer controlled access systems, or similar systems, to limit unauthorized entry into secure areas.

#### February

Secretary of Transportation led a U.S. delegation to a special International Civil Aviation Organization (ICAO) session in Montreal on aviation security. The meeting was called at the request of the United States and the United Kingdom to discuss more stringent international security standards for passengers, baggage, and cargo. These consultations resulted in a number of improvements to Annex 17 Aviation Security of the Chicago Convention.

#### March

FAA announced proposed fines totaling \$1 million against 26 airlines for failure to detect test objects during FAA checks of airport screening points.

FAA announced a final rule requiring foreign airlines serving the United States to submit security plans to the agency for review and acceptance.

FAA participated in the establishment of the ICAO Ad Hoc Group of Specialists on the Detection of Explosives.

#### April

Secretary of Transportation detailed a series of immediate and planned FAA actions designed to further enhance aviation security. These included improvements in the FAA security bulletin system, rulemaking to require explosives detection equipment as part of U.S. airline security programs, and expansion of the FAA's security inspection force.

Secretary of Transportation met with transportation officials in a half dozen European countries to discuss enhancing international security.

#### June

FAA began deploying additional security specialists on a temporary basis at overseas locations as the first step in a program to increase permanently FAA's security presence in Europe and the Middle East.

FAA announced proposed civil penalties totaling \$1.2 million against 28 airlines for failing checks at airport screening points.

FAA announced that it had amended U.S. airline security programs to require more stringent screening of portable electronic devices—including radios, cassette players, and laptop computers--on flights operating from Europe and the Mideast to the United States.

#### July

FAA published a proposed rule that would require U.S. airlines to install automated EDS for screening checked luggage on international flights here and abroad.

FAA moved to strengthen its system for issuing security information to airlines by issuing a final rule requiring mandatory compliance with prescribed countermeasures

and making disclosure of information in security alerts a violation subject to penalty.

### **President's Commission Established**

#### **August**

On August 4, Executive Order 12686 established the President's Commission on Aviation Security and Terrorism to "...review and evaluate policy options in connection with aviation security, with particular reference to the destruction on December 21, 1988, of Pan American World Airways Flight 103."

The first of six FAA-funded Thermal Neutron Analysis (TNA) explosives detection systems was delivered to the TWA International Terminal at New York's JFK Airport to begin operational testing. The other five were scheduled for delivery by the end of the year to such locations as Miami and London's Gatwick Airport.

#### **September**

FAA published a final rule giving the agency authority to require airlines to install explosives detection equipment to screen checked baggage at all domestic and foreign airports handling U.S. international flights. Some 40 airports were targeted for initial implementation.

FAA proposed civil penalties totaling over \$1.2 million against 27 airlines for failure to detect objects during FAA checks of airport screening points.

The Triennial International Civil Aviation Organization (ICAO) Assembly began in Montreal on September 19. These meetings continued through October 6 and the U.S. delegation was successful in achieving agreements on a number of aviation security issues and enhancements.

FAA proposed civil penalties totaling \$630,000 against Pan Am for alleged security violations at the Heathrow and Frankfurt airports. The alleged violations were discovered during an FAA inspection following the crash of Pan Am Flight 103 at Lockerbie, Scotland, on December 21, 1988.

FAA installed first operational TNA explosives detection system at JFK airport in New York, operationally screening interline transfer baggage for TWA.

#### **October**

The first meeting of the FAA-chartered Aviation Security Advisory Committee (ASAC) was held in the agency's Washington headquarters. Discussions focused on improving aviation's defenses against terrorist attacks.

#### **December**

Assembly and installation of the TNA explosives detection system began at the Pan Am baggage makeup area at Miami International Airport.

### **1990**

#### **January**

The U.K. Secretary of State for Transportation visited the Secretary of Transportation to discuss the status of the investigations into the bombing of Pan Am Flight 103 and other security matters of mutual interest.

FAA participated in an effort by ICAO to develop a draft treaty on taggants that can be added to explosives to make them detectable by existing gas analysis techniques.

The first of two FAA aviation security specialists assigned to ICAO under a Memorandum of Cooperation for enhanced aviation security and training assistance to member states reported to Montreal on January 29. The second expert reported on March 26.

FAA completed negotiations with an independent testing laboratory for conducting tests and/or developing testing protocols for representative, practical tests of new aviation security equipment.

#### **February**

FAA Administrator Busey completed a series of informal meetings with air carriers, passenger interest groups, and employee union representatives to discuss the issue of public disclosure of threats against civil aviation.

FAA held a meeting in Washington with selected air carrier security directors to discuss proposed explosives detection system requirements.

FAA held a meeting in London with directors of security for U.S. air carriers serving Europe and the Middle East to discuss explosives

detection systems deployment and other security issues and initiatives.

### **March**

The first permanent FAA security liaison officer to be formally assigned to an American Embassy overseas was assigned to London.

The Air Transport Association presented the FAA with a proposal to improve the selection and training of security screening employees. The FAA welcomed the proposal and said it would require all airlines to adopt the new standards.

As a followup to his April 1989 trip, Secretary of Transportation went to Europe again to discuss international security issues with senior transportation officials.

The draft treaty on taggants was considered by the full ICAO Legal Committee (67 countries participated) March 27-April 12. The Committee came to an agreement on the provisions of a final Convention for ratification by a full ICAO Diplomatic Conference in early 1991.

FAA and the British Airports Authority signed an agreement to permit the installation of a TNA device at London's Gatwick Airport for use by U.S. carriers.

### **April**

An American Airlines aircraft was seized by a lone gunman in Port-Au-Prince, Haiti. An FAA security team, headed by the Director of Civil Aviation Security, visited Haiti to assess the ability of the government to maintain and administer appropriate security standards. Meetings with the President of Haiti resulted in changes in management and control of aviation security measures.

An assessment of aviation security conditions at Jorge Chavez International Airport (LIM), Lima, Peru, revealed several problem areas which were corrected on-the-spot by a new Peruvian management team.

FAA completed hiring to increase the staff of the Intelligence Division in the Civil Aviation Security Office to improve its effectiveness and the quality of its intelligence analyses and threat assessments.

A joint FAA/United States Postal Service European airmail security survey of military mail facilities and gateways in Frankfurt, Rome, Madrid, and London areas was initiated.

The first assignments of FAA intelligence liaison officers to the Central Intelligence Agency and the Department of State were completed.

### **President's Commission Report**

### **May**

The President's Commission on Aviation Security and Terrorism released its final report.

FAA issued a proposed change to the Air Carrier Standard Security Program (ACSSP) to increase the standards for metal detectors.

### **June**

Secretary of Transportation, responding to a recommendation by the President's Commission on Aviation Security and Terrorism, created the departmental Office of Intelligence and Security.

In a parallel move, the FAA Administrator created the position of Assistant Administrator for Civil Aviation Security. Also created, was the position of Director for Security Research and Development.

FAA amended the ACSSP to require the air carriers to report to the FAA certain threat information for review and validation to ensure appropriate utilization of resources in response to that information.

FAA issued a proposed rule that would require the replacement of X-ray machines made before July 22, 1985, with more up-to-date models. It would also require foreign airlines that land and take off in the United States to use X-ray machines that meet accepted standards to screen carry-on luggage.

FAA convened a group of government and industry explosives experts to discuss aircraft hardening techniques.

Extraordinary security procedures were implemented in an additional seven countries in Eastern Europe and Africa.

### **July**

The UK Department of Transport and the British Airports Authority held a press conference in London to announce operation of Gatwick Airport's TNA System.

The FAA convened a public meeting of the ASAC and requested recommendations from the attendees on specific Commission

recommendations, including cargo and mail security procedures, bomb threat response procedures, airport design standards, and the interrelated issues of the most effective assignments of security responsibility between air carriers and airport operators and the role of the FSM. Formal recommendations on a number of these issues were sought from ASAC by the end of September.

The third of six TNA systems became operational at Gatwick Airport.

#### **August**

FAA issued a final amendment to the ACSSP, establishing new standards for the testing and calibration of metal detectors, effective September 1.

FAA issued a proposed change to the ACSSP to incorporate selection and training standards for screening personnel based upon the model presented by the Air Transport Association.

The agency completed arrangements to send 27 FAA security specialists to Europe and the Middle East to monitor U.S. airline compliance with FAA security requirements. Meanwhile, it worked on arrangements to send another 27 to the Far East and Latin America.

#### **September**

FAA issued a proposed change to the ACSSP to incorporate ICAO Standard 4.3.1 (passenger/baggage matching) and require the X-ray inspection of international checked baggage at designated U.S. airports.

#### **October**

FAA Intelligence Division was reorganized into the Office of Intelligence with four divisions and 32 authorized personnel.

FAA issued a proposed change to the ACSSP to require a passenger/baggage match for selected passengers on domestic flights and to introduce new x-ray inspection procedures for checked baggage.

FAA proposed a revision of the foreign air carrier Model Security Program including a requirement to detect test objects, standards for x-ray systems and metal detectors, selection and training standards for screening personnel, a requirement to provide checkpoint security supervisors, and a requirement to implement ICAO Standard 4.3.1 (passenger/baggage matching). Foreign air carriers were provided 45 days to comment.

FAA issued a final amendment to the ACSSP incorporating ICAO Standard 4.3.1 (passenger/baggage matching) and requiring the x-ray inspection of international baggage at designated U.S. airports effective December 8.

Installation of a TNA at Dulles Airport in Virginia was completed.

#### **November**

FAA issued a broad agency announcement soliciting input from industry in the area of civil aviation security research and development. Emphasis was put on new technologies and new applications for existing technologies. FAA issued a proposed change to the ACSSP to introduce new training standards for persons performing enhanced or extraordinary security procedures at high risk foreign airports.

#### **Enactment of P.L. 101-604**

On November 16, President signed Public Law 101-604, the Aviation Security Improvement Act (ASIA) of 1990, which strengthened the role of the Federal Government in civil aviation security through a number of actions recommended by the President's Commission on Aviation Security and Terrorism.

#### **December**

FAA issued a final amendment to the ACSSP requiring a passenger/baggage match for selected passengers on domestic flights and implementing new x-ray inspection procedures for checked baggage effective January 10.

FAA and FBI held a 1-day conference of both headquarters and field personnel to improve communications and coordination of information relating to domestic threats to civil aviation.

#### **1991**

#### **January**

At the successful conclusion of a 1 year data collection effort, FAA removed the TNA explosives detection demonstration system from Miami International Airport for refurbishment by the manufacturer and redeployment to another site.

FAA issued a final amendment to the ACSSP that established new training standards for persons performing enhanced or extraordinary security procedures at high risk foreign airports.

Intelligence and security specialists from FAA headquarters were detailed for approximately 30 days to the Brussels regional office to assist in managing the flow of threat information which resulted from the Persian Gulf crisis.

The FAA Intelligence Watch was initiated with one senior analyst on duty at all times. Intelligence Watch manning was increased to 2-3 analysts on duty at all times for approximately 30 days in response to the Gulf crisis.

The agency, in response to the outbreak of hostilities in the Persian Gulf area, raised the level of airport and airline security to the highest point ever. The additional precautions included increasing the number of law enforcement officers at airports, allowing only ticketed passengers past the screening point, prohibiting curbside checking of luggage, and prohibiting parking of vehicles (unattended) within 100 feet of an airport terminal.

#### **February**

FAA published a Notice of Proposed Rulemaking to require foreign air carriers to provide passengers a similar level of protection as that afforded by U.S. air carriers serving the same airport.

FAA published a Notice of Proposed Rulemaking to require air carriers to notify crewmembers of specific and credible threats against their flights.

A team of selected FAA & FBI headquarters personnel completed an airport assessment at a test site (Boston Logan Airport) to develop procedures for eventual use by FAA/FBI field personnel in conducting domestic airport vulnerability assessments.

#### **March**

ICAO, as a result of strong support from the United States and other major western civil aviation countries, convened a Diplomatic Conference which, on March 1, 1991, approved a convention to require the introduction of a readily detectable volatile marking agent ("Taggant") in plastic explosives worldwide.

FAA initiated Memoranda of Agreement with INTERPOL and all Category X airports for the dissemination of threat information through Airport Law Enforcement Agencies Network (ALEAN) communications channels.

FAA authorized adjustment of some specific security measures within the U.S. to decrease inconvenience to airline passengers and costs to airports without any decrease in the overall level of security mandated at Level IV.

#### **April**

FAA published a Notice of Proposed Rulemaking to establish minimum standards for hiring, continued employment, and contracting for airport and air carrier employees engaged in security-related activities.

FAA issued a revised Model Security Program for foreign air carriers including a requirement to detect FAA test objects, standards for X-ray systems and metal detectors, selection and training standards for screening personnel, a requirement to provide a Checkpoint Security Supervisor, and a requirement to implement ICAO Standard 4.3.1, passenger/baggage matching.

#### **May**

Selections were made for FSM's at John F. Kennedy (JFK), Honolulu (HNL), Los Angeles (LAX), Chicago (ORD), San Francisco (SFO), Dallas Fort Worth (DFW), and Miami (MIA) International airports for the first phase of stationing FSM's at all Category X airports.

Foreign airport assessment activity was expanded to include eight Soviet cities--including two in the Soviet Far East--and FAA inspectors visited those locations in anticipation of U.S. air carrier service and increased Aeroflot service to the U.S.

FAA provided training to aviation security personnel in Barcelona, Spain, the site of the 1992 Summer Olympics.

FAA authorized implementation of modified Level II security contingency procedures at domestic locations with no change in requirements at overseas locations.

The FAA Administrator reviewed and approved the "Review of Threats to Civil Aviation" document.

#### **June**

The FAA issued a final rule requiring airlines to notify aircrew members when there is a specific and credible security threat to their flight.

Selections were made for Federal Security Managers (FSM) at Atlanta (ATL), Baltimore

Washington International (BWI), Boston (BOS), Denver (DEN), Detroit (DTW), Houston (IAH), San Juan (SJU), Seattle (SEA), St. Louis (STL), Washington National (DCA), and Dulles International (IAD) to complete the stationing of FSM's at all Category X airports.

The Scientific Advisory Panel for Aviation Security was established.

#### **July**

FAA issued a final rule to require foreign air carriers to provide passengers a similar level of protection as that afforded by U.S. air carriers serving the same airport.

FAA transmitted to Congress the implementation plan for federal security managers and foreign security liaison officers required by Section 104 of P.L. 101-604.

#### **August**

The FAA issued a final rule imposing stiffer hiring, training, and performance standards for airline and airport security personnel. The rule included educational requirements as well as allowed FAA to establish standards for the ability to read, write, and speak English; visual and aural acuity, color perception, and physical dexterity. This rule also established training requirements for the use of airport identification media, including the requirement for training of those persons authorized to be present in certain security areas of airports.

FAA amended its regulations (14 CFR 107.25, Airport Identification Media) to require controlling access to and movement within airports. Areas covered in this section include: training of persons authorized to access any area identified in the airport security program, display of airport-approved identification medium, and records of training of airport personnel.

FAA issued a final rule requiring each airport operator to designate an airport security coordinator (ASC) for each airport operator. The ASC serves as the airport operator's primary contact for security-related activities and communications with FAA, as specified in the airport operator's security program.

#### **September**

The FAA issued a rule eliminating a "grandfather clause" which had permitted approximately 116 older x-ray screening systems to operate at airport checkpoints without meeting current standards for clarity of image detail.

The FAA conducted a 2-week training session for all of its FSM's.

#### **October**

FSM's reported to duty at the 18 Category X airports to coordinate security measures. The FAA also had 11 security liaison officers on duty overseas.

#### **November**

The FAA completed a comprehensive review of its foreign airport assessment program.

FAA reviewed all approved foreign air carrier security programs for operations in the U.S. for the "similar level of protection" criteria as mandated in the Aviation Security Act.

#### **December**

FAA established standardized foreign air carrier inspection documentation based on the performance standards in the Model Security Program.

Joint FAA/FBI airport vulnerability assessments were completed at all Category X airports. Federal security managers worked closely with airport operators and air carriers at these airports to identify and strengthen potentially vulnerable areas, even though these areas may not have been regulated by the FAA. This program was extended to 10 Category I airports.

#### **1992**

#### **January**

FAA implemented an improved training program for its inspectors conducting foreign airport assessments and foreign air carrier security inspections.

#### **February**

FAA proposed a rule to require criminal history records checks on persons who have unescorted access to security-sensitive areas of an airport, as mandated by ASIA. The proposed rule would deny persons convicted of certain crimes stipulated in the Act unescorted access to security sensitive areas.

The FAA issued a policy statement on requirements for "Recurrent Security Training for air carrier Ground Security Coordinators and Crewmembers" (flight and cabin).

The Secretary of Transportation issued a DOT Order requiring public notification that Ezeiza

International Airport in Buenos Aires, Argentina, did not maintain effective security measures and procedures. Also, U.S. air carriers serving Ezeiza International Airport were required to appropriately notify passengers. This finding was based on airport assessments conducted by FAA pursuant to Section 1115 of the Federal Aviation Act of 1958, as amended.

FAA issued a policy statement that airport operators should focus security resources on those critical areas of an airport involving air carrier passenger operations.

#### **June**

The FAA announced its new policy initiatives on test object enforcement and targeted testing of air carrier security screening checkpoints.

FAA expanded the membership of its Aviation Security Advisory Committee to include representatives of the Aviation Consumer Action Project and the Victims of Pan Am 103 public interest organizations.

The Secretary of Transportation directed termination of the sanctions imposed by the DOT Order (issued March 12, 1992) which declared that Ezeiza International Airport in Buenos Aires, Argentina, did not maintain effective security measures and procedures. As a result of technical assistance and training provided by the FAA, a later airport assessment found that adequate security was maintained.

FAA authorized air carriers to use explosive vapor/particle detection and enhanced X-ray technology devices for voluntary use in screening carry-on electrical items when specifically approved in individual air carrier security programs.

The FAA and the Department of Defense executed a Memorandum of Agreement calling for the U.S. Armed Forces to apply appropriate security controls to its military mail prior to tendering it to U.S. air carriers overseas.

The Scientific Advisory Panel published their first report with an assessment of the Security R&D program and specific recommendations.

#### **July**

The all-cargo air carrier Domestic Security Integration Program (DSIP) was adopted on a 2-year trial basis by three major all-cargo air carriers.

#### **August**

The FAA forwarded the report to Congress on air cargo and airmail security mandated by the Act. The classified report contained recommendations for improving the security on cargo and mail transported by passenger aircraft.

FAA issued a proposed change to the ACSSP to enhance screener hiring and training standards. The proposal was open for comments for 30 days after publication.

#### **September**

The FAA issued a Supplemental Notice of Proposed Rulemaking (SNPRM) using an employment history verification as the primary means of determining whether an individual should have unescorted access. The SNPRM also proposed requiring criminal history records check for individuals who trigger criteria established in the proposal. The final rule will be published in the Federal Register in 1994.

A separate R,E&D Aviation Security Human Factors program was initiated in FY93. The Screener Proficiency Evaluation and Reporting System (SPEARS) is part of this program.

#### **October**

The Secretary of Transportation made a determination that security conditions at Murtala Mohammed Airport, Lagos, Nigeria were not effective and did not meet minimum International Civil Aviation Organization standards. As a result, immediate public notification of this finding was made to the traveling public. This finding also resulted in the FAA amending on an emergency basis the security programs of U.S. and foreign air carriers that serve the United States from Lagos. This amendment procedure was issued October 1992. In July 1993, a second assessment was conducted in Lagos. The team reported no corrective actions and several new security deficiencies. On August 11, 1993, the Secretary suspended air service to Lagos citing the failure of cognizant authorities to satisfactorily correct deficiencies. The suspension remains in effect today.

With strong support from the FAA and the Department of State, the International Civil Aviation Organization's Council adopted Amendment Number 8 to Annex 17. This amendment strengthened international security standards and recommended practices in several key areas.

#### **November**

The FAA issued a proposal to amend air carrier security programs to: (1) assimilate experience gained during Operations Desert Shield/Storm from the implementation of special security procedures at designated international airports, and (2) incorporate the cargo and mail security recommendations of the report to Congress.

The FAA released for public comment the unclassified portions of the proposed criteria for EDS which establish the performance requirements for certification of EDS and performance testing of explosives detection devices. Comments received were evaluated and a Federal Register Notice which established the final criteria was published on September 10, 1993.

Draft guidelines for taking security into account during airport design and construction were completed and were under review by the Aviation Security Advisory Committee (ASAC). Security R&D laboratory (where EDS certification testing will take place) opened at the Technical Center in Atlantic City, New Jersey.

#### **December**

A detailed security R&D program requirements document was published, defining program direction, milestones, and priorities.

#### **1993**

#### **January**

The FSM effectiveness evaluation report was completed. The final report stated that the initial mission and purpose of the FSM program has been successful in that it conveyed an early and immediate line of communication with industry and other FAA counterparts.

A report was completed on the evaluation of Europe, Africa, and Middle East regional security office communication process in support of timely communication and response to information. The final report noted improved onsite problem resolution and presented recommendations for improved quality assurance between the region and headquarters.

#### **February**

The ASAC was briefed on the FSM effectiveness evaluation report.

#### **March**

Three prototypes of hardened luggage containers were fabricated and blast-tested with favorable results, as part of the effort to develop a certification standard in 1995.

With the posting of a liaison officer in Sydney, Australia, 17 CASLO's have been assigned to locations throughout the world to improve communications and serve as a source of onsite expertise.

FAA/FBI vulnerability assessments at 29 major domestic airports were completed, results analyzed, and a report to Congress submitted as required by ASIA.

Beginning in March, explosives trace detectors to screen electrical items in carry-on bags were deployed first at La Guardia, then later at Atlanta and Dulles airports for operational testing and evaluation. The results will assist in the preparation of performance standards for the devices.

FAA appointed regional aviation explosives security coordinators in each of the 9 domestic FAA regions.

#### **April**

A comprehensive FAA physical security management program for the protection, control and safeguarding of FAA facilities and assets was established.

#### **May**

The Federal Air Marshal training program was upgraded.

The Annual Report to Congress on Civil Aviation Security for 1991 was completed and submitted to Congress. Major improvements in this report were made to make it more informative and useful to Congress and the public.

FAA aviation explosives security airport surveys were pilot tested at two major airports.

#### **June**

The FAA Technical Center completed a draft management plan for certification testing of EDS equipment. Notice of the availability of this document for comment was published in the Federal Register.

Two FAA-owned Thermal Neutron Analysis explosives detection systems for screening the checked baggage of flights of over 20 U.S. and

foreign air carriers flying from San Francisco International Airport began operating to improve security while collecting data for evaluation.

FAA directed that aviation explosive security airport surveys be conducted at all Category X and Category I airports in the United States within the next year.

#### **July**

A change to the Air Carrier Standard Security Program (ACSSP) was issued. It required new, more stringent measures for the carriage of cargo and mail aboard passenger aircraft from both U.S. and foreign locations, while at the same time strengthening security rules for international passenger operations from higher risk airports overseas.

An FSM position in Orlando, Florida, was established, bringing the total number of FSM's nationwide to 19.

#### **August**

Revised contingency plans for airport and air carrier security, developed for use during periods of increased threat, were presented to the regulated parties for comment.

#### **September**

A technical report entitled "Recommended Security Guidelines for New Airport Construction and Major Renovations" was published and distributed to those with an operational "need-to-know" to ensure that security concerns are taken into account during the design stage of airport construction projects. The guidelines discuss restricted access areas, passenger flow control, the efficiency of security screening stations, and the protection of critical or vulnerable areas of the airport.

The final explosives detection system performance standard was published in the [Federal Register](#).

The first national invitational, preboard passenger screener conference concentrating on human factors issues at the screening check point was sponsored by the FAA.

New, modular, screening checkpoint test objects were distributed to FAA field offices/personnel for evaluation.

#### **October**

The notice of availability of the final management plan for EDS certification testing was published in the [Federal Register](#).

A revised change to the ACSSP was issued to implement minimum standards for hiring, continued employment, and contracting for air carrier and airport employees engaged in security-related activities.

The Assistant Administrator for Civil Aviation Security hosted the Sixth International Civil Aviation Security Conference attended by nearly 400 civil aviation security professionals from over 40 countries. Explosives detection systems and other advanced technology, threats to civil aviation, screening procedures, airport security, the cost of security, and international standards and cooperation were the primary themes.

FAA Administrator reviewed and approved an updated "Review of Threats to Civil Aviation."

#### **November**

The PSI effectiveness evaluation was completed. The final report stated the establishment of major carrier PSI positions at headquarters has resulted in greater responsiveness to industry and more consistent communication of policy. It also identified management actions for continuing improvements and collaboration with both internal and external organizations.

#### **December**

A comprehensive review by interested parties of the proposed revision of the Federal Aviation Regulations governing airport and air carrier security began with an issue paper sent to the ASAC for comment.

#### **1994**

#### **January**

A 9-month indepth evaluation was initiated of access control systems in place at major airports in the U.S. This evaluation and subsequent validation of findings was the first of a new approach to inspectional activities undertaken in 1994 and will be used to focus resource and activities where specific problem areas are identified.

#### **February**

The FAA Technical Center chaired a one-day seminar for subject-matter experts from government and industry to discuss elements to be incorporated in a domestic passive passenger profile system.

#### **March**

The FAA Technical Center performed a field evaluation of domestic passive passenger profile system with Northwest Airlines.

The AVSEC Contingency Plan was developed and placed in the Airport and Air Carrier Security Programs. Air carriers and airports are required to conduct joint annual tabletop exercises. The exercises require airports and air carriers to simulate implementation of countermeasures identified by the FAA, identify local operating procedures that would be required to implement those countermeasures, and identify areas of responsibility at each airport.

#### **May**

The FAA Technical Center successfully completed a laboratory demonstration of Nuclear Quadrupole Resonance explosive detection device.

#### **June**

The FAA Technical Center began a field trial and data collection effort of InVision CTX 5000 at LAX.

#### **August**

The first application for certification testing from InVision Technologies was received.

The FAA Technical Center successfully performed a blast test on the 5th Hardened Container prototype.

A field evaluation was performed on enhanced versus black and white X-ray for both carry-on and checked baggage at SFO.

#### **September**

A Law Enforcement Officers Flying Armed training package was developed, printed, and distributed to federal, state, and local law enforcement. The training explains criterion for "need" to fly armed, provides information about aircrew security training, and promotes an understanding of differences among air carriers' corporate policy regarding prisoner transport. The training is being implemented voluntarily by agencies prior to the anticipated requirements of revisions in FAR 108.

FAA delegations met with various foreign air carrier representatives and government officials to amend the foreign air carrier security programs and arrive at a level of protection for passengers similar to that provided on U.S. carriers serving the same airports. To date 14 of 16 category one scheduled air carriers' programs have been reviewed.

#### **October**

The FAA Technical Center performed EDS certification testing on InVision CTX 5000.

Explosive vulnerability testing was performed on pressurized KC-135 airframes.

FAA hosted a two-day seminar for analysts from the U.S. Intelligence Community to discuss advanced technical means of attacking aircraft and to outline possible countermeasures. The seminar report will help determine the direction of future research and development projects.

#### **November**

FAA collaborated with Air Transport Association in publishing new material on improvised explosive device recognition for incorporation in training materials to assist instructors who conduct both initial and recurrent GSC training. Several of the elements covered in this training may be used by screening company vendors to meet recurrent screener training requirements.

Drafting has begun on a scope paper proposing comprehensive changes to the Model Security Program (MSP) governing Foreign Air Carrier passenger operations from/within, and to the United States. The FAA anticipates issuing the revised MSP for comment in the Spring of 1995.

The first Government/Industry Trace Portal Workshop was held in Atlantic City at the FAA Technical Center.

At the conclusion of the Enhanced Airport Security System Project, the FAA cosponsored (along with industry) the Airport Security Technology Workshop in order to transfer technical information from government to industry.

#### **December**

The FAA certified the first EDS - InVision CTX 5000.

The FAA has developed new profile criteria to improve upon the current standards. The new criteria better ables us to identify high risk passengers thereby allowing air carriers to focus resources on these individuals. The training program for profilers has been updated and new requirements for testing proposed. Final implementation is scheduled for Winter of 1995.

## **APPENDIX B. Glossary of Civil Aviation Security Terms**

(listing only defines terms included in this report which have not been previously defined)

**Air Carrier:** As defined in the Federal Aviation Act of 1958, any citizen of the United States who undertakes, whether directly or indirectly or by a lease or any other arrangement, to engage in air transportation. See also foreign air carrier and U.S. air carrier.

**Amendments to Air Carrier Security Programs:** Special procedures, approved by the principal security inspector, for use by an air carrier in lieu of procedures outlined in the ACSPP at specific locations or under specific circumstances.

**Checked Baggage:** Baggage accepted by the air carrier for transportation in the hold of the aircraft.

**Commercial Air Carriers:** An air carrier certificated in accordance with FAR Part 121 or 127 to conduct scheduled services on specified routes. The air carriers may also provide nonscheduled or charter services as a secondary operation.

**Commuter Air Carriers:** An air carrier certificated in accordance with FAR Part 135 that operates aircraft with a maximum of 60 seats, and that provides at least five scheduled round trips per week between two or more points, or that carries mail.

**Federal Aviation Regulations (FAR):** The set of regulatory obligations contained in Title 14 of the Code of Federal Regulations which FAA is charged to enforce in order to promote the safety of civil aviation both domestically and internationally.

**Security FAR.** Basically, Parts 107, 108, 109, and 129.25-27 of the FAR, charge the respective certificate

holder (air carrier or airport operator) to (1) submit a security program, (2) secure FAA approval of it, (3) carry out the approved program, and (4) amend the program when conditions change. Such programs are controlled documents under Part 191. Certain portions of Parts 107, 108, and 129.27 are also applicable to individuals.

***Part 107 (14 CFR 107):*** The basic security regulation applicable to airports serving scheduled air carrier passenger operations. The airport operator must implement an FAA-approved security program in order to ensure a secure operating environment.

***Part 108 (14 CFR 108):*** The basic security regulation applicable to air carriers engaged in scheduled or public charter passenger operations. Air carriers must carry out an FAA-approved aviation security program.

***Part 109 (14 CFR 109):*** The requirement for indirect air carriers (air freight forwarders) to adopt and carry out an FAA-approved security program. Such operators are required to stringently process the receipt, handling, and consolidation of air freight intended for transport by air carriers.

***Part 121 (14 CFR 121):*** The basic regulation covering all aspects of air carriers engaging in interstate or overseas transportation under a certificate of public convenience (excluding those air carriers that fall under Parts 125, 127, 129, and 135).

***Part 125 (14 CFR 125):*** The basic regulation applicable to airplanes having a seating capacity of 20 or more passengers or a maximum payload

capacity of 6,000 pounds or more (excluding those air carriers that fall under Parts 121, 127, 129, and 135).

***Part 127 (14 CFR 127):*** The basic regulation applicable to certification and operations of scheduled air carriers with helicopters (excluding those air carriers that fall under Parts 121, 125, 129, and 135).

***Part 129 (14 CFR 129):*** The basic regulation covering foreign air carriers and foreign operators of U.S.-registered aircraft engaged in common carriage (excluding those air carriers that fall under Parts 121, 125, 127, and 135). Part 129(e) establishes the requirement for foreign air carriers serving the United States to implement and carry out a security program acceptable to the Administrator.

***Part 135 (14 CFR 135):*** The basic regulation applicable to the operation of air taxi operators and commercial operators (excluding those air carriers that fall under Parts 121, 125, 127, and 129).

***Part 191 (14 CFR 191):*** The basic regulation covering the withholding from disclosure of FAA security information, particularly related to systems, procedures, facilities, and devices to protect passengers and aircraft against acts of criminal violence and aircraft piracy.

***Foreign Air Carrier:*** An air carrier other than a U.S. air carrier. As defined in the Federal Aviation Act, any person, not a citizen of the United States, who undertakes, whether directly or indirectly or by lease or any other arrangement, to engage in foreign air transportation.

***Indirect Air Carrier:*** Any person or individual (except government entities), not in possession of an FAA operating certificate, who undertakes to engage indirectly in foreign or domestic air transportation of property, using the services of a certificated air carrier. Synonymous with air freight forwarder.