



Report of the
**PRESIDENT'S
COMMISSION
on
AVIATION
SECURITY
and
TERRORISM**

*"... a comprehensive study
and appraisal of practices and
policy options with respect
to preventing terrorist acts
involving aviation."*

Executive Order 12686
August 4, 1989

Report to the President

By The

**PRESIDENT'S
COMMISSION**

*on Aviation Security
and Terrorism*

May 15, 1990
Washington, D.C.

**PRESIDENT'S COMMISSION ON AVIATION
SECURITY AND TERRORISM**

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May 15, 1990

Dear Mr. President:

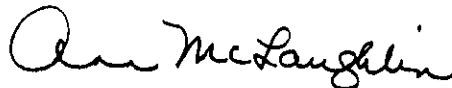
I am privileged to present the report of the President's Commission on Aviation Security and Terrorism.

Since the Commission began its work in November 1989, we have evaluated the existing aviation security system, options for handling terrorist threats and the treatment of families of victims of terrorist acts. The Commission interpreted your charge as requiring an independent and comprehensive review of these matters using the Pan Am 103 tragedy as a point of reference.

This report presents a series of recommendations designed both to improve aviation security and the ability of the government to respond to a Pan Am 103. The nation must also act to deter and prevent the use of terrorism against civil aviation as a deadly tool of political policy. The Pan Am experience demands nothing less.

The unyielding determination of the families of the victims of Pan Am 103, who sought this inquiry, provided the energy for our work. The sensitive and caring response of the people of Lockerbie, Scotland provided the passion. We trust this report reflects their determination and passion. We are confident that its recommendations can enhance the security of the traveling public. For this is surely our first and highest responsibility.

Sincerely,



Ann McLaughlin
Chairman

The President of the United States
The White House
Washington, D.C. 20500

*In compliance with the Executive Order 12686 of August 4, 1989
the undersigned present the report of the
President's Commission on Aviation Security and Terrorism.*

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Executive Summary

•National will and the moral courage to exercise it are the ultimate means for defeating terrorism. The President's Commission on Aviation Security and Terrorism recommends a more vigorous U.S. policy that not only pursues and punishes terrorists but also makes state sponsors of terrorism pay a price for their actions.

With other nations of the free world, the United States must work to isolate politically, diplomatically and militarily the handful of outlaw nations sponsoring terrorism. These more vigorous policies should include planning and training for preemptive or retaliatory military strikes against known terrorist enclaves in nations that harbor them. Where such direct strikes are inappropriate, the Commission recommends a lesser option, including covert operations, to prevent, disrupt or respond to terrorist acts.

Rhetoric is no substitute for strong, effective action.

•The Commission's inquiry also finds that the U.S. civil aviation security system is seriously flawed and has failed to provide the proper level of protection for the traveling public. This system needs major reform.

The Commission found the Federal Aviation Administration to be a reactive agency—preoccupied with responses to events to the exclusion of adequate contingency planning in anticipation of future threats. The Commission recommends actions designed to change this focus at the FAA.

•Pan Am's apparent security lapses and FAA's failure to enforce its own regulations followed a pattern that existed for months prior

to Flight 103, during the day of the tragedy, and—notably—for nine months thereafter.

These are the major findings and conclusions of the Commission, which began its work in mid-November of 1989 and reports to the President on May 15, 1990.

The destruction of Pan American World Airways Flight 103 over Lockerbie, Scotland, on December 21, 1988, was the reference point for the mission of this Commission. Pursuit of the full story of Flight 103 led the Commission also to a series of conclusions on counterterrorism policy in general, as detailed in the section on National Will at the end of the main body of this Report.

The Commission also conducted a thorough examination of certain civil aviation security requirements, policies and procedures surrounding Flight 103. It is a disturbing story.

The destruction of Flight 103 may well have been preventable. Stricter baggage reconciliation procedures could have stopped any unaccompanied checked bags from boarding the flight at Frankfurt. Requiring that all baggage containers be fully secured would have prevented any tampering that may have occurred with baggage left in a partially filled, unguarded baggage container that was later loaded on the flight at Heathrow. Stricter application of passenger screening procedures would have increased the likelihood of intercepting any unknowing "dupe" or saboteur from checking a bomb into the plane at either airport.

The international criminal investigation has not yet determined precisely how the device was loaded onto the plane. Until that occurs

and subject to the conclusions reached, the Commission cannot say with certainty that more rigid application of any particular procedure actually would have stopped the sabotage of the flight.

This Report contains more than 60 detailed recommendations designed to improve the civil aviation security system to deter and prevent terrorist attacks. Before new laws are passed and more regulations are promulgated, existing ones must be fully enforced and properly carried out. The Commission emphasizes that no amount of governmental reorganization or technological developments can ever replace the need for well-trained, highly-motivated people to make the security system work.

The Commission salutes the thousands of men and women in the public and private sectors of the U.S. civil aviation security system. The recommendations in this report are designed to help them perform their jobs more effectively. The Commission urges management to face up to the security system failures disclosed by this investigation.

A few facts can be stated with certainty about Pan Am 103. A terrorist element did succeed in having a bomb placed aboard the aircraft. That bomb blew the aircraft apart at 31,000 feet over Lockerbie, killing 259 persons on the airplane and 11 on the ground.

The criminal investigation has indicated that the bomb was placed in a radio cassette player and packed in a suitcase loaded into the plane's baggage hold. The Commission, therefore, was able to concentrate its investigation on security procedures for checked baggage.

Authorities also believe that the bomb was made of a very small quantity of semtex, a plastic explosive, and that it probably was placed aboard at Frankfurt, West Germany, where the flight began.

At the end of an October 1988 inspection of Pan Am's security operations at Frankfurt, the FAA inspector was troubled by the lack of a tracking system for interline bags transferring from other airlines and the confused state of passenger screening procedures. Overall, the inspector wrote, "the system, trying adequately to control approximately 4,500 passengers and 28 flights per day, is being held together only by a very labor intensive operation and the tenuous threads of luck." Even so, the inspector

concluded, "it appears the minimum [FAA] requirements can and are being met."

Passenger/baggage reconciliation is the bedrock of any heightened civil air security system. Under current FAA requirements for international flights, implemented since Pan Am 103, every bag carried on an aircraft must belong to someone who is also on that flight.

A key focus of the Commission's inquiry was the FAA written regulation in effect in December 1988 that unaccompanied baggage should be carried only if it was physically searched.

When Pan Am Flight 103 pushed away from the gate at Frankfurt and again at Heathrow, on December 21, 1988, no one knew whether the plane was carrying an "extra" interline bag that had been checked through to Pan Am from another airline. Months before Pan Am stopped reconciling or searching interline baggage and began simply X-raying this luggage.

Records examined by this Commission indicate that Pan Am Flight 103 might have carried one such interline bag that did not belong to a passenger on the flight. While this extra bag would have been X-rayed, the explosive semtex cannot be reliably detected by X-ray used at airports.

Pan Am officials told the Commission that the FAA Director of Aviation Security had given the airline verbal approval to X-ray interline bags rather than searching or reconciling them with passengers. The FAA official denied this.

Passenger screening procedures required by FAA at Frankfurt and Heathrow included questioning to identify for additional screening those fitting a "profile" as most likely—knowingly or unknowingly—to be carrying an explosive in any manner, including checked baggage.

The subsequent FAA investigation of Pan Am 103 found that several interline passengers who boarded at Frankfurt were not even initially screened. Several others identified at the check-in counter for further screening did not receive that additional screening at the gate. A large container holding baggage waiting to be loaded on Flight 103 arriving at Heathrow from Frankfurt was left open and unattended for half an hour. At the time, however, that practice did not violate any FAA regulations.

The FAA investigation of the Pan Am 103 disaster began immediately and concluded on

January 31, 1989. While the results were not announced for over three more months, the FAA proposed fines totaling \$630,000 against Pan Am for violations of regulations, both on December 21 and during the five-week period thereafter.

The FAA, significantly, did not cite Pan Am for substituting X-ray for interline passenger/baggage reconciliation. The official FAA report made no reference to the fact that the investigation had found that one interline bag loaded on Flight 103 could not be accounted for in any passenger records. The agency also noted in its announcement that none of the violations cited by its investigation had contributed in any way to the bombing.

Both the public and the regulatory spotlight were focused on just those types of security problems throughout early 1989. Congressional hearings were held. The Secretary of Transportation set up a task force expressly to look into the matter. The Commission would have expected the FAA to give top priority to security operations at the two airports that loaded and dispatched Flight 103.

Separate from the Flight 103 probe, the FAA found numerous security discrepancies by Pan Am at Frankfurt and London in January and February of 1989 but took no official action against the airline.

In a major inspection conducted May 8-23, 1989, the FAA found that major security violations still existed in Pan Am's Frankfurt operations.

One FAA inspector wrote in the report dated June 7, 1989, that while the operations of the four other U.S. carriers operating at Frankfurt were "good," Pan Am was "totally unsatisfactory."

Wrote the FAA inspector: "Posture [of Pan Am] considered unsafe, all passengers flying out of Frankfurt on Pan Am are at great risk."

When the FAA Associate Administrator with responsibility for the security division learned of the May inspection results, he called a June 14 meeting with Pan Am officials, who presented a plan for corrective action while contesting some of FAA's allegations.

Still, the security violations and deficiencies at Pan Am's Frankfurt station continued. An unannounced inspection in August of 1989 found that many of the same security problems

from the May inspection remained uncorrected, especially unguarded airplanes and failure to search personnel maintaining the aircraft.

Pan Am came to a September 12 meeting with FAA on security at Frankfurt with yet another "action plan." A later gathering, however, included a private session between the FAA Administrator and the chief executive officer of the airline. That same evening, a team of high-level Pan Am managers, accompanied by FAA security inspectors, flew to Frankfurt.

Within one week, personnel changes at the station had been ordered and all security violations and deficiencies corrected. At the next FAA regular inspection, Pan Am at Frankfurt was rated a model station. This corrective action occurred nine months after the Flight 103 bombing.

The bombing of Flight 103 occurred against the background of warnings that trouble was brewing in the European terrorist community. Nine security bulletins that could have been relevant to the tragedy were issued between June 1, 1988 and December 21, 1988. One described a Toshiba radio cassette player, fully rigged as a bomb with a barometric triggering device, found by the West German police in the automobile of a member of the Popular Front for the Liberation of Palestine—General Command (PFLP-GC). The FAA bulletin cautioned that the device "would be very difficult to detect via normal X-ray," and told U.S. carriers that passenger/baggage reconciliation procedures should be "rigorously applied."

On December 5, 1988, an anonymous telephone caller to the U.S. Embassy in Helsinki, Finland, said that sometime within the next two weeks a Finnish woman would carry a bomb aboard a Pan Am aircraft flying from Frankfurt to the United States. The FAA Security Bulletin on that threat was issued December 7 and was redistributed by the State Department to its embassies worldwide December 9.

At the U.S. Embassy in Moscow, the senior staff, with concurrence of the Ambassador, decided that the warning should be made public. Thus the Helsinki threat information was publicly posted at the Embassy on December 14 and was generally made available throughout the 2,000-member community of Americans, including news media and private contractor personnel, in Moscow. For these Americans,

Pan Am through Frankfurt was the most accessible and most commonly used route to the United States.

The Commission found no passenger who changed his or her travel plans because of the Helsinki threat except one civilian who was scheduled to fly Pan Am to the United States through Frankfurt on December 16 and switched to a direct flight on December 18. While there were no passengers from Moscow on Flight 103, the connecting Pan Am flight from Moscow was not scheduled to fly on that date.

Any distribution of threat information to one segment of the population, such as the posting of the Helsinki threat in Moscow, creates the perception of a "double standard"—the intentional choice to warn some people but not others. At the same time, the Commission believes that public notification of aviation threat information is appropriate under certain circumstances, described in detail in this Report. Therefore, the Commission recommends that a mechanism be established to consider in individual cases when and how to provide public notification.

As for the Helsinki threat, Finnish police quickly determined that the call was unreliable. All subsequent investigations by other governments have also concluded that the call had no connection to Flight 103. The Commission found no evidence suggesting otherwise.

The Pan Am 103 families registered bitter complaints over the treatment they received from the State Department, and the Commission found that the Department was unprepared to respond effectively and compassionately to the largest aviation terrorist disaster in U.S. history.

The Commission found that the Department failed to obtain a list of passengers, develop a list of next of kin, and notify the families in a timely and compassionate fashion, and failed to staff adequately its consular services effort in Lockerbie.

Although the State Department appears to have begun to recognize the scope of its Pan Am 103 failures, it has only begun to institutionalize mechanisms that will remedy the problems. More must be done, and the Commission's recommendations help point the way.

The Commission firmly believes the U.S. Government owes victims of terrorist acts di-

rected against this country more than just processing the return of remains and personal effects, however important that may be. Accordingly, the Commission recommends that the United States extend financial benefits to these victims and develop appropriate ceremonies to recognize their sacrifice. The outdated Warsaw Convention should be revised to speed increased compensation to passengers' families.

The Commission also finds that the FAA's research and development program should be significantly intensified to keep pace with the changing terrorist threat to civil aviation. Under a contract awarded in 1985 to Science Applications International Corp. (SAIC), the FAA has purchased six thermal neutron analysis (TNA) machines to detect plastic explosives.

These machines, by design specification and by actual performance as observed by the Commission at JFK Airport in New York, will detect plastic explosives in an operational mode only in amounts far greater than the weight of the most sophisticated bombs actually used by terrorists. For example, the bomb that destroyed Pan Am Flight 103 is believed to have weighed half or less than the amount the TNA machine would reliably detect in an operational mode at an international airport.

Despite these limitations, FAA has announced a program to require U.S. airlines operating internationally to purchase 150 TNA machines (or the equivalent, although there is no competing equipment available) and to install them at 40 international airports at an estimated cost of \$175,000,000. The Commission recommends that this program be deferred, pending development of more effective TNA machines or an alternative technology.

The Commission's examination of the security program applied by U.S. carriers at foreign airports revealed that much has been done to strengthen them since December 1988, especially at high threat airports. However, foreign governments have not imposed equally stringent requirements on carriers under their jurisdiction, and the U.S. has relied on weak international standards for foreign carrier security. As a result, there are significant imbalances. The Commission recommends steps to improve aviation security internationally and to promote the use of bilateral agreements negotiated by the State Department as the mechanism to

achieve a consistently high level of international aviation security.

As part of its mandate, the Commission assessed the coordination and evaluation and dissemination of intelligence information collected. The Commission found that, because of the government's increased intelligence activities targeted at terrorism and the increased resources being devoted to intelligence functions by the FAA, the system is working reasonably well.

The Commission's review showed that no warnings specific to Flight 103 were received by U.S. intelligence agencies from any source at any time. It also showed that no information bearing upon the security of civil aviation in general and flights originating in Frankfurt in particular was received beyond that which was promptly disseminated to the FAA and, in turn, immediately to U.S. air carriers.

Major recommendations of the Commission, as contained in this report, include:

- The United States should pursue a more vigorous counterterrorism policy, particularly with respect to nations sponsoring terrorists.

- Congress should enact legislation to create a position of Assistant Secretary of Transportation for Security and Intelligence, an appointment with tenure to establish a measure of independence.

- The FAA security division should be elevated within the agency to a position that reports directly to the Administrator.

- Through existing FAA resources, the federal government should manage security at do-

mestic airports through a system of federal security managers.

- The State Department should conduct negotiations with foreign governments to permit U.S. carriers operating there to carry out FAA-required screening and other security procedures. Airlines cannot be expected to conduct international negotiations in order to comply with regulations of their own government.

- The FAA and the Federal Bureau of Investigation should proceed with plans to conduct an assessment of the security threat at domestic airports.

- The FAA should launch a top priority research and development program to produce new techniques and equipment that will detect small amounts of plastic explosives, operationally at airports. The program to require U.S. carriers to purchase and deploy the existing TNA machine should be deferred. However, the Commission expects the FAA to continue aggressively its new emphasis on upgrading the aviation security system's human and technical capabilities.

- Public notification of threats to civil aviation should be made under certain circumstances. As a rule, however, such notification must be universal, to avoid any appearance of favored treatment of certain individuals or groups.

- Victims of terrorist actions aimed at the United States Government should qualify for special financial compensation as victims of acts of aggression against their country.

- The State Department must take major steps to ensure that the families of victims receive prompt, humane and courteous treatment and service in overseas disasters.

Introduction

The explosion that destroyed Pan Am Flight 103 at 31,000 feet over Lockerbie, Scotland, on December 21, 1988, sent repercussions throughout America and the world. Shocked and grieved, but determined to learn what had happened, many of the families of the American victims traveled to Lockerbie in the immediate aftermath of the tragedy. Thus began an odyssey that continues with this Commission's Report. The families organized to urge the formation of an independent investigative body to determine the how and why of the final flight of Pan Am 103, and to seek to assure that others could be spared their loss and their suffering.

This Commission is a response to the unwavering dedication of these families. To the extent that the Commission's Report can answer their questions, and help to prevent future terrorist acts, it will have succeeded.

The Executive Order provided for seven Commissioners to be appointed by the President: two members from the U.S. Senate, two from the U.S. House of Representatives, representing both parties equally; and three other members chosen from the private sector with expertise in aviation transportation, aviation security or counterterrorism.

The President named Ann McLaughlin, former Secretary of Labor, Chairman; Alfonse M. D'Amato (R-NY) and Frank R. Lautenberg (D-NJ), from the Senate; and John Paul Hammerschmidt (R-AR) and James L. Oberstar (D-MN), from the House of Representatives. From the private sector, the President named Edward Hidalgo, former Secretary of the Navy, and General Thomas C. Richards, USAF (Ret.).

These members brought a number of perspectives, experiences, and areas of expertise to the Commission, complemented by a staff drawn in large part from the investigative and security agencies of the Executive and Legislative branches of government.

The Commission was empowered to request and receive information, receive testimony, conduct hearings, and hold meetings.

The Commission held five public hearings.

- *November 17, 1989.* Members of the families of the victims of Pan Am Flight 103 and Union des Transports Aeriens Flight 772 testified, followed by representatives of the aviation community, including pilots, flight attendants, the air carriers, airports, and consumer groups.
- *December 18, 1989.* The General Accounting Office reported its findings on the Federal Aviation Administration's aviation security program; FAA representatives discussed the agency's programs and aspects of Pan Am 103; and the Department of State testified on its treatment of families of the victims.
- *February 2, 1990.* Scientists, the FAA, airport security experts and manufacturers presented testimony on the development of counterterrorist and aviation security technology.
- *March 9, 1990.* The Chairman of the House Foreign Affairs Committee testified on international aviation security; personnel from the U.S. Embassy in Moscow spoke on the posting of the "Helsinki

warning" and a Pan Am representative from its Moscow office presented testimony on the impact of that warning.

- *April 4, 1990.* Executives from various airlines testified on their companies' aviation security policies and programs, including the Chairman and President of Pan Am; and again the FAA, including the Administrator, discussed public policy issues.

The Commission and staff reviewed security measures in place at airports in the United States and Europe; met with officials of government here and abroad charged with directing and implementing aviation security and intelligence-gathering and evaluation. They met with security specialists, representatives of airlines and airports, and with officials of the U.S. consular, intelligence and counterterrorism communities. The staff conducted over 250 investigative interviews and received sworn testimony from witnesses.

The Commission believes that this report will mark a new beginning, not the end, of a con-

tinuing review of aviation security and measures to deter and defeat the terrorist threat.

The Commission will never forget its visit to Lockerbie, Scotland, where the members shared and sought to understand the families' and the community's grief. It should be remembered that the last to perish were 11 residents of this small town.

The Commission found more reminders of the terrors of this tragedy, but was also profoundly moved by the understated and gentle caring for those who died in and over their town. Some of the victims' possessions are still in Lockerbie waiting to be claimed. These items—clothing, Christmas presents, and children's toys, neatly and tenderly arranged—are eloquent testimony to the dimensions of this tragedy, both the terrible human sorrow and the gentle, complete response by the Scottish people.

The Commission's Report is factual and analytical; but underlying its findings, conclusions and recommendations are our memories of the visit and our lasting gratitude to the extraordinary people of Lockerbie.

Pan Am Flight 103

The Executive Order directed the Commission to conduct its review "with particular reference to the destruction on December 21, 1988, of Pan American World Airways Flight 103." The Commission has used the events surrounding Flight 103 as a basic reference point for its work.

The Executive Order made clear the Commission was to avoid interfering with the ongoing criminal investigation into the destruction of Flight 103. The Commission's mission was not to determine who planted the bomb on Flight 103 but to ascertain how the device could have made its way onto the plane. The Commission, however, was able to benefit from the extraordinary work of the law enforcement effort.

Information made public by law enforcement officials established that the bomb that destroyed Flight 103 was in a radio cassette device, packed in a suitcase which was loaded into a cargo container stowed at position 14 in the left of the plane's baggage hold, just forward of the wing. The Commission, therefore, was able to concentrate its Flight 103 investigation on security systems and procedures for checked baggage.

Law enforcement authorities informed the Commission that, although no final determination had yet been made, the balance of probabilities was that the device had been loaded onto the initial leg of Flight 103, which began in Frankfurt, Germany.

The Commission's investigation has shown that the importance of Flight 103 to the work of this Commission extends beyond the horror of that day and the events immediately sur-

rounding it. The story neither begins *nor* ends on that evening seventeen months ago.

In total, the story of Flight 103 reveals the pattern of a tragedy that could happen. On December 21, 1988, it did.

Preceding Events

The story of Flight 103 begins at least as early as 1986, when the FAA's "extraordinary security" procedures were firmly in place under Section XV of its Air Carrier Standard Security Program (ACSSP). The FAA had implemented these tightened procedures during 1985 in response to the hijacking of TWA Flight 847 from Athens airport. U.S. air carriers were required to implement the procedures at specified airports, which by mid-1986 included London/Heathrow and Frankfurt.

Among the procedures was a requirement that all personnel servicing aircraft be subject to screening procedures. Another requirement prohibited any carrier from transporting baggage that was not either accompanied by a passenger or physically inspected. Section 508 of Pan Am's Security Manual set forth the "extraordinary security" requirements as applied specifically to Pan Am operations. The FAA approved the language of Section 508 on April 16, 1986.

Two months later Pan Am advertised that it was initiating "one of the most far-reaching security programs in our industry." Called Alert, the program was "to involve Pan Am's own highly trained experts" and "would screen passengers, employees, airport facilities, baggage

and aircraft with unrelenting thoroughness," according to Pan Am's advertisement.

At about the same time, Pan Am retained an outside security consulting firm, K.P.I., Ltd., to evaluate Pan Am's security system and to recommend improvements. K.P.I.'s report in September 1986 found substantial security gaps in the screening of passengers and the control of baggage at Pan Am's operations in Frankfurt and Heathrow, among other airports. Lapses in the distribution of warning information were noted, as was the potential that an extra bag could be inserted into the system in Frankfurt and loaded on a plane. Only "good fortune," the report stated, had prevented an "act of terrorism."

K.P.I. told this Commission that top Pan Am management would not allow it to present its report directly to the Pan Am Board or to other Pan Am managers. Pan Am's Chief Executive Officer testified before the Commission that management saw these K.P.I. efforts simply as an attempt to obtain a "lucrative ongoing security consulting contract." He said that most of the substantive K.P.I. recommendations within Pan Am's control were eventually put into effect in Frankfurt.

In any event, by the fall of 1986, the FAA was becoming increasingly concerned about Pan Am's implementation of the agency's extraordinary security requirements. This concern grew to a point where the FAA convened an unusual meeting with the carrier on October 7-8, 1986, at the FAA's regional headquarters in Brussels. The reason for the meeting, the FAA told the carrier, was "the apparent widespread failure of Pan Am to implement the Extraordinary Procedures in Section XV of the Air Carrier Standard Security Program."

Among those attending the October meeting was Daniel Sonesen from Pan Am headquarters in New York. Sonesen was Systems Director, Corporate Security, with worldwide responsibility within Pan Am for interpretation of the ACSSP. Several security problems were covered at the meeting. Pan Am either sought to justify its procedures or agreed to request written waivers from the FAA when local conditions prevented Pan Am from complying with the requirements.

The FAA's memorandum of the meeting, however, shows that at least one problem was raised but not resolved: Pan Am "servicing per-

sonnel who boarded the aircraft were not appropriately examined" at Frankfurt airport, as required by the ACSSP. In April 1986, Pan Am had decided after "discussion with the FAA" not to screen its own uniformed and badged servicing personnel, regardless of what was written in the ACSSP. Sonesen told the Commission that Pan Am had "a working agreement" with the FAA on this practice. Pan Am never received from the FAA a written exemption from the personnel inspection requirements. None of the FAA inspectors at Frankfurt cited Pan Am for a violation of these requirements over the next three years.

Another of the FAA extraordinary procedures that Pan Am found problematic concerned screening interline, or transfer, passengers who connected with a Pan Am flight from another air carrier. Connection times could be close, especially at an airport with many connecting flights such as Frankfurt. Under the FAA extraordinary measures, interline passengers often fit into a risk "profile," or category, necessitating special screening, including an X-ray of their checked baggage. This process could cause delays if the bag of a particular passenger had to be located.

To alleviate this problem, Pan Am purchased additional equipment and in early 1987 began X-raying checked baggage of all interline passengers, whether or not they were selected for further screening. This procedure satisfied the FAA requirements for screening baggage accompanying passengers who boarded Pan Am flights. It did not, however, satisfy FAA extraordinary measures for positive passenger/checked baggage match, which were intended to control unaccompanied bags.

The FAA written procedures concerning unaccompanied baggage at airports such as Heathrow and Frankfurt were clear. U.S. air carriers there were prohibited from transporting any checked baggage not matched with a passenger who actually boarded a flight, unless the baggage was opened and physically searched.

In the event of a "no-show" passenger whose baggage already had been loaded onto a plane, for example, the plane could not depart until that baggage was located, off-loaded and searched. This process was a particular prob-



Baggage transfer from one airline to another poses a security problem for all airlines. Currently, at high risk airports, baggage unaccompanied by a passenger may not be loaded on U.S. carriers unless separated from a passenger due to no fault of his own.

lem for Pan Am at airports with substantial interline operations.

Martin Huebner, Pan Am's chief of security for West Germany, told the Commission: "Frankfurt station had problems with the reconciliation of interline baggage. . . . That interline baggage had to be sorted out. It had to be checked out with the number of interline passengers and, of course, was a lot of work."

Huebner raised these concerns in March 1988 during a telephone call with Alan James Berwick, Pan Am's head of security for the United Kingdom and Europe. Berwick, stationed in London, previously had talked with Allan Tucker, Pan Am's security manager for Heathrow, who said he believed passenger/baggage reconciliation was no longer required for interline baggage because Pan Am was X-raying all of that baggage.

Berwick was skeptical. Testifying before the Commission, Berwick confirmed he "had doubt" at the time that X-raying would be an acceptable substitute for the passenger/bag-

gage reconciliation procedure. Berwick said he always had believed that "total reliance on X-ray itself was not necessarily a good thing." He saw X-ray as "only a tool" and "only part of a procedure, a process."

Berwick asked Pan Am's Corporate Security headquarters whether X-raying baggage eliminated the need for positive baggage reconciliation at Heathrow and Frankfurt airports. Huebner sent a similar inquiry from Frankfurt. Dated March 10, 1988, Berwick's written request succinctly stated: "I am very much aware of the limitations of the X-ray equipment and more important [of] those persons who operate it."

Sonesen responded on behalf of Pan Am headquarters by telex on March 28, 1988, that Pan Am had "fixed the problem" existing at airports where "interline [baggage] was going to be a problem, i.e., off loading on the no show [passenger]." He explained that Pan Am had purchased X-ray equipment, and he said that Raymond Salazar, Director of FAA's Office

of Civil Aviation Security, had "granted X-ray as an alternative to searching passenger baggage."

Sonesen instructed Berwick in London and Huebner in Frankfurt that "in the event of a no show interline passenger and his bag is load[ed] in the belly [of the plane] we go!!!!"

By April 1988, Pan Am was not following the FAA's written procedure at Heathrow or Frankfurt for interline baggage. Pan Am had begun X-raying all interline bags and loading them without either a passenger/baggage match or a physical search. Huebner confirmed this critical change in procedure in a communication to Pan Am headquarters in October 1988: "Since Frankfurt [Pan Am] introduced the X-ray of all transit baggage there is no longer a reconciliation of the number of transit baggage made."

FAA agents inspected Pan Am twice at Frankfurt and once at London Heathrow during April-December 1988. The last of these inspections occurred at Frankfurt in October 1988. Pan Am was not cited for a violation for its passenger/baggage reconciliation procedure, or for any other deficiency.

During the October inspection in Frankfurt, however, the inspector did note that "in theory all [interline] baggage is X-rayed" and that there was "no verifiable tracking system" for interline baggage. He recommended the X-ray screener keep a log of the interline bags X-rayed and that occasional spot checks be conducted. But, the inspector did not say that Pan Am's procedure violated FAA's baggage reconciliation requirement.

The inspector in October 1988 also was troubled by the absence in Pan Am's operation of any clearly understood system for tracking passengers identified for screening. Pursuant to FAA regulations, all passengers were subject to questioning at check in, with those fitting a profile subjected to further screening. The inspector found that passengers identified for further questioning were not being screened correctly because employees would often improperly identify and track them. The inspector also noted there was no formalized testing procedure for airplane searchers and X-ray operators. He also identified a "lack of clearly defined procedures" for the operations staff and noted that a single manager was providing training, supervisory and managerial functions.

Overall, the inspector found that "the system, trying adequately to control approximately 4,500 passengers and 28 flights per day, is being held together only by a very labor intensive operation and the tenuous threads of luck." Even so, the inspector concluded, "it appears the minimum [FAA] requirements can and are being met."

At the end of the October inspection, the FAA agent specifically pointed out to Pan Am's Huebner the lack of a tracking system for interline bags and the confused state of the passenger screening procedures.

Huebner was already well aware of the existence of problems like those surfaced by the October inspection. As he would testify to the Commission, Huebner had concerns that Alert personnel were "less well educated" and "not qualified" in all instances. Even before the October inspection, he had concluded that the number of Alert personnel was "inadequate" to guard Pan Am aircraft and that the passenger screening procedures were not working properly.

On October 31, 1988, Huebner cabled the results of the October FAA inspection to Edward Cunningham, chief of security for all of Pan Am, concluding: "I have discussed these items in the past with [Pan Am] station management at Frankfurt. It has been pointed out to me that for financial reasons the security staff has to be kept to a minimum."

The FAA did not cite Pan Am for any violation as a result of the October 1988 inspection. The FAA did send Pan Am a letter October 28, requesting written evidence of the procedures that were in place for the passenger screening system. Pan Am's response was received at the FAA's regional office in Brussels on December 21, 1988.

The Warnings

In the period from June 1, 1988, to December 21, 1988, the FAA issued 14 security bulletins (with three followups), nine of which, in retrospect, could have been relevant to what became the Flight 103 tragedy. The carriers in Western Europe, and particularly in Frankfurt, should have been alerted by the cumulative FAA bulletins to the potential for trouble.

Two of these nine bulletins warned generally of the possibility of Iranian retaliation for the

downing of the Iranian civilian airbus over the Persian Gulf in July 1988. In the bulletins, the FAA commented that the retaliation might take the form of an attack on U.S. civil aviation.

Two other bulletins gave warnings about particular Middle Eastern terrorists operating within Western Europe whose targets, the FAA commented, might include U.S. civil aviation interests. Another of the seven bulletins contained information about suitcase bombs in the possession of a Middle Eastern terrorist group that might be targeting Western interests in Europe, Africa or the Middle East.

Two more bulletins passed on information about possible attempts to breach security at Western European airports. One described incidents during the summer of 1988 at Heathrow Airport in which an individual attempted to have other United States-bound passengers check in bags for him. The other described more general attempts to test and learn about security procedures at Frankfurt airport during the late November-early December 1988 period.

The eighth bulletin detailed events in the Frankfurt area during October 1988. The ninth bulletin, in December 1988, concerned Pan Am specifically. Each of these will be discussed in greater detail.

Radio Cassette Bulletin

On October 26, 1988 West German authorities raided a number of residences where members of the Popular Front for the Liberation of Palestine—General Command (PFLP-GC), a Middle East terrorist group, had been observed. Among other places, the raids were conducted in and around Frankfurt and Neuss. The authorities seized a large cache of weapons and explosives as a result of the raids. Among these materials was a Toshiba radio cassette player that had been tampered with.

A total of 16 persons were arrested in the raids. By the end of October, however, all but three of those arrested had been released from custody by the German courts. U.S. intelligence officials had been briefed concerning the raids the day before they occurred. They did not learn of the release of any of the individuals until after the releases had occurred.

Days later, the German officials discovered that another Toshiba radio cassette player, found in the automobile of one of the

PFLP-GC members, had been fully rigged as a bomb and equipped with a barometric triggering device.

On November 10, 1988, the Hessen State authority responsible for Frankfurt airport hand-carried a telex to the U.S. carriers there, including Pan Am. The telex described the configuration of the Toshiba bomb device in detail, and cautioned that it would be "very difficult to detect on an X-ray screen" and probably was intended for use in "the controlled area of air traffic." The report said the PFLP-GC had used this kind of altered electronic device before to attack civilian aircraft, and warned it was possible that the group had other camouflaged electronic devices.

The telex concluded: "It has to be assumed that there will be further efforts to bring similar prepared explosive devices aboard aircrafts."

On November 18, the FAA issued a security bulletin which contained a similarly detailed description of the Toshiba device. The bulletin also cautioned that the device "would be very difficult to detect via normal X-ray inspection, indicating that it might be intended to pass undiscovered through areas subject to extensive security controls, such as airports." The bulletin stated that, among other procedures required by the ACSSP, the passenger/checked baggage match should be "rigorously applied" by all U.S. carriers with international operations.

The FAA, however, had no procedure in place to verify that all affected carriers received the bulletin information, or to learn what actions, if any, the airlines took as a result.

At Frankfurt, Pan Am's Huebner found the communications concerning the radio cassette bomb on his desk on November 28, 1988, when he returned from a three week vacation. After first discussing the documents with the Pan Am station manager, Huebner immediately gave them directly to Ulrich Weber, who was in charge of Alert, the Pan Am security arm at Frankfurt.

Huebner did not determine what, if anything, Weber did with the information. Nor did he determine whether any special procedures were then being followed concerning electronic devices. Edward Cunningham subsequently confirmed in testimony before the Commission

that Pan Am had "no formal recommended procedure" for examination of electronic devices carried in baggage in December 1988.

Nor did Pan Am then have any set procedure at either Frankfurt or Heathrow for distribution of FAA security bulletin information, such as that for the Toshiba radio device. There was no pre-shift briefing of security personnel to update them on developments. The information could be put in "drop boxes" for employees who might not check the boxes for days. Otherwise, the information was passed on orally, in hit-or-miss fashion.

Helsinki Threat Bulletin

On December 5, 1988, an anonymous caller telephoned the American Embassy in Helsinki, Finland, stating that sometime within the next two weeks a Finnish woman would carry a bomb aboard a Pan Am aircraft flying from Frankfurt to the United States. The caller, who spoke with a Middle Eastern accent, provided names of two individuals who he said would engineer the bombing and who had ties to the Abu Nidal terrorist organization.

Shortly after the call, the Embassy notified the State Department Operations Center in Washington of the threat. On December 7, the Embassy sent a classified cable to the State Department which was copied, for informational purposes, to the American Consulate in Frankfurt and to other agencies, including the FAA. The Regional Security Officer at the U.S. Consulate in Frankfurt immediately notified Pan Am officials there of the threat information.

Upon learning that Pan Am already had the information, the FAA decided to issue a security bulletin concerning the Helsinki threat even though the threat was anonymous and its credibility had not been fully assessed.

The FAA's reasoning, agency officials told the Commission, was that the State Department cable said that the local authorities take such calls "very seriously." The threat mentioned the Abu Nidal organization at a time when other world events made an attack by that terrorist group plausible. FAA personnel also said they wanted to ensure all U.S. carriers operating in Europe had accurate information, rather than having the threat information spread by rumor and second-hand reporting.

FAA sent out Security Bulletin ACS-88-22 on the evening of December 7 to all of its U.S.

regions, as well as to FAA representatives in locations as disparate as Tokyo, Rio de Janeiro, and Amman. As a matter of course, the FAA also provided its security bulletins to the State Department for redistribution, so that U.S. embassies in the areas affected by the bulletins would be in a position to assist U.S. carriers through liaison with foreign government security officials.

In a standard distribution which mirrored that given the FAA security bulletin by FAA, the Department of State on December 9 forwarded the text of the Helsinki threat bulletin to all European diplomatic posts, and to U.S. embassies in locations such as Singapore and Dakar. The Department of Defense also transmitted the warning to its security units in all of its worldwide commands.

By conservative estimate, thousands of U.S. Government employees saw the Helsinki threat information.

By December 10, the Finnish police had concluded the threat was not a credible one. The threat information in the December 5 call closely paralleled information in calls received by the Israeli Embassy in Helsinki earlier in 1988. The Finnish police informed senior U.S. officials of details of their investigation, and of their firm judgment that the call was not credible.

Those U.S. officials accepted the Finnish assessment. They decided, however, against passing this information on to the FAA for dissemination to the air carriers. The officials explained to the Commission that they were concerned the carriers would misinterpret the information as a signal to relax their security precautions. In the officials' view, this would have been the wrong signal to send to the airlines. As reflected by information in other bulletins sent out by the FAA during the previous months, U.S. intelligence officials remained concerned about indications of increased terrorist activity and movement in Western Europe.

The FAA was not informed of the intelligence community's conclusion about the threat call. But, by December 12, a State Department official in Helsinki had told a Pan Am security official that the call had been discounted. Pan Am officials also testified before the Commission that the British Department of Transport

told Pan Am on December 15 that the British intelligence community had concluded the threat was not real.

Pan Am, nevertheless, did pass the Helsinki threat information to its station in Frankfurt. At least some Pan Am security personnel interviewed by the Commission staff seem to have been aware of that threat warning. Pan Am instituted special screening procedures for Finnish women and their companions transferring to Pan Am flights from Frankfurt to the United States.

In that respect, Huebner was particularly concerned about the vulnerability of Pan Am's then standard process of X-raying interline baggage, without any further security check. He asked Sonesen "whether X-ray of checked baggage will be sufficient." Huebner later told the Commission he was concerned that in an environment of "before Christmas and maybe high loads out of Helsinki" it would be difficult to sort out bags that had originated in Helsinki. Huebner suggested a change in interline procedures to prevent baggage originating in Finland from being automatically transferred in Frankfurt to a Pan Am flight.

Other than screening of Finnish passengers, however, Pan Am's security procedures at Frankfurt remained unchanged. No other changes were made in the interline process. No enhanced procedures were put in place as a result of the Toshiba radio cassette information or the other bulletins during June-December 1988. Huebner's testimony before the Commission, corroborated by that of other Pan Am officials, reflected Pan Am's attitude in Frankfurt:

Q. In December 1988, was the security operation of Pan Am in Frankfurt on any heightened state?

A. We followed the security procedures set up by the FAA.

As will appear, a substantial question exists whether Pan Am followed even the stated FAA requirements.

Moscow Posting

The United States Embassy in Moscow received the Helsinki threat information on December 9 by way of the unclassified State Department cable which repeated the text of FAA Security Bulletin ACS-88-22. The unclassified

cable was given a routine circulation to many members of the Embassy staff.

The information raised concern among those on the Embassy staff who saw it. The information was specific as to the carrier, the route, and the time period involved. It covered a route that most U.S. Government employees departing Moscow would routinely take if they were traveling back to the United States. Also, those on the staff who had access to the cable felt they could not justify having seen it while others had not, in that the information was unclassified and relevant to the U.S. community in Moscow.

The Acting Deputy Chief of Mission in Moscow during December 1988 later testified before the Commission: "Basically, the situation we were faced with there was that . . . whoever the Communications Officer had distributed the cable to, had information that was in the cable . . . so the choices we had were either to simply leave that . . . situation continue to exist . . . or to make a decision to provide the information more broadly."

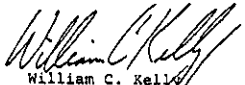
These concerns were raised at a regular meeting of the senior Embassy staff on either December 12 or 13. The staff reached a tentative decision that an administrative notice on the threat information should be posted. The dissemination of such a notice was the Embassy's broadest distribution system. Informed of the staff's recommendation, the U.S. Ambassador concurred.

Because Embassy security personnel did not have on hand a 1987 State Department cable which supposedly provided guidance concerning dissemination of FAA bulletin information, and because the FAA bulletin itself was unclear in that regard, the Embassy sent a cable marked "action" to the FAA. That cable, dated December 13, 1988, told the FAA: "Post plans to issue an internal administrative notice warning employees of the threat."

The Embassy officer responsible for sending the cable to FAA explained to the Commission that he "wanted FAA to be aware that we were intending to make a dissemination of their bulletin . . . [so] they could respond to us, and either say, 'Don't disseminate it; disseminate it with the following caveats.'" The FAA never responded (a "procedural error," according to

the testimony of the FAA's Director of Civil Aviation Security).

The Embassy posted the administrative notice on the morning of December 14. The notice was distributed in a manner so as to receive the broadest distribution possible within the American community in Moscow and was intended to reach contract employees such as painters and chauffeurs, as well as U.S. journalists, business people and students in Moscow.

351-88
ADMINISTRATIVE NOTICE American Embassy, MOSCOW December 13, 1988
TO : All Embassy Employees
SUBJECT: Threat to Civil Aviation
Post has been notified by the Federal Aviation Administration that on December 5, 1988, an unidentified individual telephoned a U.S. diplomatic facility in Europe and stated that sometime within the next two weeks there would be a bombing attempt against a Pan American aircraft flying from Frankfurt to the United States.
The FAA reports that the reliability of the information cannot be assessed at this point, but the appropriate police authorities have been notified and are pursuing the matter. Pan Am has also been notified.
In view of the lack of confirmation of this information, post leaves to the discretion of individual travelers any decisions on altering personal travel plans or changing to another American carrier. This does not absolve the traveler from flying an American carrier.
 William C. Kelly Administrative Counselor

The notice was distributed to all internal offices within the Embassy, to the press office of the Embassy, to contracting companies, to the U.S. commercial office, to the U.S. Information Service, to the American Community Association offices and to the Anglo-American school. The notice additionally was posted on many bulletin boards within the Embassy compound in plain view of visitors.

Ultimately, the notice was available to most of the approximately 2,000 members of the U.S. community in Moscow. The notice was provided to journalists, but no stories were published concerning it during the next week.

Almost immediately after the posting, Jennifer Young, Pan Am's Director of Operations in the Soviet Union, received a call from a part-time Pan Am employee who operated the small Pan Am ticket office at the American Embassy.

The employee asked for guidance on how to respond to questions from customers who had read the notice.

Ms. Young sent a telex to her security supervisor in Frankfurt, indicating that "approximately 80 per cent of Pan Am holiday traffic from Embassy is now rebooking to other airlines out of Frankfurt," and asking for public information guidelines for use by the sales offices on the subject of the threat information.

Ms. Young's use of the 80 per cent figure was apparently designed as an attention-getter to her superiors. As she made clear in subsequent testimony to the Commission, Ms. Young had "no specific numbers" at all and sent the telex out "no more than an hour" after receiving the call from the Pan Am employee at the Embassy sales office. She had no knowledge, then or now, about any passenger cancellations because of the posting, Ms. Young testified.

After Pan Am Flight 103 was destroyed, the Finnish authorities, with cooperation from the U.S. Government, conducted an extensive investigation into both the suspected caller and the person named in the Helsinki threat phone call. Every government which has investigated this matter has concluded that the December 5 threat call was unrelated to the destruction of Flight 103.

The Commission staff spoke to law enforcement and intelligence officials from England, Scotland, Finland, and the United States. All categorically stated their conclusion that the Helsinki threat had no connection with the bombing of Flight 103. The Commission has found no evidence suggesting otherwise.

Passenger Reservations

Hoax or not, the Helsinki threat information was assumed to be real when it was posted in Moscow and most definitely could have been used as a basis for persons to change their travel plans.

The Commission obtained from Pan Am records that could allow analysis of passenger load, booking and cancellation patterns relevant to Flight 103 and other Pan Am flights from Frankfurt to the United States during December 1988. A statistician retained by the Commission analyzed those records.

The analysis, contained in Appendix D to this Report, shows no significant variation in

bookings, passengers carried, or cancellations for Pan Am flights from Frankfurt to the United States during December 1988 relative to the same flights during December 1987 or 1989. The data also show that the passenger loads for Pan Am flights from Frankfurt to the United States during December 1988 paralleled those for TWA flights departing from Frankfurt at approximately the same times during the same period.

Review of Pan Am data also shows that Flight 103 had never been fully booked and that there was no unusual pattern of bookings or cancellations for it during the pre-Christmas period. Allegations that Pan Am offered a special one-half fare discount for Flight 103 were "absolutely false," according to Pan Am testimony before the Commission. Pan Am told the Commission, and the Commission confirmed, that London to New York fares for December 21, 1988, were in effect for at least the previous 30 days.

Pan Am records show that only two of the many fare classes available for Flight 103 had been fully booked at one time or another. Pan Am sold those two classes, H and L, solely to wholesalers and consolidators, who resold them to the public.

The Commission was told of several instances in which one particular travel agency was unable to obtain tickets on Flight 103 for student passengers. Personnel at that agency explained to Commission staff that the agency is permitted to sell only H category (student fare) tickets. When that class is fully booked for a flight, as it was from time to time for Flight 103, the agency tells students who call for reservations that the flight is fully booked.

Commission staff confirmed that it is common in the airline travel business for a particular fare class on a given flight to be sold out one day and open the next or even opened and closed on the same day. The result is that on the same day some people may be able to obtain reservations in a given fare class while others cannot.

Commission staff also conducted extensive interviews and reviewed all relevant travel records of personnel in the Moscow Embassy. Staff followed all rumors brought to the Commission's attention concerning alleged changes in travel plans by military and civilian personnel, whether the personnel were in Moscow or

elsewhere. The Commission found only one passenger who changed travel plans because of the Helsinki threat. A civilian under contract with the U.S. Government in Moscow was scheduled to fly Pan Am via Frankfurt to the United States on December 16, 1988, but switched to a direct Pan Am flight to the United States which departed Moscow on December 18.

The part-time employee who operated Pan Am's office at the Moscow Embassy told Commission staff that she had booked a U.S. journalist, without telling him, on a carrier other than Pan Am on December 21 because of the Helsinki threat. The Commission was unable to substantiate this assertion.

No passenger from Moscow was aboard Flight 103 on December 21, 1988, but there was no connecting Moscow flight scheduled to fly on that day of the week. Even on days when Pan Am flights left Moscow, because of the "Fly America" Act it was difficult for U.S. Government travelers to shift travel plans from Pan Am, the only U.S. carrier serving Moscow.

The Commission's investigation also determined that two U.S. civilians, other than those in Moscow, heard at least generally about the Helsinki threat information. Yet, both of them boarded Flight 103 on December 21.

December 21, 1988

Frankfurt

As passengers for Flight 103 checked into Frankfurt the afternoon of December 21, 1988, they were met by employees of Alert Management Systems, Inc., who were to conduct the initial screening of all passengers. Alert had begun operations at Frankfurt in June 1988. Although technically a corporate affiliate, Pan Am senior management viewed it "in practice, [as] a functioning, operating arm" of Pan Am.

According to written procedures, the Alert screeners were to apply FAA-developed criteria to all passengers to identify those persons who were "profiled" as possible threats. These persons were to be tracked through a markings system and would be subject to further screening. As written, the procedures appeared to satisfy FAA requirements. The FAA requirements were intended to identify passengers who,

knowingly or not, might be carrying or checking an explosive device onto a plane.

However, many of the Alert and Pan Am employees on duty at Frankfurt that day were not familiar with the passenger screening procedures or misunderstood their responsibilities. Also, some employees did not know what was being done at other points in the screening system, why they were undertaking the procedures or what they were trying to prevent.

The training of the Alert employees on duty generally was minimal. Many of the Frankfurt screeners had received no training since joining Alert, although several had a two-day training session with Pan Am's previous security contractor. Others had received a small amount of on-the-job training under supervision. Many Pan Am ticket agents also had no security training. Nor had personnel been tested since Alert began operations six months earlier.

As was discovered during the subsequent FAA investigation, several gaps existed in the screening program for passengers on Flight 103. Four interline passengers apparently were not even initially screened, as required, before they boarded Flight 103. Five other passengers, who had been identified by Alert at the check-in counter for further screening, did not receive that screening at the gate.

Pan Am subsequently denied that passengers on Flight 103 were not initially screened and claimed that any redundant screening at the gate was prohibited by West German authorities. The passenger tracking problems, howev-



Screening of passengers at busy airports is complicated by the large number of travelers, particularly during holiday seasons.

er, were the same as recognized by the FAA inspector two months earlier. And, they were the same problems as Pan Am's chief of security for West Germany had brought to the attention of Pan Am headquarters.

Several of the passengers who boarded the flight in Frankfurt had no baggage. Their bags had departed, unaccompanied by the passengers, on earlier flights that day. Pan Am's Ground Security Coordinator for those flights later claimed he exercised his discretion in letting the earlier flights depart with unaccompanied baggage. FAA written security measures, then in effect, permitted no such discretion.

Baggage destined for Flight 103 was loaded in the cargo area at the rear of the terminal in Frankfurt. Pan Am uniformed employees were handling the baggage designated for its flights. Pursuant to its "working agreement" with the FAA, Pan Am did not search these employees before they boarded the aircraft. Pan Am was the only airline at Frankfurt which employed its own baggage handlers. This was pursuant to a long-standing agreement between Pan Am and the Frankfurt Airport Authority, which handled baggage for all other carriers.

It is unclear how many, if any, of the employees in the baggage area had been made aware of the Toshiba radio information, or whether X-ray operators were on the lookout for radio cassette recorders in particular. The X-ray operator for interline baggage that day had begun working for Alert on November 1, 1988. For training, he had spent half a day with a colleague, and a few hours with a supervisor on another occasion. The rest of his knowledge was self-taught, on-the-job.

Until interline passengers checked in at Frankfurt, Pan Am often had no record of them, or their baggage, in its computer. Nevertheless, Pan Am personnel made no attempt to reconcile the number of interline bags being loaded into any plane with the number of bags checked by interline passengers who actually boarded that plane. Bags with distinctive interline tags were simply X-rayed on the baggage loading ramp, taken directly to the aircraft and loaded.

Pan Am employees did not determine whether any given interline bag loaded onto Flight 103 was accompanied by the passenger who presumably had checked it onto an earlier

flight into Frankfurt or, for that matter, whether that bag had ever been accompanied by any passenger.

The Boeing 727 pushed away from the gate at 4:54 p.m. local time, carrying 128 passengers. Flight 103 had begun. Pan Am and Alert personnel subsequently would say that, from their perspective, the flight left free of any problems or extraordinary circumstances. The cargo load sheet also showed "no known security exceptions."

Baggage was loaded in the hold of the plane loosely within netting, not in cargo containers. No one in Pan Am security knew whether or not Flight 103 was carrying an "extra" bag, unaccompanied by any passenger.

Heathrow

At London's Heathrow airport, Pan Am baggage handlers were pulling interline bags destined for the London-New York leg of Flight 103 from the conveyer belts. No physical search was made of them, nor was there any control to ascertain that bags were accompanied by passengers who boarded the plane. As in Frankfurt, the bags were X-rayed and loaded into a baggage container intended for Flight 103.

That container, then partially loaded, was towed over to an area outside of Pan Am's offices at approximately 4:45 p.m. local time. Fifteen minutes later, the Pan Am employee who had delivered the container departed, leaving the container with its curtain open and sitting unattended. No FAA regulation then expressly prohibited this practice. The regulation requiring that all containers be sealed and under constant surveillance would not be proposed until 14 days later.

Flight 103 from Frankfurt touched down at Heathrow at 5:40 p.m. local time and taxied to Terminal 3, gate K-16. The larger Boeing 747, "Maid of the Seas," that was to continue the flight to New York was waiting at the adjacent gate.

The partially loaded baggage container was taken to the 727 that had just landed from Frankfurt. Bags continuing through to New York were put into this container immediately after they came down the conveyor belt from the hold of the 727. The filled container was then towed over to the 747 and loaded into the belly of the aircraft.

Bags coming in from Frankfurt were treated as "on-line" baggage. Passenger/baggage reconciliation was done by computer so that if an online passenger did not show at the gate, those bags were supposed to be off-loaded and physically searched.

This system, however, was not sufficient to identify a bag that had been loaded in Frankfurt but was unaccompanied by any passenger. Baggage checked through to New York in Frankfurt was merely transferred at Heathrow to the baggage hold of the plane that would take Flight 103 to New York. No count of that baggage was made or compared with the number of bags checked by Frankfurt passengers who continued on Flight 103 in London.

Inside the Heathrow terminal, Flight 103 passengers were checking in and preparing to board. As in Frankfurt, the training provided to Alert employees was nominal. Several employees had undergone a three-day session in 1987. By December 1988, the training consisted of three hours of classroom training and videotapes.

On-line passengers from Frankfurt went directly from their arrival gate to the adjacent gate to board the continuing Flight 103 to New York. There was no additional security check of these passengers or their baggage. Pan Am relied on the security procedures at Frankfurt.

The screening procedure for those passengers originating in London was essentially the same as that used in Frankfurt, with several minor differences including the precise manner in which passengers were supposed to be tracked. What remained the same was the inconsistency with which the employees understood the program.

It was soon discovered that the records for 38 passengers who boarded Flight 103 had no security markings on them whatsoever. Pan Am subsequently said that this absence did not necessarily mean that all passengers were not screened. It remains at best unclear how many, if any, of these 38 passengers were screened in any manner before boarding the flight in London.

One passenger registered for Flight 103 on the computer did not arrive at the gate; nevertheless, the duty manager believed he had the discretion to let the plane go without removing the passenger's baggage. Again, FAA written

requirements. permitted no such discretion. The duty manager also never notified the pilot or the flight crew on Flight 103 of the missing passenger. The passenger was later found in the airport, having inadvertently missed the flight.

The Boeing 747 pushed back from the gate at 6:07 p.m. local time, with 243 passengers and a crew of 16. In all, citizens of 21 different nations were aboard. The passengers included over 30 employees of the U.S. Government. The plane carried about 20 tons of cargo, including 43 bags of U.S. military mail.

After an air traffic delay, it took off at 6:25 p.m. and assumed a radar reading of 350 degrees. The plane climbed to 12,000 feet and then to 31,000 feet, leveling off at that altitude at 6:56 p.m. Just under eight minutes later, it disappeared from the tracking radar screen.

An explosion had torn through the lower fuselage just in front of the left wing. The Boeing 747 ripped apart.

Sections of the aircraft fell upon and around the quiet town of Lockerbie, in the rolling hills of Scotland. The wings and attached fuselage section plummeted into the edge of the town, gouging a crater 140 feet long and 40 feet wide and exploding into a fireball that towered 10,000 feet. A piece of window frame from a nearby house landed three miles away. Winds scattered debris from the aircraft all the way to the coast of England, 80 miles to the east.

The worst security-related disaster in U.S. civil aviation history had happened. All aboard the plane and 11 residents of Lockerbie perished.

The Aftermath

An immense investigation immediately began in Lockerbie to establish the cause of the aircraft's destruction. The investigators would eventually conclude that an explosive device utilizing a plastic explosive was likely concealed



The flight deck and forward portion of "Maid of the Seas" came to rest in Tundergarth Field, approximately three miles from Lockerbie, Scotland.

in a radio cassette recorder carried within a suitcase stowed in the cargo hold.

A huge effort by the citizens of Lockerbie also began in order to deal with the aftermath of the tragedy. Personnel from Pan Am and Boeing among many others arrived at Lockerbie, as did officers from the U.S. Department of State. State Department activities will be reviewed in Chapter 7 of this Report. Representatives from the Federal Bureau of Investigation also arrived to assist in the investigation. The Central Intelligence Agency told the Commission that it did not send anyone to the site.

Through an emergency rule-making, the FAA amended the Air Carrier Standard Security Program in the days after the Lockerbie atrocity. By December 31, 1988, all affected carriers were required to meet more stringent requirements, including total reconciliation between passengers and checked baggage. Under the new standard, bags could not fly unless specifically matched with a passenger. There could be no more "extra" bags. Pan Am implemented the procedure at Frankfurt on January 4, 1989.

The FAA also began its own special investigation of the Pan Am procedures at Frankfurt and Heathrow. The Frankfurt phase was completed by mid-January, and the Heathrow review by the end of January. The inquiries covered the six-week period beginning on December 21, 1988.

Upon leaving Frankfurt and Heathrow the FAA inspectors, as was customary, briefed Pan Am on their findings. The first deficiency noted in Frankfurt was that the passenger/bag match system in place for interline bags was "inadequate." The investigators told Pan Am they had found that "interline bags were X-rayed only with no correlation between the passenger boarding the aircraft and the bag being placed on board."

In late January and early February 1989, the FAA sent teams of investigators on "determination trips," intended to assess how carriers were complying with the new procedures the FAA had mandated at the end of December 1988. While at the airports in Frankfurt and London, the determination teams decided to conduct full compliance inspections of Pan Am as well.

The January inspection at Frankfurt revealed that many of the same problems existing on December 21, 1988, continued uncorrected.

Deficiencies included no written bag match procedures; no challenging of unbadged personnel; inadequate tracking of passenger screening; failure to secure gates or ramps, and failure to search servicing personnel. An improved baggage reconciliation system was in place, but even it was found to have exploitable gaps.

The January inspection report noted that the Pan Am procedures standing alone were basically sound. However, the "erratic application of guidelines and poorly trained and supervised security is presently creating a breakdown of the system," the FAA report said. The FAA agents briefed the Pan Am station manager during the inspection and upon its completion.

As in Frankfurt, the determination trip in London uncovered a security operation replete with violations involving the screening of selected passengers and servicing personnel and the failure to seal and guard cargo containers. The inspectors stated in their report that lack of professional leadership from Pan Am was at the root of the problem, noting "Alert was there for the show more than to do a complete and thorough job."

The inspection reports prepared during these determination trips were sent both to the FAA regional headquarters in Brussels and to the FAA in Washington. But no enforcement action was ever taken as a result of these inspections.

In February 1989, two FAA inspectors revisited Pan Am at Frankfurt. They listed one minor problem but none of the many other significant ones discovered during the December-January reviews. One FAA agent who conducted this inspection became a principal security inspector for the FAA a year later, with oversight responsibility for all of Pan Am's security operations.

Meanwhile, formal FAA letters resulting from the special investigation of Flight 103 were being prepared. These "letters of investigation" were not sent out to Pan Am until May 5, 1989. During this time the alleged violations were reviewed by security officials in Brussels and Washington. Drafts of the letters of investigation were sent back and forth between the two offices. The agency wanted to be sure of its actions.

Even so, one matter documented by the investigators in Frankfurt was not cited in the official letter of investigation. The inspectors had reported that, contrary to FAA written requirements, there was "no correlation between an interline passenger checking in or boarding a flight and their baggage being placed on the aircraft." According to the investigators' report, Pan Am's station manager for Frankfurt had said he "was positive the X-ray of interline bags was sufficient to satisfy FAA requirements." The investigators also had found that one interline bag loaded on Flight 103 could not be accounted for through any passenger records. Nevertheless, the May 5 letter to Pan Am made no reference to these circumstances.

The next regularly scheduled inspection of Pan Am at Frankfurt occurred during May 8-23, 1989. While on its face the February inspection seemed to have indicated that most of the problems had been rectified, by the end of the May inspection it was clear that this was not the case.

The FAA inspection report for May 8-23 revealed continued, multiple violations of the ACSSP. These deficiencies mirrored many of those from the January inspection and included failure to use sealed containers; failure to search servicing personnel; failure to provide training records; failure to provide records on employees' background checks; failure to track passengers properly; failure to conduct redundant screening; and failure to guard aircraft. An inspection in London completed May 12 showed similar deficiencies, including a failure to adequately screen the baggage of interline passengers selected for further profiling.

The May inspection team in Frankfurt saw an attitude of "indifference" and "a complete lack of management oversight of the [security] operation." The inspectors spent over a week trying to correct the deficiencies. The Frankfurt inspection team telephoned their findings to the FAA's principal security inspector for Pan Am. Stationed in New York City, the principal security inspector was "shocked" by the findings. He had been unaware of the problems.

One of the FAA inspectors at Frankfurt prepared a Trip Report, dated June 7, 1989, in which he found the security operations of four other carriers at Frankfurt to be "good." The reporting inspector judged Pan Am as "totally

unsatisfactory," citing "major violations" in all areas of the ACSSP.

The Trip Report left no doubt about the inspector's assessment. He said: "posture [of Pan Am] considered unsafe, [and] all passengers flying out of Frankfurt on Pan Am are at great risk."

As a result of the May inspections in Frankfurt and London, the FAA Brussels office sent formal letters of investigation to Pan Am on May 25 and 26. The vast majority of FAA's charges at Frankfurt concerned Pan Am's failure to search its service employees. Pan Am responded that it interpreted the ACSSP to exclude its own uniformed employees from screening and that the FAA had consented to this interpretation for years.

Pan Am did not dispute that its training and employee records should have been provided in Frankfurt. The airline did dispute the findings that passengers had not been screened adequately; only the record-keeping was "inadequate," Pan Am said. With respect to other alleged violations, Pan Am was "taking steps to address the situation."

In the interim, the May 25 FAA letter of the recent Frankfurt investigation found its way to the FAA Headquarters and eventually to Monte Belger, the FAA Associate Administrator to whom the security division reports. Because the Brussels office did not regularly send copies of its letters of investigation to Washington, Belger would rarely see such a letter. He found the report, which in his view showed "continuing noncompliance at Frankfurt," to be "unbelievable" and "frustrating."

After a briefing from the Frankfurt investigator, Belger set up a meeting on June 14, 1989 with Pan Am's corporate chief of security and with its vice president in charge of the airport station managers. Belger and several other officials, including the Frankfurt inspector, attended the meeting. The FAA officials pointed out the deficiencies found in Pan Am's security operations in Frankfurt. They also said that "pressure to get Flight[s] out seemed more important than security compliance" for Pan Am at Frankfurt, explaining as well that some Pan Am security employees at Frankfurt had said "they are forbidden from holding up a Flight."

According to notes made on June 14 by one of the FAA officials at the meeting, the Pan Am

executives replied that a "strong message" had already been sent to their manager in Frankfurt and that a "noticeable difference" would be seen in Pan Am security operations there.

The two Pan Am representatives who attended the entire June 14 meeting disagreed about what had happened. One executive recalled in testimony before the Commission that "the point of the meeting" was to hear what the FAA investigator had found and to present to the FAA "a plan of what we were doing in Frankfurt." The other executive testified that the subject of Pan Am's Frankfurt operations never came up during the June 14 meeting. He remembered the meeting as covering only a slide presentation of a field services security plan that he had developed for all of Pan Am.

In any event, Belger told the Commission he had been "impressed" when he left the meeting on June 14 by what Pan Am had said. When Belger visited Frankfurt later in June on a previously scheduled trip to see other carriers, however, he took the occasion to meet with Pan Am's station manager. Although the manager said that new security procedures had been adopted, it appeared to Belger that this policy had not been implemented effectively at the working level.

An unannounced inspection of Pan Am at Frankfurt was conducted in late August 1989. Again, the inspectors reported to Washington that many of the same security problems remained uncorrected, especially with respect to guarding airplanes and searching the personnel maintaining those aircraft. The "common strain in Frankfurt," Belger told the Commission, was "general confusion about what the security requirements were," as well as "lack of a compliance attitude by the senior management . . . at the station."

Another meeting with Pan Am officials occurred on September 12, 1989. When FAA inspectors described the security deficiencies in Frankfurt, Pan Am officials expressed surprise, saying they were told by their Frankfurt station manager that the inspection had gone well. Actually, Cunningham, the Pan Am security chief, had sent Sonesen, a high security official, to Frankfurt following the FAA's inspection there in August. Sonesen had called back to say "there is a problem here." Pan Am came to the meeting prepared with still another multi-point "action plan."

According to notes made by an FAA official during the September 12 meeting, one of the Pan Am senior executives near the end of the meeting reflected upon the security operations run for Pan Am by Alert. "Pan Am needs to be more involved," he said, "and it took [Pan Am] a long time to recognize it."

The Administrator of the FAA, who had been confirmed in July 1989, immediately called Pan Am's Chief Executive Officer to set up a meeting on September 14. The session occurred at FAA headquarters in Washington. Part of it involved a one-on-one meeting between the Administrator and Pan Am's Chief Executive Officer. That same evening, a team of top-level Pan Am managers, accompanied by FAA inspectors, flew to Frankfurt.

After one week, personnel changes were made by Pan Am at Frankfurt, and all of the identified security deficiencies were remedied. Pan Am's security operation at Frankfurt was judged a model station at the next regular inspection. In Heathrow a similar transformation occurred in Pan Am's security procedures.

The FAA sent its civil penalty letter on Flight 103 to Pan Am on September 19, 1989. This letter proposed fines totaling \$630,000 for cited violations at Frankfurt and Heathrow during Flight 103 and immediately thereafter.

In its press statement concerning the proposed fines, the FAA carefully pointed out that "the letter to Pan American contained no allegations that any of the violations contributed to the Flight 103 tragedy."

Findings

Until it is established exactly how the bomb was placed aboard Flight 103, it is impossible to say whether the failure of any specific security procedure was directly related to the sabotage of the flight. Law enforcement efforts, however, have established the bomb was in baggage checked onto Flight 103. Unquestionably, there were severe shortcomings in the screening of baggage, and of passengers, that *could* have contributed to the terrorist act that placed the bomb aboard the plane.

Baggage Procedures

The Commission has established that Pan Am in December 1988 did not reconcile the

number of interline bags loaded into the belly of any plane leaving Frankfurt with the number of bags previously checked by the interline passengers who actually boarded the plane. Based upon Sonesen's "we go" advice from corporate headquarters in March 1988, Pan Am made no determination in Frankfurt whether a given interline bag ever had been checked in by any passenger.

When Flight 103 backed away from the gate in Frankfurt, Pan Am security personnel did not know whether or not it was carrying an "extra" bag. If so, the bag continued right through Heathrow airport, where no further security control was applied.

Records reviewed by the Commission suggest Flight 103 may well have carried at least one such bag. The operator of the X-ray machine for interline bags loaded onto Flight 103 in Frankfurt maintained a detailed list of the bags X-rayed. The FAA agent, during the inspection in October 1988, had suggested to Pan Am that such a list be maintained precisely because Pan Am at Frankfurt had no verifiable tracking system for interline baggage.

This list shows that 13 parcels (including two garment bags and a box appearing to contain six wine bottles) passed through the machine on the way to the flight. Other records, however, account for only 12 parcels (11 checked by passengers who boarded the flight and one so-called "rush" bag of a passenger who had left on an earlier flight of another carrier).

The Commission does not know whether a "thirteenth bag" loaded on Flight 103 in Frankfurt in fact contained the device that ultimately devastated Flight 103.

If on December 21, 1988, the FAA or Pan Am had required that baggage could not be carried on any flight unless it was accompanied by a passenger, there now would be no question about an "extra" bag. No such bag would have been allowed on the plane. But that reconciliation procedure (without an exception even for physical search) was not required by the FAA or by Pan Am until after Flight 103 was destroyed and 270 lives were lost.

If Pan Am in Frankfurt had at a minimum followed even the written requirements of the FAA in effect on December 21, there now would be no question about the contents of

any "extra" bag. Those requirements called for physical search of any unaccompanied bags. If



The wings and attached fuselage from Pan Am Flight 103 gouged a crater 140 feet long and 40 feet wide.

locked, a bag would not have been permitted to be loaded on the plane. If unlocked, a bag would have been physically searched.

Finally, if on December 21, the FAA or Pan Am had required that baggage containers be secured at all times, there now would be no question about possible tampering with the container that sat open and unguarded for 30 minutes at Heathrow, waiting for the leg of Flight 103 to arrive from Frankfurt. The FAA did not impose express standards prohibiting this circumstance until January 1989.

Again, the Commission does not know whether the destruction of Flight 103 would have been prevented if stronger security standards had then been observed. What we do know is that compliance with them would have eliminated the need now to even ask these questions.

Passenger Procedures

The Commission's review equally confirmed that passenger screening by Pan Am personnel at Frankfurt and Heathrow was at best confused.

The FAA's October 1988 inspection of Frankfurt showed that the Pan Am employees who were supposed to apply the tracking system for passengers did not understand the procedures. Even before the FAA inspection in October 1988, Huebner of Pan Am had found that "Pan Am staff fails to advise Alert personnel when passengers show up for check-in" in order for proper screening procedures to be applied.

Passenger screening procedures are intended to sort out persons who, wittingly or unwittingly, may be carrying explosives. That had occurred at Heathrow during April 1986, when a "dupe" was identified as a part of redundant screening procedures. A suitcase her fiance had asked her to carry for him actually contained, without her knowledge, an explosive device intended to blow up the El Al plane she was about to board.

The Commission does not know whether complete and proper passenger screening procedures could have prevented the tragedy of Flight 103. We do not know whether adequate profiling would have detected any "dupe." We do know that, by apparently failing to accomplish even its own written screening procedures, Pan Am may have missed opportunities to prevent the bombing.

Interline Baggage Gap

Because of the possible critical significance of these apparent lapses in screening baggage and passengers, the Commission investigated in detail how they occurred. The gap in passenger/bag reconciliation for interline baggage can be traced specifically to March 1988.

Pan Am's chief of security for Europe asked headquarters on March 10, 1988 whether X-raying of interline baggage alone was a sufficient security control. On March 28, Daniel Sonesen responded in the affirmative. Sonesen said in his telex that Raymond Salazar, Director of FAA's Office of Civil Aviation Security, had "granted X-ray as an alternative to searching passenger bags."

This procedure was contrary to written security standards at the time for Heathrow and Frankfurt. Both before and after March 1988, the FAA's ACSSP and Pan Am's own Security Manual set forth those standards. Specifically, Section XV C(1)(a) of the ACSSP required carriers to "conduct a positive passenger/checked baggage match resulting in *physical* inspection or non-carriage of all unaccompanied bags" (emphasis supplied). Section 508 of Pan Am's Security Manual, in effect at the time, repeated that requirement verbatim.

Commission staff questioned Sonesen about Pan Am's March 1988 change. He categorically stated under oath that the change had been approved by Salazar during a meeting of industry security personnel in October 1987. Sonesen testified:

Q. Do I understand you to say that Mr. Salazar explained that X-ray inspection was an acceptable practice, despite paragraph C(1)(a)?

A. Yes.

Q. Is there any doubt in your mind about that?

A. No.

Upon subsequent examination, however, Sonesen did not recall that Salazar had made specific reference during the October 1987 meeting to "the written procedures then in effect in the SSP for extraordinary security airports." Rather, he testified, "I honestly don't believe" that Salazar had said anything about creating an exception to a procedure which "already existed" at those airports. Sonesen recalled that the context of the discussion was application of a proposed procedure of the International Civil Aviation Organization (ICAO) for passenger/baggage reconciliation at extraordinary security airports. Sonesen testified that Salazar was granting "relief" from that proposed procedure.

Commission staff also asked Edward Cunningham, chief of security for Pan Am about the matter. He testified initially that "several FAA people" had said X-ray was an acceptable form of security control for checked baggage at extraordinary security (Section XV) airports. Upon further questioning, the "several" people

turned out to be Donnie Blazer, an official in Mr. Salazar's office at the FAA, and Salazar himself.

Cunningham knew nothing about Salazar's statement other than what Sonesen had told him. Cunningham, however, had heard Blazer during a meeting of air carrier security personnel in March 1988. In that respect Cunningham testified:

Q. Tell me, again, what Mr. Blazer said during the March 1988 meeting concerning passenger baggage reconciliation at Section XV airports?

A. Mr. Blazer indicated that in accordance with Section VIII and ICAO, X-ray was an acceptable form of security control, and a bag did not have to be removed from an aircraft if it was X-rayed.

Q. And did he say that procedure also applied at Section XV airports?

A. It was my understanding that it was—

Q. No, did he say that?

A. Well, it was my understanding that he said that.

The proposed ICAO procedure referred to in the Cunningham and Sonesen testimony became effective at the end of 1987. Set forth in Section VIII of the ACSSP, that provision permitted unaccompanied bags to be flown if they had been processed through specified security controls including, as alternatives, "physical inspection" and "X-ray inspection." But Section VIII also made clear that "the requirements of Section XV apply in addition to those in this section." The stricter provision in Section XV allowed only "physical inspection" in order to fly baggage unaccompanied by a passenger.

Minutes of the meeting in October 1987 show that Mr. Salazar had said the FAA would fully support the proposed procedure. In fact, minutes of a similar meeting in July 1987 read:

Mr. Salazar stated that the FAA will require implementation of the [ICAO] standard by the effective date of December 19, 1987. FAA will, however, approve certain security controls for use by

air carriers as an alternative to the passenger/baggage match requirement, i.e., x-ray inspection . . .

None of the minutes in 1987, however, state that Mr. Salazar also had said the ICAO procedure could be used in lieu of the more stringent Section XV procedure already in effect at airports such as Frankfurt and Heathrow.

Minutes of the March 1988 meeting referred to by Cunningham indicate some general discussion of the new ICAO standard and confirm that Mr. Blazer addressed the meeting. They do not contain any reference to Section XV of the ACSSP.

Representatives of several air carriers which had operations at Section XV airports attended the meetings in October 1987 and March 1988. Interviewed by Commission staff, none of those representatives recalled that anyone had said X-ray could substitute for passenger reconciliation at Section XV airports or that their carriers had made such a substitution.

It would seem reasonable to expect that Pan Am would have confirmed its "understanding" in writing with the FAA before changing a basic security standard. Pan Am did seek written exemptions from the FAA on other matters during 1988. Yet, Pan Am never sought or received a written FAA exemption permitting the alternative X-ray procedure at Section XV airports. Pan Am could not point the Commission to even one piece of paper from its files on the subject other than Sonesen's "we go" communication.

The Commission also questioned FAA personnel about any understanding that permitted Pan Am to substitute X-ray for physical search of baggage. Mr. Blazer testified that he could not remember "whether or not" he had discussed the physical search requirement or the ICAO standard during the meeting in March 1988. Mr. Salazar testified that it was "absolutely clear" in his mind that he had not approved any alternative X-ray procedure for Pan Am at Section XV airports. He also testified that any such change would have required a formal exemption from the FAA, which he said did not exist.

The FAA testimony, like that of Pan Am, should be viewed against the established facts. There is no dispute that Pan Am openly substi-

tuted X-ray for physical search of unaccompanied interline bags at Frankfurt and Heathrow airports during 1988. The Commission, therefore, would have expected that, absent any special understanding, the FAA would at least have cited Pan Am for a violation of the FAA's written standard at London or Frankfurt.



This is the reconstructed exterior of the forward baggage hold believed to be the spot where the bomb responsible for the destruction of Pan Am 103 was placed.

Teams of FAA agents inspected Pan Am security operations at Frankfurt twice and Heathrow once during April-December 1988. None of them cited this practice of only X-raying interline bags as a violation. Because FAA inspections are announced in advance, it is conceivable the procedure could have been altered at those times. But the report of the FAA special agent who inspected Frankfurt in October 1988 shows that he was aware of Pan Am's substitute X-ray procedure.

In addition, the FAA's investigation of Flight 103 in the weeks immediately following the crash (1) confirmed that Pan Am officials had conceded the substitute X-ray procedure for interline baggage, (2) explained that one inter-

line bag X-rayed for Flight 103 had not been accounted for, and (3) pointed out the substitute X-ray procedure was a violation of FAA's written requirements. The FAA security bulletin concerning the Toshiba radio information transmitted to Pan Am on November 18, 1988, had confirmed that physical search of unaccompanied baggage, among other procedures, was to be "rigorously applied."

Testifying before the Commission, Mr. Salazar agreed that Pan Am's substitute X-ray procedure constituted "a violation of noncompliance." Nevertheless, all reference to the absence of the required passenger/baggage match procedure for interline baggage loaded on Flight 103 at Frankfurt was deleted from the FAA's official "letter of investigation" concerning the flight, as a result of comments from a senior official in Mr. Salazar's office that more specifics were needed. The FAA subsequently emphasized that its civil penalty letter contained "no allegations that any of the violations contributed to the Flight 103 tragedy."

As to the necessity for a formal FAA exemption permitting the substitute X-ray procedure, the Commission notes that Pan Am also had not sought or received such an exemption from the FAA's standard requiring Pan Am to search its service employees at Frankfurt airport. Pan Am testified it had a "working agreement" with the FAA since at least April 1986 on this subject. For several years Pan Am did not search its uniformed maintenance employees at Frankfurt airport but was not cited by the FAA for such a violation.

Another U.S. carrier with operations at Frankfurt airport did formally request an exemption from the FAA in October 1988 that would permit X-ray rather than physical search of unaccompanied baggage in certain circumstances. The FAA denied the request, but not until April 1989—four months after Flight 103 had been destroyed, the interline baggage lapse had been identified and the FAA had tightened its passenger/baggage requirements.

The FAA provided the Commission with an April 20, 1990 survey of 53 FAA agents who had inspected Section XV airports during 1988. No inspector recalled a U.S. carrier substituting

X-ray for physical search of unaccompanied baggage or stating it had done so.

The Commission is not in a position to resolve the direct conflict between sworn testimony of Pan Am and FAA officials. Nor is it necessary to do so.

Unquestionably, the circumstances surrounding Pan Am's interline baggage procedure at Frankfurt on December 21, 1988, are of direct, if not critical, importance to the question of how the bomb could have been placed on Flight 103.

The undisputed facts before the Commission show that passenger/baggage reconciliation is a bedrock component of any heightened security system; that Pan Am employees concededly did not follow even the FAA's written reconciliation requirement for interline baggage at Frankfurt; and that the FAA did not cite Pan Am for failing to follow the FAA's mandated procedure in that respect for Flight 103.

Finally, given the high level of threat warning in Frankfurt during December 1988, nothing prevented Pan Am from instituting, or the FAA from imposing, complete passenger/bag reconciliation just as was done in January 1989.

The systems, both private and public, which allowed the interline baggage gap to continue, were fundamentally flawed.

Warning Information

Commission staff has reviewed intelligence traffic that, even in retrospect, would appear to have warned of a possible terrorist act such as Flight 103. The review showed that no warnings specific to Flight 103 were received by U.S. intelligence agencies from any source at any time. It also showed that no information bearing upon the security of civil aviation in general and flights originating in Frankfurt in particular was received beyond that which was promptly disseminated to the FAA and, in turn, immediately to U.S. air carriers.

Also, repeated interviews of law enforcement and intelligence officials in the United States and abroad, as well as extensive review of classified materials, revealed no foundation for speculation in press accounts that U.S. Government officials had participated, tacitly or otherwise, in any supposed operation at Frankfurt airport having anything to do with the sabotage of Flight 103.

The information that was disseminated during 1988, based on data received from the intelligence community, was substantial. It showed repeated concern that retaliation might occur for the downing of Iran Air Flight 655 in July 1988; that there were indications of terrorist movements in Western Europe during 1988; and that the arrest of terrorists in Frankfurt had led to the discovery of an improvised explosive device disguised as a radio cassette player that would be extremely difficult to detect through normal airline X-ray procedures.

The FAA also told carriers that "testing" of security procedures at Frankfurt airport by unknown persons had occurred during November-December 1988 and that an anonymous caller to the U.S. Embassy in Helsinki had said a Pan Am flight from Frankfurt to the United States would be destroyed sometime during December 5-19, 1988.

As noted earlier, the cumulative weight of this information should have alerted the FAA and U.S. carriers to the potential for trouble in Western Europe. The problem was in the use of the information received. The FAA did not require that additional measures be taken beyond those procedures then prescribed in its ACSSP. Other than screening any Finnish women who boarded Pan Am flights for the United States during December 1988, Pan Am took no special precautions.

Broader Conclusions

The circumstances in December 1988 were not unique. They reflected a larger pattern of complacency at both Pan Am and the FAA.

Pan Am

Alert Management Services, Inc., then a wholly owned Pan Am affiliate, became responsible for security at Heathrow airport in early 1987 and at Frankfurt airport in June 1988. Alert, according to testimony of Pan Am's Chief Executive Officer, functioned as an integral part of Pan Am. Even so, the Pan Am security managers in London and Frankfurt who were responsible for European operations in general and West German operations in particular had no lateral authority over Alert's security activities in those countries. Control and

direction of Alert and its policies came only from top Pan Am management in New York.

Financial constraints also appear to have limited hiring of security personnel by Alert. Throughout 1988, Alert had less than 90 employees at Heathrow and less than 70 at Frankfurt. Today that number is about 200 at each location. FAA investigators found in December 1988 that Alert was limited in Heathrow by Pan Am to a total of 600 man-hours per day, including time taken to train security personnel. The low level of training for Alert employees at both Heathrow and Frankfurt reflected these restrictions.

The absence of management control and direction was apparent in the day-to-day working level of these Pan Am security operations. Experience and qualifications seemed to have had little to do with the hiring of at least some Alert security personnel. Pan Am had no set procedure at either Frankfurt or Heathrow for distribution of FAA security bulletin information, such as that for the radio bomb, to these security workers.

Given the circumstances then prevailing, it is not surprising that the FAA inspector who reviewed Pan Am's Frankfurt security operation in October 1988 could conclude that it had very substantial problems. It is astonishing, however, that Pan Am permitted those problems and others to continue at that level month upon month after the disaster.

The problems repeatedly reflected in Pan Am's Frankfurt operations could be solved—as events would prove—with only a relatively brief but concentrated amount of management attention. It took just one week of that attention in September 1989, following a meeting between the Pan Am Chief Executive Officer and the Administrator of the FAA.

The Federal Aviation Administration

For years, FAA security personnel questioned Pan Am's commitment to implementation of the FAA extraordinary security procedures. As early as October 1986, the FAA had convened an unusual meeting of Pan Am's security management at FAA's regional headquarters in Brussels, to discuss Pan Am's implementation of the extraordinary security procedures the FAA had promulgated.

FAA inspectors reported Pan Am's operations at Frankfurt and Heathrow were in compliance with FAA standards as late as October 1988. Yet the FAA proposed large fines for deficiencies found at those same airports as the result of its post-Flight 103 inspection undertaken approximately 60 days after the October 1988 inspection. True, the investigation of Pan Am operations during December 1988-January 1989, following Flight 103, presumably was more thorough than a "routine" FAA inspection. Obviously, however, the problems found during this investigation did not suddenly arise during the two months before Flight 103.

The October 1988 security inspection of Pan Am at Frankfurt did find substantial problems. But, the FAA security system was not set up so that this sort of inspection report would ring an alarm, let alone lead to a quick, decisive regulatory response even for a carrier like Pan Am with a history of security problems. The report of the October Frankfurt inspection was not even finalized in FAA's Brussels headquarters until after December 21, 1988.

It might be unrealistic to expect that FAA headquarters could or would react to each security flaw identified by any of its agents after a field inspection. Nor should it be necessary for senior FAA management to become involved before adequate security will be assured in the field. But the circumstances at Frankfurt in the fall of 1988 were anything but routine.

Also troubling is the FAA's response to the problems of Pan Am at Frankfurt after Flight 103 had exploded.

Both the public and the regulatory spotlight were focused on just those types of security problems throughout early 1989. Congressional hearings were held. The Secretary of Transportation set up a task force expressly to look into the matter. The Commission would have expected the FAA to give top priority to security operations at the two airports that loaded and dispatched Flight 103. If anything, the reverse seems to have been true.

It was not without some difficulty that the Commission was able to determine what happened in 1989. Pan Am flatly refused to provide the Commission materials concerning that period, other than limited, official correspondence, even though its lawyers conceded the ma-

terials were irrelevant to the pending litigations over Flight 103.

The FAA, in turn, was in a self-defensive posture. In its briefing material submitted to the Commission for the record of a public hearing on December 18, 1989, the FAA described its "deployment of security specialists in January through March 1989 to ensure compliance" with its new, tighter security requirements in Western Europe. "Teams documented areas of less than full compliance regardless of the reasons for noncompliance," the FAA told the Commission. And, the FAA explained, "at the present, each of the U.S. carriers is in full compliance" with baggage screening requirements.

As it turned out, the "security specialists" who visited Pan Am's operations at Frankfurt and Heathrow during January 1989 had found that problems similar to those identified by FAA investigators in December 1988 had continued and actually had increased. Yet no enforcement action was ever taken by the FAA based on these findings. The explanation given by FAA personnel to the Commission: there was "miscommunication," and it "fell between the cracks."

Despite the terrible events of December 1988 and the findings in January 1989, FAA did not set up any special procedures for monitoring Pan Am operations during early 1989 in Frankfurt or Heathrow. FAA inspections continued on a regular schedule.

One inspection team which visited Pan Am in Frankfurt during February 1989 checked off the "satisfactory" boxes on the FAA inspection form with virtually no comment. The next inspection team, which reviewed Pan Am's Frankfurt security operation during May 1989, found a diametrically opposite security situation.

Only when the urgent concerns of the May inspector somehow made it to FAA headquarters did FAA management begin to focus on Pan Am security at Frankfurt. That subject obviously had not been a priority for them before then, regardless of the horror of December 21, 1988, and the apparent security lapses associated with Flight 103. No one in FAA management with responsibility for security had even visited Pan Am in Frankfurt.

Nevertheless, senior FAA officials told the Commission that they felt "frustrated" when they heard about the May 1989 inspection

report. Still, those same officials sat through two rounds of Pan Am "action plans" and "promises" during three more months. Finally, in September 1989 the newly confirmed FAA Administrator took decisive action. The problem was fixed in one week.

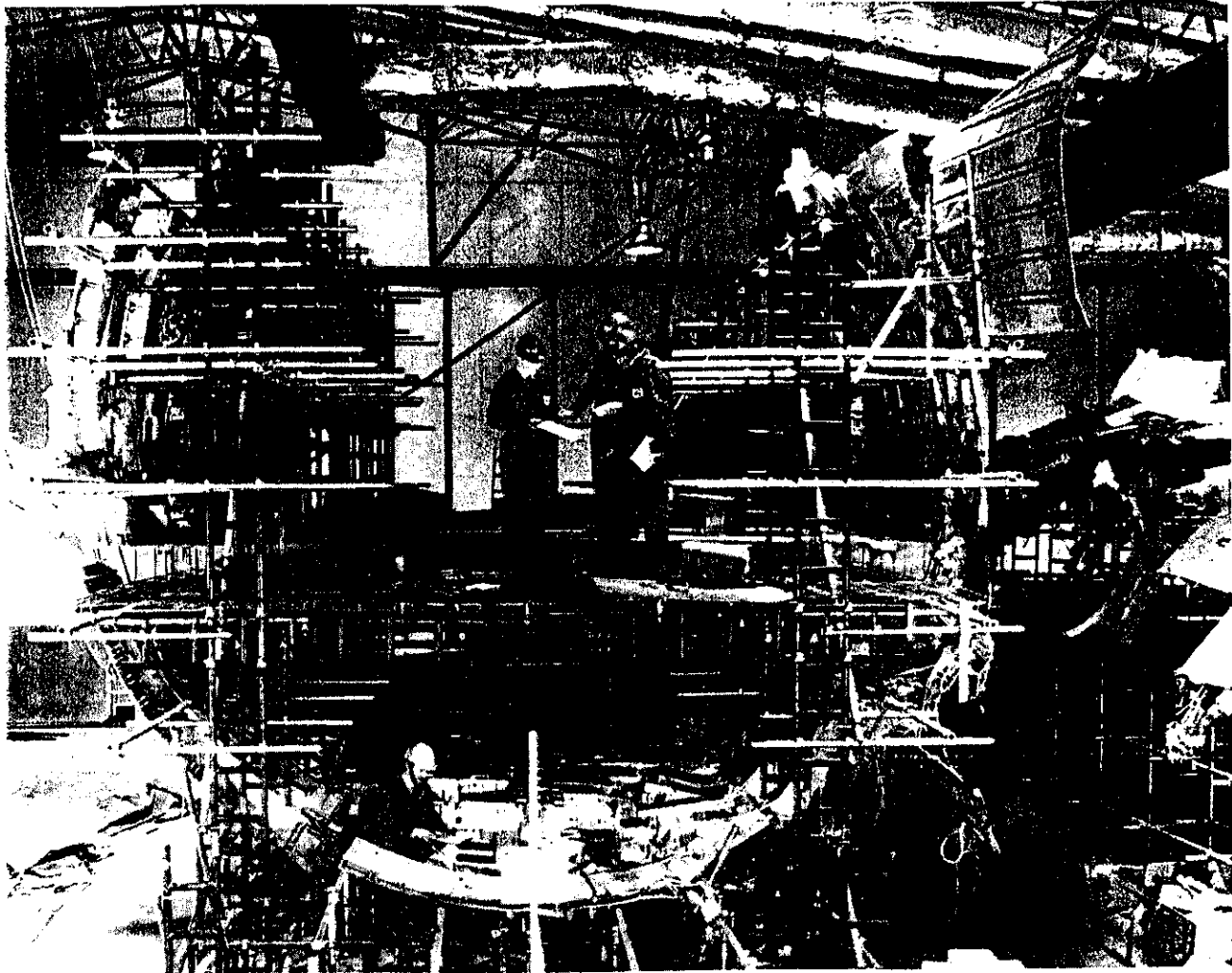
For nearly a year Pan Am had continued, and the FAA had permitted, security operations in Frankfurt identified two months before Flight 103 as "held together only by . . . the tenuous threads of luck" and five months after Flight 103 as "unsafe [for] all passengers." These problems remained unsolved for nine months after the Nation's most tragic security-related civil aviation disaster, and for nearly a year after the problems had been identified by the FAA.

It is the Commission's responsibility to assess the procedures and performance of the FAA. In that respect, the story of Flight 103 starkly illustrates what the Chairman of the House Foreign Affairs Committee, Dante Fascell (D-FL), identified in testimony before the Commission as a "daily check list" mentality at the FAA and what the General Accounting Office had identified over several years as the FAA's purely "reactive" attitude.

Although the FAA has had procedures to identify problems, those procedures tend to limit inspectors solely to the items set forth on their "check list." More significantly, the FAA appears to have had no mechanism to audit a pattern of those problems or to anticipate problems and solve them before disaster occurs.

Pan Am operations, found to be minimally satisfactory in October 1988, were the subject of a proposed \$630,000 fine after an investigation beginning in December 1988. Those same operations were assessed as "very poor" in January 1989 but checked off as "satisfactory" in February, only to be found "totally unsatisfactory" in May 1989.

The destruction of Flight 103 and its horrible loss of innocent lives is a reality. The potential for terrorist sabotage of another aircraft cannot be eliminated entirely. The apparent lack of priority placed on this problem by the carrier and the lack of action by the FAA in enforcing its own standards, however, are lapses that must not recur.



The United Kingdom Air Accidents Investigation Board has reconstructed a major portion of the fuselage of Pam Am Flight 103. This is the end section showing the lower baggage hold and the passenger deck of the doomed airliner.

The attitude that prevailed both before and after Flight 103 must be changed permanently. The initiative shown by the new FAA Administrator in September 1989 is a good step in the

right direction. However, as discussed elsewhere in this Report, much more remains to be done.

The Aviation Security System

Overview

Created in 1958, the Federal Aviation Administration is responsible for ensuring the safety of air travel. As part of that mission, the FAA Office of Civil Aviation Security establishes security requirements, inspects airline and airport security operations and issues civil penalties for noncompliance with those requirements. Security at foreign airports is provided primarily by the host country. At selected, high risk airports, the FAA requires U.S. air carriers to conduct security procedures that go beyond the host country's requirements. For domestic airports, security is a joint effort between the air carriers and the airport operators.

In 1961, the first hijacking of an American flag carrier occurred in the United States. The domestic aviation security system that has evolved since that date has been partially effective in meeting this hijacking threat. There were two hijackings of U.S. aircraft in both 1988 and 1989, the lowest number since 1976.

FAA's role in aviation security expanded significantly in 1985 with passage of Public Law 99-83, the International Security and Development Cooperation Act. The Act required FAA to assess the adequacy of security at foreign airports served by U.S. carriers, and the security procedures of foreign air carriers flying to the United States.

International Security

The Americans and foreign nationals who died in the Pan Am 103 tragedy were among an average of 26 million U.S. citizens and 19

million others who annually fly internationally to and from the United States. While this tragedy brought home to the American public the risks in aviation security, the United States is not the only target of international terrorism. Since the Pan Am 103 tragedy, terrorist bombings have destroyed two other flights: the French UTA Flight 772, from Brazzaville, Congo, to Paris in September 1989, killing 171; and the November 1989 downing of the Colombian Avianca Flight 203 from Bogota to Cali, Colombia, claiming 107 lives.

These attacks grimly underscore the reality that unless international aviation security measures are substantially strengthened, aircraft will continue to be targets of opportunity for the terrorist. The bombing of the Colombian airliner may also signify the entry of an additional terrorist threat, on this side of the Atlantic, from the drug cartels.

Currently, there is no uniform international civil aviation security system in place to assure a consistent level of security for passengers. Many nations have adopted the standards of the International Civil Aviation Organization (ICAO), a U.N. body, which recommends standards and practices for aviation security.¹ However, the ICAO standards prescribe a very basic or low level of security that is inadequate for high threat international airports. ICAO lacks any oversight authority or ability to impose sanctions for noncompliance. Nevertheless, the Commission believes the United States should continue to support ICAO and to push for more stringent ICAO standards worldwide, while recognizing that the organization likely

*Endnotes appear at end of chapter.

will be most effective at low-threat airports in smaller, less industrialized countries.

The international civil aviation security system is complicated by differences among countries in security approaches, technical capabilities, and financial resources and priorities. The U.S. approach, which assigns a major portion of the responsibility for passenger security to the air carriers, forces U.S. airlines operating internationally to satisfy the requirements of foreign governments and those of the FAA. Under the existing international civil aviation security structure, the American carriers frequently must negotiate with a foreign airport or foreign government officials in order to carry out FAA-required security measures. The Commission believes such negotiations should be the responsibility of the State Department, in consultation with the Department of Transportation.

The United States: A Sovereign Nation in the International Arena

Passengers flying to or from the United States from any airport aboard any airline, do so under the protection of U.S. laws and the FAA's security requirements.

The authority for this protection resides primarily in two statutes: the Foreign Airport Security Act, signed into law as part of the International Security and Development Cooperation Act of 1985, and the Federal Aviation Act of 1958 (Public Law 85-726), as amended.

Securing Foreign Airports

The Foreign Airport Security Act was enacted in the wake of the June 14, 1985 hijacking of TWA Flight 847 out of Athens, during which a U.S. Navy Petty Officer, Robert Stethem, was murdered, and amid a growing number of other terrorist acts directed against foreign international airports and the international aviation industry in general. The Act draws its ultimate authority from the U.S. sovereign right to control landing rights in this country.

The Act directs the Secretary of Transportation to conduct periodic security assessments of foreign international airports used by American carriers and airports from which foreign carriers last depart to the United States. These as-

sessments are measured against the minimum standards set by ICAO.

The Secretary of Transportation, in conducting these assessments under the Foreign Airport Assessment Program, must consult with the Secretary of State on the extent of the terrorist threat in each country. If the assessment determines that an airport's security procedures are deficient, the Secretary of Transportation notifies the foreign government. This occurs after advising the Secretary of State. The notification includes recommended steps necessary to correct the deficiencies.

A finding of deficiency sets in process a 90-day period during which the foreign government must bring its airport up to standard. If it fails to do so, the Act imposes a series of sanctions:

- the Secretary of State must issue a travel advisory;
- the identity of the airport must be published in the *Federal Register*;
- the decision must be advertised publicly; and
- a travel advisory must be included with all tickets between the United States and that airport.

All assistance under the Foreign Assistance Act of 1961 and the Arms Export Control Act to that country may also be suspended.

In addition to the 90-day process, the Act provides for immediate notification, issuance of the travel advisory, and suspension of air service to any airport if the Secretary of Transportation determines that a condition exists which threatens the safety and security of passengers, crews or aircraft.

A total of 247 foreign airports in 99 countries currently must be assessed under the program. The FAA's goal is to assess each of these annually, typically involving a three- to five-day visit by a two-member team. Severe FAA personnel shortages generally limit the depth of these assessments to interviews and observations. The FAA regional office in Brussels for Europe, Africa, and the Middle East, for instance, has a staff of 13 to cover 42 countries and 123 airports. Inspectors do not substantively test the operational effectiveness of secu-

rity procedures. The FAA inspectors do, however, describe in detail the security measures in place for each ICAO standard.

Since the program began in 1986, the FAA has conducted 957 foreign airport assessments and made 1,082 recommendations. Significantly, only four assessments triggered the 90-day period; and only in one case, Manila in 1986, were the sanctions invoked.

According to FAA officials, in most cases the foreign airports move immediately to correct deficiencies and to implement improvements. When a 90-day countdown does begin, FAA calls upon the assistance available from other U.S. agencies and ICAO to facilitate improvements. The Foreign Airport Security Act, therefore, generates security compliance and improvements in a low-key and generally cooperative fashion.

In an additional effort to preserve good will between nations, the FAA has offered assessed countries the reciprocal opportunity to visit and

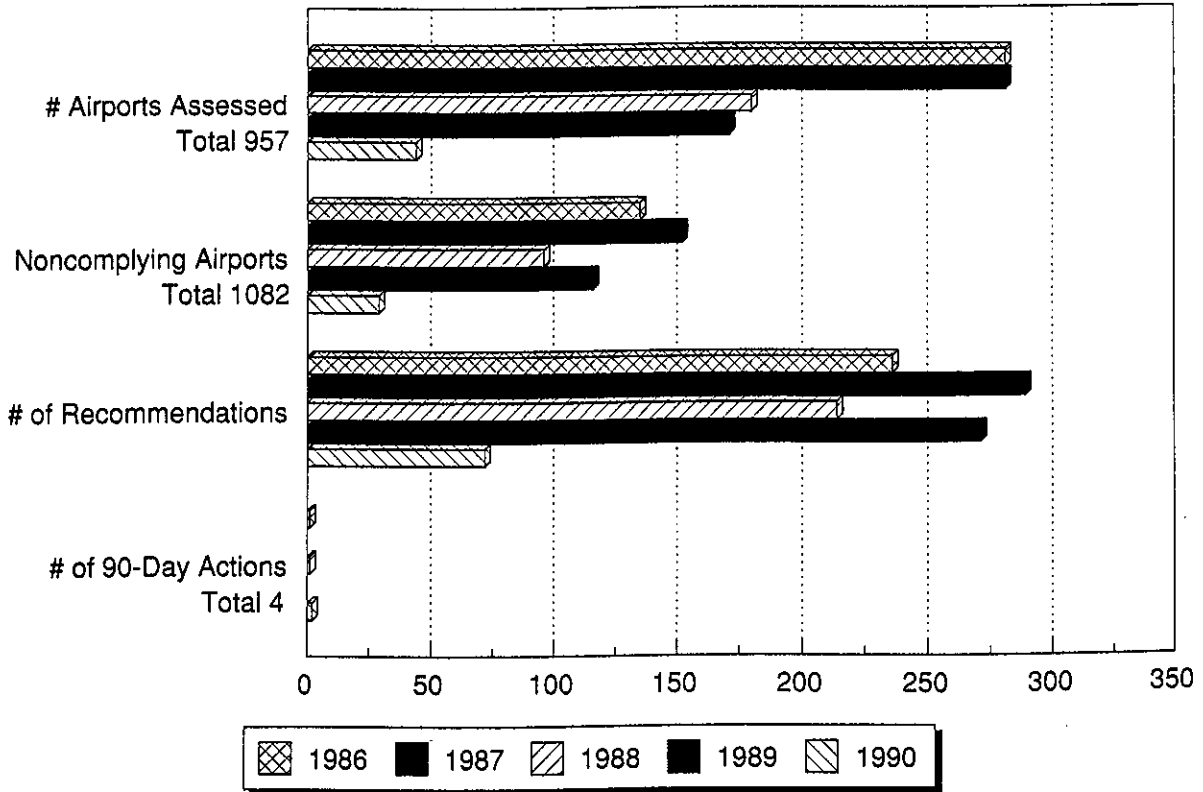
assess U.S. airports serving their carriers. Several countries have done so.

The Commission believes the Act provides an appropriate mechanism for improving security for American travelers at foreign airports. To improve the program, the State Department must be persuaded to accept the FAA's continuing efforts to assign and maintain overseas more personnel who are familiar with foreign airports. As will be discussed, the Commission believes that some of these additional personnel should be assigned permanently to foreign airports in security management positions.

U.S. Air Carriers

Section 315 of the Federal Aviation Act directs the Administrator of FAA to prescribe regulations requiring the screening of all passengers and carry-on baggage for weapons. Section 316 of the Act also requires regulations to protect persons and property aboard aircraft from acts of criminal violence and piracy.

SECURING FOREIGN AIRPORTS



American carriers must comply with FAA regulations abroad as well as domestically. At most foreign airports, the FAA security requirements are the same as those for most domestic airports. The important exception is that the FAA requires a matching of all baggage with passengers on international flights.

More stringent procedures are required at the airports of 34 nations considered by FAA to present a higher threat. At the highest threat airports, "extraordinary procedures" are in place which require more intensive scrutiny of passengers, baggage and other persons having access to the airplane. These extraordinary procedures were strengthened on an "emergency" basis nine days after the bombing of Pan Am Flight 103.

Currently, these procedures include checking passports and asking a series of questions of each passenger designed to determine if they might intentionally or unwittingly be carrying a bomb or weapon. Certain answers will single out a passenger for additional security screening. One FAA question concerning battery-operated or other electronic devices in baggage was not added by the FAA until seven months after the bombing of Pan Am Flight 103. A list of potentially suspicious electronic items was also provided with some suggested questions for detecting them.

A second tier of screening, for selected passengers based on their responses to the questions, involves a physical search or more extensive X-ray of all checked baggage, and further search of passengers and carry-on items, even though the passenger has already passed through a magnetometer or has been hand wand searched immediately prior to the second screening. Foreign travelers to or from certain airports and a random sample of all other passengers are also subject to the additional screening.

U.S.-bound baggage checked abroad on U.S. airlines can only be accepted at the check-in counter inside the terminal. This contrasts with curbside baggage check permitted on U.S. domestic flights. Some European airlines even permit baggage to be checked at train stations.

Since the extraordinary measures were tightened following Pan Am 103, U.S. carriers must match every bag to a passenger who has boarded the aircraft. At highest threat airports, all baggage must also be X-rayed or searched

by hand. The purpose of matching, or "reconciling", baggage is to assure that a terrorist does not check a suitcase containing a bomb and then simply walk away from the airport, leaving the bomb to take innocent lives.

Once screened and in the hands of the airline, the bag must be accessible only to authorized personnel, and under surveillance at all times. If it is placed in a container, the container must be closed securely.

In addition to greater scrutiny of passengers and baggage, the extraordinary security procedures prescribed by FAA call for controlled access to the aircraft by servicing personnel, searches of the aircraft cabin and holds between flights, and modest controls over cargo. In reality, the FAA oversees security controls only for checked or carry-on items screened by the carrier. Third parties, whose security programs lie outside of the FAA jurisdiction, control security procedures for other items. Cargo and mail pose particular problems, which are addressed in a subsequent section.

Foreign Air Carriers

The Federal Aviation Act gives FAA jurisdiction over foreign carriers on the last leg of their flight to the United States. In May 1989, the FAA embarked on a new program requiring foreign air carriers to adopt certain measures for each point of operation within the United States and for the last point of departure to the United States. As of December 1989, 135 foreign air carriers were subject to this requirement.

FAA has accepted 52 programs, most of which were the model program offered to the carriers by the FAA. However, 39 carriers from 20 countries also exercised the option to refer FAA to the foreign government responsible for security at the last point of departure into the United States. This has both complicated and increased the FAA's workload. In these cases, FAA must work through the State Department to deal with each of the foreign governments rather than the carriers.

The passenger and baggage screening requirements imposed by FAA on foreign air carriers at overseas locations are not as stringent as those required of U.S. carriers there. FAA does not have the authority under existing international agreements to impose require-

ments on foreign carriers in foreign countries that exceed the standards and recommended practices of ICAO. For example, while both U.S. and foreign carriers perform a positive match of passengers and checked baggage, the U.S. carriers must X-ray or physically search all baggage as well, whereas the foreign carriers have to X-ray or physically search only that baggage for which no passenger has boarded the airplane. As will be discussed later, this less stringent requirement for foreign carriers raises concerns for the security of U.S. passengers who fly foreign airlines.

Foreign Approaches to Security

To gain an understanding of aviation security abroad, the Commission visited three European countries: the Federal Republic of Germany, France, and the United Kingdom. The U.K. and West Germany were selected because of their connection with Pan Am Flight 103 and France because of the more recent UTA Flight 772 bombing. Among those killed on the UTA flight were seven Americans, including the wife of the U.S. Ambassador to Chad.

The Commission discussed security with foreign and U.S. diplomatic officials as well as U.S. and foreign airline and host country airport officials.

These three countries provided a study in contrasting philosophies, legal systems, government organizations, and aviation responsibilities, policies and procedures. Passenger and carry-on baggage screening are in place at the international airports in each nation. In West Germany, the state government conducts passenger and carry-on screening. In France, screening is done by the federal government. The British Airport Authority, a private enterprise, provides passenger security in the U.K.

Like the United States, each of the three countries visited has a complex jurisdictional interaction at the airports, among a number of federal, state and local agencies with responsibilities for immigration, customs, drug interdiction, and law enforcement, as well as aviation security.

Each country is meeting the ICAO standards and recommended practices. As a result of the Pan Am 103 tragedy, the British Parliament is moving toward enactment of new legislation to upgrade security control at U.K. airports. Internationally, the British are also providing addi-

tional support for ICAO. The French, in 1987, began providing aviation security assistance to African nations.

Each of these countries performs the positive passenger/baggage match for international flights to ensure that no unaccompanied baggage that might conceal a bomb is placed on an aircraft. Both the U.K. and France also require 100 per cent X-ray screening of hold, or checked baggage on international flights, as does the United States. West Germany does not require X-ray screening of checked baggage. West German authorities question the value of this practice because of the limited capability of the existing X-ray equipment to detect bombs.

In the United States and abroad, the Commission found the adequacy of security background checks to be an area of concern. In the United States, airport employers are required to conduct 5-year employment history checks of prospective employees, although a check of criminal records is illegal in some states. West German law limits the degree of background checking of employees, including those employed at airports. Background checking in West Germany is further complicated by a large guest worker population from other countries. The British are requiring more thorough background screening of prospective airport employees, including checking references, prior to the issuance of passes for access to restricted airport areas.

West German labor law limits the testing of airport screener performance. Other European countries also limit testing, whether by those governments or the FAA, of screener performance. Where testing is done by foreign authorities, the results may not be shared with either the FAA or the carriers who rely on the screener performance. In the United States the FAA has a formal procedure for testing security screening personnel. The Commission is convinced that this quality control is vital. Since the advent of screener testing in the United States, performance at screening points has improved substantially.

Conflicts with Host Governments

The Foreign Airport Assessment Program principally derives its strength and leverage from the United States ability to withhold other

nations' landing rights in this country. FAA assessments of foreign airports under this program are hampered, however, by the necessity of obtaining the permission of the host governments. FAA inspection teams must obtain permission to inspect abroad and announce their visits in advance. They are generally not free to roam the secure parts of the airport at will. In the past, FAA inspectors have not tested, observed or evaluated airports' security systems, out of respect for sovereignty and to retain the good will of foreign airport and host government officials.

The General Accounting Office testified before the Commission's December 18, 1989 hearing on the crucial need for this evaluation. Kenneth M. Mead, Director, Transportation Issues, of the Resources, Community and Economic Development Division, stated:

By not verifying the adequacy of security controls and systems at domestic and foreign airports, FAA inspectors did not provide a true and complete assessment of the overall level of security on inspection reports . . . We recommended that the foreign airport assessment process be strengthened by making analyses of host country security evaluations, including observing and evaluating host country testing, to assess the operational effectiveness of various security measures. FAA agreed with our recommendation and told us they plan to begin evaluating security testing at foreign airports in 1990.²

FAA initiated the program in January 1990.

U.S. Carriers Caught in the Middle

U.S. carriers are private entities required under U.S. regulations to conduct their own security screening. In Europe, the U.S. carriers find themselves caught between the requirements of FAA, exercising the sovereign right of the United States to protect its passengers and planes, and the sovereign host government, which already has in place what it believes to be adequate screening procedures. The FAA-required additional screening procedures described earlier cause legal and logistical problems between the carriers and the host govern-

ment, which the Commission believes should more appropriately be resolved by the State Department at the government-to-government level.

Timothy R. Thornton, Executive Vice President and General Counsel for Northwest Airlines, described the problem succinctly at the Commission's April 4, 1990, hearing:

We had a dispute with a foreign government that went on for six months, where we were out of compliance with the FAA mandate as it related to extraordinary X-ray security of all checked baggage. [The foreign government] told us not to do it and the federal government told us to do it. Sometimes we were in violation of American laws. Sometimes we were in violation of the foreign laws of the airport where we operated. We were in the middle. Finally we got some help from the Federal Government but, for six months, it was whose jail did we want to go to.³

In France, until passage of new legislation in mid-1989, it was illegal for anyone but a government employee to search people and their belongings. France agreed to "look the other way" as U.S. carriers or their private contract security companies conducted searches. The applicable provision of the new French law has not yet been implemented, as inter-agency discussions continue over its implications for French civil rights. Even when the law finally becomes effective, searches by private companies will be subject to supervision by the French Ministry of Justice, and will need authorization by the U.S. Attorney General.

U.S. screening by private individuals is illegal under West German law, but is tolerated by West German authorities. Frankfurt Airport requires that U.S. searches be conducted "out of sight" of the German screeners. The West Germans, who rely on the police for their security, also question the qualifications and training of U.S. security services.

U.S. carriers may also face problems in the U.K. related to differences in U.S. and British regulations. Since Pan Am 103, the United Kingdom Department of Transport (U.K.

DOT) has begun to impose new security requirements which may duplicate those already mandated by FAA. The FAA requires U.S. carriers to search manually a certain percentage of checked baggage. U.K. DOT is considering requiring a search of a larger percentage of baggage. It is unclear at this point whether the U.S. carriers will get "credit" for their searches, or whether these searches will have to be conducted in addition to those required by U.K. DOT.

U.S. screening procedures, especially the hand search of baggage and the extensive questioning of certain passengers, impose space demands on airports already pressed for terminal capacity. These procedures create long lines in front of check-in counters, sometimes stretching out the door of an airport onto the sidewalk. These lines cause delays and frustration for the passengers, and expose them to the risk of terrorist actions by concentrating the passengers for long periods in the least secure parts of the airport.

The U.K. DOT warned the Commission that Heathrow Airport was not designed and built to accommodate the long lines of passengers for U.S. flights. Similarly, France has told U.S. carriers that it might limit the number of security firms allowed at Charles de Gaulle Airport. According to French authorities, security firms hired by U.S. carriers, with their large numbers of personnel, could themselves present a security risk.

Some European and Scandinavian countries will license only a single local firm to provide all airport security. This could force U.S. airlines to terminate service to one or more of these countries. Charles A. Adams, Senior Vice President-International Division for Trans World Airlines, told the Commission at its April 4 hearing:

We're in a situation in Oslo right now that I have to make a very difficult decision. It's whether we continue to fly to Oslo because if I'm not satisfied with the security in Oslo we're not flying there, period. . . . As it stands right now, we're not satisfied with the security in Oslo if we are forced to use the security company that the Norwegian CAA is requiring us to use.⁴

Transportation Secretary Samuel K. Skinner, on April 3, 1989, announced the creation of 20

FAA security liaison officer positions, for overseas assignment to provide more permanent aviation security expertise at U.S. embassies. After initial opposition by the State Department, almost all of these positions have been negotiated with host governments.

The Commission finds an urgent need for the State Department, in coordination with the Department of Transportation, to become more directly involved in aviation security, and to do so before the carriers become caught in a conflict between FAA and foreign security procedures. U.S. privately-owned airlines are at a disadvantage in dealing with host nations which perceive security as an integral function and responsibility of government.

West German officials, along with those of other European countries, oppose the extensive U.S. questioning process, which causes long lines and congestion in their airports. They believe it virtually impossible to isolate the suicide bomber or the innocent dupe who unknowingly carries a bomb aboard a plane.

The West Germans also believe language problems may prevent some passengers from fully understanding the questions put to them. They prefer to educate passengers not to accept packages or to leave their bags unattended. They further question the qualifications of the private firms or airline personnel conducting the screening for U.S. carriers, in comparison to the West German police assigned the task under German law.

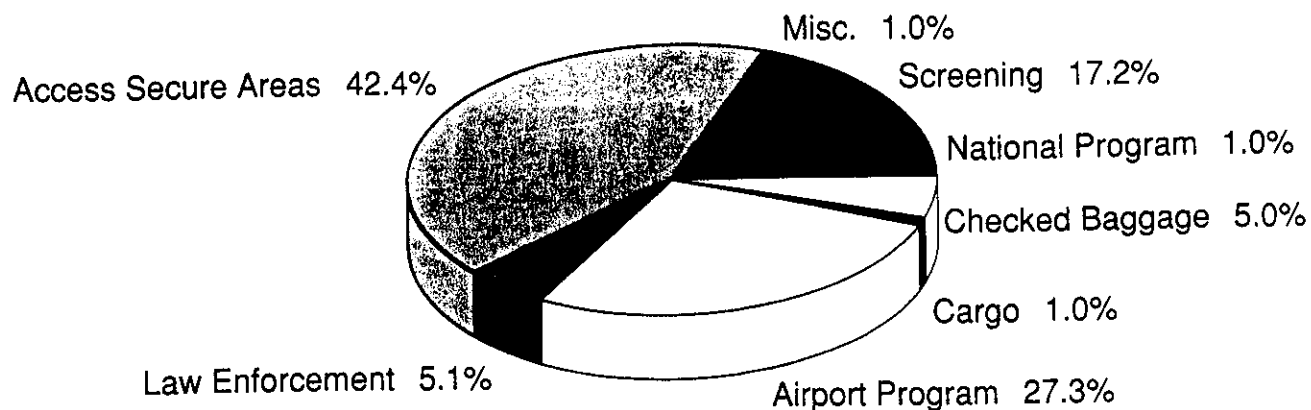
Rather than putting so much effort into finding the dupe or the suicide bomber, the West Germans rely above all on baggage reconciliation to catch the bag planted by the "no show" terrorist unwilling to die for the cause.

The FAA, on the other hand, is reluctant to yield control of security to foreign organizations whose screeners may not have undergone satisfactory background checks, whose security systems it has not been able to test or evaluate, and over whom FAA has no regulatory authority.

As with foreign governments, U.S. airlines complain that FAA's screening requirements are unnecessarily burdensome and less effective than the carrier's own procedures. They argue that FAA's criteria for questioning selects too many people who pose no threat. The carriers contend the time spent on many such low risk

AIRPORT SECURITY RECOMMENDATIONS

FAA Foreign Airport Assessment Program



Source: FAA Office of Civil Aviation Security, International Security Briefing for the Commission, January 8, 1990

passengers limits the attention that could be devoted to the higher risk ones.

The privately-owned U.S. airlines are required to bear the costs of security, some of which are paid by other carriers' governments. This fosters complaints by U.S. airlines of a distinct financial disadvantage compared to their foreign competition. (It should be noted, however, that foreign carriers must pay for security when they land in U.S. airports.) U.S. carriers also complain that delays from FAA-required security procedures compound the competitive disadvantage.

Arguing that terrorist attacks are directed against governments, not airlines, the U.S. carriers began pushing in 1986, through the Air Transport Association, for a greater U.S. Government role in aviation security as an alterna-

tive to placing the entire burden on the airlines.

The U.S. carriers seek a system in which competitors who fly the same routes would be required to implement the same security procedures. While unable to provide the Commission with hard evidence, several U.S. carriers alleged that they are losing full fare business travelers who are unwilling to wait in the lengthy American carrier check-in lines, or to arrive at the airport two hours before takeoff, to clear screening.⁵ As Northwest Airlines' Thornton explained:

[W]hen the vice president of international marketing for 3M is traveling every month or every week to Germany, he's already accepted that there is a certain risk associated with interna-

tional travel. The thing that person [as opposed to an infrequent, nonbusiness traveler] is focusing on is the convenience issue. It's not even necessarily the efforts of the European carriers to market to that person. Through their own experience, they know the difference between going through American security and going through German security. [German security] gives you an extra half hour or hour to do whatever you need to do.⁶

The carriers also point out that the fact that they alone are required to employ enhanced security measures may signal to the world that they are more at risk, regardless of the standards followed by other nations' carriers.

Forty-five per cent of U.S. international passengers fly on foreign carriers, some in the expectation that foreign carriers are "safer." These passengers, also a responsibility of the U.S. Government, may in fact receive less protection than if they were to fly on U.S. carriers. The Commission, therefore, believes that for security reasons, the U.S. Government should work to assure that U.S. passengers on foreign carriers receive the same level of protection they do flying on U.S. carriers.

All parties in Europe expressed concern to the Commission over airport security in less industrialized countries, particularly in Africa. Should the world aviation community succeed in substantially securing some 40 major world airports, terrorists could readily move to target less secure airports and routes. Many less industrialized countries lack the resources to give priority to aviation security. Many of these airports have no perimeter fencing, no security for airplanes, and no screening procedures for passengers. Those airports with security equipment have few people trained to operate it, while airport workers trained abroad frequently leave for better-paying security positions elsewhere.

Poorly secured airports in less industrialized nations thus offer easy access to terrorists. A "rogue bag" containing explosives, with or without an accompanying passenger, might be placed aboard a foreign carrier at some small airport for transfer later to a U.S. plane. This threat is very real. The destruction of the French UTA 772 illustrates the vulnerabilities

at poorly secured airports. UTA now carries its own security personnel on flights to airports it considers vulnerable.

Most threats to civil aviation have come primarily from Middle East-based terrorist cells and factions. The destruction of the Avianca airplane over Colombia demonstrated a terrorist capability in South America to destroy airlines in flight. Future threats may develop from the "war" against the drug cartels in Central and South America.

ICAO has responded to these threats with a technical assistance and training program for specific countries where funds are unavailable for aviation security.

This program, financed by the United Nations Development Program, details for government officials the shortcomings of aviation security systems, assesses airport security, and recommends ways to comply with ICAO standards. ICAO provides on-the-job training for security personnel and conducts intercountry and interregional assistance seminars.

ICAO's recent \$1.2 million assessment for 22 Asian/Pacific countries found inadequate training of personnel in the proper use of security equipment. Many of the countries lack the resources and know-how to perform satisfactory passenger/baggage reconciliation. While most of those countries have enough security workers, they lack the capability to train them.

The State Department under the Anti-terrorism Assistance Program also provides aviation security technical assistance. A small portion of the program's annual \$9.8 million funding is used for civil aviation security training.

FAA foreign airport assessment reports help the State Department to determine where and what type of training is needed and is appropriate. Through an agreement with FAA, courses are offered to personnel from selected countries. The Anti-terrorism Assistance program also provides equipment, such as hand-held and walk-through magnetometers and X-ray machines.

Both the ICAO and State Department programs are limited in funds and scope. ICAO has targeted its limited resources toward potential threats in Africa, virtually ignoring the rest of the world. The State Department views aviation security as merely one portion of its larger counterterrorism program.

The FAA has only provided direct technical assistance on civil aviation security to foreign countries in specific and unusual cases. As an example, at the 1988 Summer Olympics in Seoul, South Korea, the FAA deployed specialists to monitor security for U.S. carriers with service to Seoul and to ensure compliance with security requirements.

As future threats increase in specific parts of the world, the U.S. may wish to concentrate its aviation security resources and efforts in those areas, including Central and South America. A majority of U.S. carriers fly to Central and South American airports, potentially in peril from terrorists linked to the drug cartels.

Securing the International Aviation System

The disparity among nations' resources, priorities, and especially political will, brought home to the Commissioners the need for closer international cooperation to achieve a more coordinated approach to aviation security.

The jurisdictional problems encountered by private U.S. carriers in high-threat countries like those of Western Europe, point up the need for a strong leadership role by the U.S. Government, rather than private airlines, in dealing with foreign governments.

The fluid nature of the terrorist threat adds a sense of urgency to this problem.

The U.S. has a broad range of options within which to seek increased international aviation security, ranging from the unilateral under the Foreign Airport Security Act, to the multilateral, through ICAO.

The Foreign Airport Security Act

The Commission finds the Foreign Airport Security Act, especially its Foreign Airport Assessment Program, to be an effective means of correcting deficiencies and triggering other improvements in aviation security abroad. The sanctions authorized by the Act have been necessary only a few times.

However, this Act is only as good as the FAA's performance in carrying out its provisions. House Foreign Affairs Committee Chairman Dante Fascell, at the Commission's March 9, 1990 hearing, noted security deficiencies at airports visited by the Committee's Staff Study Mission to several European countries in Janu-

ary, and other cases disclosed to the Committee. He cited as examples FAA's favorable assessment of Seoul and Hong Kong airports despite the fact that each publicly posted lists of all arriving passengers. One such list included the name of a U.S. ambassador under threat of assassination.⁷

The FAA responds that such deficiencies as the widespread custom of posting passenger lists in Asian airports, are not covered by ICAO and are, therefore, not assessed by the FAA reports. However, such issues are covered routinely in conversations between FAA and the host airport officials. For instance, at FAA's behest the passenger manifests were not posted during the 1988 Olympics in Seoul.

The agency in January of this year changed the format for its airport assessments from the "check list" for which it has been criticized to a more narrative style. It is still too early to assess the effect of these changes on the program. However, the posting of passenger lists is an example of the kind of non-ICAO security concerns the FAA inspectors must spot and raise with the host government.

The Commission emphasizes that the assessment teams must be willing to look beyond the assessment sheets to view the full range of potential vulnerabilities and that the FAA and the Department of Transportation must be willing to exercise the full force of the Act.

Bilateral Agreements

The Commission believes that the bilateral approach offers the best and most realistic hope for improved relations on aviation security between the United States and its major aviation partners. The framework for such negotiations already exists.

The United States is a party to bilateral civil aviation agreements with 72 countries. These agreements are ideal vehicles for negotiating aviation security compacts nation by nation.

The compacts generally cover broad topics including levels of air service between the countries, pricing guidelines and market arrangements. The agreements also provide mechanisms to resolve disputes, complaints and problems as they arise. Issues include who will handle aircraft on the ground in a foreign country and the availability of adequate airport space to conduct operations.

U.S. civil aviation negotiating teams are typically composed of representatives from the Departments of State and Transportation, with the State Department usually chairing the delegation and the Department of Transportation providing policy guidance.

Aviation negotiations between the United States and its major civil aviation partners are conducted on a continuing basis: three or four times a year with countries such as the U.K. or Japan, and annually or less frequently with countries with less air service to the United States.

Security Articles

In response to the 1985 hijacking of TWA Flight 847, the United States developed a model security article to strengthen the nation's ability to take unilateral action when other countries fail to meet minimum aviation security standards. To the credit of U.S. negotiators, 53 nations have signed such articles after individual bilateral negotiations. Thirty articles have taken effect and 23 have been signed and await future action.

While security articles set the framework for cooperation, they do not address the specific disagreements plaguing U.S. carriers and European airports.

The Commission supports continued efforts to include security articles in these bilateral agreements to resolve the problems outlined above. In addition, negotiations could resolve such thorny issues as a means of conducting testing and inspections of security procedures satisfactory to both nations.

The Commission, therefore, believes that the position of Coordinator for International Aviation Security, with the rank of Ambassador, should be created in the Department of State. The coordinator would intercede when negotiation impasses are encountered. This would enable the United States to elevate the security element to the highest level of government. It should be emphasized that this recommendation does not reduce in any way the urgent need for the assignment of additional FAA personnel abroad.

Multilateral Agreements

The Bonn Declaration

In 1978, the United States and its fellow members of the Economic Summit (U.K., Canada, Japan, France, Italy, and West Germany), also known as Summit Seven, agreed to cut off air service to and from any country that does not extradite or prosecute a terrorist for hijacking. This agreement, known as the Bonn Declaration, was implemented only once, against Afghanistan in 1981 following the hijacking of a Pakistani aircraft. The Venice Annex, agreed upon in June 1987, expanded the Bonn Declaration to include halting air service in cases of sabotage. The Summit Seven has yet to apply the Venice Annex to a specific incident.

Although terrorist attacks at airports have decreased in recent years, the Commission urges the Summit Seven to agree to adopt an annex to the Bonn Declaration stating that members will halt air service in cases of unpunished attacks at airports and airline ticket offices.

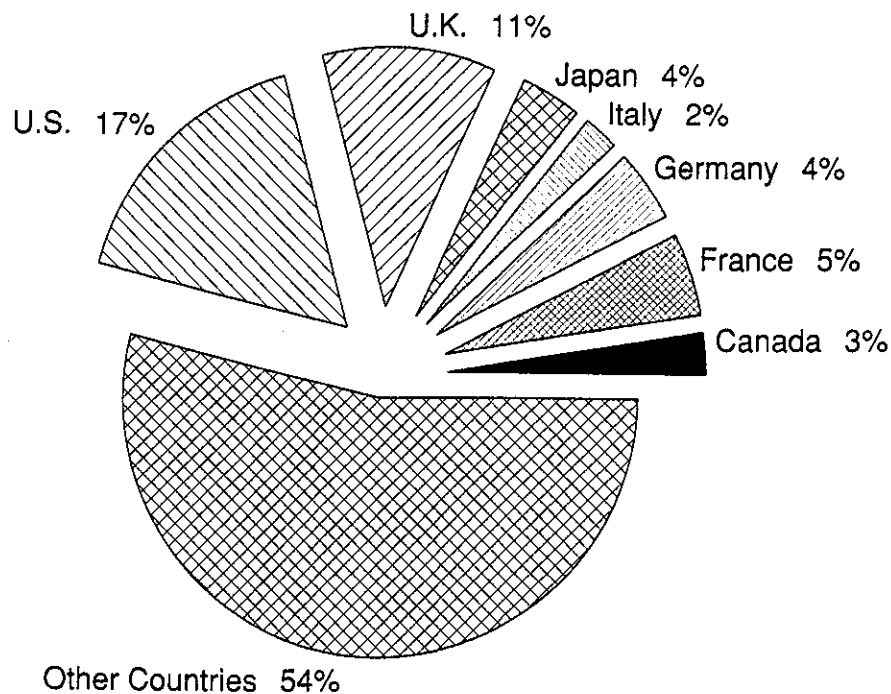
These multilateral agreements, however, have their limitations. To be effective, a unified, aggressive and expeditious response to terrorist incidents by all parties to the agreement is essential. The political will is not always forthcoming. Although the United States has unilaterally cut off air service to state sponsors of terrorism, not all of the Summit Seven partners have taken this step. In fact, the Bonn Declaration was invoked only against Afghanistan, where little economic impact was at stake for Summit Seven carriers. The United States is not the only Summit Seven partner to experience frustration in this regard. Following the discovery of Syria's involvement in an attempted bombing of an El Al plane from Heathrow in 1986, the British government requested that the economic partners not only cut off air service to Syria but also impose diplomatic sanctions. The British were left to fight this battle virtually alone.

ICAO

Despite ICAO's inherent limitations in the area of civil aviation security, it does serve an important function in countries where the terrorist threat is low and host country security is

TOTAL INTERNATIONAL SCHEDULED PASSENGERS

Carried on Summit Seven and Other Carriers



* Total international scheduled passengers worldwide: 242,559,000

otherwise minimal. In high threat countries, nations rely on additional measures.

ICAO's inherent limitations include:

No enforcement mechanism. ICAO cannot impose sanctions on a violating member state. In fact, ICAO is not even allowed to inspect airports to determine if countries are complying with its standards; inspection would violate a country's sovereignty.

State sponsors of terrorism are ICAO members. ICAO's membership includes nations widely accused of sponsoring terrorism. ICAO can take no action against these states for providing sanctuary, training camps and funding for terrorists. Moreover, ICAO must provide these same states with the very document it prepared to fight terrorism, its Security Manual.

Standards based on the lowest common denominator. ICAO's security standards generally are low level measures in order for all countries to comply. Many economically starved

countries cannot afford higher levels of security. Therefore, ICAO develops standards that can be adhered to worldwide. Moreover, if the standards are too high, they will not be administered.

Slow to react. As a political, legislative body, ICAO is slow to react. Following the bombing of Air India in 1985, ICAO took two years to enact new standards requiring baggage-passenger reconciliation. ICAO currently is under pressure to respond to the threat from radio bombs and plastic explosives. The organization has just begun issuing information on these devices and pursuing markings on explosives. However, these terrorist devices have been known for years. It took a tragedy, Pan Am 103, to bring about ICAO actions.

Conclusions

The Commission believes the responsibility for negotiating aviation security must be placed on the U.S. Government, not the private air

carriers. The FAA requirements have a number of important implications for security and foreign relations. American carriers find themselves in the middle, caught between FAA and the host government, and forced to negotiate directly with that government in order to carry out the required security program. The Department of State, in consultation with the Department of Transportation, should negotiate these aviation security arrangements with the foreign governments where American carriers fly, and should complete the negotiations before requirements are imposed on the carrier.

The additional security measures opposed by some foreign governments were prescribed because the FAA believes they are necessary, above and beyond the procedures already in place at host airports. The United States must negotiate with these governments to rectify these discrepancies, or in some other way address these very real concerns.

The Commission supports ICAO despite its weaknesses, as the appropriate international forum for upgrading aviation security worldwide. ICAO standards and recommendations work well as a baseline for all nations. The Commission believes the United States should continue to work through ICAO to strengthen aviation security internationally, particularly in the less industrialized countries.

Some nations, though willing, are unable to provide a consistent, adequate level of security. While the FAA utilizes U.S. assistance programs of other agencies, the Commission believes that the FAA should also have its own formal and active technical assistance program for other nations to improve airport security. This step is essential for the United States to lead the rest of the world to provide the same level of aviation security the FAA requires of U.S. carriers. The United States should be in a position through FAA to help upgrade air carrier and airport security wherever the threat warrants. To the extent that the intelligence community perceives a growing aviation security threat in Central and South America, due to U.S. drug interdiction activity, FAA resources should be concentrated in the region to assist the host governments and the American carriers.

The Commission has found that the state of international aviation security has improved since the destruction of Pan Am 103. The level

of security awareness in the international aviation community has increased dramatically. Many governments have taken steps to improve air carrier and airport security. The process of limiting the vulnerabilities and ensuring consistent security wherever Americans travel is only in the early stages. The Commissioners believe the legacy of the Pan Am 103 tragedy should be a firm resolve around the world to prevent a similar incident. In that context, broad and major improvements to the aviation security system have just begun. The Commission believes that the United States must take the lead in this initiative.

Recommendations

1. The lead negotiating role in aviation security should be shifted from U.S. carriers to the Department of State, which is the appropriate entity to deal with foreign governments, to assure that all airlines are treated equally by these governments. The Department of Transportation should have a strong supporting role. Further, new requirements should be negotiated before they are imposed on carriers, rather than after the carriers are required to implement them.

2. The United States should continue to press vigorously for security improvements through the Foreign Airport Security Act and the Foreign Airport Assessment Program.

3. The United States should rely on bilateral agreements to achieve aviation security objectives with foreign governments. These should aim at providing a level of security significantly higher than that currently provided by either the United States or the host government. The United States must strike a strong negotiating posture, with the goal of assuring that U.S. passengers, whether they fly on U.S. or foreign airlines, are afforded the same level of protection. Specifically, bilaterals must address the issues of testing foreign security procedures, access to the entire airport, adequate background checks of security employees, and must assure the United States a role in oversight of those procedures.

4. The State Department should create the position of Coordinator for International Aviation Security. The President should nominate

the holder of that position for the rank of Ambassador while serving in that position.

5. The U.S. should continue to work through ICAO to improve aviation security internationally.

6. The FAA should complement its foreign assessment program with an active formal technical assistance program to provide aviation security help to countries upon request. Since U.S. aviation security resources are not adequate to meet the world need, the United States should be in a position to concentrate its efforts wherever the threat is greatest.

7. The Summit Seven should amend the Bonn Declaration to extend sanctions for all terrorist acts, including attacks against airports and airline ticket offices.

Domestic Security

The Regulatory Approach to Domestic Security

Working with the air carriers and airport operators, FAA has established domestic security requirements that primarily address hijacking, still viewed by the agency as the principal threat to domestic flights. FAA's approach is based on interrelated security measures which are intentionally redundant. If any one security measure fails, another will support or replace it, according to this theory. For example, fencing and personnel identification systems alone are insufficient security for the most sensitive airport areas, but the addition of lighting, law enforcement personnel, and vigilant aviation employees produce a more complete security system.

The air carriers are responsible for the most visible security measures—screening passengers with metal detectors and X-raying their carry-on articles. Air carriers have generally elected to contract with private security firms to perform this function. Nevertheless, the air carrier is held accountable by FAA for the effectiveness of the screening operation.

The airport operator is charged with providing a secure operating environment for the air carrier. To achieve this, FAA has established security requirements for ensuring (1) that the law enforcement officials respond to various security threats; (2) that physical security such as airport perimeter fencing be provided; and (3)

that access to operations areas (taxiway, jetway, etc.) is restricted.

Assessing the Threat

The FAA's view of the nature of the threat to domestic flights has not changed for almost two decades. In the agency's most recent report to Congress on the civil aviation security program, filed after the bombing of Pan Am Flight 103, FAA stated that "American interests also continue to be targeted by terrorist organizations and those countries supporting international terrorist activities." However, FAA makes clear that it views the terrorism problem as restricted to the international arena. FAA has said that at domestic airports, efforts will continue to focus on the hijacking threat, while research and development will emphasize improved passenger and baggage screening equipment.⁸

Yet, the FBI has informed the Commission that, while terrorist incidents in the United States have declined since 1986, the threat of terrorism in the United States does exist. Included in this threat are potential attacks against the civil aviation industry in the United States. The Commission finds this conflict in views of the potential threat for domestic airports to be a major concern that cannot be ignored. As will be discussed in Chapter 5, a joint FAA-FBI vulnerability assessment of domestic airports is planned.

The Commission believes strongly that such assessments are critical to ensure that the security is adequate to meet the current threat and that contingency plans are developed to address potential vulnerabilities as changes in the threat warrant, including the need for new technology.



Congested airports across the country compound security problems.

Recommendations

1. The Commission recommends that the FAA seek the assistance of the FBI in making a thorough assessment of the current and potential threat to the domestic air transportation system.

2. The Commission further recommends that FAA initiate immediately the planning and analysis necessary to phase additional security measures into the domestic system over time.

Airports

Operations

In the United States, the federal government has a relatively small operational role in air carrier and airport security. The domestic system relies on the FAA to set standards and provide guidance, the airport to ensure a safe environment, and the air carrier to secure passengers, baggage and cargo entering the aircraft. The operational role of the FAA in airport security is limited to the dissemination of intelligence and threat information.

National attention focused on aviation security in the 1960s as a consequence of a rash of aircraft hijackings. The industry responded with air carrier screening of passengers to detect hijacker weapons. When hijackings continued, airport operators were given the responsibility to support the screening for weapons with law enforcement officers. The division of responsibility today for security at U.S. airports is virtually unchanged from the early hijacking days.

The FAA issues broad general guidelines for airport security. Airports rely on individually developed security programs that are approved by the FAA. In contrast, all U.S. carriers comply with a single air carrier standard security program developed by the FAA. A result is that specific security measures vary from airport to airport. A 1987 Department of Transportation Task Force recommended that the FAA develop a single standard airport security program, recognizing that while airports differ in many ways, an effective security program includes many of the same elements. The Commission supports the concept of a standard set

of minimum airport security measures applied nationwide.

The ownership and operation of domestic commercial airports varies considerably. Airports may be public or private, owned by the city, county, state, or specialized airport authority. The New York Port Authority, a bi-state commission, owns and operates the John F. Kennedy, La Guardia, and Newark airports. In Chicago, the largest commercial airports are city-owned. Baltimore-Washington International (BWI) Airport is state-owned. The Dallas-Fort Worth airport authority was created by a contractual agreement between the cities of Dallas and Fort Worth. McCarran International Airport in Las Vegas is county-operated. Until recently, National Airport and Dulles International airports serving Washington, D.C., were federally-owned and operated.

Airport ownership also shapes law enforcement support structure at airports. The primary organizations providing this support are state and local police forces, or special airport authority forces. Regardless of the entity providing the law enforcement support, the FAA requires that specific criteria be met to ensure a consistent level of service. Most airports also employ security forces responsible for the physical security within the airport. In some cases this function is provided by private contractors.

Physical security at many airports is further subdivided between the airport operator and the air carrier by exclusive area agreements. These agreements transfer to the carriers the responsibility for physical security in their operational areas leased from the airport, including air operations areas, cargo buildings, and airline spaces within the terminal building.

As many as 25 different organizations may share security responsibility at a single airport as a result of exclusive area agreements. With security responsibility so fragmented, it is difficult to maintain a consistent level of security throughout an airport. It also becomes more difficult to implement contingency plans in response to higher levels of threat, when coordination and cooperation is required of so many parties. Air carriers believe they are entitled to control their leased space and provide the ap-



Here, carry-on luggage is examined before a passenger clears the security check point.

appropriate security as long as the airlines comply with FAA regulations.

The Commission believes that security accountability at each domestic airport should rest with a single federal airport security manager, as detailed later in this Report.

Contingency Plans

The March 1987 Department of Transportation Task Force recommended that each airport develop a phased contingency alert program that could be implemented at different levels of potential terrorist or criminal threats.⁹ In July 1987, the FAA issued guidance to its field offices requiring that each airport security program contain contingency plans. Later guidance listed topics for inclusion in the plans

without requiring specific measures to address particular threats.

A subsequent report by the Department of Transportation in January 1989 revealed that the contingency plans it reviewed (1) lacked specificity; (2) did not adequately fix roles and responsibility; (3) failed to establish adequate coordination among airport tenants; and (4) did not define the role of the FAA in determining the threat level.¹⁰ The FAA has worked to improve the quality of the plans, focusing on the largest domestic airports. Yet the responsibilities of air carriers and other airport tenants are still not normally defined in the plans.

Sandia National Laboratories is also evaluating contingency plans as part of a larger study of aviation security at Baltimore-Washington International Airport. The Commission be-

lieves that contingency plans are a critical part of domestic airport security strategy, requiring additional emphasis.

Background Checks

On November 26, 1985, the FAA began a program to require that all airport security employers conduct employment background checks for all employees who have unescorted access to secure areas. The checks verified employment history for the preceding five years. This emergency security program was enacted by Congress in 1985 after members of the CBS "60 Minutes" staff were hired to work in airport security without background checks. A "60 Minutes" followup six months later, after FAA action to correct the problem, found that little had changed.

While the FAA requires the five-year employment checks, it is the employers who conduct and certify the checks. No further clearance is required. FAA issues no guidance on what constitutes an acceptable employment history. Criminal record checks are not required. In some states, such background checks are prohibited in determining employment suitability. Other states allow only law enforcement authorities to request or conduct the checks. These background check limitations enable employees to have access to airport secure areas without the FAA, the airport operator, or the air carriers knowing if they pose a security risk. The Commission was told of cases where employees with criminal records have been given unaccompanied access to the secure areas of airports. The Commission believes that the case for mandatory criminal record checks for airport employees is at least as compelling as for employees in industries such as securities or banking, where criminal record checks are required. The Commission believes that airline employees should be similarly checked.

DOT submitted to Congress in 1986 and again in 1988 legislation to allow FAA to require criminal history background checks and to prohibit access to aircraft or to secured areas to persons convicted for felonies or certain other crimes. Congress has not acted on the proposed legislation, which will probably be re-submitted during the current session.

There is a consensus among the airport operators, air carriers, law enforcement officials and the FAA that federal legislation is needed

to require a criminal record check for employment. The cost of criminal record checks is small. They are performed by the FBI, on a cost reimbursable basis, for a fee of \$20 per employee. The Commission believes that criminal background checks should be conducted for all prospective airport employees and urges Congressional action.

Airport Expansion

DOT Secretary Skinner has stated that the domestic airport system soon will undergo a major expansion. It is essential that security features be incorporated into all new airport designs. While individual airport design and construction projects may include certain security features, currently there are no FAA security design standards for new airport construction, and there is no formal process within the FAA for review of airport facility designs by the FAA security office. The Commission believes that FAA should determine the security features necessary for new airport facilities and ensure that such features are included in design and construction.

Access Control

The major concern at airports is a lack of controls over those having access to aircraft. For example, caterers (those delivering food and drink to an aircraft) are allowed access to the aircraft with few security checks. Cleaning crews also enter aircraft without having their equipment, such as buckets and vacuum cleaners, screened or examined. While procedures require that employees challenge anyone not wearing proper identification in the Air Operations Area (AOA), these procedures are of limited effectiveness. Various methods to encourage more vigorous challenging have been adopted, including a "bounty" paid to employees for challenging unauthorized persons.

In its January 1989 report, the DOT Safety Review Task Force found that its investigators were able to gain access to the AOA at several airports without being challenged—a problem the Task Force also had reported in 1986. Airport operators and air carrier representatives confirmed to the Commission that these conditions still exist.

FAA inspection results point to access control as the most frequent security violation at

airports. Over the last four years, 80 to 85 percent of all airport violations have been access-related. The inspection results obviously mirror the inspection methodology, which concentrates heavily on access issues. Thirty-five of 64 line items on the inspection check list are access-related. FAA oversight should focus on the adequacy of contingency plans and the capability to address a higher threat level.

On December 7, 1987, Pacific Southwest Airlines Flight 1771, en route from Los Angeles to San Francisco, crashed after a recently dismissed company employee shot the pilot and crew. All 43 passengers and crew members perished. The disgruntled former employee reportedly brought the weapon aboard after bypassing pre-board screening by showing company identification.

In response to the incident, the FAA moved to amend domestic airport security programs to require that no one entering a secure airport area could bypass the security checkpoints. The FAA proposed access control rule is designed to restrict access to the airport operations area to only authorized persons.¹¹ The proposal further required that the security program distinguish those who have access to all restricted airport areas from those who have access to limited airport areas.

The proposed rule did not specify a computer access card system, although it envisioned such a system at most primary airports. Full system implementation was to be required within six months of system approval by the FAA.

The proposed rule brought an outcry about virtually every provision from the aviation industry. Questions were raised about the degree of the threat being countered, the evidence supporting the need for such security measures, the implementation schedule, the estimated cost, the funding, the degree of additional security to be gained, and the expertise within the industry and the FAA to evaluate such systems. Nearly every respondent objected to the proposed rule. The industry demanded that automated access control systems be pilot-tested at several airports.

On January 6, 1989, two weeks after the Pan Am 103 tragedy, the FAA determined that the proposed rule should be immediately approved and implemented without pilot tests and with only minor modifications. The aviation industry

had raised sufficient concern about the final rule that the Senate Appropriations Committee included, in the FY 1990 Department of Transportation Appropriations, language requiring the FAA to conduct pilot programs at four airports.

To date, 66 airports' programs have been approved. The FAA believes that pilot testing is no longer necessary, and would unnecessarily delay program implementation, now that there are numerous potential model programs for airport operators to follow.

The airports believe the requirement should carry with it the necessary additional federal funding. The accelerated implementation schedule of the new access rule will place a significant strain on available federal resources.

Cost estimates for the new security measures vary widely. The FAA estimated the total cost of the system nationwide at about \$170 million in 1987 dollars when the proposed rule was announced. Airport industry organizations estimate the cost of installing the systems at \$1 billion.

While there is a general recognition that an automated access control system can be a good management information tool, there is no consensus on how much security is enhanced by such a system. Even with a sophisticated access control system, security will still depend on human factors and the procedures for issue and return of employee access cards. The Commission believes that a better approach would place more emphasis on controls over access by airport employees, combined with stricter FAA enforcement. Meanwhile, automated access control systems would be tested, debugged, and refined at selected airports.

Department of Transportation Reports

The Secretary of Transportation, in February 1986, directed a Safety Review Task Force to conduct a comprehensive review of domestic aviation security. The year and a half long study issued a series of reports that made more than 70 recommendations. In January 1988, the DOT Office of Safety Program Review initiated a follow-up review, at the request of the Secretary, to assess the status of previous recommendations and analyze existing security. It made 37 additional recommendations, and to date 22 of the more than 100 recommendations have

been fully implemented. The majority of the remaining recommendations are to be addressed in the rewrite of the FAA regulations governing airports and air carriers. The Commission supports the recommendations of the Task Force and the Office of Safety Program Review and believes they should be implemented expeditiously.

The BWI Study

The FAA is currently conducting with Sandia National Laboratories an important security demonstration project at Baltimore-Washington International Airport. The project seeks to design an integrated security system that provides (1) detection, assessment, and effective threat response; (2) continuous protection against higher level threats; and (3) contingency measures to protect against escalating terrorist threat levels. Sandia is assessing security throughout the airport including concourses, screening points, ramps, baggage handling areas and airport access roads. The project is also weighing the costs and benefits of upgraded security measures in an operating environment. The Commission believes that more research of this nature is necessary to advance the state of aviation security. The Commission strongly supports the FAA security demonstration project at BWI.

Conclusions

The existing FAA approach to domestic security under ordinary circumstances is to maintain a low level of security consistent with the assessed threat and to rely on well-developed contingency plans to upgrade security when the threat dictates. This approach minimizes the disruption of domestic operations. To be effective, it is essential that airports, air carriers and other airport tenants be capable of moving together immediately to a high level of security, based on well-conceived contingency plans. The most recent Secretary of Transportation report on domestic security indicates that serious problems persist in contingency planning.

The airports also need more information to limit the threat from within the ranks of their own workers. Criminal record checks must be required for all airport employees, and employment should be denied where necessary.

As the FAA looks to the future, airport expansion should factor security needs into the design and construction of facilities. The FAA Civil Aviation Security Office should have a formal role in the approval of airport facilities' designs.

The most critical elements in aviation security will continue to be people and the procedures which guide them. Effective security can best be achieved with a single strong manager who directs a highly-integrated system, staffed by well-trained, motivated workers. To that end, qualification and training standards for airport personnel are crucial.

Recommendations

1. The FAA should take the necessary action to clearly define responsibilities under exclusive area agreements and contingency plans to ensure that existing problems are corrected and the contingent security system is capable of meeting the specified threat levels.

2. The Congress should require criminal record checks for all airport employees. The legislation should identify certain criminal records that indicate a potential security risk and enable airport operators to deny employment on that basis.

3. The FAA should determine the security features necessary for new airport facilities and ensure that such features are included in airport facility design and construction.

4. The Commission endorses the recommendations of the Office of the Secretary of Transportation Office of Safety Review Task Force and recommends full implementation expeditiously.

Air Carriers

In the United States, the threat is deemed to be much less than that faced in certain foreign airports. Security requirements for the carriers differ accordingly. Nevertheless, the singular purpose of the air carrier security program remains the same: to protect the traveling public from aircraft hijacking, sabotage or other criminal acts.¹²

A total of 119 U.S. scheduled and public charter air carriers of various sizes are required by the FAA to provide security. Each of these



Baggage, cargo and mail security is a critical component of a comprehensive aviation security plan.

carriers has adopted a standard security program developed by FAA in consultation with the air carrier industry. Therefore, each carrier must implement a similar set of security procedures at its operating stations.¹³ In addition, 135 foreign air carriers operating into and from the United States must have security programs for those flights that are acceptable to the FAA.¹⁴

Organizational Structure of U.S. Carriers

The placement of the security function varies within the corporate structures of U.S. airlines. Typically, security is a stand-alone function or separate office several rungs down the corporate ladder. The security office usually reports to a vice president, who reports to the Chief

Executive Officer and/or Chairman of the Board. Since security requirements can have a substantial impact on operations, including flight schedules and passenger processing times, security personnel are often responsible to operations officials.¹⁵

The responsibilities of an airline corporate security office usually include interpreting FAA security requirements, setting policies and procedures for compliance by the airlines, auditing and inspecting the security operations and representing the carrier in security-related matters. The airline security office also is responsible for other security matters such as theft and fraud. All air carriers queried by the Commission stated that security has high priority within their organizations.¹⁶

Airline security at domestic airports is typically contracted out to private firms which provide the personnel and training to operate the passenger screening check-points.¹⁷ The federal government purchased the original X-ray equipment for screening in the 1970s. Air carriers have since upgraded that equipment at their own expense. Moreover, an impending change to improve weapons detection capabilities may require the replacement of much of today's passenger screening equipment, according to an FAA security official.

Most carriers originally elected to contract out for security because the initial screening of passengers was conducted in the various concourses rather than at the gates. Since concourses are used by passengers of different air carriers, the carriers often found it practical to hire third parties to serve them all and to share the costs. This approach has evolved to the point where one air carrier,¹⁸ has contracts with 30 private security companies at the various airports and concourses where the carrier has primary responsibility for security.

Security Responsibilities

The air carrier's local station manager is typically responsible for all operational activities at the airport, and exercises oversight over day-to-day activities of the security contractor.¹⁹

The air carriers share security responsibilities with the airport operator. The airport operator is responsible for securing access to the Air Operations Area, controlling the movement of persons and vehicles on the AOA, and providing the general law enforcement response to any security breaches or problems. The air carriers are generally responsible for screening of passengers and carry-on baggage, including training and testing of persons responsible for the screening; securing the aircraft against the introduction of any explosive or incendiary devices; monitoring and securing all sterile areas under carriers' control, and controlling the handling and loading of baggage and cargo. For the domestic flights, there is no regular screening of checked baggage or cargo, catered food or other supplies placed on board.²⁰ In effect, FAA imposes no security controls on any items other than hand-carried baggage. The exception is hazardous cargo, for which special procedures are applied.

The responsibility for ensuring that all security requirements are monitored prior to each flight is the job of a carrier's Ground Security Coordinator (GSC). Security is only one part of the typical GSC's job, but those duties are extremely important to the traveling public's safety. The Commission has some concerns about the adequacy of FAA's requirements for GSC training and actual on-the-job activity. FAA requires the carriers to provide training in accordance with a course outline provided by FAA. The training requirements span nine major subject areas and 72 subtopics.²¹ Up to a quarter of the course may be presented in "home study media" materials and testing is left up to the carrier.

The FAA has not, in the Commission's view, set the minimum number of required training hours at an adequate level. A carrier can meet the FAA requirement by providing the 25 hours of initial training and six hours of annual recurrent training. The recurrent training is supposed to cover all of the topics.

Passenger and Carry-On Item Screening

The most visible aspect of domestic airline security is screening of passengers and carry-on items. For all practical purposes, the focus of the security procedures for domestic flights is to deter hijackings and has been so since their inception seventeen years ago. Aided substantially by the closing of Cuba as a safe harbor for hijackers, this emphasis has been successful.

The Air Transport Association reports that since the air carriers started screening passengers and their carry-on items in 1973, over 10 billion passengers and 11 billion carry-on items have gone through screening points. Forty-two thousand firearms have been detected. Obviously, as one carrier told the Commission, most persons found with weapons at screening points have no intention of hijacking a plane.²² Nonetheless, ATA refers to this security measure as the "first line of defense". It may, in fact, be the "last line of defense." If someone is able to defeat this security measure, that person can gain access to passengers, crew, and aircraft with relative ease.

FAA's testing of the effectiveness of the screening process—which utilizes X-ray machines to screen the carry-on items and magne-

tometers (metal detectors) which the passenger walks through—is relatively unsophisticated. The agency uses test weapons, such as three sticks of simulated dynamite, tied together with a large clock and attaching wires, to test the X-ray and the ability of the operator to detect a potentially lethal weapon. The test bomb is placed in a bag or briefcase with little effort to conceal or disguise it. The bag or briefcase is then taken by an FAA security inspector, posing as a passenger, to the screening point and submitted to the X-ray operators.

FAA inspection reports note that nationwide these screening systems are identifying test weapons about 90 per cent of the time. The system's performance has improved since 1987, when GAO noted the tests found an average detection rate of about 80 per cent (with a low at one location of 34 per cent).²³ Nevertheless, the FAA criteria for these most obvious weapons is 100 per cent detection. The DOT Task Force reported in January 1989 that while there had been improvement in the detection rates, "further improvements are still needed." This Commission concurs. In fact, the Commission observed firsthand how an FAA security inspector's "dynamite bomb" went undetected by a screening point even though it was thinly disguised in a briefcase with only a few sheets of paper.

For metal detectors, FAA's test calls for the equipment to alarm two of three times an FAA security inspector attempts to pass through with a test weapon. The inspector must carry the test weapon at a certain place on his or her body. Again, there is little attempt to disguise the weapon. The testing procedure permits a device to be returned to service even if it fails one out of three times to detect a simulated weapon carried in a vertical position at waist level.²⁴

In its latest report, the DOT Task Force noted that new X-ray equipment is available which can do a much more effective job of screening. Nevertheless, FAA has not required the air carriers to replace their outdated models with this new equipment.

Checked Baggage

At domestic airports, baggage may be checked either at curb-side or in the terminal. Once checked, the baggage must remain separate from the passengers. As a result, a person



Curbside check in is a great convenience for air travelers, but raises security concerns.

could check baggage with an explosive device for a specific flight and leave the airport while the baggage is loaded aboard.

The FAA has established a "profile" of a hypothetical passenger who could pose a potential security threat. If a passenger meets the profile, his or her baggage is to be subjected to additional security measures. The profile is based upon known characteristics of a potential bomber. Such controls are easily circumvented, however, through curb-side check-in. Moreover, even if the person fits the profile, if he or she produces an acceptable form of identification, such as a driver's license, the baggage is accepted without X-ray.

The Secretary of Transportation, in written testimony submitted to the Senate Appropriations Committee in March 1989, stated that if passenger/baggage reconciliation (making sure that a bag is not transported without the corresponding passenger on board) was required for domestic flights, delays at hub airports probably would paralyze the air transportation system. He said the current threat at U.S. airports does not warrant these measures for the 1.1 billion bags annually checked on domestic flights.

Bomb Threats

Air carriers have both major responsibilities and considerable discretion in dealing with bomb threats. In receiving bomb threats, the airlines are responsible for searching aircraft

and notifying pilots, the FAA, the FBI, other air carriers, the airport authority and law enforcement officials. However, the circumstances in which the carrier must report a threat immediately are extremely narrow. For example, an anonymous threat that, "There will be a bomb on one of your flights to New York this week," would not have to be reported immediately if the carrier had more than one flight from that airport.

Periodically (but unspecified by FAA), all threats not meeting the specific criteria for immediate reporting must be reported to FAA. The FAA, however, does not stipulate the conditions for informing passengers that a threat has been made against their intended flight. The standard FAA security program is silent on this subject.

FAA also considers the air carrier to be the "only appropriate party to determine whether inspection of an airplane or a ground facility is necessary" as the result of a bomb threat.²⁵ At one major domestic airport visited by the Commission staff during this inquiry, certain airport officials took issue with the FAA practice of entrusting broad powers and discretion with the private carriers in bomb threat incidents. These officials said the airport's public safety department personnel were better trained and equipped to conduct searches, handle suspicious parcels and take other steps to protect the public.

Conclusions

The Commission believes that FAA's training requirements for ground security coordinators need to be changed. Specifically, the prescribed minimum hours need to better reflect the amount of time that should reasonably be required to absorb the required material. The Commission also believes that FAA should develop its own test requirements for GSC's so their job knowledge can be checked systematically. Also, FAA should expedite its development of standard duties that GSC's should carry out for each flight.

The Commission also believes that the FAA needs to strengthen its requirements for air carrier operational testing of passenger screening devices being returned to service.

Effective security controls must also be developed and applied for those passengers who meet FAA's criteria for potential carriers of ex-

plosive devices in checked baggage for domestic flights.

The Commission believes the FAA has vested too much discretion in the carriers to decide whether to report bomb threats immediately, and to control searches of aircraft and other facilities in bomb threat cases. Searches of aircraft and other facilities for possible explosive devices should be controlled and carried out by official public authorities.

Recommendations

1. The Commission recommends that the FAA eliminate the discretion afforded private carriers for reporting bomb threats and searches of aircraft and facilities, and require the immediate reporting of all threats to FAA, airport and public safety authorities, and recognize that public safety authorities have the responsibility for deciding whether and how searches should be conducted.

2. The FAA should change the minimum training requirements for ground security coordinators so that minimum training periods are in line with the amount of material that has to be covered.

3. The FAA should establish and apply standardized testing requirements for ground security coordinators and expedite the development of standards for actions to be taken prior to each flight.

4. The Commission recommends that the FAA require carriers to assure that all baggage associated with passengers who meet FAA's criteria as possibly having explosive devices in checked baggage, are subject to security controls and then are not carried unless the passenger is on board the aircraft.

Mail and Cargo Security

U.S. airlines carry mail and cargo on almost all of their passenger flights both within the continental United States and abroad. Pan Am 103 alone carried 43 bags of mail²⁶ and over 20 tons of cargo ranging from electrical transformers to sewing needles and comic books.²⁷ Yet the FAA requires strikingly different security standards for mail and cargo in comparison to those procedures imposed for passengers and their baggage.

Legal restrictions generally prevent mail on American passenger aircraft from being technologically screened for explosive or incendiary devices (absent special circumstances) by either the airlines or the United States Postal Service (USPS). Furthermore, the FAA has focused its regulatory efforts for air cargo away from the airports, on "indirect air carriers," business entities which ship parcels and cargo on the airlines. Although the USPS is taking steps to improve the security of air mail, both the mail and cargo areas constitute a huge gap in the security umbrella for domestic and international flights.

Mail

Current Measures

Air mail is big business for the airlines. According to USPS figures, the Postal Service paid in excess of \$1 billion to air carriers in fiscal 1989 to carry mail.²⁸ Yet there is no regular, technological screening of domestic mail carried by commercial airlines. Carriers which contract with the USPS generally receive mail in bound bags with a marked destination. The airlines simply place the bags on the appropriate flights without any further examination. All letter mail and parcels can be sent air mail simply by stamping the items with the proper postage and depositing them in drop boxes.

The USPS uses commercial carriers exclusively for its international mail shipments, and uses American carriers whenever it can do so. Most incoming mail on American international flights is military mail from U.S. posts. Although technically an agent of the USPS, the Military Postal Service (MPS) has the authority and discretion to adopt special security measures for the mail it handles.

For legal reasons, the USPS has taken the position that general X-ray or other screening of mail "sealed against inspection" cannot be undertaken by the airlines without first obtaining a search warrant except in extraordinary circumstances. The MPS, however, has cabled instructions to military posts to allow the airlines to screen the military mail delivered to them when the carriers see fit. Northwest Airlines recently confirmed that it had begun screening all mail it carries into the United States from Frankfurt airport, most of it mili-

tary mail. Still, the number of instances worldwide where mail is screened are few and far between.

Legal Considerations

Federal law provides that all USPS regulations pertaining to air mail must be consistent with the Federal Aviation Act of 1958 and the rules and regulations promulgated under the Act. Nevertheless, the FAA has consistently relinquished to the USPS responsibility for air mail security. As Monte Belger, the FAA Associate Administrator with security responsibilities, testified before this Commission: "The Postal Service has authority and responsibility for the safety of the mail."²⁹

The USPS is required by law to "maintain one or more classes of mail for the transmission of letters sealed against inspection."³⁰ That statute also states that "no letter of such a class of domestic origin [those sealed against inspection] shall be opened except under authority of a search warrant authorized by law. . . ." USPS regulations also state that no person may "open, read, search, or divulge the contents of mail sealed against inspection . . ." without a warrant, unless extraordinary circumstances create a reasonable suspicion to an inspecting authority that a letter or parcel could be dangerous.³¹ Federal law also imposes a criminal penalty on anyone who delays the mailing of a letter or parcel "with design to obstruct the correspondence, or to pry into the business or secrets of another, or opens, secretes, embezzles, or destroys the same. . . ." ³² Accordingly, the FAA has not issued any regulations requiring the screening of air mail.

The FAA/USPS Memorandum of Understanding

One federal program to begin security screening of air mail parcels never got off the ground. On December 11, 1979, the FAA and the USPS entered into a Memorandum of Understanding (MOU) requiring all direct and indirect carriers, including USPS, to implement an air parcel security program with procedures to prevent, detect, and deter the introduction of any unauthorized explosive or incendiary device into air mail parcels.³³

Both the FAA and USPS have told the Commission, however, that the MOU never was workable and soon foundered.³⁴ This agreement resulted from pressure on FAA and USPS to do something after a mail bomb exploded aboard an American Airlines aircraft in 1979. The security program was apparently implemented in some fashion in about 40 cities, but was inherently flawed in that there were no controls on parcels placed in drop boxes. The USPS legal department also adhered to the position that the airlines could never screen the mail and that even USPS could screen sealed mail only under very limited circumstances. In sum, the MOU never was fully implemented and soon was disregarded by both parties.

Cargo

Air Carrier Standards

Air cargo also is big business for the airlines. The legal restraints to searching cargo are not as strict as those for mail. Nevertheless, the safety of air cargo on U.S. carriers depends more on good faith than on security procedures.

Domestic air cargo is placed on the carrier's next flight to its destination upon presentation of the appropriate identification or shipping documents. The shipper does not have to be "known" to the carrier.³⁵ Upon any suspicion, the cargo may be refused, held for 24 hours or inspected. The major carriers also have small parcel service systems for acceptance at the airport of certain smaller items for direct air transport. All carriers with such programs are required to keep a record identifying the shippers; parcels from unknown shippers may undergo further security controls.³⁶

As a practical matter, there are no real restrictions on who may ship domestic air cargo. In fact, an employee of one carrier told the Commission staff the airline will rent to anyone, known or unknown, the cargo containers that are loaded aboard its planes. Indirect carriers, or even individuals, can take the containers; load, seal, and return them to the carrier for transport. The carriers later told the Commission that this practice should be limited to known shippers.

At "high threat" airports overseas, air cargo for U.S. carriers is subject to security controls

unless it comes from established customers. The exception is cargo that has been out of possession of the originator for a certain period of time.³⁷

As long as the international cargo is coming from known shippers, therefore, the U.S. airlines are under no specific obligation to screen it. Moreover, even the tightest screening requirement may be satisfied merely by holding the shipment a certain length of time. Since cargo generally goes to consolidators at these airports before being delivered to the airlines, the carriers lose some physical control over what goes into their holds. At these foreign airports, items for the airlines' small parcel service systems must be physically searched or X-rayed.

Indirect Air Carrier Program

For domestic air cargo, the FAA has spared the airlines from the screening function in most instances and imposed the responsibility on the indirect air carriers and freight forwarders who deliver cargo to the airlines for transport.

An emergency rule for indirect air carriers was promulgated in 1979 after a bombing incident. An indirect air carrier is an entity which is in business, at least in part to accept and ship items on the commercial airlines. The rule focuses, therefore, on the point of acceptance of the cargo, rather than on the natural bottleneck occurring at the airport.

Codified as FAR Part 109,³⁸ the rule requires indirect air carriers to develop and file for FAA approval a security program based on the FAA-developed standard security program designed solely for Part 109 carriers.

This standard security program exempts from screening cargo from known shippers. FAA-developed selection criteria then are applied to the remaining cargo to determine what should be screened. The screening procedures, however, can vary from a physical inspection to an X-ray inspection or a mere identification check.³⁹

Ever since 1979, the FAA has had problems with the Part 109 air cargo security program. At this time, the FAA admittedly does not even know the identity of most of the indirect carriers. Part 109 carriers formerly were certificated by the Civil Aeronautics Board. When the CAB went out of existence, this oversight capacity

was lost.⁴⁰ In fact, the FAA believes there are from 4,000 to 6,000 indirect air carriers in operation and supposedly subject to the Part 109 security requirements.⁴¹ The last CAB listing included 1,600 indirect air carriers.⁴² FAA efforts to date have identified only 408 indirect carriers.⁴³ The FAA further admits that only random, spot-check inspection is feasible of even this limited number of indirect air carriers.⁴⁴

A package can be forwarded through several indirect air carriers before it reaches the airline. The last indirect carrier might be in perfect compliance with Part 109, inasmuch as it received the package from a known shipper. Yet, as the FAA's Director of Security, Raymond Salazar, testified to the Commission: "there is no way for the carrier to know" who the original shipper was or whether additional screening should have been, or was, imposed.⁴⁵

Additionally, unknown individuals conceivably could obtain pre-printed forms of known shippers or use fake identification. Indeed, the USPS testified before the Commission that any "point of acceptance" screening program is "so easily subject to circumvention as to be of little real benefit."⁴⁶

Finally, any shipper who wants to avoid the profile system prescribed for indirect carriers need only go direct to the airline at the airport. Since the carriers are not subject to Part 109, it is likely that the shipment will be accepted and loaded on showing of personal or company identification, without any screening. Even at a high threat international airport, the cargo might only be held for a certain period before being shipped.

Conclusions

Mail

Without first removing the legal hurdles to technological screening, no security control system can be established for air mail. The Commission believes the USPS itself can accomplish this change without legislation. USPS could define more narrowly the category of mail "sealed against inspection." Currently, the category includes different types of mail, some of which can weigh up to 70 pounds.⁴⁷

By limiting this category of mail to letters, or parcels containing written materials and weigh-

ing less than a specified limit, USPS could continue to protect the sender's privacy while removing from the "sealed" category those larger parcels with more capacity to contain devices sufficient to pose a threat to an aircraft. USPS or the airlines then could screen these parcels legally for explosive or incendiary devices.

The Commission recognizes the special status afforded mail and the right of privacy of those mailing the parcels. Thus, technology for screening any parcels should be as unobtrusive as possible and aimed specifically at detecting explosives.

USPS representatives acknowledged to this Commission that the screening of all mail outside the "sealed" category would be consistent, as a matter of policy with the X-raying of carry-on baggage at airports.⁴⁸ The USPS has proposed a regulatory change to enable the Chief Postal Inspector to call for X-raying in the event of a major threat.⁴⁹ Such a proposal is a step in the right direction, but the Commission believes a more far-reaching revision of USPS regulations is necessary to lay the groundwork for any systematic air mail screening procedures.

The air carriers, rather than the USPS or the MPS, should be initially responsible for the screening of mail. The airlines will already have the operational technology and can screen the mail along with baggage. USPS or MPS would have to purchase new screening equipment, retrofit facilities and train personnel in explosives detection. The airlines also are truly in a better position to screen all military mail from abroad and foreign mail entering the United States.

Since it is impractical and too costly to require that all non-sealed mail be screened at the outset of this new program, the initial screening should be limited to carrier operations at airports with extraordinary security measures in place. Thus, the entire security procedure at these airports would be consistent for all categories of entry to the aircraft, including passengers and checked baggage. Screening of non-sealed mail then should be extended to U.S. international flights; next to other flights which screen checked baggage.

Cargo

The Commission believes the FAA's Part 109 program should be replaced. The FAA cannot regulate indirect carriers when it cannot even identify them. This system can be easily circumvented by false identification or the use of multiple shippers. Accordingly, the FAA must concentrate cargo security efforts on airline cargo operations at the airports.

Ideally, the screening procedures for cargo should correspond closely with those for checked baggage, both domestically and internationally. To the extent that screening measures are undertaken, responsibility should remain with the airlines. Currently deployed security equipment and operational technology cannot screen large cargo items for explosives. The Commission urges the FAA to foster a research program to provide technological solutions necessary to screen bulk cargo, as well as checked baggage.

Until technological screening of cargo at the airports is a practical solution, interim measures must recognize that cargo poses as great a threat to an aircraft as checked baggage. Options could include an FAA requirement that air carriers train and assign security personnel to observe and spot inspect all cargo for explosives, and to secure cargo areas.

Recommendations

1. The USPS should effect a regulatory change redefining the category of mail "sealed against inspection" to include written materials and those parcels below a specific weight.

2. The air carriers must be initially responsible for any screening of air mail.

3. Any screening of mail should be instituted first at "extraordinary security measures" airports and then phased in at other airports as the threat warrants.

4. The FAA Part 109 program should be replaced. Instead, responsibility for the screening of cargo should rest with the air carriers and procedures should correspond closely with those measures pertaining to checked baggage.

5. The FAA should foster research and development of a technology designed to screen cargo for explosives; until this system is developed, interim screening measures must be instituted.

The Federal Aviation Administration

As we have previously discussed, significant aviation security problems exist both at domestic and foreign airports. These problems are long-standing and difficult to address. However, the consequences of not adequately addressing them are tragic.

The Federal Aviation Administration is the responsible governmental agency for providing solutions to these problems. The agency has not risen to the challenge. In this section of our report, the Commission details the factors contributing to this failure and offers a blueprint of specific actions to correct these problems. These proposed actions are designed to create an active—not reactive—FAA approach to security.

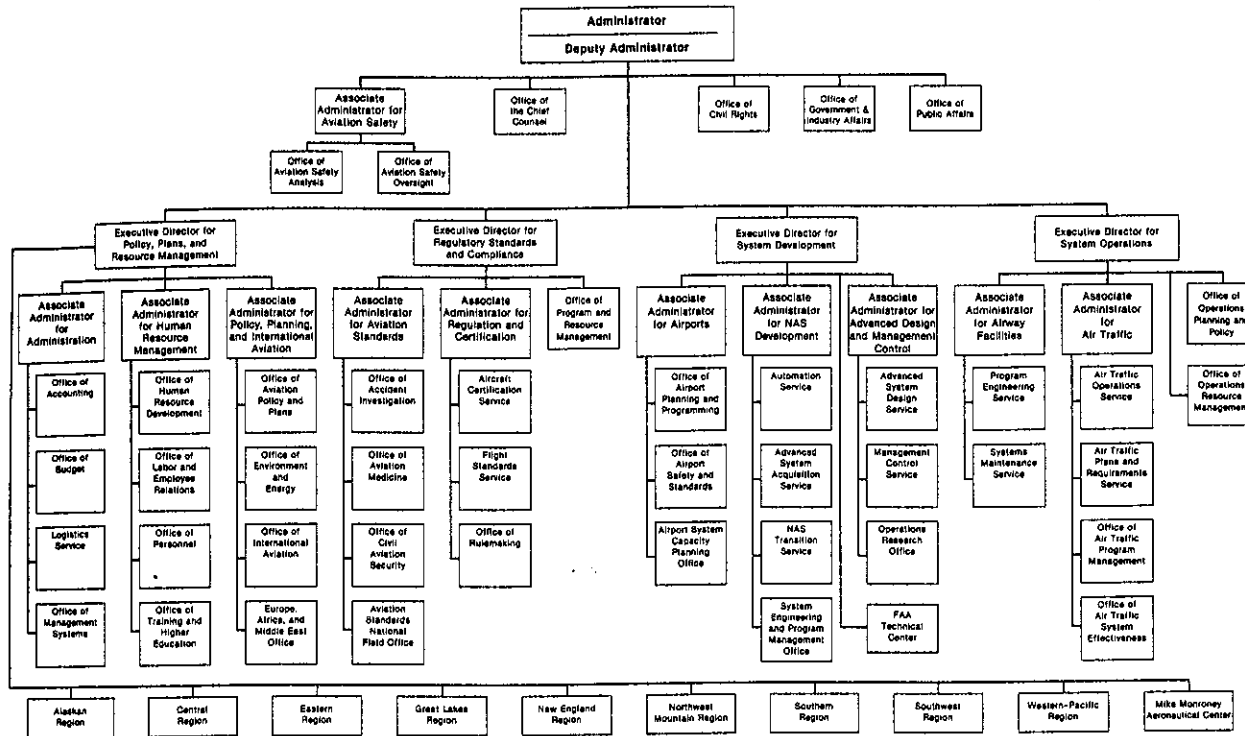
A Pattern of Reaction

Since the Pan Am 103 bombing, FAA's performance in carrying out its security responsibilities has been examined by several sources. Congressional hearings, audits, reviews and investigations have focused on the agency. All of these reviews have concluded that the agency is far too reactive to problems instead of anticipating them. This view was probably best expressed by Chairman Dante Fascell, in testimony before the Commission on March 9, 1990, when he stated, "The U.S. Government is playing catch-up ball with respect to aviation security rather than taking innovative steps to get ahead of the curve."⁵⁰ Indeed, the head of the FAA Office of Civil Aviation Security, in a speech before ATA in January 1990, acknowledged that FAA is a "reactive agency." He said the agency's approach to security is largely dictated by incidents and reaction to those incidents.

In the Commission's view, the FAA's reliance upon a reactive approach to aviation security issues results from several factors: a lack of visibility of the security function within the agency; a lack of an effective information base; insufficient staff resources for the security-related responsibilities; and a division of security responsibilities that leaves no one entity accountable.

Currently, FAA is reviewing its basic security requirements. Most of these requirements are

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about ten years old and grew out of specific incidents or events.

As noted earlier, in December 1987, a U.S. carrier flight was boarded by a fired employee who shot and killed the flight crew, causing the aircraft to crash and kill 43 passengers. The fired employee was able to bypass the screening point and board the aircraft with a weapon by using his employee identification card. Consequently, FAA amended its screening requirement to require that all persons, including carrier and airport employees, go through the screening points. In January 1989, FAA required that airports comply with new access control requirements as previously described. These actions also grew out of this incident.

The most recent security requirements resulted from the Pan Am 103 bombing. Subsequent to the bombing, FAA issued additional security requirements for U.S. carriers at selected high risk foreign airports, including 100 per cent screening of checked baggage, and a new question for screened passengers about any electronic devices they might be carrying. At the same time, the FAA required carriers to meet an explosive detection capability. The

agency also is proposing the assignment of additional security inspectors to Europe.

FAA's Inattention to Human Factors and Training

Effective implementation of security programs is necessarily dependent on adequate FAA guidance in selection of screeners and in their training, as well as on the importance which individual airlines place on security. FAA identifies in its security program the core requirements and guidance for the initial, recurrent, and on-the-job training of airline screening personnel at domestic airports. The quality of this training varies widely among the airlines. It also varies within an airline. Most American carriers provide far more training for security agents assigned to international departures compared with those responsible for domestic flights.

Each airline has adopted different approaches to carrying out procedures such as additional questioning of passengers, profile applications, and detection of explosives. Moreover, the FAA does not evaluate airline security

training at high-risk foreign airports. We found that one airline provides videotapes to instruct non-English speaking screeners at Frankfurt airport, but these tapes are in English and are apparently translated for the German-speaking screeners by a supervisor.

The importance of having a consistent set of training standards for required additional security measures at high-risk foreign airports was demonstrated by the FAA's Pan Am 103 investigation. The investigation suggested that the security deficiencies found could be connected to breakdowns in airline training. For example, the investigation found that Pan Am security personnel failed to screen 38 passengers at Heathrow airport to determine whether they should have received additional screening.

During testimony in September 1989, the GAO stated:

Despite additional security measures imposed following the loss of Pan Am Flight 103, FAA cannot be assured that currently required procedures are being properly carried out by airlines at designated high-risk foreign airports. FAA's investigation of Pan Am Flight 103 and subsequent FAA airline security inspections found deficiencies in the way airline security personnel were carrying out extra security measures. We believe these deficiencies occurred largely because FAA has not established in its security program minimum training requirements and standards for extra security measures required at high-risk overseas airports.⁵¹

All eight major air carriers responding to a Commission survey indicated that their security personnel are trained in the detection of explosive devices and materials.⁵² But the carriers provided little information on the nature and scope of the specialized training. Moreover, while procedures have been issued there are no associated training standards for this process.

Indeed, the Commission's own investigations at Baltimore-Washington International Airport disclosed a screener's failure to identify an obvious explosive device in a briefcase put through the standard X-ray machine. The screener was incapable of understanding ques-

tions posed to him in English concerning the extent of any training he may have received.

The Air Transport Association has recognized the need for improvement in the screening process. It encourages air carriers to conduct tests for the screeners on a regular basis. These tests use the identical testing objects used by the FAA inspectors. In 1989 there were 56,000 tests performed by the air carriers with a reported 96 per cent detection rate. In order to further improve on this performance, ATA has developed a profile on the attributes of a superior screener. This test instrument has 32 questions that can be administered and graded on-site.

ATA also developed a training course both for trainers of screeners and for the screeners themselves. Each training program consists of a lesson plan, the curricula and competency tests. ATA hopes that this effort will heighten and standardize training for all screeners. It is also promoting motivational concepts for carriers to recognize the "screener of the month" and to pay a bounty for each item of contraband detected.

Although FAA has reviewed the ATA training model and is considering making it part of the standard security program under Part 108, the FAA has provided to the airlines and airports very little guidance and few standards for their use.

FAA has paid little attention to how to recruit, train and motivate a security work force, and to integrate that work force with modern technology to achieve a systems approach to security. At hearings before the Commission on February 2, 1990, it was again pointed out to FAA officials that study of the human factors in security was noticeably absent from the agency's research and development effort. The FAA Associate Administrator for Aviation Standards agreed, saying, "That is something we ought to be looking at."

The Commission strongly urges that this long overdue "look" be followed by positive action. The Commission believes that effective security screening requires well-trained people operating the best available equipment. The Commission is also concerned that FAA has failed to implement the 1989 DOT Safety Review Task Force recommendation on the human factors in aviation security.

A Lack of Clarity and Visibility

FAA's security regulations primarily set performance standards but do not prescribe how these standards should be met. The regulations require the air carriers and airports to submit proposed security plans, but say little about what should be in the plans. Rather, the FAA has developed a model plan, the Air Carrier Standard Security Plan, for air carriers and is considering developing a comparable plan for airports.

While both the safety and security functions of FAA use inspections as their primary enforcement tool, FAA's safety side collects data from the individual inspection reports in its Enforcement Information System, and carries out trend analysis to pinpoint pervasive safety problems. The FAA security function does not perform this type of data collection and problem analysis.

The FAA Office of Civil Aviation Security is one of five offices reporting to the Associate Administrator for Aviation Standards, who reports to the Executive Director for Regulatory Standards, who reports to the FAA Administrator, who reports to the Secretary of Transportation. In contrast, the FAA Associate Administrator for Safety reports directly to the Administrator.

While the Office of Civil Aviation Security has grown from about 200 persons in 1984 to over 550 currently and is projected to rise to 700 in 1991, the total resources committed to aviation security represent about one per cent of FAA's operational budget. FAA lacks enough security inspectors overseas to perform the required inspections of foreign airports and U.S. carriers' operations at those airports. Consequently, the agency must augment its existing overseas staff with inspectors from the various security offices in the United States. This inefficient use of inspectors, many of whom are unfamiliar with the foreign airport operations, results in inconsistent inspections and reporting.

U.S. carriers operating overseas complain of inconsistent interpretation of FAA security requirements caused by constant change in inspectors and of being left to deal with host country officials by themselves. The carriers believe the FAA should have a continuing presence in major host countries to help resolve security-related problems. As one air carrier rep-

resentative testified before the Commission on April 4:

Airlines do not have the authority or the clout to negotiate with foreign governments about the implementation of security directives. When the FAA tells us to do one thing at a foreign airport and the foreign government tells us to do another, we are in an impossible situation. These differences need to be resolved with both governments at the table before we are ordered to proceed.⁵³

FAA procedures require that certain U.S. airports be inspected monthly. Inspectors find that as soon as they complete a required inspection, including the paperwork, they must start over again. The inspection itself follows a checklist of items with little interpretation. The inspectors complain that their role now is one of handing out violations, rather than actively seeking solutions.

At the Commission's March 9, 1990, hearing, Chairman Dante Fascell described FAA's approach to inspecting foreign airports as a "daily checklist mentality." He said that while FAA has conducted over 800 security assessments of some 200 foreign airports over the last four years, FAA inspectors continued to "demonstrate a lack of understanding and appreciation for the changing threat environment of individual foreign international airports and regions." He concluded that FAA must train its inspectors to perform better assessments of foreign airport vulnerabilities to terrorism.

FAA collects large quantities of data through its security inspections of most domestic airports and over 40 foreign ones. U.S. carriers with domestic and international operations are similarly inspected and assessed for security compliance. All of this data is provided to the FAA Office of Civil Aviation Security. However, that office lacks a centralized data base for the inspection information. The agency cannot, therefore, reliably identify trends and correct system-wide weaknesses before they result in tragedies.

The Office of Civil Aviation Security also lacks the staffing to properly evaluate the data

from inspections and perform system-wide analyses.

The question of the relative priority of security within FAA, given the agency's other responsibilities, is difficult to assess. Agency officials have maintained that security has always been a top priority. Yet it was not until 1990 that FAA formally identified security as one of the agency's top priorities—along with 22 other issues.

A Lack of Accountability

Security is a shared responsibility, both at U.S. and foreign airports. FAA sets the security requirements, inspects both air carriers and airport operators for compliance with the requirements, and proposes civil penalties for non-compliance. Implementation of this split responsibility results in a lack of clear accountability for security. For instance, when a passenger arrives at an airport, the first security encountered (i.e. fencing, terminal area, etc.) is the responsibility of the airport operator. Inside the terminal, the passenger encounters the next ring of security, namely the passenger screening and X-raying of passengers and their carry-on items—the responsibility of the air carriers, a function frequently carried out by contractor personnel. Once the passenger has passed through the screening checkpoint, responsibility for security reverts back to the airport operator. When the passenger enters the aircraft, the air carrier assumes responsibility for security again.

Moreover, each airport must provide law enforcement personnel to respond to security threats. That role can be filled by local or state police or by airport police with the power to arrest. Overseas, the local government provides the airport security while U.S. carriers must, at certain high risk airports, augment or supplement the host country security to meet FAA requirements.

This division of responsibility is an issue of continuing concern in seeking a consistent level of security performance and accountability. The results of this split responsibility were evident to the Commission staff in visiting various airports.

In its analysis of domestic airport security, a DOT Task Force reported that effective security requires coordination and consultation between FAA, the air carriers, and the airport op-

erators. The Task Force concluded that mechanisms "need to be developed to improve the process by which these parties are involved in security matters."

At a March 13, 1990, meeting of the Policy and Procedures Subcommittee of the FAA's Aviation Security Advisory Committee, the Subcommittee stressed the need to study who is responsible for security. This Subcommittee consists of representatives of air carriers, airport operators, trade organizations, and other aviation-related groups. Recently formed, the purpose of the group is to provide input to FAA management on the operational issues relating to aviation security. The Commission believes strongly that this group can and should play an important advisory role in shaping security policy and procedures that are effective in an airport environment. It is important to note that FAA's Office of Civil Aviation Security, also represented on the Subcommittee, responded that a current review of security requirements will include the question of roles in security responsibility.

Conclusions

Domestic Airports are Vulnerable

Despite the current security requirements at the nation's airports, potential vulnerabilities exist. As a former head of law enforcement for one of the country's largest airports said: "FAA should move in the direction of closing the gaps now, not wait until we have a significant domestic problem."

The Commission is concerned over the minimal security controls for the shipping of cargo by aircraft and the absence of controls for mail; the lack of controls over checked baggage; limited employment checks for airport employees; limited control over those gaining access to an aircraft, such as caterers and cleaning crews; and the limited effectiveness of screening passengers and their carry-on articles. These potential vulnerabilities are described in other sections of the Commission's Report. Both the General Accounting Office and the DOT Safety Review Task Force expressed concern over many of these vulnerabilities in a series of reports dating from 1986. GAO reported that it found at six major U.S. airports, "weaknesses [that] could have resulted in the access of un-

authorized persons to the airport operations areas".⁵⁴

A combination of improved technology, like the latest X-ray equipment and improved skills of the screener personnel, is needed to meet the FAA performance requirement of 100 per cent detection of weapons. More importantly, the combination will provide a higher degree of confidence that those who would attempt to commit violence against civil aviation will fail.

Current FAA testing does not give an accurate picture of the effectiveness of the security systems. Use of test weapons with little or no attempt to disguise or hide them is of little practical value when considering the types of sophisticated weapons available today and the ease with which they can be hidden. Yet, security workers are trained only in the detection of these relatively unsophisticated test weapons. Consequently, the tests results do not truly reflect the health of the aviation security system.

Working with the FBI, the FAA must perform individual airport threat and vulnerability assessments. This information is critical to designing security programs to address the current threat and providing the basis for improved security if the threat changes.

FAA must seek remedies to the vulnerabilities described in this report. Working with the air carriers and airport operators, FAA needs to develop a systems approach to security that integrates well-trained people with effective technology. The Commission recognizes that FAA has launched a pilot project to examine the application of new security technologies. The Commission recommends that this project include the following areas, to achieve an integrated systems approach to security:

1. Controls over checked baggage. Some air carriers have adapted technology to code baggage for electronic direction and routing to the correct destination. FAA needs to develop and expand this technology toward achieving a workable, electronically controlled and economically feasible passenger/baggage reconciliation system.

2. Controls over those persons with access to aircraft, including caterers and cleaning crews.

3. Improved testing of security systems with modern test weapons and a more realistic effort to disguise them. The testing standard for magnetometers should be strengthened.

4. Use of the most modern X-ray equipment for the screening of passengers and their carry-on luggage.

FAA must also lead in stressing the role of human factors in the security equation. This includes working with the aviation community to implement the newly adopted hiring and training standards, and assessing their impact on the performance of the security work force. The Commission recommends that the integration of people and technology into a systems approach to security be part of FAA's pilot project.

Another area which the Commission believes warrants studying now for future use is the pre-screening of passengers. The pilot project offers an excellent test bed for evaluating the feasibility of this concept.

Congress should provide DOT with the legal authority to require criminal background checks for prospective workers at airports.

FAA Fails to Plan

The Commission was charged with assessing the adequacy of current aviation security policies and procedures to provide for a safe aviation system. FAA is the agency responsible for developing those policies and ensuring compliance with them.

The Commission finds that the agency's senior security managers have not provided the leadership or oversight to effectively carry-out that mission. Furthermore, FAA's organizational structure for security failed to facilitate the timely exchange of information and guidance from headquarters to the field and from the field to headquarters. The Commission also believes that FAA is not making effective use of its field resources, a valuable asset in addressing the ever changing day-to-day security problems.

The agency must be ahead of potential problems rather than reacting to them. The FAA has not done so. Aviation security must be recognized as a top priority. The necessary human and financial resources must be committed to

supporting aviation security as a top priority. The analysis of security-related data must go hand in hand with the decision-making process. Finally, responsibility for security must be clearly identified and clear lines of accountability established.

A Blueprint for Improvement

The Commission recommends a series of significant actions designed to bring about an active approach to aviation security. These recommendations address the need to raise security to a senior level of attention by elevating it within the FAA, and by establishing an office within the Department of Transportation to address security and intelligence on a national level.

First, to ensure that security receives top management attention, the FAA Administrator should establish an office reporting directly to him which will have as its primary functions:

- day-to-day operational guidance to field security resources;
- pursuit of all security-related enforcement actions;
- research and development of security-related projects; and
- inspections of security systems.

This office will not have an intelligence function.

The Commission also recommends that the Secretary of Transportation appoint a Secretarial Assistant Secretary for Aviation Security and Intelligence as an interim step pending Congressional establishment of an Assistant Secretary of Transportation for Security and Intelligence. This position should be an appointment with tenure, to ensure continuity and a measure of independence, and should be filled with a person uniquely qualified by extensive experience and background in the intelligence field.

Because the threat of international terrorism has national importance, the Secretary should authorize this official to develop (1) an aviation transportation security policy; and (2) a long-term strategy for dealing with a potential increase in the threat. The Secretary would have the option to use this resource to develop similar strategies in transportation security on an inter-modal basis. This office will be responsi-

ble for developing an aviation security program based on a systems approach to security.

This office will also have the responsibility for the intelligence function. As with security, the Secretary would decide whether to establish this function for all modes. The office must establish strong working relations with the intelligence community at the highest level. Moving this function to DOT will help to assure that security field managers receive all pertinent threat information. The office must ensure the timely and complete communication of intelligence data to the field managers, as well as to the FAA Office of Civil Aviation Security, as required. The Commission is also recommending in Chapter 5 the designation by the Director of Central Intelligence of one or more intelligence officers to serve in this office.

This new office would evaluate trends in security and report to both the Secretary and to the Congress on the health of the aviation security system. It would receive the results of all FAA security inspections and would have the authority and discretion to perform its own inspections.

To ensure the proper commitment of resources the Commission recommends that the new office within DOT be fully staffed, and the overseas security offices and liaison positions be filled to authorized capacity. These positions will report directly to the FAA office of security. Therefore, the Commission recommends that the FAA Administrator abolish the security function in the Brussels office and reassign these resources to positions at high risk airports overseas. It is recognized that administrative support for the airport security offices will be needed, and this need can best be met by the continued support of the Brussels office.

To ensure accountability, a clear line of responsibility for security must be established. Since the federal government is ultimately responsible for the safety and security of the traveling public, it must provide the leadership and take the responsibility for security at the airports. The Commission has wrestled with how to structure this federal role.

The Commission was advised repeatedly that the federal government must play a more active role in aviation security because the terrorist act is directed against the government, not the air carriers. At the Commission's April 4, 1990

hearing, representatives of several U.S. air carriers spoke with strong conviction on the need for federal leadership in aviation security. As the chairman of one major air carrier stated in his recommendations to the Commission: "Governments of all nations must accept and implement their direct responsibility for security, as distinguished from a passive, regulatory role."⁵⁵ The Commission agrees with this premise.

With this greater responsibility and accountability for aviation security must also go the necessary authority to carry it out. There is currently a strong core of hard-working, experienced FAA personnel in the field. Therefore, the Commission recommends that existing FAA resources in place at the Nation's major domestic airports, as well as overseas become the accountable entity for security—the federal security manager.

Specifically, the federal security manager should have the ultimate responsibility for security. These officials would work with the air carriers and airport operators in designing one security plan for each airport, based upon the known and potential threat. This plan will identify the role and responsibilities of the air carriers, the airport operator, and the local law enforcement participation in terms of what each will do, how they will do it, and what resources will be committed to security, including the qualifications of the security personnel. The federal manager must approve this plan.

Furthermore, the federal security manager will oversee air carrier and airport operators in the implementation of this plan. This will include requiring the re-direction of air carrier or airport security resources should the federal manager decide that additional security resources are needed or that the resources are not being effectively used. The federal manager will retain the authority to initiate civil penalties for noncompliance with the security plan and be given the regulatory authority to change the plan to address any weaknesses or problem areas. As in the overseas operation, this manager will report directly to the FAA headquarters, eliminating the need for regional security management. Again, it is recognized that these field offices will need administrative support which can be met by the various FAA regional offices.

Additionally, the federal security manager will serve as the conduit for all aviation-related

intelligence. In this manner, security procedures and intelligence can be monitored and coordinated on a daily basis.

The Flight 103 story best illustrates the need for this presence. Such a federal security manager could have played a key role in Frankfurt and London, not only to ensure the proper measures were being implemented before the flight, but also to take immediate corrective action—long before the nine months it took for FAA and Pan Am to correct security problems identified by FAA.

The security systems would be tested and evaluated with the goal of making improvements. These tests also would be monitored and assessed by an outside source, such as the Inspector General, to ensure their objectivity and effectiveness.

The Commission recognizes limitations to the federal security manager's authority at foreign airports. It is expected, however, that the federal security manager will have responsibility for the U.S. carrier security operations and will work closely with the host country to ensure that adequate security support is provided to the U.S. carriers. The federal manager would also assist the State Department in any negotiations with the host country on aviation security-related matters.

The Commission recommends that this approach begin with the FAA resources already in place at the major airports. It is recognized that it is not feasible to station a federal security manager at all of the over 440 airports in the country. For the smaller airports, it is expected that the federal resources will review and approve an individual security plan for each of the smaller airports and inspect against that plan.

In summary, the federal security manager will work with the air carriers and airport operators to design and approve security systems, and oversee the carriers' and airport operators' implementation of the security systems to ensure compliance.

Recommendations

1. The FAA must begin to develop stronger security measures for controls over checked baggage, controls over persons with access to aircraft, testing of security systems, the use of

modern X-ray equipment, and the pre-screening of passengers.

2. The FAA must take the lead in stressing the role of human factors in the security equation; training must be improved.

3. The FAA Administrator should establish an office of security reporting directly to him.

4. The Secretary of Transportation should appoint, on an interim basis, a Secretarial Assistant Secretary for Aviation Security and Intelligence. The Secretary should obtain legislative authorization to appoint an Assistant Secretary of Transportation for Security and Intelligence and authorize this official to develop an aviation transportation security policy and long term strategy for dealing with a potential increase in the threat.

5. The Secretary of Transportation and the Administrator of FAA should ensure that the necessary resources are provided to fully staff the respective security offices, both at the headquarters and field levels.

6. The FAA resources currently in place at the major domestic airports, as well as overseas, should become the accountable entities for security—the federal security managers.

Endnotes

¹ ICAO's international aviation security standards and recommended practices are found in the "International Standards and Recommended Practices, Security, Safeguarding International Civil Aviation Against Acts of Unlawful Interference," Annex 17, to the Convention on International Civil Aviation," (4th edition).

² Prepared statement of Kenneth M. Mead, Commission Hearing, December 18, 1989, pp. 9-10 (hereinafter referred to as the "Mead Statement").

³ Testimony of Timothy R. Thornton, Commission Hearing, April 4, 1990, p. 203 (hereinafter referred to as the "Thornton Testimony").

⁴ Testimony of Charles A. Adams, Commission Hearing, April 4, 1990, p. 197.

⁵ The Commission asked the Department of Transportation's Office of Information Resources for statistics to determine whether safety or convenience considerations had affected travel on U.S. airlines. The statistics show that, of the 2.6 million U.S. citizens who traveled by air to the U.S. from Europe in the first half of 1988, 1.4 million flew on a U.S. carrier. Of the 2.8 million U.S. citizens who traveled by air to the U.S. from Europe in the first half of 1989, in the immediate aftermath of Pan Am 103, 1.5 million flew on U.S. carriers. In both periods, the percentage of Americans flying on U.S. carriers—53 percent—remained the same. These figures, however, do not distinguish among business and other fare classes.

⁶ Thornton Testimony, p. 203.

⁷ Prepared Statement of Rep. Dante Fascell, Commission Hearing, March 9, 1990, p. 5 (hereinafter referred to as the "Fascell Statement").

⁸ Report, "Semiannual Report to Congress on the Effectiveness of the Civil Aviation Security Program—July 1, 1988—De-

ember 31, 1988" Administrator, Federal Aviation Administration (hereinafter referred to as the "Semiannual Report"), p. 19.

⁹ Report of the Secretary's Safety Review Task Force on Domestic Aviation Security 1986-1987, U.S. Department of Transportation.

¹⁰ Office of Safety Program Review Report on the Federal Aviation Administration's Implementation of the Safety Review Task Force Recommendations on Domestic Aviation Security (January 1989).

¹¹ Department of Transportation, Federal Aviation Administration, 14 CFR Part 107, Access to Secure Areas of Airports; Final Rule.

¹² Air Carrier Standard Security Program (ACSSP), p. 10.

¹³ Semiannual Report, p. 6.

¹⁴ FAA Briefing Material, section I.D., Commission Hearing, December 18, 1989.

¹⁵ Air Carrier Survey responses to Commission Questionnaire (hereinafter referred to as the "Air Carrier Survey Responses").

¹⁶ Commission staff meeting with air carrier security officials and Air Transport Association of America representatives, (March 22, 1990).

¹⁷ Air Carrier Survey Responses.

¹⁸ *Id.*

¹⁹ Commission staff meeting with air carrier security officials and Air Transport Association of America representatives, (March 22, 1990).

²⁰ ACSSP, pp. 20, 70, and 80.

²¹ *Id.*, pp. 136-139a.

²² Air Carrier Survey Responses.

²³ General Accounting Office report entitled FAA Preboard Passenger Screening Test Results (GAO/RCED-87-125FS) dated April 1987.

²⁴ ACSSP, p. 41.

²⁵ *Id.*, p. 101.

²⁶ Telex from 7025 AIRPS KAPAUN to Executive Director Military PSTL SVC (January 1989).

²⁷ Interview with John Gilmour.

²⁸ Letter from Kenneth McFadden to Brian Hyland (January 5, 1990).

²⁹ Testimony of Monte Belger, Commission Hearing, December 18, 1989, p. 189.

³⁰ 39 U.S.C. 3263.

³¹ USPS Regulations, Part 115.4 and 115.5.

³² 18 U.S.C. 1702.

³³ Memorandum of Agreement Between the United States Postal Service and the Federal Aviation Administration, dated December 11, 1979.

³⁴ Prepared Statement of Raymond A. Salazar (March 23, 1990, Examination Under Oath); Prepared Statement of U.S. Postal Service (March 23, 1990, Examination Under Oath), p. 5.

³⁵ ACSSP, p. 90.

³⁶ *Id.*

³⁷ *Id.*, p. 150.

³⁸ 14 C.F.R. 109.

³⁹ Indirect Air Carrier Standard Security Program, Sec. II.

⁴⁰ Sworn Testimony of Raymond Salazar (March 23, 1990, Examination Under Oath) pp. 85-86.

⁴¹ *Id.*, p. 84.

⁴² *Id.*

⁴³ *Id.*, p. 88.

⁴⁴ *Id.*, pp. 90-94.

⁴⁵ *Id.*, p. 112.

⁴⁶ Written Testimony of U.S. Postal Service (March 23, 1990 Examination Under Oath) p. 6.

⁴⁷ *Id.*, Attachment A, p. 4.

⁴⁸ Sworn testimony of George C. Davis (March 23, 1990 Examination Under Oath) p. 42.

⁴⁹ Written Testimony of U.S. Postal Service (March 23, 1990 Examination Under Oath), Attachment A.

⁵⁰ Fascell Statement, p. 4.

⁵¹ Testimony of Victor Rezendes, before the House Government Operations Subcommittee on Government Activities and Transportation (September 27, 1989).

⁵² Air Carrier Survey Responses.

⁵³ Prepared Statement of Timothy R. Thornton, Commission Hearing, April 4, 1990, p. 4.

⁵⁴ General Accounting Office report entitled Corrective Actions Underway, but Better Inspection Guidance Needed (GAO/RCED—88-169), (August 1988).

⁵⁵ Prepared Statement of Thomas G. Plaskett, Commission Hearing, April 4, 1990, p. 6.

Research and Development

The increasing sophistication of terrorists, and their ability to exploit technological improvements, makes effective detection of weapons and explosive devices critical to aviation security. The challenge for the FAA has been to meet that sophistication and anticipate those improvements by the development of effective detection technologies.

Unfortunately, FAA has not met this challenge. The agency has not planned for the future, but rather has reacted to past events. Long lead times in technological development demand that the United States stay ahead of the threat rather than lag behind it. Only a massive effort now will bring our technology ahead of the destructive devices of terrorist adversaries.

Different techniques exist for the interdiction of explosives carried on passengers, in passenger baggage and in cargo. X-ray technology looks for a particular geometry of a bomb. Other technologies measure the physical or chemical properties of the contents of a bag without opening it, or sniff the vapors or particles emanating from the bag. Magnetometers are used to detect metal carried on passengers. The dominant technologies now employed are magnetometers to screen passengers and X-rays to screen baggage.

Since at least the early 1980s, however, terrorists have used plastic explosives as their preferred bomb material. Large quantities of semtex, a particularly powerful plastic explosive compound, are available to terrorists. The President of Czechoslovakia recently confirmed that his country under the previous regime had sold 1,000 tons of semtex to Libya,¹ and noted

that it takes only a very small amount of semtex to destroy a jumbo jet. With at least 1,000 tons of "untagged" semtex in the world, therefore, any international agreement to identify plastic explosives in the manufacturing process, even if enforceable, would offer only distant hope to air travelers.

Plastic explosives pose serious problems for detection. They have no metal content, which traditional detection devices can reliably discern.² Semtex bombs can be shaped to fit into items like radios, or formed into thin sheets in luggage, making detection even more difficult. In short, these weapons defy reliable detection by X-ray, or any other equipment now operational at airports.

Most of the latest devices for the effective detection of explosives measure the physical or chemical properties of a bag's contents to detect the presence of organic explosives containing nitrogen, such as semtex. The best known of these devices is the thermal neutron analysis (TNA) machine, which we discuss below in detail. Other nuclear-based technologies include time-of-flight, neutron-gamma techniques and resonance absorption analysis.

Since TNA equipment uses nuclear radiation, albeit in very small quantities, it is unsuitable for screening passengers or carry-on luggage. Vapor-detector technology is very sensitive and discriminating and may offer real promise for detecting plastic explosives concealed on people. To date none has been fully developed or tested to determine whether it can function within acceptable levels of speed and sensitivity at airports.

*Endnotes appear at end of chapter.

The Commission is also aware of a device that will soon become available commercially to identify explosives by spotting the lead and mercury used in detonators. Backscatter X-ray equipment, which promises to be far more discriminating than the standard X-ray equipment currently in use, is also nearing production. The potential of electromagnetic technologies for explosives detection is not yet known.

It is evident, therefore, that new technologies now being developed offer great promise of effective plastic bomb detection in luggage and on passengers, but more research must be performed. Until such technologies are scientifically tested, they are promises at best.

Cargo placed aboard an aircraft can theoretically be checked by a TNA device or by vapor-detection. In practice those technologies, however, have not been adapted to cargo screening. The FAA specifications for TNA equipment, for example, anticipate its use for suitcases no more than 16 inches wide, but not for the larger boxes, crates or containers used for cargo.

One foreign airline uses atmospheric-pressure chambers to examine all cargo carried on their planes. Within the chamber, the cargo is pressure "landed" as often as the flight will land, and it is "flown" to the altitude the plane will reach. This process might delay dispatch of cargo for a day, but it warrants serious attention. Unfortunately, the FAA has not adopted a program for serious screening of air cargo at airports. Therefore, neither industry nor the FAA has focused on techniques to screen cargo effectively for explosives.

Beginning in 1985, FAA greatly expanded its research in the threat posed by explosive devices carried or placed aboard aircraft. This shift occurred roughly 30 years after the first bombing of a U.S. commercial aircraft. In 1988, the FAA asked the National Academy of Sciences to evaluate its research programs in explosive-detection systems. The Academy's report has not yet been submitted.

FAA's major R&D effort to counter the explosive threat has been focused on development of a thermal neutron analysis machine. Science Applications International Corporation (SAIC) won an FAA design competition for TNA in 1985, and in 1988 was awarded an FAA production contract.³

At the time of the initial design competition and the subsequent production contract, the FAA required that any electronic detection system (EDS) machine be able to detect certain amounts of known explosive materials. The FAA set these amounts without any scientifically-based study. Rather, the specification represented the best guess of FAA personnel based on their accumulated experience with aviation bombs. No computer modeling was performed to arrive at this specification. No instrumented testing was performed on aircraft hulls to determine the minimum amount of explosive that would destroy given airplane models.

Accordingly, without first knowing what it really needed to guard against, the FAA launched a multi-million dollar development program that has dominated the R&D expenditures of the agency ever since. The FAA's specifications were, at best, of doubtful utility, for terrorists had been using plastic bombs at least since 1982 that are lighter than the weight specifications for detection of plastic explosives by an EDS machine.

Pan Am Flight 103 was destroyed in December 1988 by what almost all authorities agree was less than half the amount of plastic explosive material the TNA machine is expected to reliably detect. Nevertheless, the FAA still has not changed the specifications for explosive-detection devices in any respect. The TNA machine manufactured by SAIC remains the only machine qualified under this outdated standard.

Despite these drawbacks to TNA and the absence of any other approved explosive-detection system, FAA issued a rule effective October 5, 1989, permitting it to require U.S. air carriers to use explosive-detection systems to screen checked baggage for international flights. FAA intends to require deployment within the next two years of 150 TNA or other EDS systems at approximately 40 international airports (15 domestic airports and 25 abroad) served by U.S. carriers.⁴ FAA believes this action will create an incentive for manufacturers to make technological advances and produce smaller, less costly EDS equipment.⁵ FAA did not provide the Commission with any factual basis for that belief.

Absent the use of the TNA machine, the FAA Administrator states, there is no effective

check today for plastic explosives in baggage. Passenger safety, he argues, dictates deployment of TNA simply because it is the best available device.

The Commission disagrees. The inescapable fact is that today's TNA machines cannot, without an unacceptably high rate of false positive alarms, detect the amount of semtex widely believed to have blown up Pan Am 103.

The TNA machine produced under the SAIC contract, although never scientifically tested, was approved by the Administrator of FAA for use as meeting the specifications for the detection of plastic and other explosives in checked luggage. This was done without approval from FAA's Technical Center that the TNA met the EDS standards.

The FAA has purchased six of these machines, each combined with a special X-ray unit, called Xenis, to provide a dual-sensor system.⁶ The first machine has been installed at JFK International Airport, in New York City, and is being used by TWA to screen interline and intraline baggage for its international flights. Of the five additional machines, one is being installed in Miami International Airport, another is to be installed at Gatwick in London, and the FAA is negotiating for the placement of the additional three machines in U.S. and foreign airports.

The Commission notes that although the FAA's specification for an EDS system requires that it be fully automated, addition of the Xenis X-ray, approved by the FAA, requires operators to oversee the detection process using the SAIC TNA-Xenis equipment. The machine is not, therefore, fully automated.

The Commission viewed the TNA-Xenis machine in use in the TWA terminal area at JFK Airport on April 21, 1990. The Commission staff arranged to test the machine with three suitcases containing various amounts of semtex: an amount equal to the EDS specification; an amount equal to 60 per cent of that amount and an amount equal to 30 per cent of that amount. The amount of semtex believed to have destroyed Pan Am 103 was between 30 and 60 per cent of the EDS specification. Even though the TNA machine at JFK has been undergoing testing at JFK since mid-1989, this was the first time it had been tested at the airport using actual explosive material. Instead,

the testing has consisted of strapping simulated explosives onto the outside of suitcases.

The results of the Commission's tests were startling. Although calibrated to detect the EDS specification set out by the FAA, the TNA machine failed to detect the explosive in two out of 10 passes; it failed to detect the amount equal to 60 percent of the EDS specification seven out of eight passes; and it failed to detect 30 per cent of the EDS specification on any of eight passes.

The Commission learned from SAIC personnel present at the JFK test that the TNA-Xenis machine can usually detect semtex in the amounts set forth in the FAA rule 80 per cent of the time. False positives (bags that falsely alarm the system and need to be opened to be sure they do not contain explosives) are reduced by running bags through the system a second time. Thus, if 100 bags with explosives are tested, an 80 percent detection rate will let 20 bags go through undetected on the first pass. The second pass will permit an additional 16 bags to go through undetected (80 per cent of the remaining 80) for a 64 percent total detection rate.⁷

The SAIC equipment can apparently be adjusted to discern smaller quantities of plastic explosive, similar to the quantity thought to have been used to destroy Pan Am 103. But when it is so adjusted, the rate of false alarms rises sharply, far in excess of the acceptable false-alarm rate permitted under the FAA's EDS specifications. This false identification rate would require that a very large number of bags be opened in the presence of the passengers, a time-consuming task. This prospect argues for the placement of the TNA machines in the terminal area where passengers are processed, but because of its massive weight and size, and because it uses nuclear radiation, this might not always be feasible.

The FAA claims that the order requiring airlines to deploy EDS equipment will stimulate new technologies that may outperform the TNA.⁸ This belief appears to the Commission to be unfounded. To require airlines within the next two years to spend \$175,000,000 for the SAIC TNA-Xenis machines will inevitably stifle interest in developing new and superior technologies.

Until the threat is scientifically defined and machines capable of countering that threat are approved, the widespread deployment of the SAIC TNA machine would mislead the flying public by offering a false sense of protection. The facts argue strongly instead for the FAA to suspend the proposed SAIC TNA deployment by the carriers, to continue to improve the various technologies, and to quickly reach a valid scientific determination of the threat to be countered by such equipment.

In the interim, the FAA needs to bridge the gap between what can destroy aircraft and what can be reliably detected by addressing some fundamental questions. Can steps be taken to modify airframes to minimize the damage that would otherwise be caused by explosive devices? Should manufacturers be encouraged to develop hardened baggage containers for use on specific routes, and what material would be appropriate for that purpose? Should efforts be made to isolate and protect the "avionics" bay in aircraft to safeguard sensitive electronic and navigational equipment? Should all aircraft electronic equipment be specially located in the least vulnerable location of the cargo hold? The best and most inventive minds in science and industry need to answer these questions. While the Commission agrees that the nation cannot wait for the perfect detection device, the quest for it can at least start by asking the right questions.

FAA has used R&D funds in modest amounts for development of vapor-detection systems for screening passengers for concealed plastic explosives. A prototype machine was tested at Boston's Logan Airport in 1988 and proved unacceptably slow. Thus far, FAA has not approved any equipment to detect plastic explosives being carried on the person of a passenger, nor any equipment suitable for use at boarding gates to screen for plastic explosives in carry-on luggage.

After at least five years of experience in developing a device to detect plastic explosives used to destroy aircraft, the FAA is now asking industry and the academic community for research proposals for possible future development. The FAA for years did not have a continuing scientific and engineering advisory committee of independent, acknowledged experts to advise on its research programs.

As of the Commission's Hearing on April 4, 1990, no FAA detection equipment, including the current generation of TNA machines, had been tested by independent authorities under scientifically-developed testing protocols. Scientists told the Commission that such testing should become routine for FAA approval of any new equipment, including the TNA machines. To provide assurance of impartiality, the Commission was urged to recommend that the testing board should be independent of the FAA or DOT, and comprised of scientists and engineers without commercial interest in the results of any tests. The Commission believes that the establishment of such a board is vital.

The Commission concludes that the security of the nation and the traveling public have not been adequately served by the FAA's R&D activities. The FAA must give higher priority and allocate more federal funds to R&D. The FAA must seek independent scientific advice for its research and testing activities, while paying closer attention to the establishment of training standards for surveillance personnel. Until all of these efforts produce better detection equipment, manned by skilled personnel, multiple approaches to detection offer the best approach.

Recommendations

1. FAA should undertake a vigorous effort to marshal the necessary expertise to develop and test effective explosive-detection systems.

2. The FAA should establish an expert panel of persons from the national laboratories, other government agencies, academia and industry to oversee the design and development of this high priority initiative.

3. The FAA should undertake an intensive program of research and experimentation with the structure of aircraft to determine the kind and the minimum weight of explosives which must be detected by any technology.

4. In the interim, the requirement for widespread use of present TNA equipment should be deferred while the technology is developed further.

5. The FAA should conduct research to develop the means of minimizing airframe damage that may be caused by small amounts of explosives.

6. To avoid the undesirable reliance on any single commercial source for TNA equipment, the FAA must make every possible effort to encourage the development of additional sources.

7. FAA must think ahead and anticipate how to counter the next generation of terrorist weapons before they are used to kill innocent people.

Endnotes

¹ "The Washington Post" (March 23, 1990).

² Prepared Statement of Professor Lee Grodzins, Commission Hearing, February 2, 1990, pp. 11 and 14.

³ 55 Fed. Reg. 36938-36946 (September 5, 1989).

⁴ Testimony of Raymond Salazar, Director of FAA's Office of Civil Aviation Security, and Monte Belger, FAA's Associate Administrator for Aviation Standards, Commission Hearing, February 2, 1990, pp. 153-155, and 157-158.

⁵ Testimony of Admiral James B. Busey, Commission Hearing, April 4, 1990, pp. 361-62.

⁶ The first six TNA production units cost over \$1,000,000 each. The six X-ray units produced under the SAIC contract cost \$2,042,000. Installation, maintenance, and indemnification/insurance costs also add to the installed cost of the TNA, enhanced by the use of the Xenis X-ray devices.

⁷ At the lower weights of explosives, virtually all the bags will go though undetected.

⁸ Testimony of Monte Belger, Commission Hearing, February 2, 1990, pp. 157-158.

Intelligence

Introduction

If security measures at airports are the last line of defense against civil aviation terrorism, the first line of defense is the collection of accurate and timely intelligence concerning the intentions, capabilities and actions of terrorists before they reach the airport. An important part of the Commission's mission was to assess the effectiveness of intelligence on threats to civil aviation, and the coordination within and among U.S. Government agencies with intelligence responsibility for terrorist activities.

In particular, the Commission wanted to examine the effectiveness of the evaluation and dissemination of information concerning terrorism targeted at civil aviation, given the number of different agencies within the U.S. Government that have some interest in terrorist reporting. The Commission also sought to assess the level of priority accorded to civil aviation by the intelligence agencies dealing with terrorism.

The Commission sought and received the full cooperation of the intelligence and law enforcement communities within the United States. With the appropriate security clearances, the Commission staff was able to interview the intelligence officers with responsibility for counterterrorism and, in particular, those officers with any involvement with intelligence information about the destruction of Flight 103. The Commission reviewed classified intelligence information from 1988 that may have had a bearing upon terrorist activities targeted at civil aviation. The Commission interviewed U.S. intelligence officers at the headquarters

and field level. The Commission is satisfied that all those officers interviewed were forthcoming, as the President had directed in the Executive Order creating the Commission.

The Commission believes strongly that its findings and conclusions concerning the coordination and effectiveness of U.S. intelligence activities directed at terrorism should be available to the public. Therefore, the Commission chose not to submit this portion of its report in classified form, as permitted by the Executive Order.

The U.S. intelligence effort on terrorism targeted at civil aviation has two general components. The first encompasses the intelligence community members with responsibility for international activities, and the Federal Bureau of Investigation with comparable responsibility within the United States. The second component is the Intelligence Division of the FAA, which serves as the conduit for intelligence information collected and evaluated by the intelligence community and the FBI for dissemination to the private air carriers and/or airports that must ultimately take defensive action.

The Commission's mandate was to assess the coordination and evaluation of intelligence information collected, as well as the timeliness of dissemination of that information. The Commission's mandate did not include assessing the adequacy or effectiveness of intelligence collection efforts against terrorism.

The Commission's review found that, because of the government's concerted intelligence activities on terrorism and the increased resources being devoted to intelligence func-

tions by the FAA, the system is working reasonably well.

Improvements, however, can still be made. In particular, the Commission recommends emphasis on ensuring that information suggesting terrorist threats, collected by U.S. law enforcement agencies abroad, continues to be made available to the intelligence community in general and to the FAA in particular, bearing in mind the need for appropriate confidentiality when law enforcement proceedings are directly involved. Domestically, the Commission recommends that the FAA and the FBI cooperate, as now planned, to assess the vulnerability of U.S. airports to the threat of terrorist violence. Additionally, the FBI must continue to evaluate the terrorist threat in the United States, and the FAA must work to ensure the proper level of security at domestic airports.

The Commission also recommends that more attention and resources be devoted to an increased strategic, as opposed to operational, intelligence effort. This is particularly so within the FAA, where intelligence should be coordinated with the agency's technical research component.

Finally, given the fundamental importance of intelligence evaluation and dissemination in the context of civil aviation security, the Commission believes the function of the FAA Intelligence Division, now located within the Office of Civil Aviation Security, should be elevated in importance by moving it to an office reporting to the Secretary of Transportation.

Counterterrorism Intelligence Coordination

Terrorism is an elusive intelligence target. Terrorists, particularly state-sponsored terrorists, are technologically sophisticated, mobile, well-funded and highly compartmentalized. Collecting and assessing intelligence information on terrorist intentions is especially difficult. Often this task is like attempting to determine where a piece of a jigsaw puzzle fits without knowing the size, shape or picture of the puzzle, or even if the piece fits that puzzle at all.

The U.S. intelligence effort aimed at combatting terrorism is divided among the Central Intelligence Agency (CIA), Department of State (DOS), National Security Agency (NSA), De-

fense Intelligence Agency (DIA), Federal Bureau of Investigation (FBI), and Department of Justice (DOJ). The National Security Council (NSC) is also involved at a policy level. Recognizing the elusiveness of the target and the potential for missed opportunities because of the number of agencies involved in the intelligence effort, the United States has made significant strides in recent years to better coordinate its counterterrorism intelligence effort.

In February 1986, the Vice President's Task Force on Combatting Terrorism recommended new emphasis on all facets of intelligence gathering, processing and dissemination to combat terrorism.¹ Building on the task force report and a reorganization effort then underway in the CIA, in 1986 a counterterrorist center was created within the CIA to coordinate intelligence efforts against international terrorism. The center includes a crisis management capability that can bring all source intelligence information to bear on terrorist incidents as required. All members of the intelligence community now coordinate their efforts concerning international terrorism through that center.

By this coordinated effort, intelligence information on terrorism is shared among all concerned parties, regardless of the originating agency. Communications systems have been developed to permit immediate comment from all involved agencies on any significant information. In turn, this effort permits a joint evaluation and determination of threat information, and dissemination to agencies like the FAA. The intelligence community also participates in exercises designed to anticipate potential terrorism strategies. Day-to-day counterterrorism efforts attempt to discern trends, based upon assessments of prior incidents.

Domestically, the FBI is responsible for the U.S. counterterrorism effort, a national priority for the Bureau since 1982. The FBI has also enhanced its section devoted to coordinating U.S. domestic counterterrorism efforts at the federal level.

Terrorism directed at civil aviation, both domestically and internationally, has high priority in the intelligence centers and among U.S. intelligence officers in the field.

Most significantly, management and operations personnel in each intelligence center repeatedly stated that they place the highest pri-

ority on protecting lives first, even if this policy means foregoing ongoing law enforcement investigations and regardless of what must be done to make intelligence concerns fit within this priority. Civil aviation figures prominently in this consideration, the officials said.

The FAA has had its own intelligence operation since 1986. The FAA is a "consumer" of intelligence, regularly receiving intelligence information relating to international terrorism from the CIA counterterrorist center and other intelligence agencies. The FAA assesses that information and determines whether to issue a security notice to air carriers and airport authorities. The FAA intelligence unit also receives information from the FBI counterterrorism section when there is a specific domestic threat requiring action. For various legal and law enforcement reasons, information concerning domestic terrorism is closely held within the FBI counterterrorism section. That section, in turn, is responsible both for operational intelligence relating to domestic terrorism threats, and for evaluating and assessing trends.

Intelligence Community

Several agencies are involved in the U.S. counterterrorism effort.

State Department

The State Department has lead agency responsibility for U.S. counterterrorism policy abroad. Its Office of the Coordinator for Counterterrorism (CT) has existed in various forms since the early 1970s. The Coordinator for Counterterrorism is the senior U.S. Government official on counterterrorism policy abroad.

The CT is responsible for focusing on the policy issues related to the U.S. counterterrorism effort. The CT has the important responsibility for determining whether public notification is to be made about terrorist threats overseas. During the life of this Commission, the CT coordinated and released two separate public statements on terrorist threat activity in Western Europe and Africa. Another concerned a terrorist threat in the Philippines. Although none of the alerts dealt expressly with civil aviation, the FAA sent to the carriers information circulars on each State Department notice.

The CT also chairs an inter-agency committee that includes representation from more than 20 different federal agencies involved in the comprehensive effort to deal with terrorism-related matters.

The State Department, in addition, coordinates all U.S. Government anti-terrorism assistance programs to other countries in their fight against terrorism. This assistance includes training services and equipment.

The State Department's Bureau of Intelligence and Research (INR) and its Bureau of Diplomatic Security, Threat Analysis Division (TAD), directly support the CT's mission by providing time-sensitive, critical analysis of intelligence information. The INR is responsible for the overall intelligence analysis in support of the CT's efforts. The TAD provides analytical support to the CT and the intelligence community, particularly in matters dealing with threats and risk to U.S. facilities and personnel abroad.

The FAA has recently delegated a full-time representative to the TAD staff to serve as a liaison between FAA and TAD. This FAA representative will focus on civil aviation issues.

Central Intelligence Agency

In early 1986, the Director of Central Intelligence established a counterterrorist center designed to apply CIA resources more effectively against the terrorist target. The center is a unique amalgam of resources within the CIA. The center is headed by a senior CIA operations officer, and its deputy is a senior officer from the Directorate of Intelligence, which is the CIA component charged with collating and analyzing information, and interpreting it for the President and other high-level policymakers. The center's staff includes a variety of specialists, including analysts, operations officers, translators, explosives experts and other technical specialists.

Building upon the recommendation of the Vice President's Task Force, an inter-agency effort concerning terrorism has been established in conjunction with the CIA's counterterrorist center. Representatives from all members of the intelligence community, as well as many consumer agencies, serve as full working members of the center's staff. These non-CIA staff members are integrated into the total day-to-

day operations of the center, and have access to all incoming counterterrorism material. They also serve as immediate liaisons to their "home" agencies and can focus particularly on information and activities of interest to those agencies.

The FAA has recently added a full-time representative to the counterterrorist center's staff. This person will also be integrated into the workings of the center, and will focus particularly on any intelligence information of particular interest to civil aviation.

The center receives and assesses the raw intelligence data from the field. Worldwide intelligence relating to terrorism is processed, analyzed and disseminated to members of the intelligence community as well as to intelligence consumer agencies by the center. The center has established a planned effort to project trends and information to provide a strategic, global approach to countering terrorism. Assessments are also made on possible intelligence gaps, methods and operations.

In the drive to gather better intelligence on the plans and activities of terrorists, the intelligence community faces a difficult problem that is common to other intelligence collection efforts. Sensitive sources or methods often produce the most specific and credible intelligence information. The better the information, the more useful it is likely to be, either for taking steps to interdict planned terrorist activity or for warning the intended target or the public. Yet either course may well run the risk of interfering with intelligence operations which produced the critical information. Senior U.S. policymakers must constantly strike a balance between acting on current intelligence information and protecting sources and methods in hopes of gathering more vital information.

As noted above, U.S. intelligence officials emphasized that they subscribe to a policy of protecting lives first and make certain that intelligence concerns are shaped to accomplish this priority. This Commission has found no evidence that intelligence officials fail to adhere to this policy.

National Security Agency

The National Security Agency is under the direction, authority, and control of the Secretary of Defense. It is responsible for centralized coordination, direction and performance of

highly specialized intelligence functions in support of U.S. Government activities.

NSA is a collector and processor of intelligence information. It services the intelligence community and its collection priorities are set at the national level. Terrorism has always been and remains among NSA's highest priorities. NSA works in concert with the three other core intelligence agencies (CIA, State, and DIA) to provide timely information.

Defense Intelligence Agency

Two components of the DIA which deal with terrorism reporting on a regular basis are the Terrorism Analysis Branch of the Global Analysis Division, and the Requirements and Validation Branch of the Central Reference Division. The Terrorism Analysis Branch supervises the Counterterrorism Section and the Threat Analysis Section.

The Threat Analysis Section produces a daily summary of selected terrorism intelligence items derived from the reporting of the Department of Defense and other agencies, and mans a 24-hour desk which screens all incoming message traffic for indications of terrorist threats.

The Counterterrorism Section is responsible for the coordination of intelligence collection and for operational support in the event of a terrorist attack, which includes the development of options to support appropriate contingency plans.

The DIA Central Reference Division manages the dissemination of intelligence reports and finished studies to its approximately 2,500 customers, including FAA. The Requirements and Validation Branch reviews the requesting agency or unit's mission, need-to-know, and security accreditation. The Document Analysis Branch indexes and catalogues incoming intelligence and matches it with the customer's pre-registered requirements.

Foreign Intelligence Services

The intelligence effort against international terrorism requires continuing cooperation among many countries. Yet because of sovereignty concerns, no nation, including the United States, may be compelled to share with other countries information that is acquired through its own intelligence efforts. Countries face a continuing internal struggle to improve

cooperation within their own borders among the various intelligence agencies that may have different jurisdictions and institutional rivalries.

The exchange of intelligence information between and among countries is at bottom dependent on the willingness of each of those countries to share it. For example, sharing of information concerning the October 1988 arrests of PFLP-GC terrorists in West Germany that uncovered the Toshiba radio cassette bomb was a matter within the control of the West German authorities.

Foreign intelligence and/or police agencies have established formal and informal channels to exchange terrorist threat information with their U.S. counterparts. All government-to-government threat information on terrorism, security or criminal matters is relayed through these liaison channels. The FAA is not a direct part of this process of intelligence exchange. Therefore, the FAA usually receives threat information originating from foreign governments that might affect civil aviation from the receiving U.S. intelligence or law enforcement agencies.

During the Commission's European trip in February, the Commission met with various foreign intelligence and law enforcement officials. All expressed their commitment to international cooperation in this area and recognized that terrorism is an international concern. The bombings during 1989 of UTA Flight 772 from Brazzaville to Paris and of Avianca Flight 203 from Bogota to Cali, have underscored the importance of this conviction. International cooperation in intelligence concerning terrorism must remain a high priority.

Law Enforcement

Within the United States, counterterrorism is the responsibility of law enforcement agencies. Several of these agencies by law also have responsibilities with international components.

Federal Bureau of Investigation

The Federal Bureau of Investigation (FBI) is the lead federal agency for combatting terrorism within the United States. The FBI mandate is to prevent terrorist acts before they occur, and, if they occur, to mount an effective investigative and prosecutorial response.

The significance of the domestic counterterrorism effort has long been recognized. Fifteen

years ago the President's Commission on CIA Activities Within the United States recommended that "a capability should be developed within the FBI, or elsewhere within the Department of Justice to evaluate, analyze and coordinate intelligence and counterintelligence collected by the FBI concerning . . . terrorism . . ." ²

The FBI has established a Counterterrorism Section within the Criminal Investigative Division. This section collects information from numerous sources to establish an intelligence data base. This data is gathered using techniques such as interviews, informants, undercover operations, physical surveillance and court-authorized electronic surveillance. Additionally, information is received from the U.S. intelligence community and foreign intelligence and law enforcement agencies.

The field evaluation process is conducted by field agents who refer all pertinent intelligence data concerning domestic terrorist activity to FBI headquarters. Terrorist information is analyzed and evaluated at the headquarters level by the Counterterrorism Section.

According to the FBI, since 1986 there has been a decline in the number of terrorist incidents recorded in the United States. Nevertheless, the FBI told the Commission that it would be incorrect to conclude that the threat of domestic terrorism has significantly decreased. The threat of terrorist violence to Americans from both foreign and domestic groups continues and is projected to remain significant in the future. The Counterterrorism Section evaluates intelligence information to establish trends and patterns of both domestic and international terrorist groups.

The FBI's Counterterrorism Section produces an annual report on domestic terrorism that is disseminated to the FAA, all federal law enforcement agencies and some 2,000 state and local police departments, with statistics, trends and patterns, and current terrorism topics. The section also produces and disseminates reports on terrorist groups, country profiles, and specific counterterrorism investigations.

The FBI recently initiated a terrorist threat warning system designed to convey new information to those responsible for monitoring and countering ongoing terrorist threat situations within the United States.

The FBI has also established the Strategic Information Operations Center, staffed by FBI personnel and intelligence community members, who monitor imminent and ongoing terrorist incidents.

Other Federal Law Enforcement

The Drug Enforcement Agency (DEA) and the U.S. Customs Service (USCS) are two additional federal law enforcement agencies with an interest in terrorist tactics and activities. DEA is exclusively interested in the shipment and sale of illegal drugs, and draws on intelligence reporting from both its own agents in the field and reporting from the intelligence community. The USCS is strictly an intelligence consumer, focusing on the prevention of smuggling of drugs and other contraband into the United States. Both of these agencies participate in an established working group of all U.S. Government agencies with a role in counterterrorism.

INTERPOL

The International Criminal Police Organization (INTERPOL) is a worldwide organization that serves as a conduit for a cooperative exchange of criminal information to help detect and combat international crime. INTERPOL does not maintain an international police force, but serves merely as a communications link between various national law enforcement agencies.

For years the organization had a "hands-off" policy toward the issue of terrorism. In 1984, INTERPOL changed its definition of terrorism from that of an act with political motivation to that of a crime against society, and established a special unit in its headquarters to coordinate cases from around the world involving terrorism. The anti-terrorism group is comprised of representatives from five countries: United States, United Kingdom, Italy, France and West Germany.

Local Law Enforcement

In addition to obtaining threat information from federal law enforcement agencies, the FAA also receives threat and terrorist information from state and local police and airport security personnel within the United States.

FAA Intelligence Division

To effectively use terrorist threat information from the U.S. intelligence community, it must be transmitted to those responsible for the security measures to discourage or interdict the threatened attack. The United States is unusual among its allies in that aviation security is handled primarily by the private sector and by state and local entities. This adds a layer of complexity to the intelligence function because information must be declassified for receipt and use by these non-federal entities. The FAA Intelligence Division's central function is to serve as the bridge between the intelligence community, which gathers intelligence information, and these private sector and non-federal entities which need the information to take appropriate security steps.

In June 1985, TWA 847 was hijacked by Middle Eastern terrorists who held 153 passengers prisoner and tortured and murdered a U.S. Navy diver on board. The hijacking of Egyptair 648 in November 1985 saw terrorists murder one U.S. citizen and seriously wound two others, while 50 persons were killed in the rescue attempt. In December 1985, airports in Rome and Vienna were attacked by terrorists, with a total of 17 people killed and 113 wounded, including five Americans killed and 17 wounded.

According to the FAA, the agency then realized that it needed an intelligence capability for the civil aviation security program.

In March 1986, the FAA Intelligence Division (ID) was created, charged with determining and assessing current threats of criminal and/or terrorist actions against U.S. civil aviation and, when appropriate, disseminating that information in an unclassified form to the airlines or airports affected by the threat. Thus, the FAA receives information collected by U.S. intelligence and law enforcement agencies, U.S. air carriers, foreign governments and other available sources.

In some cases intelligence reporting will come to the FAA fully analyzed and with a "tearline," which is an unclassified version of the classified reporting that can be immediately disseminated to the appropriate airline and airport personnel. The unclassified version contained below the tearline is written to protect

any sources or methods of collection. In those cases, the FAA ID serves principally as a conduit for the intelligence information to the affected airlines and airports.

Some intelligence information relevant to civil aviation comes to the FAA with no tearline, and the ID must seek from the originating agency a "sanitized" version which will maintain the essence of the information without jeopardizing sources or methods.

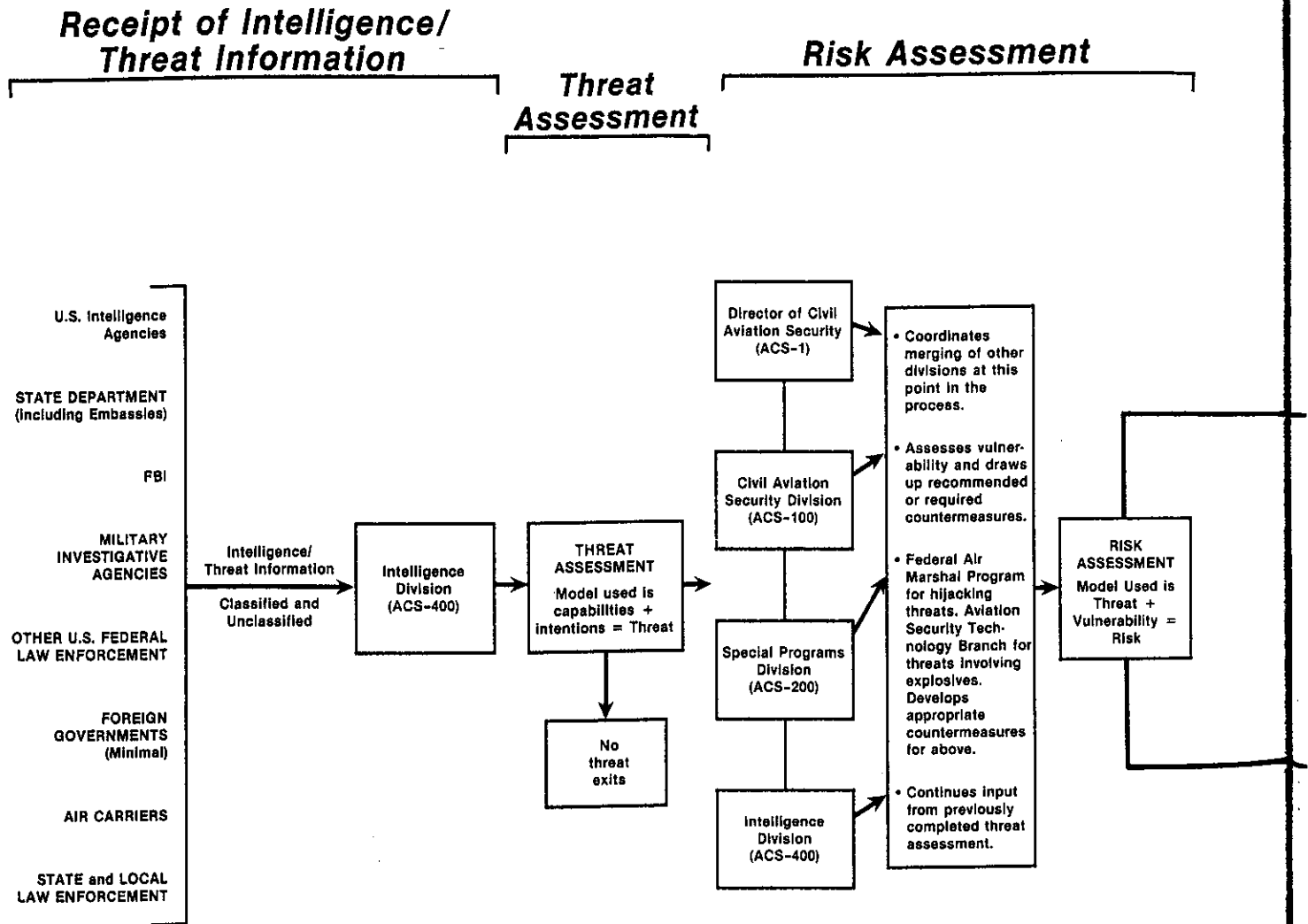
Anonymous calls and correspondence constitute the most common and the most unreliable type of threat information that must be assessed by FAA for the private sector. Over 6,000 of these threats were received in the

United States during the 1980s.³ One responsibility of the ID is to evaluate this information and distribute information circulars when necessary to quell rumors or to prevent repetitious reporting. On occasion, the FAA ID will send out circulars that are neither time-sensitive, nor specific but more in the nature of a "heads-up."

Analysis

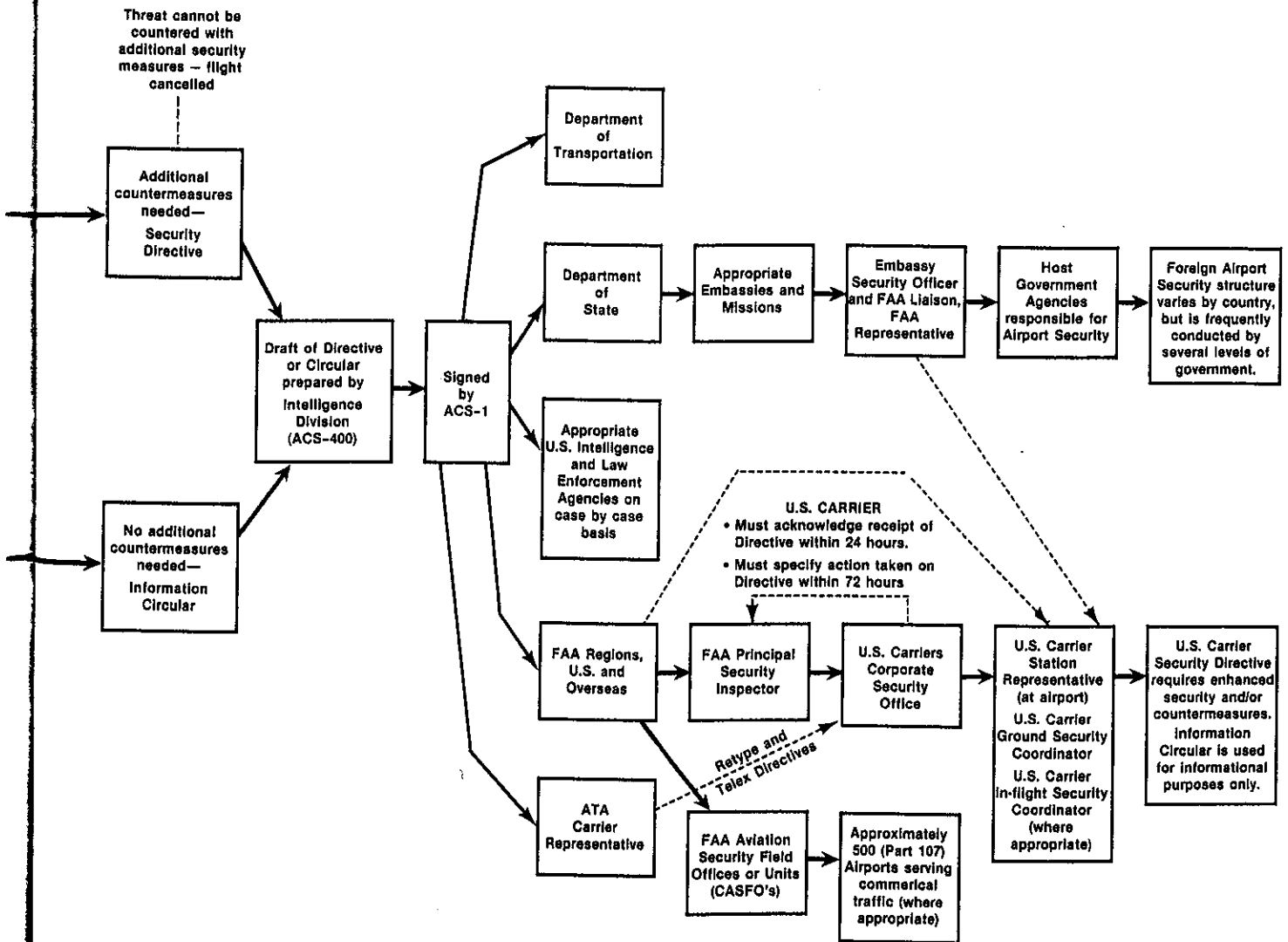
Threat information flows from receipt by the FAA ID, to its analysis, to dissemination to carriers and other elements in the following sequence as shown on the accompanying chart:

RECEIPT, ASSESSMENT and DISSEMINATION of INTELLIGENCE/THREAT INFORMATION



Security Directive or Information Circular

Dissemination



The FAA's basic approach to evaluating terrorist threat information, at the time of Pan Am 103 and today, consists of a five-step risk management model:

1. capability combined with intentions produces threat
2. threat combined with vulnerability produces risk
3. FAA cannot control threat
4. FAA can lower vulnerability to decrease risk
5. aviation security countermeasures lower vulnerability

The initial step in this process, threat evaluation, is done strictly by the FAA Intelligence Division, working closely with the relevant U.S. intelligence agencies. In the FAA model, threat exists only when a person or entity has both the capability to carry out a particular type of attack and the intention to do so. Either of these factors, standing alone, does not constitute a credible threat. The model used by FAA is widely accepted and used by the majority of U.S. intelligence and law enforcement community agencies.

Once the threat is determined, the process moves to the risk assessment phase, which is coordinated by the Director of Civil Aviation Security. The Civil Aviation Security Division participates in assessing the vulnerability of the target and recommending countermeasures. The Federal Air Marshal Program comes into play in a hijacking threat. The Aviation Security Technology Branch may be called in for its expertise in the case of threats involving explosives.

Security Bulletins

According to the FAA, before the establishment of the Intelligence Division in March 1986, the system of alerts, bulletins and summaries served mainly to provide recipients with general information about such topics as lost identification cards and new types of handguns appearing on the market. Bulletins were typically mailed to the recipients and were usually vague and of limited use to the airlines.

As the Intelligence Division established itself, the focus of the bulletin system shifted to warn-

ings of specific threats, or of general conditions which dictated a high degree of concern or caution. In 1987, the ID issued 38 security bulletins, and in 1988 it issued 27 more, based on the receipt of approximately 20,000 cables and other specialized intelligence products annually from the intelligence community. The bulletins ranged from very specific information (for example, one gave the names and passport numbers of potential hijackers in Western Europe) to very general information (for example, one noted that a car-bombing outside a USO facility in Europe, together with other events, pointed to a rise of anti-U.S. activity in Europe and the Middle East).

As previously detailed, from June to December 1988, a series of FAA bulletins concerning terrorism in Western Europe were distributed to carriers. Even so, the FAA at that time had no means of requiring air carriers to take any action in light of the security bulletins, nor did it have in place a means for determining whether the carriers had even received the information. As a result, the FAA headquarters in Washington had no idea what, if anything, air carriers in Frankfurt had done as a response to the FAA security bulletins about the Toshiba radio cassette recorder or the Helsinki threat.

Security Bulletin Process After Pan Am 103

After the destruction of Flight 103, the Secretary of Transportation formed a high level task force which focused primarily on the "collection, analysis, and dissemination of information concerning threats to civil aviation." The work of the task force resulted in several recommendations designed to remedy some of the clear inefficiencies in the FAA security bulletin process. FAA now produces two separate types of communications to the air carriers: security directives and information circulars.

Security bulletins were renamed security directives, and now contain specific and mandatory actions which must be taken by the affected air carriers. Air carriers are now required: (1) to prepare written procedures to ensure that FAA security directives can be received and acted upon at any hour; (2) to acknowledge, within 24 hours and in writing, receipt and understanding of all the FAA security directives referred to them; and (3) to document

in detail all actions taken at all stations in response to the FAA security directives within 72 hours of receipt. This much needed improvement remedied a significant flaw in the system which was obvious to the Commission from its review of the circumstances concerning Flight 103.

The information circular now produced by the FAA has no mandatory requirements or instructions for the air carriers. The circular provides carriers with background information for carrying out their security duties. The distinction between directives and circulars, which separates information that requires action from that which is more in the nature of background, is also a significant improvement in the system.

For all of 1989, the FAA issued 11 security directives (eight of which were still designated as security bulletins) and 22 information circulars. In the first quarter of 1990, the FAA issued only one security directive, while issuing 23 information circulars. The lower rate of security directives is a clear refinement; those documents now focus on the more time-sensitive or serious threats deemed to require immediate action by the carriers. The less time-sensitive nature of information circulars has also allowed the FAA to better communicate with the carriers on a variety of subjects, from State Department travel advisories to world events to the general nature of disguised explosives.

Despite these improvements in the system, the carriers still complain that the information they receive from the FAA is too vague and general to be of much value to them. These complaints may result in part from the necessity to "sanitize" classified information for distribution to private sector security representatives. Despite the efforts of the FAA ID, by the time the information has been "sanitized," it sometimes lacks important details that would more fully guide airline security officials.

To counter this perceived problem, carriers have suggested granting security clearances to senior airline security officials.⁴ The Commission prefers that federal resources at airports receive classified intelligence reporting which impacts on that airport. The Commission is recommending an increased security role for those federal airport personnel, and this will enable them to ensure that adequate security

measures result from the relevant intelligence reporting.

Dissemination of Security Bulletins

From 1986 through all of 1988, FAA security bulletins were routinely disseminated to all FAA representatives abroad and to all FAA regional security offices in the United States, whether a security bulletin discussed a terrorist threat affecting Peoria or Paris. The security bulletin in 1988 on the "Helsinki threat," which concerned flights originating in Frankfurt, was disseminated to locations as disparate as Rio de Janeiro and Dakar.

After the destruction of Flight 103, the FAA began to narrow the dissemination of its security information. Today, the FAA states that security directives and information circulars are disseminated only to the FAA representatives in the geographic areas affected by the directives. Both, are still disseminated, however, to all FAA regional security offices.

FAA security directives and information circulars are also provided to the U.S. Department of State, so that affected embassies can assist U.S. carriers through liaison with foreign government security officials. Since the content of the security directives and information circulars might reach airport or host government officials through contact with U.S. airline security, embassy officers need to be in a position to respond to inquiries from foreign officials. The State Department cable reiterating the Helsinki threat followed the same broad distribution given it by the FAA. With the narrowing of the FAA directive distribution process, the State Department redissemination has also been narrowed.

Strategic Branch

In October 1989, the FAA Intelligence Division reorganized into two branches, an Operations Branch and a Strategic Branch. The Operations Branch continues to have day-to-day responsibility for threat assessment, analysis, and dissemination. The Strategic Branch is intended to focus on long-term planning and analytic assessments of terrorist groups, tactics, and other developments which might affect civil aviation in the future.

This group's primary focus to date has been on studies of prior incidents in which terrorist

groups or individuals have attacked civil aviation. Because credible intelligence information providing specific warning of an upcoming attack is extremely rare, FAA believes that analysis of the past behavior of terrorist groups provides the best evidence of future capabilities and general intentions of terrorist groups.

This creation of a Strategic Branch is a good first step by the FAA in this area. Much more needs to be done.

Conclusions

In general, the government's concerted effort to coordinate intelligence activities concerning terrorism, particularly terrorism directed at civil aviation, appears to be working reasonably well.

The Commission's investigation into the flow of intelligence traffic prior to the bombing of Flight 103, however, indicates that there are still instances where communication and cooperation can be improved. The FBI representative in Bonn did not attend a meeting on November 15, 1988, hosted by the West German authorities to pass on detailed information about the Toshiba radio cassette bomb. An Air Force representative did attend that meeting, but the information received there did not make its way to DIA headquarters until mid-January 1989, and was never forwarded to FAA. These information lapses could have been critical. As it was, however, the West German authorities, and eventually the FAA, distributed information on the Toshiba device to the affected U.S. carriers substantially before December 21, 1988.

Cooperation among all U.S. agencies against terrorism depends on rapid and timely sharing of information. This critical effort cannot afford gaps or lapses.

It appears that the FAA has an excellent working relationship with the CIA and its counterterrorist center. Numerous interviews, as well as an extensive review of documents concerning Flight 103, have shown no reason to conclude other than that all relevant intelligence information on terrorism that could affect civil aviation was and is being relayed to the FAA Intelligence Division by the CIA and the counterterrorist center in a timely fashion.

The recent addition of an FAA representative as a full-time CIA counterterrorist center staff member will further improve these capabilities.

Similarly, the full-time presence will help strengthen the FAA's good working relationship with the State Department and its Threat Analysis Division.

The FAA Intelligence Division also has a good day-to-day working relationship with DIA personnel, and apparently has corrected problems found by the Commission in FAA's receiving some terrorism reports from the DIA Central Reference Division. The Commission emphasizes the important need for this cooperation to continue.

The FBI states that information detailing imminent civil aviation threats is disseminated immediately. Its stated policy is to continue to furnish FAA with any specific information on civil aviation threats, regardless of source or method of intelligence collection.

The Commission has found no reason to believe that this kind of terrorist threat information is not being shared domestically with the FAA. The Commission recognizes that the law enforcement community must operate within the mandate of U.S. laws on subjects including grand jury secrecy, which sometimes restrict the degree of information sharing. Recognizing these constraints, the Commission underscores the continuing importance of the FBI's sharing with the FAA domestic threat information on civil aviation.

The FBI has told the Commission that the threat of domestic terrorist violence continues and will remain significant. Although bombings of domestic aircraft have been limited, they have occurred. It would be totally unacceptable to this Commission to rest on any conclusion that there is no domestic threat of terrorist violence against civil aviation until a plane is blown out of the U.S. skies.

Therefore, the Commission urges that the FAA and the FBI proceed as planned to assess the vulnerability of U.S. airports. Additionally, FAA and FBI must work together so that the level of terrorist threat domestically is monitored adequately and proper levels of aviation security are provided.

Since legislation in 1985 increased the presence of FBI representatives overseas, the FBI is receiving a substantial amount of information relating to terrorism abroad. The Commission approves the objectives of this legislation, but it may have produced an unintended side-

effect. Because terrorism overseas is often handled primarily by the law enforcement and police agencies of each country, it is reasonable to expect that the FBI may become the primary U.S. recipient of an increased amount of terrorism reporting from these entities. Policies and procedures should be reinforced to ensure that this kind of international terrorism reporting will be shared with other members of the U.S. intelligence community, as well as with the FAA where appropriate.

The Commission also recommends greater emphasis within the intelligence community on developing a specific unit whose principal function will be long-term strategic thinking and planning on terrorism. The objective is to be better able to anticipate future terrorist strategies and tactics, rather than simply to react to incidents as they occur.

Counterterrorism is an all-consuming operational effort, 24 hours a day. To expect that U.S. counterterrorism personnel in charge of operations will also be able to stand back from their work to conduct strategic studies and long-term planning, may be asking too much of them. In order to increase U.S. counterterrorism capabilities, the Commission believes that consideration should be given to the creation of a greater independent strategic effort than is currently in place.

The FAA ID's recent creation of a Strategic Branch is a positive first step in this direction. However, its activities to date have focused on studies of past attacks, not projections of the future terrorist threat to civil aviation. More forward-looking projections and analyses are needed to stay ahead of new terrorist weapons and tactics.

All strategic efforts concerning aviation should be more directly linked with the FAA's research and development needs. The R&D effort should be driven by the best available intelligence information.

The Commission has also heard recommendations from several different elements within the intelligence and law enforcement communities that the FAA Intelligence Division, and indeed the entire security function would be able to better fulfill its function over time if it were elevated to a position of greater importance within the DOT structure. Currently, the intelligence function within FAA falls under the Director of Civil Aviation Security.

The Commission recommends that the function of the Intelligence Division be moved to the Department of Transportation, where it would report directly to the Secretary through a newly created post of Assistant Secretary of Transportation for Security and Intelligence. This move would accompany the move of the security function that has been outlined in a previous chapter of this Report. The Intelligence Division will provide timely and complete intelligence to personnel responsible for implementing all appropriate security measures.

Elevating the intelligence element will allow it to interact more easily with other high-level components within the intelligence and law enforcement communities. Having the intelligence element report directly to the Secretary may also provide the Secretary the ability to coordinate intelligence efforts affecting other transportation concerns, such as maritime security. It will clearly provide the Secretary with an immediately available source of intelligence advice concerning matters of importance to the Department.

To this end, the Commission also recommends that the Director of Central Intelligence promptly designate one or more intelligence officers, from the Central Intelligence Agency or other appropriate intelligence agencies, to serve in a senior capacity in the new intelligence element.

Finally, the Commission's investigation has found that some written agreements between the FAA and other intelligence community and law enforcement agencies are seriously outdated. Some Memoranda of Understanding (MOU's) were written before the creation of the FAA Intelligence Division in 1986, and fail to recognize the changing role of FAA as it has become a more sophisticated intelligence user. The Commission, therefore, recommends that these agreements between the FAA and the intelligence and law enforcement community members be reviewed and updated, where appropriate, to acknowledge and incorporate the changing roles of the FAA and DOT in the institutional intelligence relationship.

Recommendations

1. Policies and procedures should be put in place to ensure that international terrorism reporting received by U.S. law enforcement officials abroad will be shared with other members of the U.S. intelligence community, as well as the FAA where appropriate.

2. The FAA and the FBI should work together, as is now planned, to assess the vulnerability of U.S. airports to the threat of terrorist violence. Additionally, the level of terrorist threat in the United States must be analyzed and monitored on a continuing basis to ensure the proper level of security at domestic airports, and the FAA and FBI should work together to arrive at the most effective method for this to be done.

3. Consideration should be given to placing greater emphasis within the intelligence community on strategic (as opposed to operational) efforts, by developing a specific unit with limited day-to-day responsibility, whose principal function would be long-term strategic thinking concerning terrorism.

4. The function of the FAA's Intelligence Division, now located within the Office of Civil Aviation Security, should be moved to the Department of Transportation, where it will

report directly to the Secretary through a newly created post of Assistant Secretary of Transportation for Security and Intelligence. This move should accompany the move of the security function that has been outlined in a previous chapter of this Report.

5. The Director of Central Intelligence should promptly designate one or more intelligence officers, from the Central Intelligence Agency or other appropriate intelligence agency, to serve in a senior capacity at the Office of the Secretary of the Department of Transportation. In doing so, the Director should consult closely with the Secretary of Transportation.

6. All MOU's and written working agreements between FAA and the intelligence and law enforcement community members should be reviewed and updated where appropriate.

Endnotes

¹ Vice President's Task Force on Combatting Terrorism (February 1986).

² Report to the President by the Commission on CIA Activities Within the United States (June 1975) p. 129.

³ Letter from Donnie R. Blazer, Manager Special Programs Division, FAA Office of Civil Aviation Security (March 28, 1990).

⁴ See, e.g., Written Statement of Thomas G. Plaskett, Pan American World Airways, Commission Hearing, April 4, 1990, pp. 9-10.

Aviation Threat Notification—A National Standard

As the Commission has reviewed, the intelligence agencies cast a wide net to catch all possible aviation threat information ranging from public sources, such as newspaper articles and trade publications, to extremely sensitive sources, such as agents in the field. This intelligence information can vary widely in type and quality, but much of it is more mundane than the public may suspect. Culling the "wheat from the chaff" is a daunting task, considering the mass of data that must be analyzed, whether from the intelligence and law enforcement network or the anonymous telephone call to an airline. Some threat information is literally thrust upon the intelligence and law enforcement agencies, the air carriers, and other institutions, in the form of threats actually delivered. The classic example is the anonymous telephoned bomb threat.

The particular issue is whether, under what circumstances, how and by whom should the public be made aware of such information.

This question arises in the context of Flight 103 largely because of the so-called Helsinki warning previously described in this Report. Although later determined to be a hoax, the warning and the public posting by the U.S. Embassy in Moscow of its substance, dramatically drove home the importance of developing a national standard for the release of aviation threat information. Furthermore, although there is no basis to conclude that the Embassy posting was designed solely to warn U.S. Embassy personnel,¹ that episode exposed the risks and pitfalls of any "double standard," i.e., where persons are selectively warned against aviation threats while the public is left in the dark.

*Endnotes appear at end of chapter.

An intense public debate over the question of public notification of aviation threats² is underscored by the serious current weaknesses in the aviation security system. While no government or airline can assure 100 per cent security from terrorism, the question of public notification becomes particularly compelling when it is plain that certain credible threat information must be taken quite seriously. On the other hand, the Commission's review reveals that intelligence and law enforcement agencies successfully sift out the "noise." Most of the loudest threats are just that—noise. The reality is that the terrorists rarely announce their intentions. Thus the government must carefully address what to do when the sounds are heard.

Importance of a Single Notification Standard

On December 5, 1988, the U.S. Embassy in Helsinki received an anonymous telephone threat that a bomb would be carried aboard a Pan Am flight from Frankfurt to New York within the next two weeks. Although all authorities have since concluded the threat was a hoax, at the time the threat was taken very seriously.

The FAA issued a security bulletin to certain regions and representatives overseas and through the State Department to numerous embassies abroad.

On December 14, the U.S. Embassy in Moscow posted and distributed the substance of the FAA bulletin describing the Helsinki warning.³ News of this posting was widely reported by the news media soon after Flight 103

was destroyed and resulted in an angry and bitter reaction. Although it is now known that the Moscow posting was available to the entire American community in Moscow and was not limited to personnel at the Embassy, the perception was created widely that the government warned only its own. The basis for this perception is easy to understand. The government possesses the intelligence information and controls its release—what, when and to whom. Therefore, when there is any distribution of threat information to a segment of the population, such as the posting in Moscow, the perception is created that the government, as a matter of policy, applies a “double standard”—the intentional choice to warn some people but not others. For the families of Flight 103 victims, the Moscow episode raised the possibility that people warned by the posting saved their own lives, while the Flight 103 passengers went unwarned to their deaths. In such a case, the policy implications of such a dual standard are devastatingly obvious, and particularly if those who were warned were government employees.

The State Department has characterized the Moscow posting as a mistake and has denied that it reflected a double standard policy.⁴ Moreover, as previously detailed, the Commission has attempted to ascertain whether any Embassy personnel actually altered their plans to avoid Pan Am flights out of Frankfurt during the period of the Helsinki warning, including Flight 103 on December 21. The Department of State has testified that it is not aware of any cancellations by U.S. Government personnel and that 31 U.S. Government personnel were killed on Flight 103, including three State Department employees.⁵ The Commission recognizes that it may never be known how many people were aware of the Helsinki warning and decided not to fly on Pan Am from Frankfurt during this period. The Commission, however, is aware of only one, and that passenger was not booked on Flight 103, December 21, 1988.

In the aftermath of Flight 103, the Department of State has underscored its policy:

no double standard or appearance of one can exist regarding our warning systems. Official Americans cannot benefit from receipt of information which might equally apply to the travelling public but is not available to

them. Warnings which posts plan to distribute to official personnel and dependents should be referred, unless immediate notice is critical, in advance to the department for a determination about dissemination to a broader e.g. non-USG audience.⁶

Unfortunately, the State Department's standing policy for its posts in effect in December, 1988 was opaque at best—providing little or no guidance to officials like those at the Embassy in Moscow. The Department's subsequent statements highlight the importance of clear guidance on this matter.

The Commission cannot state too strongly that any double standard or system of selective notification is unacceptable and should not be tolerated as a matter of policy or practice. The only government personnel who should receive travel security information are those involved in intelligence or providing security. There is no justification for disseminating threat information to a wider government audience, or for using the information to affect travel plans of the family and friends of even those who have a legitimate need to know the information.

The Commission fully recognizes that this tight rein on the distribution of threat information may sometimes put State Department and other government personnel in a difficult position: they are aware of a credible threat, they are aware that their family members, friends, subordinates, co-workers or superiors might alter their plans if they were aware of the threat; yet they are forbidden to reveal the information. This moral dilemma was concretely and clearly set out for the Commission at its March 9 hearing by Raymond F. Smith, of the U.S. Moscow Embassy:

When I looked at this [the FAA bulletin on the Helsinki warning], and thought about it, I said to myself, if I were planning to travel during this period of time, would I take this information into account? Would I want my family to have this information to take into account? And the answer was yes. And the second question I asked myself is well, what right do I have to

use this information and not to make it available to other people?⁷

Unfortunately, this dilemma cannot be avoided. The State Department and other government channels must make it clear to those who hold positions with this sensitive responsibility that this difficulty is simply part of their job. The guidance and direction for these personnel must be clear and unambiguous: either the information remains closely held by those with a legitimate need to know, or it must be made public. There can be no middle ground; there is no justifiable premise for any system of selective notification, whether official or informal.

The likelihood that threat information will be improperly distributed is greater if the number of people who have the information is large. Indeed, if the universe of people handling such information is large enough, there can be an appearance of a double standard, even if the information is kept within appropriate channels. These two problems were illustrated by the distribution of the Helsinki warning.

Although the Helsinki warning concerned a threatened bombing of a Pan Am flight from Frankfurt to the United States, this unclassified information was distributed to literally thousands of people around the world with responsibilities remote from the threat. This practice inevitably invites the question whether this distribution had the effect (whether intended or not) of a *de facto* double standard.

In early 1989, the State Department sent to all diplomatic and consular posts an extensive set of instructions and guidance that repeated and clarified its position on the dissemination of FAA security bulletins. These instructions make clear that FAA security bulletins are distributed to posts in affected areas to keep intelligence, security and other necessary personnel informed of the information being given to the air carriers in their area and to enable them to arrange any necessary coordination of additional security measures with host country officials. The State Department cable also emphasized that FAA bulletins should have limited distribution within the post, and are not intended for use to warn U.S. Government employees of threats against civil aviation.

There is one U.S. Government mechanism for the dissemination of threat information that the Commission believes remains subject to

criticism as reflecting a "double standard." The State Department's Bureau of Diplomatic Security currently offers an electronic data base, the Overseas Security Electronic Bulletin Board (EBB), to disseminate, free of charge, security information to "any enterprise incorporated in the United States doing substantial business overseas."⁸ This definition is not very limiting, but excludes individual travelers.

The EBB was established at the recommendation of the Overseas Security Advisory Council, a 25-member "joint venture between the Department of State and the private sector" that was created at the urging of Secretary Shultz in 1985.⁹ Twenty-one of the 25 OSAC members are from the private sector, and have included major organizations such as Exxon, United Airlines, Bristol-Myers, Coca-Cola, GE, CARE, American Express, DuPont, and IBM.¹⁰

OSAC performs an important function in providing assistance particularly to American business enterprises that may have installations and offices overseas. The State Department has been sensitive to claims of a double standard, and the EBB does not contain any classified information or FAA-issued directives or circulars. The EBB does contain, however, information such as reports on security and crime incidents, by country; profiles of terrorist groups, by country; and "updates on new or unusual situations overseas."¹¹ Some of this information could be relevant to travelers as well as businesses.

The EBB did not contain the so-called Helsinki warning. However, during the period from July 1988 through December 1988 it did contain significant terrorist threat information not irrelevant to aviation, including, for example, information concerning possible retaliation for the downing of the Iranian airbus, the attack on the Greek ship "City of Poros," possible disruption of the Seoul Olympic games, and the arrest of PFLP-GC members in West Germany and the discovery of radio cassette bombs. All of this information was unclassified, and derived from a variety of sources, including press reports. But the EBB, by design, is an excellent single source of security information.

The Commission supports the efforts that have been made to clarify for U.S. Government personnel that a double standard of threat notification is not acceptable and to reduce the

prospect of a double standard. However, more needs to be done to limit the distribution of FAA security directives and information circulars within U.S. Government channels, and access to the OSAC EBB should be broadened.

Recommendations

1. The Commission recommends that the intelligence and law enforcement communities, and those that receive information collected or analyzed by those communities, review their procedures to reduce to the minimum the number of persons with access to information on civil aviation threats.¹² The Commission has no desire to compromise or otherwise interfere with the legitimate needs of intelligence and law enforcement agencies, or the agencies they serve. This recommendation is intended to be consistent with the needs of the intelligence community and those agencies that might respond to the threat.

2. The Commission recommends that the State Department Bureau of Diplomatic Security daily transfer a copy of the content of the OSAC EBB to the Bureau of Consular Affairs, and that the Bureau of Consular Affairs establish a system of public access to that information. Such access could be accomplished either directly by the Bureau of Consular Affairs, through an electronic bulletin board it might establish, or through a private sector service available to public subscribers. In this fashion the traveling public will have the opportunity to access the same threat information available to the business community. Further appropriations may be necessary to support this expanded access.

Current Notification Practices

In considering the question of whether there should be public notification of aviation security threats, the Commission examined the scope of the issue (how much and what kinds of threat information), current policies for access to aviation threat information, and the State Department's various advisories.

The Universe of Threats

Aviation security threat information takes many forms. The Commission's analysis focuses on two types: (1) threat information and

analysis from intelligence and law enforcement agencies, and (2) threats against aviation actually delivered to various entities, including airlines, airports, private citizens, law enforcement agencies, and public officials.

In the United States, airlines and airports receive an average of 600-700 anonymous threats per year. The FAA reports that from 1980-1989, a total of 6,322 bomb threats were made concerning U.S. aircraft; *not one* has come true.¹³ There were no actual explosions, and no actual device was ever found related to those threats. In one case, in 1980, a hoax device was found on the aircraft.¹⁴ Yet, it is impossible to determine how many, if any, attacks were deterred or prevented by increased law enforcement and security efforts taken in response to these threats.

By the nature of anonymous threats, the caller or writer often leaves law enforcement and intelligence agencies little to go on but the content of the threat itself. In these cases, little or no information is available to help determine how seriously the threat should be taken. The FAA's statistical evidence supports the presumption that anonymous threats are not credible; that is not to say that this presumption is not rebuttable.¹⁵

In contrast to the large number of anonymous threats, the occasions when our intelligence efforts produce solid information about upcoming terrorist attacks is exceedingly rare. Only a portion of those rare occasions produce terrorist threat information directed at U.S. civil aviation targets.

The Commission reviewed the number of security bulletins (now directives or circulars) issued by the FAA in the last three years. The FAA issued 27 security bulletins in 1988, 11 bulletins or directives and 22 information circulars in 1989, and one security directive and 23 information circulars in the first quarter of 1990. These bulletins, directives and circulars were derived from intelligence reporting and other sources that in many cases would not easily translate into specific additional security measures by the air carriers or precautions by passengers were they privy to the information.

The limited number and general nature of those reports reflects the difficulties inherent in any effort to gather firm information about small, mobile, compartmentalized groups which

operate predominantly on foreign soil. The obvious is worth repeating: terrorists do not normally telegraph their intentions, and they do not typically call in warnings of their planned attacks.

Current Aviation Threat Information Access Policies

One of the FAA's most important functions is to issue security directives and information circulars. By this process, threats to aviation are shared with airlines and airports, and host governments.

Although the FAA Intelligence Division receives a great deal of both finished and raw reporting on terrorism from the intelligence community, it does not distribute classified information. When the FAA's Civil Aviation Security and Intelligence divisions determine that threat information warrants distribution as a directive or information circular, it is prepared in an unclassified form to be shared with airport and airline security personnel, who are responsible for providing aviation security.¹⁶ The classified intelligence reporting often is "sanitized," distilling the report to protect either the source or the method by which it was collected.

The end product of this process is usually an FAA security directive or information circular, which can then be used by the affected airlines to enhance security procedures to meet the threat. These warnings from the FAA to the private sector are also disseminated to various government agencies on a "need to know" basis. For example, FAA bulletins are distributed to the State Department posts in any country where FAA originally disseminates the information to airlines. The State Department said of the procedures: "The contents of these bulletins may come to the attention of airport or host government officials through airline security channels, (thus) it is also important that officers at post who deal with these matters be in a position to respond to inquiries from foreign officials."¹⁷

The U.S. Government's policy on whether and/or when the public should be notified of threats against civil aviation is set forth in various public statements made by the Departments of State and Transportation.

On March 14, 1989, at the first Senate hearings held in the aftermath of Flight 103's destruction, DOT Secretary Skinner testified:

Again, let me emphasize that when we believe an element of the civil aviation system cannot be adequately protected against a credible threat from someone or some organization with the clear intent and capability to carry out a criminal act, the U.S. Government will: 1) recommend that airlines cancel threatened services; and 2) if necessary, issue a public travel advisory to alert air travellers.¹⁸

Ambassador Clayton E. McManaway, Jr., then Associate Coordinator for Counterterrorism at the State Department, testified at another Senate hearing in April 1989:

If we have a specific and credible threat to civil aviation security which cannot be countered, we will strongly recommend to the air carrier that it cancel the threatened flight. If it is a U.S. carrier, the FAA will cancel the flight if the airline will not. If necessary, the Department of State will issue a public travel advisory to alert the American traveling public to this threat.¹⁹

While these are the official positions, to date there has never been a public notification of a terrorist threat to civil aviation by the State Department, DOT, or FAA. Flight cancellations have occurred, however. The State Department has testified that it has not recommended to an air carrier that it cancel a threatened flight.²⁰ In contrast, the FAA has testified that it has recommended that carriers cancel flights under a variety of circumstances, and that the carriers have agreed to do so.²¹ The FAA has also indicated that it has the authority to cancel flights, but has never exercised that authority.²² These policies, which emphasize cancellation of flights, appear focused on threats against specific flights. The airlines historically have not publicly announced threats, although some have notified passengers at the gate that threats have been received.²³

However, since the destruction of Flight 103 and the public debate over the Helsinki warning, there has been a decided shift by air carriers and the State Department toward public notification of threat information, at least in some circumstances.

In late December 1989, Northwest Airlines received an anonymous bomb threat against its December 30 Flight 51 from Paris to Detroit. The threat information was originally circulated by Northwest to its European operations, and was apparently leaked to the Swedish news media. American media subsequently picked up on the story.²⁴

After learning that the threat information had been erroneously reported in the Swedish press, Northwest issued the following statement:

Northwest has received a security threat directed at its Saturday flight from Paris to Detroit. Northwest is working through established channels with the FAA, FBI, CIA and other agencies within the United States and with overseas governments to ensure the safe operation of NW51 on Saturday.

Nevertheless, passengers with tickets on the flight may rearrange their travel without penalty on other Northwest flights or the flights of other airlines if they are uncomfortable about traveling on NW51 Saturday.

Background: NW51 is scheduled to leave Charles de Gaulle Airport at 12:40 p.m. and arrive at Detroit Metro at 3:50 p.m. The flight will be operated with a 284-passenger McDonnell Douglas DC10. Approximately 130 passengers hold reservations for the flight.

All airlines, including Northwest, are operating with heightened security measures. Passengers are advised to report early for their international departures.

After a dramatically enhanced security effort, which the Commission will not detail, Northwest Flight 51 eventually flew without incident to Detroit on December 30, with a small frac-

tion of the passengers originally booked on the flight.

In early January 1990, Delta Airlines received an anonymous bomb threat call about its transatlantic operations. The caller did not name a specific flight, date, or point of departure. On January 4, 1990 Delta issued the following press release:

Delta has received a general threat against its transatlantic operation. The threat does not name a flight, city or day, and while we believe this is a hoax, Delta treats all threats seriously and has implemented an intensified security program for all transatlantic operations. We are advising our impacted passengers of this threat.

The Delta example may illustrate the extent to which some airlines, in the post Flight 103 atmosphere, feel compelled to publicize the existence of threats, however lacking in credibility.²⁵

FAA Administrator James Busey has acknowledged that in the absence of announcements, heightened security measures in response to threat information may alert passengers, particularly the "experienced traveler [who] will know that something is going on. And they have every right to know what it is."

"I think the air traveler needs to know so he can make a responsible decision when that flight is about to leave, to have the flexibility to make his own personal decision independently." Nonetheless, "our policy remains that we not go public," Busey said.²⁶

State Department Dissemination Practices

The Commission has identified five State Department mechanisms for disseminating threat and/or travel advisory information.

Travel Advisories. The Department issues travel advisories to warn Americans of "conditions involving the potential for actual physical danger or violence," or of "unusual situations and travel conditions within a country, the potential for unexpected detention, or serious health problems."²⁷ These travel advisories, which are issued in various gradations, generally provide country-specific travel information

and cautions, but do *not* contain aviation threat information. Travel advisories are issued by the Bureau of Consular Affairs via cable to more than 100 organizations (including the media, the travel industry and major U.S. corporations), by mail to over 90 other business addresses, in response to inquiries to passport offices, U.S. embassies and consulates, or by telephone to the Bureau's Citizens Emergency Center.²⁸ The travel advisories are also on the OSAC EBB, which permits the text of the advisory to be down-loaded. The Commission's recommendation that access to the EBB be broadened will facilitate distribution of travel advisories to the general public.

Foreign Airport Assessments. Under the Foreign Airport Assessment Program, the Secretary of State must issue a travel advisory if security procedures at a foreign airport are deficient. This advisory is part of a series of public steps coordinated with the Department of Transportation to alert the traveling public to potentially hazardous security conditions at particular foreign airports.²⁹ There has been only one advisory issued under the Foreign Airport Assessment Program, concerning Manila airport in 1986.

Electronic Bulletin Board. The State Department's OSAC EBB, discussed above, currently disseminates security information to the private sector with business interests abroad. The EBB is not designed to distribute aviation threat information such as FAA circulars and directives.

Regional Security Officers. Regional security officers (RSO) are located at posts overseas, and are responsible not only for the security of the post and its personnel but for assisting U.S. business interests in country that may be the subject of attack. The RSO disseminates unclassified threat and safety information and advice to non-official American business representatives. This dissemination could include routine local police information on criminal activities or areas of unrest, or specific threats against named targets. According to the Bureau of Diplomatic Security, the RSOs do not disseminate aviation threat information.

Threat Advisories. The State Department, since December, 1989, has issued three threat advisories alerting U.S. citizens to terrorist threats. These threats reflected an important change in practice, if not policy.

On December 15, 1989, the State Department issued the following threat advisory:

The United States Government, noting recent reports of movement of Middle Eastern terrorists in Western Europe, combined with the discovery of weapons shipments destined for Hizballah cells in Spain and Africa, is concerned that terrorists may be planning near-term attacks against a variety of targets, possibly including U.S. interests. At this time we would consider the most probable venues of such activity to be Western Europe or possibly Western Africa. If credible, specific information on the threat to the public is received, the Department of State will provide additional information for travellers and other concerned parties.

This coordinated threat advisory was the result of an established process within the U.S. intelligence community. The FAA Office of Civil Aviation Security was fully apprised of the proposed threat advisory prior to its issuance.³⁰ Since this threat advisory did not specifically mention civil aviation, FAA did not participate in the formal coordination or comment process. However, FAA did discuss with the State Department some aspects of the wording of the public release version.

On February 8, 1990, the following statement was issued by Richard Boucher, Deputy Spokesman for the State Department:

As you will recall, last December the State Department issued a threat advisory on the high level of activity by Hizballah operatives in Western Europe. That threat continues.

The United States Government is deeply concerned that terrorists may be planning an operation against U.S. interests in Western Europe. This attack may be timed for on or about February 11. At present we do not have specific information about the nature of the terrorist operation or its target.

If further credible and specific information on this threat develops, the

Department of State will issue additional alerts to travellers and other concerned parties.

Finally, on April 11, 1990, the Department issued a statement advising Americans against a "heightened threat of attack during Holy Week" against U.S. interests, including non-official Americans, in the Philippines. This announcement supplemented a travel advisory for the Philippines that the Department had issued on February 14.³¹

These three threat advisories were unprecedented and somewhat controversial. There are no formal rules (either criteria or procedures) for the issuance of such threat advisories. Clearly, many of the same considerations applicable to a decision to release these generalized threat advisories also would apply to similar decisions on aviation threat information.

Public Notification: Factors and Considerations

There has been much debate over the wisdom of public notification of aviation security threats. This is a complex and difficult issue not amenable to a mechanical answer.

The case for public notification springs from these arguments: (1) there may be circumstances where there is reasonably credible information available to the U.S. government that a terrorist attack may occur; (2) the current aviation security systems are not adequate to effectively counter some threats; (3) the threat information may also be specific enough to guide persons on how to lower their risk or exposure to the threat; and (4) passengers are entitled to know the terrorist threat information in deciding whether to accept the risks associated with the threat.

In opposition to public notification, it is argued: (1) security is best left in the hands of the professionals; (2) if every threat were publicized, it would encourage more threats and the public would become numb and ignore them; (3) publication of threats would be disruptive to our aviation system and cause economic injury (which is what the terrorist wants to accomplish); and (4) publication of security threat information could jeopardize intelligence sources and methods. Many of these arguments have merit; some do not.

On balance, the Commission believes that passengers are entitled to be notified of credible aviation threat information where the information is specific enough to assist the traveler in avoiding or minimizing exposure to the potential risk, and where there is no assurance that the threat can be nullified. If the threat is so specific that it results in the cancellation of the threatened flight, the notification issue is moot.

The Commission cannot over-emphasize that the question of when and whether to notify the public of threats of this sort cannot be translated into a mechanical or litmus paper test. The issues are too complex and the variables too case-specific. The Commission firmly believes that there must be a process to evaluate the question of public notification whenever credible aviation threat information is received. Identifiable public officials should be accountable for these decisions. The Commission bases this recommendation on the following considerations:

The present system is vulnerable. Substantial shortcomings and obvious vulnerabilities exist in the current aviation security system. Future improvements might increase confidence that virtually any threatened tactic or weapon can be countered and overcome by that security system. In the meantime, the system is vulnerable to certain known and proven methods of attack, and is likely to remain vulnerable for many years.

This is not to say that the current security system is completely ineffective; it is not. The widespread threat of hijackings that the aviation industry faced in the 1970s has been effectively checked. However, certain improvised explosive devices, and other technologies that may soon be used by terrorists, pose serious problems for our security systems to counter, even if alerted in advance by credible threat information.

There are few specific threats. Based on the Commission's review of the terrorist threat information received, processed, and disseminated by the FAA during 1988-1990, it is abundantly clear that specific aviation threat information is received by or from the intelligence community only on rare occasions.

The presence of greater specificity does not always support notification to the public. On

the one hand, the more specific the threat information, the more useful it is to the traveler. It is much easier to avoid a specific flight on a specific day, like Northwest Flight 51 on December 30, 1989 than to avoid a general threat to transatlantic operations covering an unknown period from an unspecified airport (e.g. the Delta threat).

On the other hand, the more specific the threat, the more likely the security system can be geared up to meet the threat, either by increasing security measures or by cancelling, delaying or interrupting operations to foil the threat. However, it is not reasonable to expect that such extraordinary measures can be put in place for a threat as broad and unspecific as the Delta threat.

Thus, specific information will be desired by the traveler because it offers specific guidance on how the risk can be avoided. Specific information will also be desired by law enforcement and security personnel, because the more specific the information, the more likely that an interdiction effort will succeed without the need for public notification.

Of the approximately 80 FAA security bulletins, directives and circulars issued in the last three years, many have contained specific information that would be helpful for law enforcement and security purposes but not for individual travelers. For example, suppose the FAA receives a report that three individuals, whose names and potential passport numbers are known, may attempt to board an aircraft with a bomb in the next month somewhere in Europe or Asia. The names and passport numbers are specific, but the traveler is provided little guidance on how to avoid or even assess the threat. However, that same information is of great help to law enforcement and security efforts.

The most difficult situation is one where there is credible information, but it is vague—providing little guidance either to law enforcement officials or to the public traveler. The State Department's advisories appear to fall in this category. Some critics contend that the advisories provided little guidance to the public on how to avoid or minimize exposure to an ill-defined risk. The Commission believes, however, that credibility carries more weight than specificity in the notification decision. Nonetheless, the value of advisories issued by the De-

partment would have been enhanced by some guidance to the public, however general.

There are few credible threats. Of the 600-700 anonymous aircraft threats received on average annually for the past decade, none resulted in an explosion or the discovery of a bomb. For this reason alone, there is no serious suggestion that travelers should be notified of all threats. Notification of all anonymous threats would surely lead to an increase in such threats, e.g. the "copycat syndrome," and defeat the purpose of notification, i.e., to provide the public useful information. A flood of warnings would also leave the public unable to distinguish among threats and to identify those that should be taken seriously. Over time, the public would begin to ignore all warnings.

Yet the arguments most often raised against notification concern a flood of crank threats being publicized. If one limits notification to "credible" threats, these arguments have no applicability.³²

If the proposition is accepted that a threat should be "credible" before notification is considered, the question then becomes how to determine when a threat is to be deemed "credible." The Commission believes that this answer must rest with the professionals who analyze threat information—the intelligence and law enforcement communities.

The protection of intelligence sources and methods. The intelligence and law enforcement communities often rely on sensitive sources or methods to acquire information. The decision to make public terrorist threat information could decrease the ability to secure future intelligence if these sensitive sources or tactics are revealed by the public notice.

This is not to say the public should not be given the threat information in these circumstances; it is simply to acknowledge that there can be costs, sometimes high, associated with making credible information public.³³

Assurance that the threat can be countered. Depending on the type and quality of information available and the strengths and weaknesses of the security system, any given threat case will have some degree of assurance that the threat can be countered. For example, credible information from the intelligence community reports that a Mr. X plans to hijack a specific U.S. flight on a specific day at a specific air-

port. The current security system will have a high confidence level that the threatened hijacking can be foiled or interdicted. On the other hand, other threats may be more difficult to counter.

Threat Hypothetical. Many of the elements critical to the decision of whether to notify the public of at least some terrorist threat information are best assessed by reference to a hypothetical set of facts.

Threat: Known Middle East terrorist group plans to bomb a "Widget Air" flight from Madrid to New York some time in the next month, by use of a plastic explosives secreted in either a suitcase or in a parcel. The plastic explosives are disguised in a common object of unknown shape and configuration. This same group has had previous success in an aviation bombing, but few of the members are known.

Credibility: Intelligence analysts feel strongly that the information is credible and has a reasonable probability of being accurate.

Sources and Methods: Intelligence analysts have multiple sources for the threat information and are not concerned that disclosure of the threat may compromise sources or methods.

Specificity: The threat is specific enough that telling the public about it would give the public enough information to change their plans and lower their risk if they choose to do so. Yet the threat is not so specific as to make it easy to cancel flight(s)—because Widget Air has roughly 12 flights a week from Madrid to New York.

Assurance That Can Counter Threat: The threat of plastic explosives in an improvised device of unknown shape or configuration is difficult to detect with current technology, and it may be impractical to hand-search all baggage, parcels and cargo. The group had demonstrated past success with similar devices. Thus, there is a low degree of confidence that the threat can be countered.

Options: (1) Notify the public—inform them of the threat and let them make their own choice and/or (2) Enhance security measures—but know that all measures probably

will not likely catch the plastic explosive or the bomber or (3) Cancel all Widget Air flights from Madrid to New York for a month—roughly 50 flights.

Conclusions

The Commission believes that public notification would be appropriate in circumstances like the above hypothetical case. The threat information is credible, has enough specificity for travelers to act but not enough specificity to tailor special interdiction efforts; and there is a low level of confidence that the threat of plastic explosives can be countered.³⁴

Enhancing security measures is not by itself a viable option when these measures would be unlikely to prevent the threatened attack.

The option of cancelling some 12 flights a week for a month appears to be a completely unreasonable alternative that neither the airlines nor the public would prefer. Public notification of the threat will still allow the airline to fly, and will permit attempts at enhanced security to lessen its risk of attack. The cost and disruption to the airline and passengers of cancellations of flights will presumably be much higher than the costs associated with public notification, a much more reasonable and realistic solution.

The above hypothetical case presents a compelling case. The hypothetical case is not the only type of circumstances where public notification is appropriate; nor must all of those same elements be present to qualify the threat for public notification. Other situations will present tougher calls, but there is no mechanical test by which the decision can be made, nor is there any easy formula to which the decision can be reduced. It is simply designed to demonstrate why a system of public notification must be in place, and illustrate the kinds of circumstances that should influence any decision concerning notification.

The responsibility for notification. This decision-making process is imbued with policy considerations. The Commission strongly believes that the primary responsibility for public notification is and should be a government responsibility.³⁵ This will assure that a single standard is applied consistently, instead of leaving the decision to many different national and regional air carriers, each of which might have a dif-

ferent policy on the issue. This policy also is consistent with the Commission's recommendations that the responsibility for security be more squarely shifted to the government, and that threat information not be widely disseminated outside of government channels. For threats to aviation abroad, this responsibility appropriately rests with the State Department.³⁶

For domestic threats, the Commission recommends that the responsibility be given to the Department of Justice, where policymakers would have a close working relationship with the source of most domestic threat information, the FBI—the lead domestic counterterrorism agency.³⁷ The Department of Justice should work closely and coordinate all notification decisions with the Department of Transportation and the FAA.

The Commission emphasizes the importance of clear government accountability and responsibility for the notification decision. The Commission has detailed the various considerations that should be incorporated in the notification decision process, and we have acknowledged that the process is imbued with public policy choices. Public confidence in any system of notification is dependent on there being identifiable public officials in whose hands the decision to notify or not to notify rests.

The Commission recognizes that government cannot bar the airlines from communicating threat information to their passengers. For example, an airline might choose to notify its passengers of an anonymous bomb threat. The Commission has learned from the air carriers that at least some of them notify individual passengers at the gate on specific threatened flights. Airlines would be free to notify their individual passengers in any case where the information is unclassified and in the proper possession of the carrier.³⁸ Naturally, the Commission believes that the public would be best served by coordination between the airlines and the government with respect to the dissemination of threat information.

How to notify. The method and manner of notification (passengers at the gate or wide public dissemination) must depend on the circumstances of the threat. In a typical threat case against a specific flight, notification of individual passengers at the gate is appropriate. In other cases like the hypothetical one previ-

ously described, broad-scale public notification will be more appropriate and effective. Because the hypothetical threat covered a month's worth of flights, it is likely the press would learn of notification warnings made directly to passengers. To avoid confusion and possible overreaction, a broad-scale notification would be appropriate in that circumstance.

The Commission cannot predict with certainty how often public notifications will occur, or how best to be sure that broad-scale notifications are available to the traveling public. In some cases press coverage will be effective; in other cases it may not. We encourage the Departments of State and Justice to explore various mechanisms to facilitate public notification, including an 800 number, as envisioned by S. 596, and adding aviation threat information to the OSAC EBB which, under the Commission's recommendation, will be available to public access.

Recommendation

The Commission believes that public notification of aviation threat information is appropriate under certain circumstances and after taking into account the various considerations described in this Report. The U.S. Government should, as a matter of course and policy, consciously consider the question of notification and carefully review the factors outlined. To implement this recommendation, the Department of State, and the Department of Justice, in close cooperation with the Department of Transportation, should establish a process and a mechanism by which clearly identifiable officials will consider when and how to provide notification to the traveling public.

Endnotes

¹ See discussion in Chapter 2.

² S. 596, introduced on March 15, 1989, would require that certain aviation threat information be made available to the public by the Department of Transportation.

³ Although this posting occurred *after* the United States and foreign intelligence agencies had determined that the Helsinki warning was a hoax, the Moscow Embassy personnel responsible for the posting testified that they did not learn it was a hoax until April 1989. Testimony of Mark Sanna, Commission Hearing, March 9, 1990, p. 105.

⁴ See *e.g.*, Testimony of Ambassador Clayton E. McManaway, Jr., "Aviation Security," Senate Appropriations Committee Transportation Subcommittee, S. Hrg. 101-110 (March 14, 1989), pp. 39-40 and 53) (hereinafter "S. Hrg. 101-110" and

"McManaway Testimony" respectively); Testimony of Ambassador L. Paul Bremer, III, "Foreign Airport Security," House Committee on Foreign Affairs, February 9, 1989, p. 55.

⁸ McManaway Testimony, pp. 39-40.

⁹ State Department Cable 250425, par. 1 (August 5, 1989).

⁷ Testimony of Raymond F. Smith, Commission Hearing, March 9, 1990, pp. 80-81.

From the Commission staff's interviews, it appears that the issues raised by the Helsinki warning and the posting by the Moscow Embassy have been the source of substantial debate and discussion in the diplomatic community. In interviews with staff of U.S. Embassy in Paris, France (February 15, 1990), virtually the same concerns expressed by Mr. Smith were expressed by the Deputy Chief of Mission. Indeed, one employee at the Paris Embassy who had been stationed in London, said he had been angered when he learned of the Helsinki warning's existence because he had not known of it in December, 1988, when his wife traveled on Pan Am.

⁸ State Department, "Overseas Security Information." The EBB was developed and is operated by the Private Sector Liaison Staff within the Bureau of Diplomatic Security. State Department, "Overseas Security Electronic Bulletin Board (EBB)" (November 16, 1988). Although there are no "on-line" charges, there is a \$250 start-up cost for a tailored software package.

⁹ OSAC is chartered under the Federal Advisory Committee Act, and its most recent charter was executed November 23, 1988. *Charter, U.S. State Department Overseas Security Advisory Council* (hereinafter referred to as "OSAC Charter"). Although the Commission staff was advised by the Department that the EBB does not contain classified material, the OSAC charter requires that the representatives appointed have a "secret" level clearance.

¹⁰ OSAC (August 1988).

¹¹ "Overseas Security Information," *supra*; Interviews with Clark Dittmer, Director of Diplomatic Security Services, Department of State; Ralph Laurello, Executive Director, Overseas Security Advisory Council; and Stefanie Stauffer, Chief, Private Sector Liaison Staff. See "OSAC Charter," par. V.A.

¹² Although the Commission's focus is on threats to aviation security, this recommendation could be applied with equal force to terrorist threat information generally. There can be no double standard for any threat information, and every good reason for minimizing its potential or appearance in all contexts.

Additionally, although the Commission has addressed the selective disclosure of *unclassified* threat information, it is worth repeating what may be obvious: there is *no* circumstance where it is appropriate for government personnel to distribute classified information to anyone other than those who have appropriate clearance *and* who have a need to know.

¹³ See letter from Donnie R. Blazer, Manager Special Programs Division, FAA Office of Civil Aviation Security (March 28, 1990).

That these threats do not prove out is not surprising. Someone wishing to accomplish a bombing normally would not alert others who could take steps to prevent it. Accordingly, the FAA's empirical evidence supports what would be expected.

¹⁴ *Id.*

¹⁵ For obvious reasons, the Commission does not discuss the various ways by which an anonymous caller may intensify the interest of law enforcement and intelligence officers.

¹⁶ It is anomalous to have a construct where you invest huge sums of money to develop a government intelligence apparatus that deals in secrets, yet the ultimate consumers of its findings and analysis are the private sector carriers and the airports. We address this issue in Chapters 3 and 5.

¹⁷ State Department Cable 025598 (January 27, 1989).

¹⁸ S. Hrg. 101-110, p. 9.

At the same time, however, the Department of Transportation has indicated that the FAA should cancel threatened flights if the airlines refuse to do so. See Department of Transportation, Selected Aviation Security Initiatives, appendix H.

¹⁹ "Aviation Security," Senate Committee on Commerce, Science and Transportation Aviation Subcommittee, pp. 51-52 (April 13, 1989).

The FAA has expressly acknowledged that if the threat is to civil aviation outside the United States, the State Department is the only U.S. agency that should be responsible for notifying the public. S. Hrg. 101-110, p. 28. It is not clear that the U.S. government has identified who would be responsible for deciding whether and how the public would be notified of domestic aviation threats.

²⁰ At the Senate Transportation Appropriations Subcommittee's March 14, 1989 hearing, Senator D'Amato asked Ambassador McManaway how many times the Department recommended a threatened flight be cancelled. Mr. McManaway responded:

We have not. We do not get those kinds of threats very often, Senator.

S. Hrg. 101-110, p. 45. Although it is assumed that an airline would cancel a flight at the request of the State Department, the circumstance has not arisen. The State Department has conceded it lacks that authority. *Id.*

²¹ Testimony of Monte Belger, Commission Hearing, December 18, 1989, p. 187.

²² Enclosure with letter from Darlene M. Freeman (April 13, 1990).

²³ The U.S. air carriers discussed their notification practices at the Commission's April 4, 1990 Hearing, at a March 22, 1990 round table of security officials sponsored by the Commission staff, and in response to survey questions from the Commission.

²⁴ It is not entirely clear whether Northwest took sufficient care to guard the threat information from public/press disclosure. It is also not clear how the Swedish press was in a position to know about the threat.

²⁵ The Commission will not speculate on what may have motivated Northwest and Delta to publicize these threats in particular. Although both cases represent a departure from the airlines' prior practices, they apparently do not represent a change in policy. Neither airline has publicized a threat since then and neither airline has indicated that it knows how it would handle the identical threat in the future.

²⁶ "Sometimes Passengers Should Be Told of Threats, FAA Chief Says" (AP, February 5, 1990).

²⁷ "Travel Advisories" (May 25, 1989).

²⁸ *Id.* Through a series of menus and submenus activated by telephone touch-tones, access to recorded travel advisory information is provided.

²⁹ See discussion in Chapter 3.

³⁰ Although officially issued by the Office of Assistant Secretary/Spokesman, the two threat advisories emanated from the Office of the Coordinator for Counterterrorism.

³¹ Unfortunately, the Philippines travel advisory available from the Bureau of Consular Affairs on April 16, 1990, did not include the information contained in the April 11 announcement.

³² Interestingly, the "boy who cried wolf" argument implicitly concedes that there are some threats that should be made public because they are serious, i.e., when there is a wolf.

³³ There also can be side benefits. For example, a public acknowledgement of threat information tells the terrorists we know what they are up to, which can deter them from carrying out the threat.

³⁴ At a March 22, 1990 meeting at the Air Transport Association, the Commission staff posed a comparable hypothetical to the heads of security for the major U.S. carriers. All agreed that notification should be made in this case. They believed, however, that the responsibility to notify should rest with the carrier and not the government.

³⁵ The question has been raised whether a government decision to notify should result in some compensation to the airline

whose flight is the subject of the warning. The Commission rejects this notion given the limited circumstances under which the Commission recommends that notification be made. Indeed, an airline faced with these circumstances may have a duty to warn its passengers under our tort law.

³⁶ See S. Hrg. 101-110, p. 28.

³⁷ Under the two authorities providing for rewards to be paid out of U.S. Government funds for information leading to the arrest/conviction of persons who commit acts of terrorism against Americans, the State Department has the responsibility

with respect to acts of terrorism occurring overseas, while the Department of Justice is responsible for acts occurring in the United States.

³⁸ In fact, public notification may be in the airlines' long-term economic interest. The public notifications made by the Northwest and Delta may have given them a business boost, in that their customers thereafter traveled those two airlines with the assumption that their flight must be a "safe" (unthreatened) one, because otherwise there would have been a notification.

Treatment of the Families of Victims of Terrorism

In the Commission's view, the general issue of the treatment of the victims of terrorist acts, and the bombing of Flight 103 in particular, is divided into two parts: (1) the provision of consular services by the State Department and (2) compensation, which is further divided between international treaties that govern the recovery of damages from international air carriers, and the provision of compensation by the U.S. Government.¹

At numerous Congressional hearings and in testimony submitted to the Commission, the families of Flight 103 victims have registered bitter complaints over their treatment by the State Department and its Bureau of Consular Affairs. The complaints of the families focused on poor delivery of the consular services that the Department attempted to provide, and on other vital services families contend were totally ignored. The families' bitterness was compounded by the legal environment. U.S. law provides no monetary benefits for private civilian victims of terrorist acts. The Warsaw Convention, an international treaty, impedes the families in recovering compensation from Pan Am, an American carrier.

State Department Practices and Policies

Consular Services

The responsibility for delivery of consular services² rests primarily with State Department posts overseas in conjunction with the Bureau of Consular Affairs³ and its Office of Overseas

Citizens Services (OCS).⁴ OCS is itself divided into two components: the Citizens Emergency Center (EMR), to render assistance in "crisis situations" (e.g., the repatriation of Americans who die overseas), and the Office of Citizens Consular Services (CCS), which handles non-emergency services (e.g., estate matters and the return of property).

In the Lockerbie disaster, the nearest U.S. diplomatic post was the U.S. Consulate in Edinburgh, which reports to the U.S. Embassy in London. The location of this disaster was in many ways advantageous to the delivery of consular services:

1. The disaster occurred in an English speaking country, with which the United States has excellent relations. The police, other governmental authorities and local residents provided assistance and cooperation.

2. The applicable legal system is similar to that of the United States.

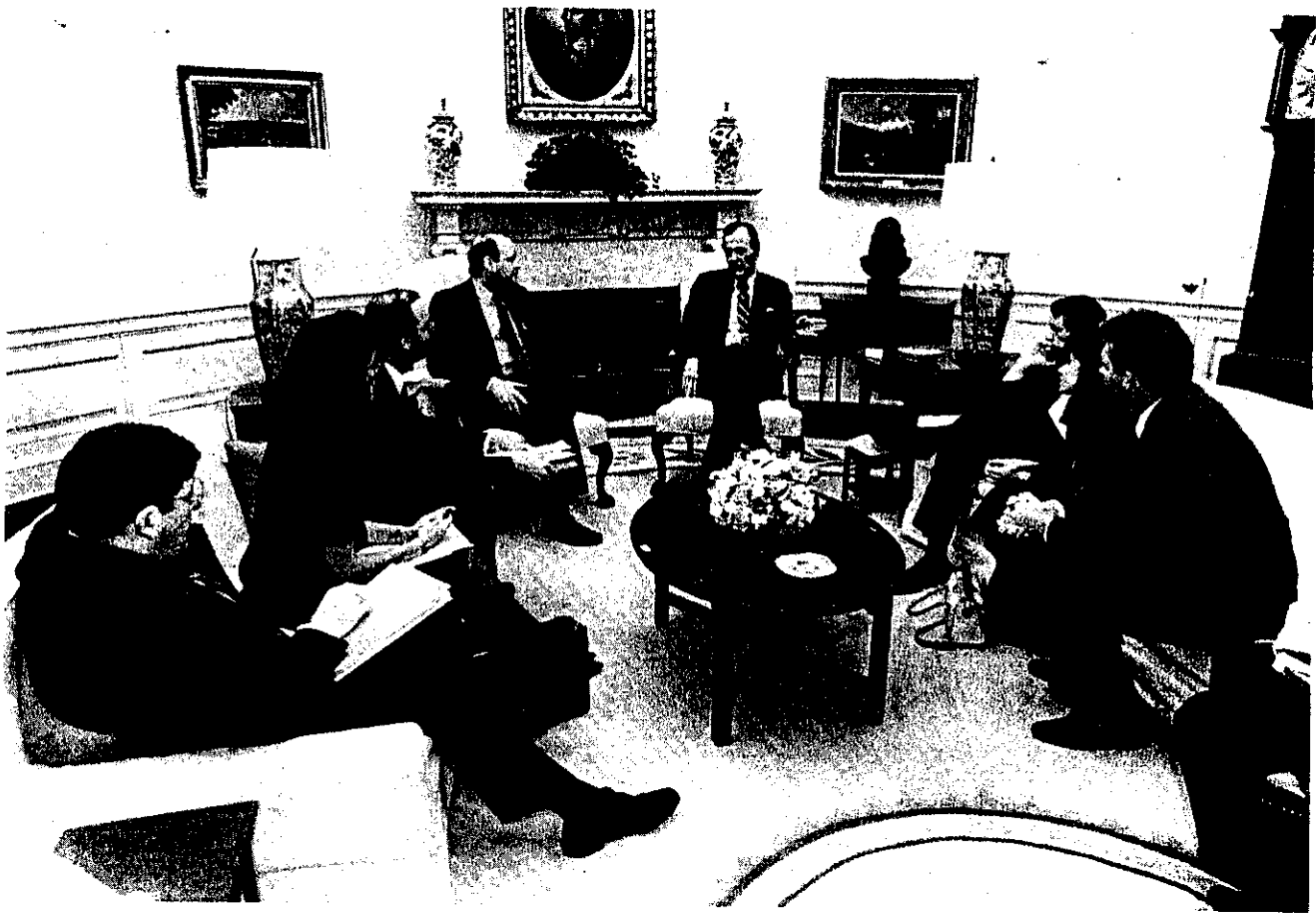
3. The carrier involved was American owned and operated.

4. Although Lockerbie is a small town (3,500 population) in a rural area, the U.S. Edinburgh Consulate is 80 miles away, and reachable by car and scheduled train in less than two hours.

5. The London Embassy had revised its disaster plan two years earlier, with specific guidance to Embassy and Consulate staff in the event of a disaster.⁵

6. Exactly one week earlier, "[t]wo consular officers [from the London Embassy] participated in an emergency exercise at Heathrow Airport, with Pan Am as the participating airline"⁶ and six months earlier the Embassy had held a crisis management exercise according to subsequent State Department accounts.⁷

*Endnotes appear at end of chapter.



In June 1989, President George Bush met at the White House with several persons who lost family members on Pan Am Flight 103. Pictured left to right are White House Chief of Staff John Sununu; family members Victoria Cummock, Paul Hudson and Bert Ammerman; President Bush; Transportation Secretary Samuel Skinner; and family members Wendy Giebler and Joe Horgan.

While response to any aviation disaster or terrorist incident is difficult, it is easy to imagine circumstances that would have posed additional impediments: a truly remote or inhospitable site, a hostile or corrupt government or legal system, a non-English speaking local population, a distant or small U.S. diplomatic mission, or a lack of basic emergency, communications, forensic and mortuary facilities or capacity.

From the Commission's inquiry of the available evidence, it is apparent that the State Department was simply unprepared for the Lockerbie disaster. It did not recognize, much less have the plans in place to provide, the level of services expected in the case of the mass murder of Americans at the hands of terrorists.

Indeed, a review of officials' testimony and the staff interviews of consular personnel suggest that the State Department did not even realize until much later that it had not provided a level and quality of service that the Flight 103 families expected. For example, the current As-

sistant Secretary of State for Consular Affairs testified:

it wasn't until later, until March o[r] April, that we began to recognize that there were some real serious problems with how the families felt they were being responded to.⁸

The Response to Flight 103

After Flight 103 exploded and fell, State Department in Washington, the Embassy in London and the Consulate in Edinburgh reacted immediately.

In Washington, D.C., at about 5:00 p.m., local time, after learning that Flight 103 was destroyed over Lockerbie, the Department established a "Working Group" to manage the crisis.⁹ A Bureau of Consular Affairs "shift" responded to telephone inquiries from concerned relatives and friends, but could not provide or confirm identification of victims. Although Pan

Am was asked for a copy of the manifest, or passenger list, none was produced for more than seven hours. That evening, according to the State Department's account, the "number of inquiries continue[d] to mount [and] [m]any callers [we]re frustrated at the lack of information currently available."¹⁰

The U.S. Ambassador to Great Britain, accompanied by five consular officers, two public affairs officers and a military attache, flew from London to Carlisle, Scotland, on U.S. Air Force transportation, and was escorted by Pan Am and the Scottish police to Lockerbie. They arrived at 3:00 a.m. Lockerbie time.¹¹ In the meantime, the Consul General at the Consulate in Edinburgh, 80 miles away, had arrived in Lockerbie by car four hours earlier.¹² This group surveyed the scene, held discussions with Scottish authorities and Pan Am, and secured office space and telephones.

The London Embassy staff also attempted to get the manifest from Pan Am, and formed an inter-agency Embassy work group and an Embassy consular work group (phone bank) to respond to calls and coordinate the flow of information between Lockerbie and Washington.¹³

Over the next several days, after the manifest was received, consular staff in Washington, Lockerbie and London attempted to put together a complete list of passengers and their next of kin.¹⁴ The next of kin information came primarily from passport records.¹⁵ A core group of four consular officers manned an office at the Lockerbie Academy (where many other organizations were provided space). By December 23, families had already begun arriving in London, and continued to arrive over the next few weeks. Many continued on to Lockerbie.

The scope and breadth of the disaster that occurred at Lockerbie challenges description. The Boeing 747, fully loaded with aviation fuel (having left Heathrow only 37 minutes earlier), carried 259 passengers and crew, their baggage, and about 20 tons of cargo.¹⁶ The aircraft exploded at approximately 31,000 feet, breaking into many pieces, strewing debris and bodies over a wide area. The flight deck and forward portion of the fuselage fell into a field about three miles from Lockerbie in an area known as Tundergarth. The main portion of the fuselage fell in a Lockerbie neighborhood known as Rosebank, but miraculously killed no

one on the ground. Likewise, the four jet engines landed in Lockerbie, but caused little damage.¹⁷ The wings, loaded with aviation fuel, fell on Sherwood Crescent, creating an immense fireball and crater—killing 11 persons on the ground.¹⁸

The Scottish police searched an area of 845 square miles—extending to the coast of England to the east, where lighter material fell. Their guiding principle was "if it's not grass, pick it up."¹⁹ The remarkable police and volunteer effort resulted in the identification of all but 17 of the persons killed, recovery of more than 16,000 items of personal effects, and permitted an astounding reconstruction by the British Air Accidents Investigation Branch of much of the wreckage. This reconstruction also led to promising leads in a criminal investigation that remains open.

The Scottish police early on classified the tragedy as a murder investigation. All bodies were autopsied.²⁰ In this regard it must be remembered that the United States was one of 21 countries with victims, and that the standard set by Scottish authorities throughout was no less than 100 per cent conclusive proof of identification. Despite this, all of the bodies which were recovered and identified were released during the 28 days following the disaster. In this regard, the consulate officers prepared copies of Consular Mortuary Certificates and later, the Consular Reports of Death, the legal documentation under U.S. law.²¹

The necessary demands of the criminal investigation, rather than a lack of effort or interest by consular personnel, gave rise to delays in the return of personal effects. The Procurator Fiscal (equivalent to a U.S. Attorney and Coroner) has indicated that State Department personnel in Lockerbie made every effort to secure the prompt release of the personal effects of American citizens.

Nearly 85 per cent of the 16,000 personal effects that were catalogued have been returned.²² Under Scottish law, officials could have held all personal effects until completion of the investigation or subsequent proceedings. However, they permitted a phased release of items in groups, beginning in February 1989, with certain valuables (jewelry, watches and rings) deemed not germane to or needed in the criminal investigation. Some items still are

held, and the next of kin have been so advised.²³

A dedicated group of Scottish police have worked closely and personally with the families to identify as much of the personal effects as possible. When items are identified and cleared for release, they are inventoried and transferred to the U.S. Consulate, which contacts the families for instructions on disposition.²⁴ In 1989, nearly 1,000 shipments of personal effects were sent to family members.²⁵ Although the entire process of identifying and returning remains and property has not been free of complaints and mistakes, this massive, sensitive and difficult job generally has been handled with care and commitment.

Notwithstanding these efforts, the Commission's review of the Department's actions reveals how the families concluded that the State Department was insensitive to their needs. According to testimony to the Commission:

- Pan Am took the lead role in the initial death notification and follow-up information and services;
- The State Department yielded to Scottish authorities the primary role at Lockerbie of briefing and dealing with the families; and
- Pan Am made the necessary arrangements for shipping forensic information, and provided for the return of remains.²⁶

In addition, Pan Am and Kenyon Emergency Services, Ltd. arranged with the families the disposition of remains as they were identified.

In fact, it is difficult to find an area where the State Department took a leading role. As a result, the families became increasingly dependent on the Scottish police and Pan Am for information and assistance—while the State Department appeared to be a background crew of paper shufflers.

Two areas illustrate the problems that the State Department encountered and now must remedy in order to provide compassionate and effective consular services: communications with the families, and consular support at the disaster scene.

Communications with the Families

Three of the actions the Department says it takes when an American dies overseas relate di-

rectly to communications with the families of victims: (1) to be satisfied the next of kin are notified or to make the notification themselves; (2) to provide all "appropriate information to families about" the return of remains and personal effects; and (3) in the case of an airplane (or similar) tragedy, to organize task forces to respond to public inquiries and seek to ascertain the welfare of Americans believed to be involved.²⁷

Yet the Department apparently lacks a consistent policy on how to secure a list of passengers involved in airline disasters and their next of kin, nor is there a clear policy on who has the responsibility to notify the next of kin of the deaths. In the case of Flight 103, Assistant Secretary of State Elizabeth M. Tamposi testified before the Commission that "Pan Am took the lead role in the initial death notification and in the follow up of information and service that families required Pan Am did not provide the State Department the passenger manifest and next of kin information early on [and] they wanted to be the first in notifying the passengers' relatives . . ." ²⁸

The manifest the State Department received from Pan Am after more than seven hours, "consisted of surnames and first initials only," then Assistant Secretary of State Joan Clark reported.²⁹ "In many cases, we found it useless for locating next-of-kin in our passport records.³⁰ At about noon on December 23, almost two full days after the bombing, we finally received Pan Am's contact list. This list had much more complete data on the identity of next-of-kin. Pan Am advised us that they already had notified all the families," Clark said.³¹

It is unclear to the Commission why the Department did not press more vigorously for Pan Am to provide the Department with the manifest. While the Department has testified it lacks the legal authority to force an airline to produce a passenger list,³² the Department's internal written guidelines and procedures clearly assume that it will obtain the manifest "as soon as possible."³³ Although requests for the manifests were apparently made to Pan Am in London and in New York,³⁴ it remains unclear exactly how much pressure the Department brought to bear at what levels. There is no indication that, for example, the Assistant

Secretary of State for Consular Affairs attempted to contact Pan Am directly, or sought assistance from her superiors at the State Department.³⁵ The matter apparently was not pursued by the Department above the chairman of the Working Group established for the crisis, who did not pursue the matter with Pan Am above the vice president for legal affairs.³⁶ One member of the Commission observed that this may have been one of those cases where "somebody had to pick up the phone and call Tom Plaskett," the chairman of Pan Am.³⁷ The Commission has difficulties reconciling the Department's current concern with this matter with its failure at the time to take the steps necessary to get the passenger list from Pan Am.³⁸

Failure to secure the manifest promptly had a negative ripple effect on the State Department's image in subsequent activities. Thereafter, the Department appeared to lack control or authority over who should notify next of kin, an accurate list of next of kin, and communications with the families.

The Department began notifying Pan Am 103 next of kin by telephone but stopped doing so after some who had been contacted by Pan Am objected to "being contacted again by a second source," according to Tamposi.³⁹ The Department has "learned that [its] failure to persist in notifying all the families was interpreted as indifference on [their] part by some of the family members, and that [they] had missed an opportunity to reassure them that the department was actively engaged in dealing with this tragedy," she said.⁴⁰ In addition, officials failed to send written messages to the next of kin to notify them officially of the deaths,⁴¹ as required by Department regulations.⁴² The State Department Task Force Handbook, revised September 1989, underscores the importance of notification by consular officers:

Immediate notification made to the family as soon as there is an incident involving their family member. These individuals should be contacted without delay, even if the information immediately available is scanty.⁴³

The issue is not whether the airline or the Department should be the first to notify the passengers' next of kin. Instead, the critical point is that the Department of State must make con-

tact as soon as reasonably possible—and tell the family what the government will do to assist in the prompt return of remains and personal property. Thus, initial communication establishes the link—a link that is critical to a continuing relationship and the compassionate treatment of the family.

Even though Pan Am took the lead in notifying families of Flight 103 victims, the switchboard handling the 28 lines for the State Department task force to take incoming calls, was "swamped," an official said later.⁴⁴ Although the State Department has testified that it has "installed trunk lines for the 800 numbers to be given only to families of victims for use in contacting and communicating with us during the crisis,"⁴⁵ an 800 number was not yet a reality at the time the Department testified before the Commission. Thus, a question is raised whether the Department even now has the resources to handle the volume of communications required in the event of a major disaster like Flight 103.⁴⁶

Even when callers made contact, the results often left them dissatisfied. The Department has acknowledged to the Commission:

Our system did suffer from our failure to assign each family a specific case worker so that they would speak to the same person each time that they called. Since task force workers answered the calls as they came in, it was sometimes the case that an individual didn't have all the information that he or she should have when dealing with a particular family.⁴⁷

Many callers also were unable to get information about matters reported by the news media. The Department initially testified in response:

We do not like to give out any information if in fact we are not sure or have not had it verified. Sometimes the press has information which we do not have. But until we can verify it as being official, we do not like to pass on that information to the families.⁴⁸

This attitude may be appropriate for the spokesman for the Department, but not for

consular officers attempting to help people in tragic circumstances.⁴⁹

The lack of information available through the State Department in Washington may have compelled some families to journey to Lockerbie, where police briefings and being on the scene provided a wealth of information not otherwise available. The State Department failed to act as a bulletin board—posting for families in the United States the information that was being made available by police briefings and other events in Lockerbie.⁵⁰

From the testimony presented to the Commission, it appears that the Department now realizes that consular officers manning telephone lines in a crisis play a critical role in the establishment of a rapport with families of victims. In the Flight 103 case, the Department's initial failures at this crucial time infected its relationship with the families to such an extent that, for many, the bitterness cannot be overcome. The Commission has not attempted to catalogue the many complaints by the families about attitudes or actions of consular personnel. It is more than enough to note that these complaints, expressed in hearings before Congress and this Commission, are numerous and deeply felt. The Department has conceded that it:

need[s] to build a more integrated approach . . . sensitizing our people to dealing with such tragedies, and the need for compassionate follow through. . . . [W]e can never forget that we are participating in a life-shattering event for these families, and that we must proceed with utmost care.⁵¹

Although the Department is "designing procedures to accomplish this,"⁵² there is no procedure that will assure sensitive and caring treatment of shocked and grieving family members. The Commission heard numerous complaints of insensitivity, but did not attempt to verify each of these accounts. Nor did the Commission attempt to balance those cases in which State Department employees were praised by family members. The Commission believes it is evident that the Department could and should have acted in a more compassionate and sympathetic fashion.

The State Department has instituted a training program to sensitize 140 consular officers to the demands of providing assistance to families in a crisis. As of February 1, 1990, 75 of the 140 consular officers had taken an "in-house training course,"⁵³ as an interim step to courses being developed by a contractor. Meanwhile there has been little guidance or training at overseas posts since Flight 103.

Recommendations

1. The Department must quickly obtain from the airline in an aviation disaster a manifest with sufficient detail to permit the prompt identification of passengers. Notwithstanding the lengthy discussions that have taken place between the State Department and the Air Transport Association (with the participation of the Department of Transportation) no agreement has yet been reached on procedures for the collection and dissemination of manifest information. A regulatory or legislative solution is likely to be required.⁵⁴ In the interim, the State Department should pursue agreements with individual carriers.

Any resolution, however arranged, should require the airline to provide the State Department an initial manifest as soon as possible, but no later than one hour after learning of the incident. Such manifest should include the full name of each passenger, a passport number (if required for the travel), and the name and telephone number of a person to contact in the event of an emergency. Consistent with the laws of host governments, this information should be collected as a condition for receiving the ticket or boarding pass, and the FAA should condition landing rights in the United States on the carrier's implementation of these steps.⁵⁵ The State Department should be permitted to use funds from the fees for passports to purchase and install machines that can read U.S. passports, which will facilitate data collection.⁵⁶

2. The Department should always contact the families of victims—even when the airline has made a prior notification of the deaths. In addition, it is essential for the Department promptly to provide a personal written notification.

3. The Commission believes the Department should, wherever possible, assign to each

family one person, and an alternate, to act as designated liaison. Establishment of two separate 800 numbers would speed family access to consular personnel. One 800 number would be published and presented on television screens. Once families are identified, they should be given access to a second 800 number designed for their exclusive use. The Commission believes the families benefit from as much information as the Department can reasonably disseminate, even if "scanty" or not fully confirmed. There is no reason why the Department cannot qualify the information it cannot confirm.

4. While the Commission is additionally encouraged that the Department is sensitive to the importance of training, the specialized skills necessary to aid grieving family members are not easily acquired as an adjunct to the administrative responsibilities of consular officers. The Department is encouraged to consult further with death and bereavement counselors to assure that the entire consular services corps is sensitized to the demands posed by tragedies such as Flight 103. The Department should consider supplementing its training programs by either (1) providing specialized training to create a team of "disaster specialists" to deploy immediately in a crisis or (2) securing outside experts to be brought in during the initial phases to assist consular personnel.⁵⁷

Consular Support at the Disaster Scene

On the scene staffing is of critical importance to the delivery of consular services in major disasters. The size and composition of the consular staff in Lockerbie were criticized by many families of Flight 103 victims.⁵⁸ By December 23, the second full day, two of the five consular officers actually returned to London—leaving the three London Embassy consular officers, headed by the Chief of American Citizen Services Branch, a foreign service national (FSN) from the Edinburgh Consulate, and the Edinburgh Consul General, who traveled from Edinburgh to Lockerbie daily.⁵⁹

By December 27, the Vice Consul from the Edinburgh Consulate had relocated to Lockerbie, replacing the Consul General on a daily basis.⁶⁰ The consular staff in Lockerbie averaged about four persons during the one-month

period after the destruction of Flight 103.⁶¹ In contrast, Pan Am averaged more than 125 employees in Scotland during this time period, providing disaster relief services.⁶²

Staffing in Lockerbie was determined by the London Embassy, although the State Department in Washington could have overruled this decision.⁶³ However, there apparently was no written guidance anywhere in the Department for evaluating the level of staffing that was appropriate, or required. Two embassies facing the identical crisis could come to completely different judgments on staffing. The State Department's new Task Force Handbook does not even address this important question.

Thus, it happened at Lockerbie that two consular officers were sent back to London — just before a wave of Flight 103 families arrived in Scotland. The families have complained that the staff assigned was too low-level, consumed with administrative tasks, like processing death certificates, and unavailable for the personal counseling and assistance the families needed. The Commission staff interviewed four consular personnel who staffed the Lockerbie effort. All now agree that a larger staff was needed.

The staffing pattern did not anticipate the number of families who visited. Neither the State Department nor the London Embassy/Edinburgh Consulate reacted appropriately once it became clear that many families would visit. More than a week after Flight 103 went down (after the Task Force organized in Washington had been disbanded, reflecting the end of the "crisis" phase), Laurence Kerr, Deputy Director of the Office of Citizens Consular Services, visited Lockerbie to assist in the return of personal effects. He was "stunned" by the number of families and the atmosphere in Lockerbie.⁶⁴

The Commission considers it significant that even during the "crisis" week the State Department sent no one from Washington to Lockerbie, to show the Department's concern or to bolster the consular staff. It is hard to imagine how much more compelling the circumstances need be to trigger the decision that a senior State Department official should go to the scene.

The Department was totally unprepared for the presence of families in Lockerbie. To have enough personnel for the administrative con-

sular duties is not enough. The families wanted information of all kinds, including, where the bodies were located, how the identification process was going, what additional forensic evidence would be needed, and what conclusions were being drawn with respect to the existence of a bomb.

Yet the Department did not have one person assigned to brief families, or to be their ombudsman with the local social service agencies, governmental authorities and Pan Am, or to provide consolation and comfort.⁶⁵ Indeed, because the small staff could not handle a large number of incoming calls, the telephone number for the Consulate's temporary Lockerbie office was generally not given out.⁶⁶ The conclusion appears inescapable that the consular staff at Lockerbie was focused on, if not overwhelmed by, the paperwork and administrative tasks required of them. This, however, left many families with the impression of callous neglect.

Recommendations

1. In each and every case of a terrorist disaster, the Commission believes that at least one senior official from the Bureau of Consular Affairs should be dispatched to the scene. In the case of Pan Am 103, it is hard to understand why the Assistant Secretary for Consular Affairs did not even visit Lockerbie to assure the families that their State Department was indeed at their side.

2. The State Department should promulgate criteria for staffing disaster scenes that also define responsibility for these decisions. In the event of a disaster, the resources of individual posts must be monitored under these new criteria, and supplemented if necessary.

3. The Department should require that in any disaster at least one person be assigned the sole function of providing on-site assistance to families who may visit, and be the ombudsman in matters involving local government authorities and social service agencies. This person must have the stature, personal skills and sensitivities for these critical duties.

4. Since Lockerbie, the Department has deployed "crisis teams" to disaster scenes to augment the embassy and consulate staff. The Department told the Commission it is "working to regularize the procedures."⁶⁷ The Commission

believes that crisis teams (public affairs, forensic and bereavement experts) are critical; this is more efficient than training staff at each embassy and consulate to handle all aspects of a major disaster, an event that occurs rarely, if ever, in those areas. These teams would join in-country staff familiar with the local language, laws, customs, and personalities.

With a crisis team, however, the resident State Department post would remain in charge of, and responsible for, the delivery of consular services. Therefore, the availability of these support teams should not diminish the training and planning that is still the responsibility of the posts, including crisis plans,⁶⁸ unique to the circumstances of the post.

5. Unfortunately, the Commission found no evidence that the Department has shared with its embassy and consulate posts any assessment of the Flight 103 experience or new guidance on response to terrorist disasters. This is a critical first step that needs to be complemented with clear direction, training, financial and equipment support.⁶⁹

Government's Responsibility to the Families

The Commission believes it is also important to address the question of whether the U.S. Government has a special obligation to the victims of terrorist acts directed against the United States.

The government provides special treatment for members of the military who are killed overseas. The Air Force transported the caskets of military personnel killed on Flight 103, flag draped and removed by honor guard on arrival. In contrast, the civilian families' caskets were flown as cargo on Pan Am,⁷⁰ without ceremony.

The State Department did not send a representative to the individual funerals. Although the current Assistant Secretary of State for Consular Affairs, Elizabeth Tamposi, has testified that she "*personally* believe[s] that the U.S. Government should be represented at the funerals of the Americans killed abroad by terrorists,"⁷¹ and although State Department representatives have attended some funerals recently, the policy question remains under development.⁷² The current Secretary of State has sent individually signed letters of condolence to

families of victims of terrorism (subsequent to Flight 103), and the Commission encourages this practice.

Recommendations

1. The Commission believes the U.S. Government owes special treatment to those who are killed in terrorist acts against this Nation, and their families. The Department of State's Bureau of Consular Affairs should assign personnel qualified in terrorism cases to assist families in the recovery and disposition of remains and personal effects, and to act as their ombudsman with foreign authorities and agencies.

2. The State Department should provide some ceremony appropriate to recognize the sacrifice of the victims. For some families, the most the Department can offer is privacy. Others may wish to have government representatives at funerals and memorial services as an expression of respect and support. We send reception teams when hostages are released; we should offer no less when the circumstances are more tragic. The State Department should have discretion, in consultation with our Armed Services, to adopt appropriate ceremonial procedures compatible with the families' own preferences. Whatever the procedures, the State Department must institutionally recognize the special status of U.S. citizens who are victims of acts of terrorism against this Nation.

Compensation and Monetary Benefits

There are no federal statutory provisions that specifically provide government payments or other monetary benefits for the families of private civilian victims of acts of terrorism. Several provisions of federal law provide financial benefits and relief for the families of federal government employees and contractors, and members of the uniformed services who are killed or injured in terrorist acts, but not for other civilians.

Moreover, when terrorism involves death or injury aboard an international flight, such as Flight 103, the Warsaw Convention limits compensation families may recover from the air carrier, absent a finding of willful misconduct.

The Warsaw Convention—Carrier Liability

Since 1934, the United States has been a party to the Warsaw Convention of 1929, a treaty that governs carrier liability for accidents in international air travel and establishes a general presumption of carrier liability for death or injury in connection with these flights. The Warsaw Convention, however, limits carrier liability to approximately \$10,000 per victim absent a showing of "willful misconduct."⁷³ Although a variety of "protocols" have been proposed to revise the Warsaw Convention, the United States has ratified none of them.⁷⁴ Nevertheless, under the Montreal Agreement of 1966 for flights to or from the United States the carriers agreed to accepting an increase in liability to \$75,000.⁷⁵ Nonetheless, the Montreal Agreement did not alter the Warsaw Convention's provision that permits the cap on carrier liability (increased from \$10,000 to \$75,000) to be exceeded only upon a showing of willful misconduct.

The Warsaw Convention applies only to international flights, and the Montreal Agreement only to international flights to, from or with a stopover in the United States. Thus, no less than three legal scenarios might apply to a U.S. citizen's death or injury on a flight: (1) a domestic U.S. flight would be governed by state law, a system of common law negligence that generally does not impose a limit on compensatory or punitive damages; (2) an international flight itinerary not involving travel to or from the United States would be governed by the Warsaw Convention, but not the Montreal Agreement; and (3) an international flight itinerary involving travel beginning, ending or stopping in the United States would be governed by the Montreal Agreement. For Flight 103, which was destined for New York from London, the \$75,000 limit of the Montreal Agreement applies. However, in pending litigation, certain Flight 103 claimants seek a finding that Pan Am engaged in willful misconduct.⁷⁶

Pending revisions (awaiting U.S. ratification), known as Montreal Protocol 3, would establish absolute liability in cases of death or injury occurring on international flights and increase the current liability limit to an International Monetary Fund index now equivalent to approxi-

mately \$130,000. No recovery from the carrier could exceed that liability limit, but Montreal Protocol 3 would permit each signatory nation to establish its own supplemental compensation plan.

In 1983, the Senate, by an affirmative vote of 50-42 (short of the two-thirds required), failed to ratify Montreal Protocol 3 with a proposed supplemental compensation plan to increase the total potential recovery per passenger by \$200,000.

Montreal Protocol 3 is still pending before the Senate by virtue of a motion for reconsideration. Hearings on Montreal Protocol 3 and a draft revised plan for supplementary compensation were held by the Senate Foreign Relations Committee in November 1989, and since then an additional draft has been under consideration. The Foreign Relations Committee is planning to hold further hearings and has asked the General Accounting Office to examine the issues posed.

The current draft revised supplemental compensation plan would provide an insurance pool of \$500 million per incident, per aircraft to pay compensatory damages based on injury or death to the extent economic and non-economic damages exceed the approximately \$130,000 per passenger that would be paid by the air carrier. The plan would cover U.S. citizens on international flights (not just to or from the U.S.), and would be financed by an additional ticket surcharge on international flights sold in the United States.

There is widespread agreement that the Warsaw Convention's current liability limits are inadequate. Efforts to revise the system seek to balance the following objectives: (1) expeditious recovery of fair compensation for death or injury; (2) a system in which carriers can be held accountable for their misconduct; (3) a limitation on liability to encourage universal participation; and (4) avoiding the quagmire of conflicting laws of hundreds of nations and local jurisdictions.

The Commission believes it essential that families of victims of international aviation incidents receive just compensation without undue expense or delay. Recovery of \$130,000 from the carrier in combination with an administrative claim process by which victims can recover from a fund of \$500 million per aircraft per incident would be a substantial improvement

over either the current system or no treaty at all. This is particularly so for those incidents where it may be difficult to attribute fault, much less willful misconduct.

At the same time, the Commission believes that a "no-fault" system may be seen as resulting in a diminution of accountability notwithstanding the powerful market forces that ought to deter unsafe or reckless conduct by carriers. Accordingly, the Commission believes it advisable to strengthen current regulatory enforcement mechanisms, the pursuit of which will help assure carrier accountability for violations of safety and security requirements.

Recommendations

1. The Commission recommends that the United States ratify Montreal Protocol 3 together with a supplemental compensation plan that would provide all U.S. citizens and permanent residents, for any international flight, full recovery of all economic and non-economic damages. Following ratification of Montreal Protocol 3, the Commission recommends that the United States commence a diplomatic initiative to increase the \$130,000 limit on carrier liability.

2. The Commission recommends that legislation be enacted to require the FAA to commence a civil penalty proceeding whenever there is reason to believe that a carrier's violation of FAA requirements may have contributed to loss of life or serious injury. This "reason to believe" would be based on investigative results of others (e.g., the National Transportation Safety Board, parallel foreign investigative bodies and law enforcement agencies) and the results of the FAA's own compliance and enforcement inquiries. If the FAA determines that a violation by the carrier contributed to the death or injury of a passenger, the FAA would be required to levy fines, taking into consideration the nature and consequences of the violation, and the carrier's prior compliance history.

Government Compensation and Benefits

The Commission is not aware of any federal law that provides compensation to private civilian victims of an act of terrorism.⁷⁷ This contrasts with a variety of statutory provisions to

benefit victims of terrorism who are federal employees or contractors, or members of the armed services.⁷⁸ It also contrasts with the laws of France and Israel, both of which specifically provide compensation for private citizen victims of terrorism.⁷⁹

Israel, through its National Insurance Institute, provides a variety of cash and in kind benefits for injury or death resulting from actions by forces hostile to Israel. These provisions also apply to tourists and other visitors.⁸⁰

France adopted a law, following a wave of terrorist bombings in Paris, which provides compensation for victims of acts of terrorism in France, and for French citizens abroad. A French Foreign Ministry official told the Commission the law seeks to provide "national solidarity" with the "innocent victims of cruel and despicable acts."⁸¹

Under U.S. law, the only eligible persons are either members of the military, government employees or persons providing personal services similar to that of a government employee. Individual U.S. Government employees personify the government of the United States and are targets for terrorist attacks for that reason.⁸² A question for the Commission is whether, and under what circumstances, the United States has any similar obligation to its private civilians for acts of terrorism directed against this Nation, such as the bombing of Flight 103.⁸³

Although the criminal investigation into the bombing of Flight 103 continues, it is accepted that the tragedy was an act of terrorism directed against the United States.⁸⁴ In that sense, no single individual or group of individuals was the target. Rather, they were innocent victims—unsuspecting pawns in terrorist aggression against their country. Since government employees and the military had been the usual targets of terrorists, they were the focus of compensation considerations. Almost forgotten is the fact that one of the hostages held by Iran for 444 days was a private citizen.⁸⁵ The President's Commission on Hostage Compensation, while acknowledging that the Iranians did not distinguish this person from the "governmen-

tal" hostages, determined that "the U.S. Government has no legal or moral responsibility to pay compensation to private hostages taken abroad, particularly in circumstances where warnings against travel in the area had been issued."⁸⁶ The 1986 Victims of Terrorism Compensation Act, which addressed the issue more generically, continued this distinction by not providing any coverage for private civilian victims, irrespective of the circumstances.

The Commission shares the view of its counterparts in France, that it is appropriate for the national government to provide compensation to the victims of terrorism as a matter of "national solidarity." All of the Flight 103 passengers and crew were innocent victims of an act of terrorism directed at the United States.

The Commission is persuaded that the definition of what constitutes an act of terrorism is best left to the Executive Branch. The Vice President's 1986 Task Force report noted that terrorism is easier to describe than define—and legal definitions in this area can be inadvertently too expansive or restrictive. The Commission believes the President, or a board he might establish for this purpose, will know the right circumstances of terrorism when they occur. When the President determines that an act of terrorism has occurred, the Commission believes there is no basis upon which to differentiate between the compensation and benefits for private civilians and that for federal employees or contractors.

Recommendation

The Commission recommends that the President seek legislation to authorize and permanently appropriate funds to provide monetary benefits and tax relief for any American victim of an act of terrorism.⁸⁷ The President may wish to consider a board to develop criteria for compensation in terrorist cases, and to recommend a harmonization of the current laws that address this question disparately.⁸⁸ One question at the outset should be whether benefits should be made available retroactively for the victims of Flight 103.

Endnotes

¹ Mission Statement at 4-5 (November 20, 1989). We considered, but rejected as infeasible, the likelihood that families of victims of international terrorist acts might use the United States court system to seek recompense from individual terrorists or states that sponsor their activities. The practical problems are obvious, and, in any event, foreign governments are not subject to the jurisdiction of U.S. courts. See *Persinger v. Islamic Republic of Iran*, 729 F.2d 835 (D.C. Cir.), cert. denied, 469 U.S. 881, (1984) discussed in *Compensating Victims of Terrorism: The Current Framework in the United States*, 22 Texas Int'l L.J. 383, 393-96 (1987).

² The Department's own statement of the actions it takes when an American dies overseas, include:

- To be satisfied the next of kin are notified or to make the notification themselves.
- To transfer money, if needed, for the preparation and return of the remains to the United States.
- To prepare a Foreign Service Report of Death (which is accepted under United States law as a death certificate).
- To serve as provisional conservators of an estate of an American dying abroad if authorized kin is not at hand.
- To provide all "appropriate information to families about" the return of remains and personal effects.
- In the case of an airplane (or similar) tragedy, the Department also organizes task forces to respond to public inquiries and seeks to ascertain the welfare of Americans believed to be involved.

Aviation Security, Senate Committee on Appropriations Transportation Subcommittee, S. Hrg. 101-110, pp. 50-51 (March 14, 1989) (hereinafter referred to as "S. Hrg. 101-110").

³ The Bureau of Consular Affairs was created by a 1978 Department of State reorganization designed to join in "one directorate all the various services performed for American citizens abroad." *Overseas Consular Services—Overview* (June 5, 1989).

⁴ See generally "Disaster Assistance Handbook" printed in Citizens Consular Services Procedures for Handling Reports of Death and Estates of Victims of Disasters and Emergency Travel Documentation for Survivors of Disasters Abroad, and reprinted as Tab D to "Consular Affairs Task Force Assistance Handbook" (September 1989). The Consular Affairs Task Force Assistance Handbook was submitted as Exhibit B to the Commission Hearing, December 18, 1989 (hereinafter referred to as the "Task Force Handbook").

⁵ Interview with Taylor Blanton; *Air Disaster at Lockerbie, Scotland December 21, 1988 Embassy London Assessment*, par. 7(A), p. 4 (March 13, 1989) (hereinafter referred to as the "London Embassy Assessment"). The Embassy's Chief of American Citizen Services revised the Embassy's disaster plan, and forwarded it to the Department in Washington.

⁶ London Embassy Assessment, par. 5(A), p. 4. Department of State, "Pan Am Flight 103 Chronology of Events, p. 1 (hereinafter referred to as the "State Department Chronology").

⁷ London Embassy Assessment, par. 7(A), p. 4; State Department Chronology, p. 1.

⁸ Testimony of Assistant Secretary of State Elizabeth Tamposi, Commission Hearing, December 18, 1989, p. 253 (hereinafter referred to as the "Tamposi Testimony").

⁹ State Department Chronology, p. 1. The Working Group, similar but less formal than a Task Force, was created at the direction of the Executive Secretary to respond to the crisis, and it remained in effect until it was disbanded on January 4, 1989. State Department Chronology, p. 22. The Bureau of Consular Affairs is but one of several bureaus represented. Task Force Handbook, p. 4-6.

At the time the Working Group was established, it was assumed that this was a plane crash rather than an act of terrorism.

¹⁰ State Department Chronology, p. 2.

¹¹ "Consular Staff Log," p. 1.

¹² Interviews with Douglas Jones and Elizabeth Leighton; "The American Consulate General in Edinburgh's Role in Pan Am 103 Follow-Up," (hereinafter referred to as the "American Consulate Follow-up"), p. 1.

¹³ London Embassy Assessment par. 1, p. 1.

¹⁴ Interviews with Consulate and Embassy staff revealed that these contemporaneous efforts resulted in the creation of many "lists." These staff all indicated that the absence of computer equipment, with appropriate database software, impeded harmonization of the various lists.

¹⁵ The passport application has a non-mandatory data field that calls for the name, address and telephone of a person to notify in case of an emergency. However, reliance on this information can be hazardous. The information contained on applications for recently issued passports may not yet be computerized, and the information from older passport applications may have become inaccurate—this is particularly true now that passports are valid for 10 years.

¹⁶ See Air Accidents Investigation Branch (AAIB) Special Bulletin S1/89, p. 1-2 (hereinafter referred to as the "AAIB Special Bulletin").

¹⁷ AAIB Special Bulletin, p. 1. Part of what the Scottish Police call the "miracle of Lockerbie" is that one of the engines fell harmlessly in a parking lot, but only 50 feet from a house.

¹⁸ Dumfries and Galloway Regional Council, "LOCKERBIE: A local authority response to the Disaster," p. 1 (November 1989). The Sherwood Crescent crater measured 140 feet by 40 feet. AAIB Special Bulletin, p. 1.

¹⁹ Quoted during interviews with Procurator Fiscal James MacDougall and Detective Chief Superintendent Stuart Henderson, Senior Investigating Officer.

²⁰ All the bodies were X-rayed, and teams of pathologists performed autopsies. The bodies were then embalmed and the ongoing identification process continued. The Scottish police have made it clear, notwithstanding the preferences of some of the families, that the autopsy reports (including any photographs) are under Scottish law and procedure, police property and part of the criminal investigation. As such, they will not be released to the families or the public. Interviews with Procurator Fiscal James MacDougall and Chief Constable George Esson.

The Commission has no basis upon which to question this procedure or practice.

²¹ See 7 FAM 231; Interviews with Elizabeth Leighton and Taylor Blanton.

²² Statement of Chief Constable George Esson, Dumfries and Galloway Constabulary, Press Release (December 15, 1989) and *Present Position of Property Being Held at L.I.C.C. (Lockerbie Incident Control Center, where the Lockerbie / Flight 103 investigation is headquartered)*.

²³ The Scottish police sent letters to the families formally notifying them in October, 1989.

Some additional items are unreturned because they remain unidentified. In order to facilitate the identification of valuables, the Scottish police met with some of the families and circulated a picture catalogue of these items. The State Department and the FBI are coordinating distribution of the catalogue to families that did not meet with the Scottish police. Interview with Chief Constable George Esson.

²⁴ See American Consulate Follow-up; Interviews with John Gilmore, Harvey Thomson, Sheila Meads, Julie Rethmeier and Elizabeth Leighton; State Department Chronology, p. 36.

Much of the clothing, soiled by aviation fuel and fluids, was washed by Lockerbie volunteers before it was turned over to the Consulate.

²⁵ American Consulate Follow-up, p. 2.

²⁶ Tamposi Testimony, pp. 218, 220 and 224.

²⁷ S. Hrg. 101-110, pp. 50-51.

²⁸ Tamposi Testimony, pp. 218.

²⁹ Prepared Statement of Joan M. Clark, Assistant Secretary of State for Consular Affairs submitted to the Senate Foreign Relations Subcommittee on Terrorism, Narcotics and International Operations (April 7, 1989), p. 3 (hereinafter referred to as "Clark Foreign Relations Prepared Statement").

³⁰ Ms. Clark earlier had testified that "if you have a name like mine Clark, or Smith, or something which is fairly common, it is difficult to go through millions and millions of passport applications that we have on file and retrieve those." Hearings and Markup on H.R. 1487, p. 116 (March 8, 1989) (hereinafter "H.R. 1487 Hearings").

The problem was compounded in the case of Pan Am 103 by the existence of multiple lists—the London Embassy list, Pan Am's London list, the State Department's list and the list generated by Pan Am in New York. Each list in turn was supplemented and annotated by the information generated or received at each location. The benefits associated with a single, complete list (or a mechanism to assure that all information is harmonized) appear obvious.

³¹ Clark Foreign Relations Prepared Statement, p. 3. See also Testimony of Ambassador Clayton E. McManaway, S. Hrg. 101-110, p. 75 (hereinafter referred to as the "McManaway Testimony").

³² Compare McManaway Testimony, p. 48, with Tamposi Testimony, p. 218.

³³ Compare Disaster Assistance Handbook, p. 5 (Disaster Action Checklist, item #4) "Obtain an accurate passenger manifest as soon as possible and cable the names of passengers to the Department" with Disaster Assistance Handbook, p. 10, "If at all possible, a passenger manifest of the plane, train, bus, etc., should be obtained from the carrier involved as soon as possible."

³⁴ Clark Foreign Relations Prepared Statement, p. 2.

In the exercise conducted one week earlier at Heathrow, it was contemplated that Pan Am would make the manifest available to the U.S. Embassy in London. Indeed, it appears that on the evening of December 21st, Pan Am (Heathrow/London) was agreeable to making the Flight 103 manifest available, at least for the Embassy's internal use. However, Pan Am New York corporate headquarters instructed that the Pan Am 103 manifest not be released. London Embassy Assessment, par. 5.(A), pp. 2-3; State Department Chronology, p. 3; Interviews with Taylor Blanton and Jeffrey Garrison.

³⁵ The Commission had expected Joan Clark, who was Assistant Secretary for Consular Affairs at the time of Pan Am 103, to testify at its December 18, 1989 hearing. Unfortunately, Ms. Clark did not appear during the hearing. Commission Hearing, December 18, 1989, p. 235.

³⁶ In the event of a crisis, either a Task Force or Working Group is established, which is "chaired by an officer of the geographic bureau responsible for the country where the event is taking place." Task Force Handbook, pp. 4-6. In this case, the desk officer for the United Kingdom, Mr. Perlow, chaired the Working Group.

³⁷ See remarks of Commission Member, Congressman James Oberstar at the Commission Hearing, December 18, 1989, p. 274.

³⁸ The State Department's current Consular Affairs Task Force Handbook informs consular staff that they should normally expect to receive a preliminary manifest in 12 to 24 hours (Task Force Handbook, p. 19), but Ms. Clark testified that the 7 hours it took for the Department to receive any manifest information from Pan Am was "a long period of time." H.R. 1487 Hearing, p. 115. Yet, the Department has now sought from the Air Transport Association its agreement that the member airlines would provide the Department a "working manifest . . . within one hour of the incident" (Draft Guidelines for the Consular Affairs Bureau, U.S. State Department and the International Airline Companies in the Management of

a Crisis, par. 2.B.(2), attached to letter from Assistant Secretary of State Elizabeth Tamposi to Commission Chairman Ann McLaughlin (January 4, 1990)).

³⁹ Tamposi Testimony, p. 219. According to the Department's chronology of consular actions, about two hours after the manifest was received, the Department began calling those persons who had previously called the Department about relatives. See State Department Chronology, pp. 3-4.

⁴⁰ Tamposi Testimony, p. 219.

⁴¹ Tamposi Testimony, p. 220.

⁴² "The Department has a statutory obligation to make notifications of death. Notification by traveling companions and others does not relieve the Department of the responsibility of informing the closest relative to ensure that all proper notification has been made and that all available information has been disseminated. The consular officer must be certain that the proper person is notified..." 7 FAM par. 221.

It is not at all clear that even a large post with good communications facilities, such as London, has the resources to send out the large number of cables required in a major disaster such as Flight 103. In its assessment, the London Embassy noted:

We have wondered how we would have coped if we had been required to send 189 or more notification cables.

London Embassy Assessment, par. 8(B), p. 6.

⁴³ Task Force Handbook, p. 21.

⁴⁴ Testimony of Joan Clark, H.R. 1487 Hearings, p. 116.

⁴⁵ Tamposi Testimony, p. 225.

⁴⁶ Indeed, one consular officer suggested that in contrast Pan Am had a very sophisticated telephone system that could handle a large volume of calls. Interview with Elizabeth Leighton.

⁴⁷ Tamposi Testimony, pp. 221-22. It was not until March 1989 that the Bureau adopted something akin to a "buddy" system, such as the one used by Pan Am, where each family would have an assigned person to be their "liaison." State Department Chronology, p. 45.

⁴⁸ Testimony of Joan Clark, H.R. 1487 Hearing, p. 116. In subsequent testimony before the Senate Committee on Foreign Relations Subcommittee on Terrorism, Narcotics and International Operations on April 7, 1989, Ms. Clark added:

Early on we were asked a lot of questions which we were unable to provide the answers to because as representatives of the government we provide information only of an authoritative nature, and we do not provide any information of a speculative nature.

Unedited Transcript, p. 13 (emphasis added)

⁴⁹ The Commission also heard from consular officers concerned about maintaining a "professional" relationship with the families. In some cases, the posture of the "professional" appeared to the families as cold and uncaring.

⁵⁰ Interview with Joan Clark. The State Department in Washington received ample communications from Lockerbie and London. For example, 53 situation reports (cables) were sent from Lockerbie/London to Washington from December 21-27, 1988.

⁵¹ Tamposi Testimony, p. 224.

⁵² Id.

⁵³ "Update on Crisis Management," p. 1 (February 1, 1990).

⁵⁴ Even if the ATA and the Department were to reach some accord, that agreement would not govern procedures applicable to foreign carriers or charters.

⁵⁵ The airlines have expressed concern over the administrative and cost burdens imposed by requiring the airlines to collect these data. We suggest that the airlines explore alternatives, such as the one suggested by Flight 103 family member, Mrs. Georgia Nucci, which would require passengers to submit the information on a portion of the boarding pass collected by the airline.

⁵⁶ It is the Commission's understanding that all U.S. passports now issued are machine readable.

⁵⁷ One family member has provided the Commission with a Directory of Members of the Association for Death Education and Counseling, an organization that, *inter alia*, provides workshops as well as a resource for referrals.

⁵⁸ See e.g., Prepared Statement of Paul Hudson, Families of Pan Am 103/Lockerbie at 8, Contentions and Allegations, No. 18, Commission Hearing November 17, 1989; Testimony of Bert Ammerman, Victims of Pan Am 103 before the Senate Foreign Relations Subcommittee on Terrorism, Narcotics and International Operations, pp. 77-79 (April 7, 1989).

⁵⁹ London Embassy Assessment, p. 2; Interviews with Taylor Blanton, Elizabeth Leighton and Douglas Jones. It appeared that the Edinburgh Consul General was "in charge" while he was there, but that the Chief, American Citizen Services was "in charge" in the absence of the Consul General. In the view of the Consul General, no major decision should have been taken without consultations with him (Interview with Douglas Jones); whether this occurred is not clear.

⁶⁰ Interview with Elizabeth Leighton.

⁶¹ See London Embassy Assessment, p. 2; Interview with Elizabeth Leighton; Interview with Taylor Blanton.

⁶² Interview with Paul Rendich, Pan Am Assistant General Counsel. This group of 125 does not include the Pan Am contingent responsible for assisting with the various investigations into the causes of the tragedy.

⁶³ Interviews with Taylor Blanton and Elizabeth Leighton.

⁶⁴ Interview with Laurence Kerr, Deputy Director, Office of Consular Services.

⁶⁵ The London Embassy did have staff to meet arriving families at the airport and to brief them at their hotel. Interviews with Jeffrey Garrison and Bridget Burkart.

⁶⁶ This had the effect of further reducing the channels by which the families could have their many questions answered directly. Instead inquiries had to be routed through the Embassy and Consulate.

⁶⁷ "Update on Crisis Management," p. 2 (February 1, 1990).

⁶⁸ Individual posts are required to develop crisis plans that are reviewed and approved by the Bureau of Consular Affairs. 7 FAM par. 153.

⁶⁹ Computer hardware and software, together with telecopiers, would speed the collection, transfer and use of information, such as passenger and contact lists, in Washington, at the embassies and consulates and at the site of a disaster.

⁷⁰ It should be noted that the return of the bodies was arranged by Pan Am and Kenyon's, in consultation with the families and/or funeral directors of their choice. Although the shipment of caskets as commercial cargo is *not* unusual, the caskets are customarily picked up by a mortuary or funeral home, out of the sight of families. Kenyon's has assured the Commission staff that they had notified funeral directors of all flight arrangements in advance. Interview with Kenyon's.

Some family members have complained that their loved ones were shipped in flimsy cardboard coffins, and Commission staff investigated this claim. It appears that these families, who unfortunately viewed caskets being unloaded, mistook the cardboard and packing materials that protected the wood caskets from damage during shipment for the actual caskets. Interview with Christopher Kenyon, letter from John Nicholls, and interview with Paul Rendich.

⁷¹ Tamposi Testimony, p. 226 (emphasis added).

⁷² "Update on Crisis Management," p. 2 (February 1, 1990).

⁷³ What constitutes "willful misconduct" has been a much litigated matter. See Comment: *Flying the Unfriendly Skies: The Liability of Airlines Under the Warsaw Convention for Injuries Due to Terrorism*, 8 N.W. J. of Int'l Law & Bus. 249, 258-63 (1987); Silets, *Something Special in the Air and on the Ground: The Potential for Unlimited Liability of International Air Carriers for Terrorist Attacks under the Warsaw*

Convention, 53 J. of Air Law and Comm. 321, 365-72 (1987) (hereinafter referred to as "Silets").

Even though the current system permits the carrier "cap" to be broken by a finding of willful misconduct, pursuit of compensation can be a slow and arduous process. According to testimony submitted to the Senate Foreign Relations Committee on November 15, 1989, more than six years after the KAL Flight 007 was shot down and notwithstanding a 1989 jury finding that Korean Airlines personnel engaged in the willful misconduct required under the Warsaw Convention to exceed the liability cap, "none of the litigating families have received any compensation, not even the \$75,000—provided for under the Montreal Agreement of 1966." Prepared Testimony of Mr. Hans Ephraimson-Abt, Chairman of The American Association for Families of KAL 007 Victims, p. 4.

⁷⁴ For example, the Hague Protocol of 1955 doubled the carrier liability limit applicable absent a showing of "willful misconduct" to nearly \$20,000.

⁷⁵ The Montreal Agreement is not a treaty, but rather is a "contract between the United States and the principal United States and foreign international air carriers serving the United States that neither directly involves nations participating in the Warsaw system, nor amends the Warsaw Convention itself." Silets, pp. 341-42 (footnotes omitted). The United States had announced its intention to renounce the Warsaw Convention (after having failed to take any action on the Hague Protocol) because of the unacceptably low liability limits. The Montreal Agreement was an accommodation arrived at a week before the effective date of the U.S. renunciation. Silets, p. 341.

⁷⁶ Even if willful misconduct exists, the District Court hearing the claims arising out of the Pan Am 103 disaster has ruled that punitive damages are barred by the Warsaw Convention. *In Re: Air Disaster in Lockerbie Scotland on December 21, 1988*, MDL 799 (E.D.N.Y.) (Memorandum and Order, Jan. 3, 1990); *Accord Floyd v. Eastern Airlines, Inc.*, 872 F.2d 1462 (11th Cir. 1989); *Contra In Re: Hijacking of Pan American World Airways, Inc. Aircraft at Karachi International Airport, Pakistan on September 5, 1986*, 729 F. Supp. 17 (S.D.N.Y. 1990).

⁷⁷ The Commission has not surveyed the laws that generally provide compensation to victims of crime. The matter, however, was reviewed in the Final Report of the President's Task Force on Victims of Crime, which described the status of federal and state programs for crime victims and the rationale for their creation and funding. Subsequent to the issuance of that report, a federal Crime Victims Fund was established to provide federal grants to state crime victims compensation programs. See 42 U.S.C. § 10601.

In addition, the Commission has not surveyed the extent to which and the conditions under which private insurance programs cover injury, death or other loss resulting from acts of terrorism.

⁷⁸ There have been three separate efforts to address the treatment of victims of at least certain acts of terrorism: The Hostage Relief Act of 1980, P.L. 96-449, October 14, 1980, 94 Stat. 1967; the President's 1981 Commission on Hostage Compensation, E.O. 12285, 46 *Fed. Reg.* 7931 (January 19, 1981); and the Victims of Terrorism Compensation Act, Title VIII of the Omnibus Diplomatic Security and Antiterrorism Act of 1986, Public Law 99-399, August 27, 1986, 100 Stat. 853. See *Compensating Victims of Terrorism, supra*.

The Hostage Relief Act of 1980 and the President's 1981 Commission both focused on the Iran hostage crisis. The Victims of Terrorism Compensation Act was enacted in 1986 to address the issues more generically. *Id.*, pp. 391-93.

⁷⁹ The Commission did not attempt to survey the laws of other nations, and there very well may be other examples of such compensation laws.

⁸⁰ National Insurance Programs in Israel April 1989, prepared and published by the Research and Planning Administration (August 1989).

⁸¹ Compensation is made out of a fund created by levies on insurance contracts and administered by a multi-member Board of Directors. Inasmuch as the law does not define an act of terrorism, this Board apparently has wide discretion in approving claims against the fund. The Ministry indicated that since enactment of this law, 64 cases have been submitted, and that preliminarily, approximately \$19 million has been paid out.

⁸² *Compensating Victims*, p. 386 ("Government employees stationed abroad are often both the easiest prey and the greatest prize for terrorists wishing to strike out at the United States.") (footnote omitted).

⁸³ Only if it is decided that there are *any* circumstances under which *any* compensation or benefits should be provided to private civilians are the questions presented concerning the appropriate scope of benefits and whether family members of the victims should be eligible to receive benefits.

⁸⁴ See discussion in Chapter 2.

⁸⁵ The Final Report and Recommendations of The President's Commission on Hostage Compensation, pp. 31-32 (September 21, 1981).

⁸⁶ *Id.* At the same time the Commission specifically recommended that:

Federal Government consider as a matter of policy the question of its responsibility towards private American citizens who may be taken hostage in the future. (Final Report, Recommendation 8, p. 36).

This apparent inconsistency is not explained except that the Report noted that: (i) Congress had extended some tax benefits to the private citizen held hostage in Iran (Final Report, p. 32);

and (ii) the U.S. Government had warned its citizens against travel in Iran and the United States used "every good faith effort to obtain the release of the private citizen hostage along with the others taken captive." (Final Report, pp. 32-33). Perhaps the Commission was suggesting implicitly that there might be circumstances where the "legal" or at least the "moral" obligations of the government might be viewed differently.

⁸⁷ The kinds of benefits now available, include, for example:

1. Exclusion from income computation of amounts received as disability income (26 U.S.C. § 104(a)(5)); forgiveness of federal income tax for a multi-year period determined by the date of death and date the injury or wound was incurred (26 U.S.C. § 692(c)); forgiveness of certain federal estate taxes (26 U.S.C. § 2201); deferral of federal income tax during periods of captivity (37 U.S.C. § 558).
2. Compensation for the death or disability of an employee or a family member of the employee (5 U.S.C. § 5570(b));
3. For hostages, a savings fund for pay and allowances (5 U.S.C. § 5569(b)), certain medical and health care expenses not otherwise covered (5 U.S.C. § 5569(c)), a per diem cash payment (5 U.S.C. § 5569(d)), the benefits of the Soldiers' and Sailors' Civil Relief Act of 1940 (5 U.S.C. § 5569(e)), and educational benefits for the spouse and children of a hostage (5 U.S.C. § 5569(f)).
4. Advancement or reimbursement of medical and health expenses (5 U.S.C. § 5570(c)).

⁸⁸ There is little consistency between and among the various laws setting forth the eligibility criteria for benefits to members of the uniformed services, and government employees and contractors, and scant guidance on what constitutes an act of terrorism. *E.g.*, Compare 5 U.S.C. § 5570(b) with 26 U.S.C. § 692(c)(2).

National Will

The free world has been lurching from terrorist attack to terrorist attack, attempting to agree on how to respond to each event. This approach will not work.

Several facts about terrorism have been dramatically made clear:

—Terrorism is a deadly weapon of the weak and the cowardly. Terrorism leverages violence against innocent victims. As Lenin put it: “The purpose of terrorism is to terrorize.”

—Terrorism is cheap, especially in terms of the political results it may achieve. One act of terrorism can cause changes in the policies of major nations.

—Unchecked, terrorism creates a shift in the balance of power toward those nations that sanction terrorism and use it as an instrument of foreign policy.

—Historically, terrorism consisted of isolated acts of individuals or small groups of fanatics. Over recent decades, however, terrorism increasingly is state-sponsored.

—Terrorism is a form of surrogate warfare. Conventional warfare is too difficult, too costly and, indeed, impossible for some nations to conduct. Terrorism offers an alternative.

—Acts of state-sponsored terrorism against a nation’s citizens are acts of aggression against that nation. In today’s world, the principal targets are the values and interests of democratic nations.

A consensus must be reached among law-abiding nations that terrorism is an act of ag-

gression which can and must be deterred. Those outlaw nations—properly labelled “the league of terror” for harboring and sponsoring terrorism—should be held accountable for their “crime.”

The Commission believes strongly that the time is now for the United States to take a more active leadership role in the fight against international terrorism. The American public must be prepared to exercise its national will and support U.S. Government action to increase dramatically the cost to terrorists and their patrons. Elected leaders, in turn, must be prepared to act on this national will as a foundation for taking more aggressive action against both terrorists and their state sponsors.

Once America clearly adopts this consistent, aggressive policy, terrorist groups should quickly get the message that terrorist acts will not be condoned. They must understand that if they pursue terrorist actions against the United States, this country will act to protect its interest to the fullest extent allowed by domestic and international law.

Air travelers are particularly vulnerable to terrorist violence. It is estimated that over one billion passengers used commercial airlines to travel throughout the world in 1989. Yet a handful of terrorist groups, willing to commit their cowardly and despicable crimes, have the capacity to plunge the world’s passengers into a hostage-like grip of fear.

Significantly, the wave of hijackings of the 1960s and 1970s stopped when nations refused to give refuge to hijackers. In the 1980s, terrorists turned to bombs to attack passenger air-

In-Flight Explosive Sabotage Incidents

Period	Number of Incidents	Persons Killed	Average Number Killed
1949-1958	8	97	12
1959-1968	11	254	23
1969-1978	18	624	34
1979-1988	12	849	70

Source:

Criminal Acts Against Civil Aviation—1988

lines, resulting in 1,030 deaths and 112 injuries in the last five years alone.

The materials necessary to make bombs from plastic explosives like semtex are readily available to terrorists. Czechoslovakian President Vaclav Havel said recently that his country, under the previous regime, exported to Libya 1000 tons of semtex, an amount Havel said is sufficient for the world terrorist community to make bombs for 150 years.

Every airport, every departure, every passenger and every suitcase, mail bag or cargo container, presents a possible opportunity for a terrorist to introduce small but deadly amounts of explosives that are effectively invisible to X-ray and other detection equipment currently in use at airports.

The security of U.S. civil aviation has been increased. The Commission believes this security will continue to improve, especially if the recommendations of this Commission are carried out. In reality, however, there will never be 100 per cent security against every terrorist technique.

The more security measures are imposed, the more fundamental freedoms are restricted. Searching bags and screening passengers constitute intrusions upon privacy. Flight delays or cancellations for security reasons limit the freedom of travel. Moreover, the cost of security procedures to the public is incalculable, both in

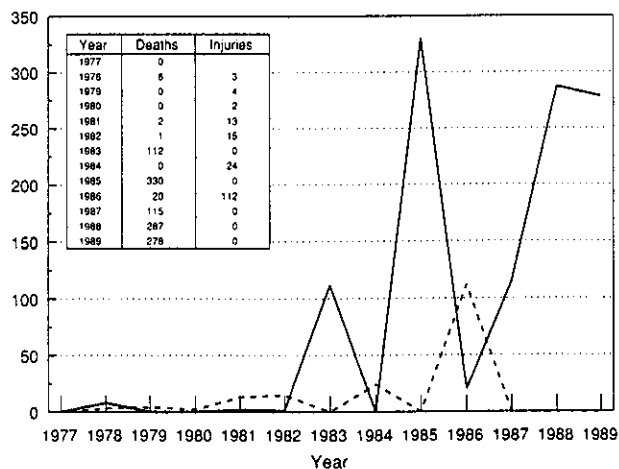
terms of higher fares and time spent in check-in procedures.

Even if aviation security improves dramatically, the terrorist will simply turn to other target areas where people congregate. Securing government targets, like embassies, has had the ironic effect of directing terrorist attacks to more vulnerable and more civilian targets. With an infinite number of civilian targets, it will never be possible to defend against all terrorist attacks. Perhaps most importantly, no state has taken a retaliatory action in response to an aircraft bombing.

While the world aviation system again moves to make this terrorist tactic more difficult, through better detection equipment, tighter screening, improved training practices and better access controls, we must squarely face the reality that even the combination of all of these improvements cannot guarantee civil aviation security.

DEATHS AND INJURIES

Due to Explosives Onboard Aircraft
1977-1989



* Incidents where the explosion aboard the aircraft occurred during a hijacking are not reflected in these summaries

Source: Federal Aviation Administration

Deaths Injuries

There is, however, an alternative: addressing the problem of international terrorism at its source.

The current strategic policy of the United States on counterterrorism consists of four elements:

First, make no concessions of any kind to terrorists. Do not pay ransom,

release convicted terrorists, or change policies to accommodate terrorist demands.

Second, make state sponsors of terrorism pay a price for their actions. This may entail the use of military force as was used in 1986 in the bombing raids of Libya. It might also include sanctions of a political, economic or diplomatic nature.

Third, work with friends and allies to identify, track and apprehend, prosecute and punish terrorists. This program is designed to bring terrorists to justice, to disrupt their operations, and to destroy their networks.

Fourth, provide training in antiterrorism techniques to law enforcement officials around the world.

The Commission recommends strongly that a policy of "zero tolerance" towards terrorist attacks be adopted through a heightened emphasis on the second element of U.S. counterterrorism policy—to make state sponsors of terrorism pay a price for their actions.

Pursuing terrorists and responding swiftly and proportionately to their acts against humanity must become U.S. policy in deed as well as in word. What is required is effective action, not simply strong rhetoric.

To date, the United States has too often treated terrorism only as a law enforcement problem. The Commission recognizes that taking a law enforcement approach to terrorist attacks has many advantages, including: the lawful gathering of evidence; the confrontation of the accusers in an open court of law with all the evidence made public; the assurance of a defense attorney; and the opportunity to present evidence in support of the defense. If successful, a law enforcement approach also results in the punishment of those individuals who were directly responsible for the acts perpetrated.

However, a law enforcement approach is, by its very nature, reactive. It is also an extremely time-consuming process requiring proof of guilt beyond a reasonable doubt. It may be hindered by an inability to gather evidence or by difficulties in arresting or extraditing the accused. Most importantly, a law enforcement ap-

proach will rarely result in the prosecution of more than a few individual members of any terrorist group, and it is neither designed for, nor can it be effectively used against the state sponsors of terrorism.

While a law enforcement approach must always be a part of our response to terrorism, this Commission finds unacceptable the idea of holding ourselves in all cases to a criminal standard of proof before we act. The United States must be ready to view some terrorist attacks as a matter of national security, and indeed, in some cases should be prepared to treat the act for what it is, as an act of aggression against the United States. It may well be that the perpetrators of a terrorist act may be identified quickly through intelligence operations and techniques.

A swift response could be directed against the terrorist group responsible and/or its state sponsor. In this context, the Commission recommends planning, training and equipping for direct preemptive or retaliatory military actions against known terrorist hideouts in countries that sanction them.

Where such direct strikes are unwise or inappropriate, the Commission recommends use of middle-level options, including covert operations to preempt, disrupt or respond to terrorist actions. The Commission recognizes the many reasons, historical and otherwise, why the United States Government must proceed with caution in the use of covert operations. Certainly such tactics must not be used to circumvent basic democratic values. Terrorists, however, have relied upon the adherence by others to these values to permit them to attack thousands of innocent victims with impunity.

Major steps have been taken in the last few years by the United States and her allies to improve international cooperation in the fight against terrorism. Major democratic powers have begun to recognize that an effective counterterrorism policy requires mutual cooperation and support. In 1978 the United States and its fellow members of the Economic Summit (U.K., Canada, Japan, France, Italy, and West Germany) agreed to cut off air service to and from a country that does not extradite or prosecute a terrorist for hijacking. The Venice Annex, agreed upon in June 1987, expanded

upon the Bonn Declaration to include halting air service in cases of sabotage.

Despite this strong rhetoric, countries in the past too often have chosen to act solely in their own self-interest rather than recognizing and acting in support of the combined interests of the international community. However, as terrorism's ugly hand affects more and more countries (citizens of 21 countries were on Pan Am 103), prospects grow for a more unified international response to terrorism.

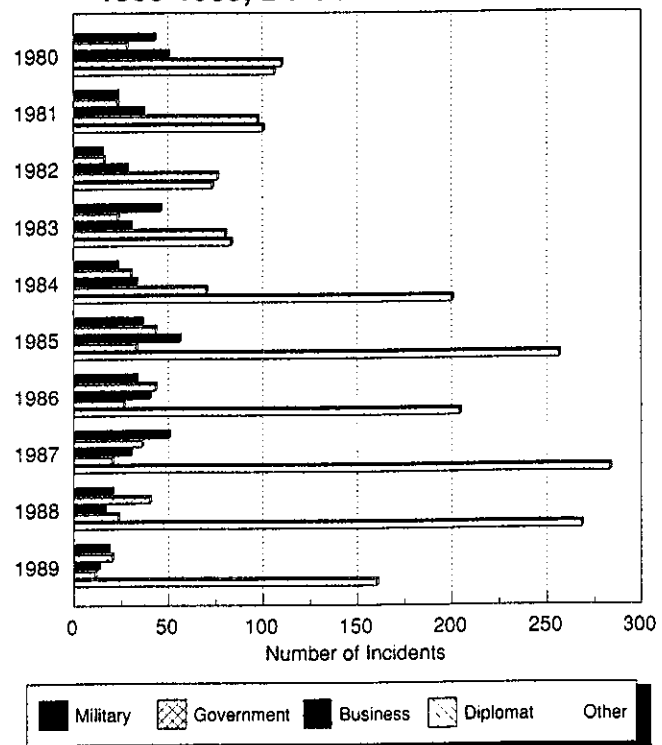
Recent events in the Soviet Union and Eastern Europe also present new opportunities to foster wider cooperation on terrorism. Discussions were reportedly held with the Soviets on the issue of terrorism at the Malta Summit in 1989. The Soviets have taken a more constructive approach recently by condemning specific terrorist acts, but there is still much room for improvement. Because terrorism is not only an assault on democratic principles but an act against all humanity, the United States and her allies should continue to urge the Soviet Union to exercise its leadership to ensure that concrete and effective steps are taken to minimize if not to eradicate the threat of terrorism worldwide.

Many of these steps can be taken with the help and support of our U.S. allies. Such a bilateral or multilateral approach should be encouraged. With other like-thinking nations, the United States should work to elevate the acceptable standards of international behavior, and treat as outlaws states sponsoring terrorism. But, the United States itself must stand ready to act.

To continue as a world leader conducting an effective foreign policy and influencing events, the United States must remain engaged. State-sponsored terrorism must be faced and must be deterred—with methods that are consistent with the nature of the threat and the U.S. system and values. Otherwise, terrorism will force a change in the world balance of power fundamentally adverse to U.S. interests.

The United States has vital interests. It needs only the will to defend them against those few states living outside an acceptable standard of international behavior.

INTERNATIONAL TERRORIST INCIDENTS 1980-1989, BY TYPE OF VICTIM



Source: *Patterns of Global Terrorism—1989*

Recommendations

In the view of this Commission, the United States must:

- First, heighten emphasis on the second element of U.S. counterterrorism policy, that state sponsors should be made to pay a price for their actions.
- Second, refuse to allow terrorist attacks to alter U.S. political and economic policies.
- Third, improve human intelligence-gathering on terrorism, in cooperation with other nations.
- Fourth, work with other nations to treat as outlaws state sponsors of terrorism—isolating them politically, economically, and militarily.
- Fifth, develop through the Congress and the people a clear understanding that state-sponsored terrorism threatens U.S. values and interests, and that active measures are needed, overt and covert, to counter more effectively the terrorist threat.

-
- Sixth, ensure now that all U.S. Government resources are prepared for active measures—preemptive or retaliatory, direct or covert—against a series of targets in

countries well-known to have engaged in state-sponsored terrorism.

National will—and the moral courage to use it—is the ultimate means to defeat terrorism.

Final Thoughts

This Report represents an important first step in improving aviation security. But because of the dynamic nature of the terrorist threat and the evolving nature of detection technology, this Report must be only a beginning. Therefore, the Commission recommends that the Secretary of Transportation and the Secretary of State be directed to report to the Presi-

dent, the Congress and the American people in one year on actions taken in conjunction with this Commission's Report, and the results of those actions.

The criminal investigation of Flight 103 continues, hopefully to result in the indictment, arrest, trial and conviction of the killers.

Recommendations

International Security

- The lead negotiating role in aviation security should be shifted from U.S. carriers to the Department of State.
- The United States should continue to press vigorously for security improvements through the Foreign Airport Security Act and the Foreign Airport Assessment Program.
- The United States should rely on bilateral agreements to achieve aviation security objectives with foreign governments.
- The State Department should create the position of Coordinator for International Aviation Security and the President should nominate that office holder for the rank of Ambassador.
- The U.S. should continue to work through ICAO to improve aviation security internationally.
- The FAA should create an active formal technical assistance program to provide aviation security help to countries upon request and concentrate its efforts wherever the threat is greatest.
- The Summit Seven should amend the Bonn Declaration to extend sanctions for all terrorist acts, including attacks against airports and airline ticket offices.

Domestic Security

- The FAA should seek the assistance of the FBI in making a thorough assessment of

the current and potential threat to the domestic air transportation system.

- The FAA should initiate immediately the planning and analysis necessary to phase additional security measures into the domestic system over time.
- The FAA should take the necessary action to clearly define responsibilities under exclusive area agreements and contingency plans to ensure that existing problems are corrected and the contingent security system is capable of meeting the specified threat levels.
- The Congress should require criminal record checks for all airport employees. The legislation should identify certain criminal records that indicate a potential security risk and enable airport operators to deny employment on that basis.
- The FAA should determine the security features necessary for new airport facilities and ensure that such features are included in airport facility design and construction.
- The Commission endorses the recommendations of the Office of the Secretary of Transportation Office of Safety Review Task Force and recommends full implementation expeditiously.
- The FAA should eliminate the discretion afforded private carriers for reporting bomb threats and searches of aircraft and facilities, and require the immediate reporting of all threats to FAA, airport and public safety authorities, and recognize

that public safety authorities have the responsibility for deciding whether and how searches should be conducted.

- The FAA should change the minimum training requirements for ground security coordinators so that minimum training periods are in line with the amount of material that has to be covered.
- The FAA should establish and apply standardized testing requirements for ground security coordinators and expedite the development of standards for actions to be taken prior to each flight.
- The FAA should require carriers to assure that all baggage associated with passengers who meet FAA's criteria as possibly having explosive devices in checked baggage, are subject to security controls and then are not carried unless the passenger is on board the aircraft.

Mail and Cargo

- The USPS should effect a regulatory change redefining the category of mail "sealed against inspection" to include written materials and those parcels below a specific weight.
- The air carriers must be initially responsible for any screening of air mail.
- Any screening of mail should be instituted first at "extraordinary security measures" airports and then phased in at other airports as the threat warrants.
- The FAA Part 109 program should be replaced. Instead, responsibility for screening of cargo should rest with the air carriers and procedures should correspond closely with those measures pertaining to checked baggage.
- The FAA should foster research and development of a technology designed to screen cargo for explosives; until this system is developed, interim screening measures must be instituted.

The FAA

- The FAA must begin to develop stronger security measures for controls over checked baggage, controls over persons with access to aircraft, testing of security

systems, the use of modern X-ray equipment, and the pre-screening of passengers.

- The FAA must take the lead in stressing the role of human factors in the security equation; training must be improved.
- The FAA Administrator should establish an office of security reporting directly to him.
- The Secretary of Transportation should appoint, on an interim basis, a Secretarial Assistant Secretary for Aviation Security and Intelligence. The Secretary should obtain legislative authorization to appoint an Assistant Secretary of Transportation for Security and Intelligence and authorize this official to develop an aviation transportation security policy and long-term strategy for dealing with a potential increase in the threat.
- The Secretary of Transportation and the Administrator of FAA should ensure that the necessary resources are provided to fully staff the respective security offices, both at the headquarters and field levels.
- The FAA resources currently in place at the major domestic airports, as well as overseas, should become the accountable entity for security—the federal security managers.

Research and Development

- FAA should undertake a vigorous effort to marshal the necessary expertise to develop and test effective explosive-detection systems.
- The FAA should establish an expert panel of persons from the national laboratories, other government agencies, academia and industry to oversee the design and development of this high priority initiative.
- The FAA should undertake an intensive program of research and experimentation with the structure of aircraft to determine the kind and the minimum weight of explosives which must be detected by any technology.
- In the interim, the requirement for widespread use of present TNA equipment

should be deferred while the technology is developed further.

- The FAA should conduct research to develop the means of minimizing airframe damage that may be caused by small amounts of explosives.
- To avoid the undesirable reliance on any single commercial source for TNA equipment, the FAA must make every possible effort to encourage the development of additional sources.
- FAA must think ahead and anticipate how to counter the next generation of terrorist weapons before they are used to kill innocent people.

Intelligence

- Policies and procedures should be put in place to ensure that international terrorism reporting received by U.S. law enforcement officials abroad will be shared with other members of the U.S. intelligence community, as well as the FAA where appropriate.
- The FAA and the FBI should work together, as is now planned, to assess the vulnerability of U.S. airports to the threat of terrorist violence. Additionally, the level of terrorist threat in the United States must be analyzed and monitored on a continuing basis to ensure the proper level of security at domestic airports, and the FAA and FBI should work together to arrive at the most effective method for this to be done.
- Consideration should be given to placing greater emphasis within the intelligence community on strategic (as opposed to operational) efforts, by developing a specific unit with limited day-to-day responsibility, whose principal function would be long-term strategic thinking concerning terrorism.
- The function of the FAA's Intelligence Division, now located within the Office of Civil Aviation Security, should be moved to the Department of Transportation, where it will report directly to the Secretary through a newly created post of Assistant Secretary of Transportation for Security

and Intelligence. This move should accompany the move of the security function.

- The Director of Central Intelligence should promptly designate one or more intelligence officers, from the Central Intelligence Agency or other appropriate intelligence agency, to serve in a senior capacity at the Office of the Secretary of the Department of Transportation. In doing so, the Director should consult closely with the Secretary of Transportation.
- All MOU's and written working agreements between FAA and the intelligence and law enforcement community members should be reviewed and updated where appropriate.

Threat Notification

- The intelligence and law enforcement communities, and those that receive information collected or analyzed by those communities, should review their procedures to reduce to the minimum the number of persons with access to information on civil aviation threats.
- The State Department Bureau of Diplomatic Security should daily transfer a copy of the content of the OSAC EBB to the Bureau of Consular Affairs, and that Bureau should establish a system of public access to that information.
- The U.S. Government should, as a matter of course and policy, consciously consider the question of notification and carefully review the factors outlined. The Department of State, and the Department of Justice, in close cooperation with the Department of Transportation, should establish a process and a mechanism by which clearly identifiable officials will consider when and how to provide notification to the traveling public.

Treatment of the Families of Victims of Terrorism

- The State Department must quickly obtain from the airline in an aviation disaster a manifest with sufficient detail to permit the prompt identification of passengers. A regulatory or legislative solution is likely to be

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- required. In the interim, the State Department should pursue agreements with individual carriers.
- The State Department should always contact the families of victims, even when the airline has made a prior notification of the deaths. In addition, it is essential for the Department promptly to provide a personal written notification.
 - The State Department should, wherever possible, assign to each family one person, and an alternate, to act as designated liaison. Two separate 800 numbers should also be established, one just for the families.
 - The State Department is encouraged to consult further with death and bereavement counselors to assure that the entire consular services corps is sensitized to the demands posed by tragedies such as Pan Am Flight 103. The Department should consider supplementing its training programs by either (1) providing specialized training to create a team of "disaster specialists" to deploy immediately in a crisis or (2) securing outside experts to be brought in during the initial phases to assist consular personnel.
 - The State Department should dispatch at least one senior official from the Bureau of Consular Affairs to the scene of each and every terrorist disaster.
 - The State Department should promulgate criteria for staffing disaster scenes that also define responsibility for these decisions. In the event of a disaster, the resources of individual posts must be monitored under these new criteria, and supplemented if necessary.
 - The State Department should require that in any disaster at least one person be assigned the sole function of providing on-site assistance to families who may visit, and be the ombudsman in matters involving local government authorities and social service agencies.
 - The State Department should establish "crisis teams" to handle all aspects of a major disaster, to join in-country staff familiar with the local language, laws, customs, and personalities.
 - The State Department should share with its embassy and consular posts any assessment of the Flight 103 experience and new guidance on response to terrorist disasters. This action needs to be complemented with clear direction, training and equipment support.
 - The State Department's Bureau of Consular Affairs should assign personnel qualified in terrorism cases to assist families in the recovery and disposition of remains and personal effects, and to act as their ombudsman with foreign authorities and agencies.
 - The State Department should provide some ceremony appropriate to recognize the families' sacrifice. The Department should have discretion, in consultation with our Armed Services, to adopt appropriate ceremonial procedures compatible with the families' own preferences. Whatever the procedures, the Department must institutionally recognize the special status of U.S. citizens who are victims of acts of terrorism against this Nation.
 - The United States should ratify Montreal Protocol 3 together with a supplemental compensation plan that would provide all U.S. citizens and permanent residents, for any international flight, full recovery of all economic and non-economic damages. Following ratification, the United States should commence a diplomatic initiative to increase the \$130,000 limit on carrier liability.
 - The Congress should enact legislation to require the FAA to commence a civil penalty proceeding whenever there is reason to believe that a carrier's violation of FAA requirements may have contributed to loss of life or serious injury. If the FAA so finds, it should be required to levy fines.
 - The President should seek legislation to authorize and permanently appropriate funds to provide monetary benefits and tax relief for any American victim of an act of terrorism. The President may wish to consider a board to develop criteria for com-

pensation in terrorist cases. One question at the outset should be whether benefits should be made available retroactively for the victims of Flight 103.

National Will

- The United States must heighten emphasis on the second element of U.S. counterterrorism policy; that state sponsors should be made to pay a price for their actions.
- The United States must refuse to allow terrorist attacks to alter U.S. political and economic policies.
- The United States must improve human intelligence-gathering on terrorism, in cooperation with other nations.
- The United States should work with other nations to treat as outlaws state sponsors of terrorism, isolating them politically, economically, and militarily.
- The United States must develop a clear understanding that state sponsored terrorism threatens U.S. values and interests, and that active measures are needed to counter more effectively the terrorist threat.
- The United States should ensure that all government resources are prepared for active measures—preemptive or retaliatory, direct or covert—against a series of targets in countries well-known to have engaged in state-sponsored terrorism.

President's Commission on Aviation Security and Terrorism

Ann McLaughlin, Chairman

Former U.S. Secretary of Labor (1987-1989), Under Secretary of the U.S. Department of Interior (1984-1987) and an Assistant Secretary of the U.S. Department of Treasury (1981-1984). For 15 years prior to her government service, she had extensive corporate and other private sector experience. Currently, she is a Visiting Fellow and Board Member at the Urban Institute in Washington, D.C. and a member of the Board of Directors for five major corporations and several not-for-profit institutions. She is a graduate of Marymount College, Tarrytown, New York, and has studied at the University of London and the Wharton School of Business, University of Pennsylvania. In 1989, President Reagan awarded her the Presidential Citizen's Medal in recognition of her public service.

Alfonse M. D'Amato

Elected to the United States Senate from New York in 1980. Prior to his election, he served as vice chairman, Nassau County (NY) Board of Supervisors (1977-1980); supervisor of the Town of Hempstead (1971-1977), and the Nassau County public administrator (1965-1968). He is the founder and co-chairman of the Senate Anti-Terrorism Caucus, established to help find ways to combat international terrorism. He serves on three Senate Committees: Appropriations (Ranking Member of Transportation Subcommittee); Intelligence;

and Banking, Housing and Urban Affairs. He is a graduate of Syracuse University and the Syracuse University School of Law. He was admitted to the New York State Bar in 1962 and practiced law in that state until 1976.

John Paul Hammerschmidt

Elected to the United States House of Representatives from Arkansas' Third District in 1966. Before entering the political arena, he was a lumber business executive. Currently he is the Ranking Member on the Committee on Public Works and Transportation (former Ranking Member, Aviation Subcommittee), and senior Republican on the Veterans' Affairs Committee and the Select Committee on Aging. Founding member of the Environmental and Energy Study Conference and holds membership on the Congressional Rural Caucus and the U.S. Congressional Travel and Tourism Caucus. Attended the Citadel, Oklahoma State University and the University of Arkansas. During World War II, served as a pilot in the China-Burma-India theatre earning numerous citations including the Distinguished Flying Cross four times and five Air Medals.

Edward Hidalgo

Former Secretary of the Navy (1979-1981); Assistant Secretary of the Navy for Manpower - Reserve Affairs - Installations - Logistics (1977-1979); General Counsel and Congressional Liaison, United States Information Agency (1973-1976), and Special Assistant for Economic Affairs to the Director of USIA (1972-1973). Partner in the law firm of Cahill,

Gordon and Reindel in charge of the European office (1966-1972). Currently an independent attorney with the Washington office of Vorys, Sater, Seymour and Pease. Served in the Pacific during World War II as an air combat intelligence officer and was awarded the Bronze Star Medal. Holds a BA, *magna cum laude*, from Holy Cross College. Earned a law degree from Columbia Law School and a degree in civil law from the University of Mexico. Recipient of the "Mexican Aztec Eagle" decoration from that government.

Frank R. Lautenberg

Elected to the United States Senate from New Jersey in 1982. President (1969-1975) and chairman of the board and chief executive officer (1975-1982), Automatic Data Processing, Inc.; Commissioner, New York and New Jersey Port Authority (1978-1982); Commissioner, New Jersey Economic Development Authority. Serves on the Committee on Appropriations and chairs its Transportation Subcommittee. Also chairs the Superfund, Ocean and Water Protection Subcommittee, as a member of the Environment and Public Works Committee. Serves also on the Budget Committee and the Helsinki Commission. Served in the U.S. Army Signal Corps during World War II (1942-1946). Earned a BS degree in economics from the Columbia University School of Business.

James L. Oberstar

Elected to the United States House of Representatives from Minnesota's Eighth District in 1974. Present Committee assignments include Public Works and Transportation where he chairs the Subcommittee on Aviation, member of the Subcommittees on Investigations and

Oversight; Water Resources, and Public Buildings and Grounds. He is also a member of the Budget Committee. Serves as at-large Democratic whip, is a member of the Democratic Steering and Policy Committee; and serves on executive committees of the Democratic Study Group, National Water Alliance, Northeast-Midwest Congressional Coalition, and the Steel Caucus. He is Secretary-Treasurer of the Congressional Travel and Tourism Caucus and co-chairs the Conference of Great Lakes Congressmen. Holds a BA degree, *summa cum laude*, from the College of St. Thomas and earned an MA at the College of Europe, Bruges, Belgium.

**General Thomas C. Richards, USAF
(Retired)**

Deputy Commander in Chief, Headquarters, U.S. European Command (1986-1989) until his retirement from active duty. Commissioned in the Air Force in 1956. Subsequently served as an aircraft commander in Vietnam; Group air officer commanding, U.S. Air Force Academy (1969-1972); Chief, Leadership and Motivation, Pentagon (1975-1976); Commander, Air Reserve Personnel Center, Denver (1976-1977); Vice Commandant and Commandant of Cadets, U.S. Air Force Academy (1977-1981); Commander, Air Force Recruiting (1981-1982); Commander, Electronic Technical Training Center (1982-1984); Vice Commander, 8th Air Force; Commander, Air University (1984-1986). He earned a BS degree from Virginia Polytechnic Institute and an MA in communications from Shippensburg State College. His military decorations and awards include the Distinguished Service Medal; Silver Star; Legion of Merit, and the Distinguished Flying Cross.

The President's Commission Staff

Professional Affiliation

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Nina Bang-Jensen, Deputy Executive Director	Rogers & Wells
Michael J. Bayer, Counsellor	Private Sector Consultant
Harry R. Van Cleve, General Counsel.....	General Accounting Office, General Counsel (Retired)
Thomas J. Barchi, Staff Investigator.....	General Accounting Office, Resources, Commu- nity, and Economic Development Division
Gary R. Carney, Associate Counsel	Rogers & Wells
John F. Collins, Staff Investigator	Department of the Treasury, U.S. Secret Service
Gregory Conway, Staff Investigator	Department of Defense, Office of Assistant In- spector General for Analysis and Followup
Rechell Y. Crumpé, Secretary.....	Department of Transportation
Francis J. Duggan, Family Liaison	Attorney, Former Assistant Secretary of Labor
Tammuel V. Edelen, Secretary.....	Department of Transportation
Caroline D. Gabel, Staff Investigator	U.S. House of Representatives, Subcommittee on Aviation, Committee on Public Works and Transportation
Nicholas P. Geier, Staff Investigator.....	General Accounting Office, Office of Special In- vestigations (Retired)
Michael B. Gritton, Associate Counsel	Rogers & Wells
Abraham E. Haspel, Special Assistant	Department of the Interior, Minerals Manage- ment Service
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Douglas M. MacKenzie, External Affairs	Department of Agriculture
Susan L. Malone, Staff Investigator	Department of Defense, Office of Inspector General, the Defense Criminal Investigative Service
Frances L. Mason, Secretary	Department of Transportation, United States Coast Guard
Margaret A. Matthews, Secretary.....	Consultant
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Michael V. Miller, Editor	MVM Public Affairs
Patricia Kielty Moran, Media Relations	General Accounting Office, Office of Public In- formation
Refahel M. Muskin, Staff Investigator	Aviation Consultant
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Susan L. Pickrel, Executive Secretariat.....	Department of Transportation, Maritime Ad- ministration
Robert G. Planansky, Executive Assistant to the Chairman	Ann McLaughlin
Charles H. Powers, Media Relations	Pro Bono
Alan R. Schwartz, Counsel.....	Attorney, Consultant
Robert F. Taylor, Security Adviser	Department of Health and Human Services, Office of the Secretary
Betsy R. Warren, Congressional Liaison	Warren and Company

The President's Commission Staff—Continued

Professional Affiliation

Eleanor L. Wozniak, Secretary..... Department of Transportation, Federal Aviation
Administration
Kerstin L. Zedalis, Secretary..... Department of Transportation

The Victims of Pan Am Flight 103

Airline Staff

Cockpit Crew

Captain: MacQuarrie, James Bruce, 55, Kensington, New Hampshire. American

First Officer: Wagner, Raymond Ronald, 52, Pennington, New Jersey. American

First Engineer: Avritt, Jerry Don, 46, Westminster, California. American

Pursers

Murphy, Mary Geraldine, 51, Twickenham, England. British

Velimirovich, Milutin, 35, Hounslow, England. American

Flight Attendants

Avoyne, Elisabeth Nichole, 44, Croissy-sur-Seine, France. French

Berti, Noelle Lydie, 41, Paris, France. American

Engstom, Siv Ulla, 51, Windsor, England. Swedish

Franklin, Stacie Denise, 20, San Diego, California. American

Garrett, Paul Issac, 41, Napa, California. American

Kuhne, Elke Ehta, 43, Hanover, West Germany. West German

Larracochea, Maria Nieves, 39, Madrid, Spain. Spanish

Macalooloy, Lilibeth Tobila, 27, Kelsterbach, West Germany. American

Reina, Jocelyn, 26, Isleworth, England. American

Royal, Myra Josephine, 30, Hanwell, London, England. American

Skabo, Irja Synove, 38, Oslo, Norway. Finnish

Passengers

Ahern, John Michael Gerard, 26, Rockville Center, New York. American

Aicher, Sarah Margaret, 29, London, England. American

Akerstrom, John David, 34, Medina, Ohio. American

Alexander, Ronald Ely, 46, New York, New York. Swiss

Ammerman, Thomas Joseph, 36, Old Tappan, New Jersey. American

Apfelbaum, Martin Lewis, 59, Philadelphia, Pennsylvania. American

Asrelsky, Rachel Marie, 21, New York, New York. American

Atkinson, William Garreston, 33, London, England. American

Bacciochi, Clare Louise, 19, Tamworth, England. British

Bainbridge, Harry Michael, 34, Montrose, New York. American

Barclay, Stuart Murray, 29, Farm Barnard, Vermont. Canadian

- Bell, Jean Mary, 44, Windsor, England. British
- Benello, Julian MacBain, 25, Brookline, Massachusetts. American
- Bennett, Lawrence Ray, 41, Chelsea, Michigan. American
- Bergstrom, Philip, 22, Forest Lake, Minnesota. American
- Berkley, Alistair, 29, London, England. British
- Bernstein, Judith Ellen, 37, London, England. American
- Bernstein, Michael Stuart, 36, Bethesda, Maryland. American
- Berrell, Steven Russell, 20, Fargo, North Dakota. American
- Bhatia, Surinder Mohan, 51, Los Angeles, California. American
- Bissett, Keneth John, 21, Hartsdale, New York. American
- Boatmon-Fuller, Diane, 35, London, England. American
- Boland, Stephen John, 20, Nashua, New Hampshire. American
- Bouckley, Glenn, 27, Liverpool, New York. British
- Bouckley, Paula, 29, Liverpool, New York. American
- Boulanger, Nicole Elise, 21, Shrewsbury, Massachusetts. American
- Boyer, Francis, 43, Toulosane, France. French
- Bright, Nicholas, 32, Brookline, Massachusetts. American
- Browner (Bier), Daniel Solomon, 23, Parod, Israel. Israeli
- Brunner, Colleen Renee, 20, Hamburg, New York. American
- Burman, Timothy Guy, 24, London, England. British
- Buser, Michael Warren, 34, Ridgely Park, New Jersey. American
- Buser, Warren Max, 62, Glen Rock, New Jersey. American
- Butler, Steven Lee, 35, Denver, Colorado. American
- Cadman, William Martin, 32, London, England. British
- Caffarone, Fabiana, 28, London, England. British
- Caffarone, Hernan, 28, London, England. Argentinian
- Canady, Valerie, 25, Morgantown, West Virginia. American
- Capasso, Gregory, 21, Brooklyn, New York. American
- Cardwell, Timothy Michael, 21, Cresco, Pennsylvania. American
- Carlsson, Brent Wilson, 50, New York, New York. Swedish
- Cawley, Richard Anthony, 43, New York, New York. American
- Ciulla, Frank, 45, Park Ridge, New Jersey. American
- Cohen, Theodora Eugenia, 20, Port Jervis, New York. American
- Coker, Eric Michael, 20, Mendham, New Jersey. American
- Coker, Jason Michael, 20, Mendham, New Jersey. American
- Colasanti, Gary Leonard, 20, Melrose, Massachusetts. American
- Concannon, Bridget, 53, Banbury, England. Irish
- Concannon, Sean, 16, Banbury, England. Irish
- Concannon, Thomas, 51, Banbury, England. Irish
- Corner, Tracey Jane, 17, Millhouses, England. British
- Cory, Scott, 20, Old Lyme Court, Connecticut. American
- Coursey, Willis Larry, 40, San Antonio, Texas. American
- Coyle, Patricia Mary, 20, Wallingford, Connecticut. American
- Cummock, John Binning, 38, Coral Gables, Florida. American

- Curry, Joseph Patrick, 31, Fort Devens, Massachusetts. American
- Daniels, William Allen, 40, Bell Mead, New Jersey. American
- Dater, Gretchen Joyce, 20, Ramsey, New Jersey. American
- Davis, Shannon, 19, Shelton, Connecticut. American
- Della Ripa, Gabriel, 46, Floral Park, New York. Italian
- Di Mauro, Joyce Christine, 32, New York, New York. American
- Di Nardo, Gianfranca, 26, London, England. Italian
- Dix, Peter Thomas Stanley, 35, London, England. Irish
- Dixit, Om, 54, Fairborn, Ohio. Indian
- Dixit, Shanti, 54, Fairborn, Ohio. American
- Dornstein, David Scott, 25, Philadelphia, Pennsylvania. American
- Doyle, Michael Joseph, 30, Voorhees, New Jersey. American
- Eggleston, Edgar Howard III, 24, Glens Falls, New York. American
- Ergin, Turhan, 22, West Hartford, Connecticut. American
- Fisher, Charles Thomas IV, 34, London, England. American
- Flick, Clayton Lee, 25, Coventry, England. British
- Flynn, John Patrick, 21, Montville, New Jersey. American
- Fondiler, Arthur, 33, West Armonk, New York. American
- Fortune, Robert Gerard, 40, Jackson Heights, New York. American
- Freeman, Paul Matthew Stephen, 25, London, England. Canadian
- Fuller, James Ralph, 50, Bloomfield Hills, Michigan. American
- Gabor, Ibolya Robertine, 79, Budapest, Hungary. Hungarian
- Gallagher, Amy Beth, 22, Quebec, Canada. American
- Gannon, Matthew Kevin, 34, Los Angeles, California. American
- Garczynski, Kenneth Raymond, 37, North Brunswick, New Jersey. American
- Gibson, Kenneth James, 20, Romulus, Michigan. American
- Giebler, William David, 29, London, England. American
- Gordon, Olive Leonora, 25, London, England. British
- Gordon-Gorgacz, Linda Susan, 39, London, England. American
- Gorgacz, Anne Madelene, 76, Newcastle, Pennsylvania. American
- Gorgacz, Loretta Anne, 47, Newcastle, Pennsylvania. American
- Gould, David, 45, Pittsburgh, Pennsylvania. American
- Guevorguian, André Nikolai, 32, Sea Cliff, New York. American
- Hall, Nicola Jane, 23, Sandton, South Africa. Australian
- Halsch, Lorraine Frances, 31, Fairport, New York. American
- Hartunian, Lynne Carol, 21, Schenectady, New York. American
- Hawkins, Anthony Lacey, 57, Brooklyn, New York. British
- Herbert, Pamela Elaine, 19, Battle Creek, Michigan. American
- Hilbert, Rodney Peter, 40, Newton, Pennsylvania. American
- Hill, Alfred, 29, Sonthofen, West Germany. West German
- Hollister, Katherine Augusta, 20, Rego Park, New York. American
- Hudson, Josephine, 22, London, England. British
- Hudson, Melina, 16, Albany, New York. American
- Hudson, Sophie Ailette Miriam, 26, Paris, France. French
- Hunt, Karen Lee, 20, Webster, New York. American

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- Hurst, Roger Elwood, 38, Ringwood, New Jersey. American
- Ivell, Elizabeth Sophie, 19, Robertsbridge, England. British
- Jaafar, Khalid Nazir, 20, Dearborn, Michigan. Lebanese/American
- Jeck, Robert van Houten, 57, Mountain Lakes, New Jersey. American
- Jeffreys, Paul Avron, 36, Kingston-upon-Thames, England. British
- Jeffreys, Rachel, 23, Kingston-upon-Thames, England. British
- Jermyn, Kathleen Mary, 20, Staten Island, New York. American
- Johnson, Beth Ann, 21, Greensburg, Pennsylvania. American
- Johnson, Mary Alice Lincoln, 25, Wayland, Massachusetts. American
- Johnson, Timothy Baron, 21, Neptune, New Jersey. American
- Jones, Christopher Andrew, 20, Claverack, New York. American
- Kelly, Julianne Frances, 20, Dedham, Massachusetts. American
- Kingham, Jay Joseph, 44, Potomac, Maryland. American
- Klein, Patricia Ann, 35, Trenton, New Jersey. American
- Kosmowski, Gregory, 40, Milford, Michigan. American
- Kulukundis, Minas Christopher, 38, London, England. British
- Lariviere, Ronald Albert, 33, Alexandria, Virginia. American
- Leckburg, Robert Milton, 30, Piscataway, New Jersey. American
- Leyrer, William Chase, 46, Bay Shore, New York. American
- Lichtenstein, Joan Sherree, 46, New York, New York. American
- Lincoln, Wendy Anne, 23, North Adams, Massachusetts. American
- Lowenstein, Alexander Silas, 21, Morristown, New Jersey. American
- Ludlow, Lloyd David, 41, Macksville, Kansas. American
- Lurbke, Maria Theresia, 25, Balve Beckum, West Germany. West German
- McAllister, William John, 26, Sunbury-on-Thames, England. British
- McCarthy, Daniel Emmet, 31, Brooklyn, New York. American
- McCollum, Robert Eugene, 61, Wayne, Pennsylvania. American
- McKee, Charles Dennis, 40, Arlington, Virginia. American
- McLaughlin, Bernard Joseph, 30, Bristol, England. American
- Mack, William Edward, 30, New York, New York. American
- Malicote, Douglas Eugene, 22, Lebanon, Ohio. American
- Malicote, Wendy Gay, 21, Lebanon, Ohio. American
- Marek, Elizabeth Lillian, 30, New York, New York. American
- Marengo, Louis Anthony, 33, Rochester, Michigan. American
- Martin, Noel George, 27, Clapton, England. Jamaican
- Maslowski, Diane Marie, 30, New York, New York. American
- Melber, Jane Susan, 27, Middlesex, England. American
- Merrill, John, 35, Hertfordshire, England. British
- Miazga, Susanne Marie, 22, Marcy, New York. American
- Miller, Joseph Kenneth, 53, Woodmere, New York. American
- Mitchell, Jewel Courtney, 32, Brooklyn, New York. American
- Monetti, Richard Paul, 20, Cherry Hill, New Jersey. American
- Morgan, Jane Ann, 37, London, England. American
- Morson, Eva Ingeborg, 48, New York, New York. American

- Mosey, Helga Rachael, 19, Warley, England. British
- Mulroy, Ingrid Elizabeth, 25, Lund, Sweden. Swedish
- Mulroy, John, 59, East Northport, New York. American
- Mulroy, Sean Kevin, 25, Lund, Sweden. American
- Noonan, Karen Elizabeth, 20, Potomac, Maryland. American
- O'Connor, Daniel Emmett, 31, Boston, Massachusetts. American
- O'Neil, Mary Denice, 21, Bronx, New York. American
- Otenasek, Anne Lindsey, 21, Baltimore, Maryland. American
- Owen, Bryony Elise, 1, Bristol, England. British
- Owen, Gwyneth Yvonne Margaret, 29, Bristol, England. British
- Owens, Laura Abigail, 8, Cherry Hill, New Jersey. American
- Owens, Martha, 44, Cherry Hill, New Jersey. American
- Owens, Robert Plack, 45, Cherry Hill, New Jersey. American
- Owens, Sarah Rebecca, 14, Cherry Hill, New Jersey. American
- Pagnucco, Robert Italo, 51, South Salem, New York. American
- Papadopoulos, Christos Michael, 45, Lawrence, New York. Greek/American
- Peirce, Peter Raymond, 40, Perrysburg, Ohio. American
- Pescatore, Michael, 33, Solon, Ohio. American
- Philipps, Sarah Susannah Buchanan, 20, Newtonville, Massachusetts. American
- Phillips, Frederick Sandford, 27, Little Rock, Arkansas. American
- Pitt, James Andrew Campbell, 24, South Hadley, Massachusetts. American
- Platt, David, 33, Staten Island, New York. American
- Porter, Walter Leonard, 35, Brooklyn, New York. American
- Posen, Pamela Lynn, 20, Harrison, New York. American
- Pugh, William, 56, Margate, New Jersey. American
- Quiguyan, Estrella Crisostomo, 43, London, England. Filipino
- Ramses, Rajesh Tarsis Priskel, 35, Leicester, England. Indian
- Rattan, Anmol, 2, Warren, Michigan. American
- Rattan, Garima, 29, Warren, Michigan. American
- Rattan, Suruchi, 3, Warren, Michigan. American
- Reeves, Anita Lynn, 24, Laurel, Maryland. American
- Rein, Mark Alan, 44, New York, New York. American
- Rencevicz, Diane Marie, 21, Burlington, New Jersey. American
- Rogers, Louise Ann, 20, Olney, Maryland. American
- Roller, Edina, 5, Hungary. Hungarian
- Roller, Janos Gabor, 29, Hungary. Hungarian
- Roller, Zsuzsana, 27, Hungary. Hungarian
- Root, Hanne Maria, 26, Toronto, Canada. Canadian
- Rosen, Saul Mark, 35, Morris Plains, New Jersey. American
- Rosenthal, Andrea Victoria, 20, New York, New York. American
- Rosenthal, Daniel Peter, 20, Staten Island, New York. American
- Rubin, Arnaud David, 28, Waterloo, Belgium. Belgian
- Saraceni, Elyse Jeanne, 20, East London, England. American
- Saunders, Scott Christopher, 21, Macungie, Pennsylvania. American
- Saunders, Theresa Elizabeth, 28, Sunbury-on-Thames, England. British

- Schauble, Johannes Otto, 41, Kappellenweg, West Germany. West German
- Schlageter, Robert Thomas, 20, Warwick, Rhode Island. American
- Schultz, Thomas Britton, 20, Ridgefield, Connecticut. American
- Scott, Sally Elizabeth, 20, Huntington, New York. British
- Shapiro, Amy Elizabeth, 21, Stamford, Connecticut. American
- Shastri, Mridula, 24, Oxford, England. Indian
- Sigal, Irving Stanley, 35, Pennington, New Jersey. American
- Simpson, Martin Bernard Carruthers, 52, Brooklyn, New York. American
- Smith, Cynthia Joan, 21, Milton, Massachusetts. American
- Smith, Ingrid Anita, 31, Berkshire, England. British
- Smith, James Alvin, 55, New York, New York. American
- Smith, Mary Edna, 34, Kalamazoo, Michigan. American
- Stevenson, Geraldine Anne, 37, Esher, England. British
- Stevenson, Hannah Louise, 10, Esher, England. British
- Stevenson, John Charles, 38, Esher, England. British
- Stevenson, Rachael, 8, Esher, England. British
- Stinnett, Charlotte Ann, 36, New York, New York. American
- Stinnett, Michael Gary, 26, Duncanville, Texas. American
- Stinnett, Stacey Leanne, 9, Duncanville, Texas. American
- Stow, James Ralph, 49, New York, New York. American
- Stratis, Elia G., 43, Montvale, New Jersey. American
- Swan, Anthony Selwyn, 29, Brooklyn, New York. Trinidadian
- Swire, Flora Margaret, 24, London, England. British
- Tager, Marc Alex, 22, London, England. British
- Tanaka, Hidekazu, 26, London, England. Japanese
- Teran, Andrew Alexander, 20, New Haven, Connecticut. British/Peruvian
- Thomas, Arva Anthony, 17, Detroit, Michigan. American
- Thomas, Jonathan Ryan, 2 months, Southfield, Michigan. American
- Thomas, Lawanda, 21, Southfield, Michigan. American
- Tobin, Mark Lawrence, 21, North Hempstead, New York. American
- Trimmer-Smith, David William, 51, New York, New York. American
- Tsairis, Alexia Kathryn, 20, Franklin Lakes, New Jersey. American
- Valentino, Barry Joseph, 28, San Francisco, California. American
- van Tienhoven, Thomas Floro, 45, Buenos Aires, Argentina. Argentinian
- Vejdany, Asaad Eidi, 46, Great Neck, New York. American
- Vrenios, Nicholas Andreas, 20, Washington, D.C. American
- Vulcu, Peter, 21, Alliance, Ohio. American
- Waido, Janina Jozefa, 61, Chicago, Illinois. American
- Walker, Thomas Edwin, 47, Quincy, Massachusetts. American
- Weedon, Kesha, 20, Bronx, New York. American
- Weston, Jerome Lee, 45, Baldwin, New York. American
- White, Jonathan, 33, North Hollywood, California. American
- Williams, Bonnie Leigh, 21, Crown Point, New York. American
- Williams, Brittany Leigh, 2 months, Crown Point, New York. American
- Williams, Eric Jon, 24, Crown Point, New York. American

Williams, George Waterson, 24, Joppa, Maryland. American

Williams, Stephanie Leigh, 1, Crown Point, New York. American

Wolfe, Miriam Luby, 20, Severna Park, Maryland. American

Woods, Chelsea Marie, 10 months, Willingboro, New Jersey. American

Woods, Dederá Lynn, 27, Willingboro, New Jersey. American

Woods, Joe Nathan, 28, Willingboro, New Jersey. American

Woods, Joe Nathan, Jr., 2, Willingboro, New Jersey. American

Wright, Andrew Christopher Gillies, 24, Surrey, England. British

Zwynenburg, Mark James, 29, West Nyack, New York. American

Residents of Lockerbie

Flannigan, Joanne, 10.

Flannigan, Kathleen Mary, 41.

Flannigan, Thomas Brown, 44.

Henry, Dora Henrietta, 56.

Henry, Maurice Peter, 63.

Lancaster, Mary, 81.

Murray, Jean Aitken, 82.

Somerville, John, 40.

Somerville, Lyndsey Ann, 10.

Somerville, Paul, 13.

Somerville, Rosaleen Later, 40.

Witnesses, Selected Interviews and Resources

Public Hearings—Witnesses

November 17, 1989

Bert Ammerman	President, The Victims of Pan Am Flight 103
M. Victoria Cummock	Family Member
Joan L. Dater	Family Member
Paul S. Hudson	President, Families of Pan Am 103/Lockerbie
Peter Reiss	Air Line Pilots Association
Juliette Lenior	Association of Flight Attendants
Homer A. Boynton	American Airlines, Inc.
Richard F. Lally	Air Transport Association of America
Wilfred A. Jackson	Airport Operators Council International and the American Association of Airport Executives
Billie H. Vincent	Vincent Enterprises
Christopher Witkowski	Aviation Consumer Action Project
Statement for Record	International Air Transport Association
Statement for Record	Bonnie Ahern O'Connor, Family Member

December 18, 1989

Kenneth M. Mead	General Accounting Office
Robert Shideler	General Accounting Office
Jason Fong	General Accounting Office
Monte R. Belger	Federal Aviation Administration
Raymond A. Salazar	Federal Aviation Administration
Jack Gregory	Federal Aviation Administration
Claude Manno	Federal Aviation Administration
Daniel Mahoney	Federal Aviation Administration
David Knudsen	Federal Aviation Administration
Elizabeth M. Tamposi	Department of State
Ann Swift	Department of State
Michael Mahoney	Department of State
Carmen DiPlacido	Department of State
Laurence Kerr	Department of State
Elizabeth Leighton	Department of State
Frank Moss	Department of State

February 2, 1990

Lee Grodzins
Allen N. Garroway
Monte R. Belger
Raymond A. Salazar
Bill Wall
John D. Armour

Ronald J. Massa
John W. Howard
Joseph P. Costa
L. Dale Holmburg
J. Patrick LeGory
Hadi Bozorgmanesh
Bill G. Smith
Douglas P. Boyd
David S. deMoulied
Jerome R. Clifford
David N. Fine
Barry L. Berman

Statement for Record

March 9, 1990

Dante B. Fascell
Raymond F. Smith
Mark A. Sanna
Jennifer S. Young
Statement for Record

April 4, 1990

Robert L. Crandall
Thomas G. Plaskett
James M. Guyette
Timothy R. Thornton
Charles A. Adams
Robert R. Kierce
James B. Busey
Monte R. Belger
Raymond A. Salazar
Statement for Record

Massachusetts Institute of Technology
Naval Research Laboratory
Federal Aviation Administration
Federal Aviation Administration
Federal Aviation Administration
American Association of Airport Executives and Airport
Operators Council International
Lorron Corporation
Everett I. Brown Company
Security Control Systems, Inc. and LINX Technologies
Intelligent Security Systems Inc.
Intelligent Security Systems Inc.
Science Applications International Corporation
Johnston, Lemon & Co.
IMATRON, Inc.
EG&G Incorporated
Titan Corporation
Thermedics, Inc.
George Washington University and Los Alamos National
Laboratory
ION Track Instruments, Inc.

Chairman, House Committee on Foreign Affairs
Department of State
Department of State
Pan American World Airways, Inc.
International Civil Aviation Organization

American Airlines, Inc.
Pan American World Airways, Inc.
United Air Lines, Inc.
Northwest Airlines, Inc.
Trans World Airlines, Inc.
Trans World Airlines, Inc.
Federal Aviation Administration
Federal Aviation Administration
Federal Aviation Administration
Boaz Dor, Detection/Deterrence Security, Inc.

Selected Commission Investigative Interviews

Robert Aaronson	Captain Lloyd Anderson
Thomas C. Accardi	Arik Arad
Moe Aleman	Marcus Arroyo
Dominick A. Alfieri	Toni Azaryad
William Alexander	Philip Baker
Bert Ammerman	William Baker

Stanley Barkin
William Bartlett
Robert A. Bartol
Molly Baumgardner
Robert Bauter
John Beardslee
Dan Beaudette
Hannelore Behl
Monte Belger
Karen Bernadette

Stephanie Bernstein
James Berwick
John Blaney
Donnie Blazer
Taylor Blanton
Walter Bleiler
Richard Bly
Leo Boivin
Nancy Bort
Dan Boyce

Doty Boyd	John P. Devine	Stuart Henderson	Richard Lally
Robert Boyer	Carmen DiPlacido	Christopher Henley	Ran Langer
Stephen Boykin	Clark Dittmer	Earl Herbert	Yassi Langotsky
Micke Boyle	David L. Divan	Karl Herman	Ralph Laurello
Homer Boynton	Jay Dobbins	Dan Hoban	David Leach
Hadi Bozorgmanesh	Alvy J. Dodson	Charles Hodges	Walter J. Leamy
Lydia Breckon	Thomas Dome	Stefan Hoffer	Tom Leavitt
John V. Brennan	Donna Dorothy	Harold Hoffman	Major Ernie Lee
Lt. Col. R. Bretschneider	Major Douglas	Henk Hogervorst	Walter Lehmann
Anthony Broderick	Conrad Dresher	John Holden	Elizabeth Leighton
Philip Brown	Vauncile Dunkelberg	Donald Holm	Kathy Leitzke
Larry Bruno	James Dunn	Michael Hooks	Michael Lemov
John Bullard	Kevin Dupart	William Hoover	L. R. Lentz
Quentin Burgess	Robert Ebdon	Joanne Horne	George Lewis
H. Bridget Burkart	Carolyn Edens	Michael Horowitz	Len Limmer
Carl Burseson	Donald Epstine	Clint Howard	E. F. Lintott
Frank Burns	George Esson	Paul Hudson	Jurgen Loos
Admiral James Busey	William Evans	Martin Huebner	Paul Lozito
Robert Butrick	Richard Everett	Michael Hurley	Mel Lundberg
Gwen Buttlng	Ann Fegan	Capt. Peter Hutchhausen	Ronn Luskie
Donald Byrne	Anthony Feinberg	Vanja Huth	Edward Luttwak
Gwen Callman	Michael Fink	William Huth	Ken Luzzi
Robert Cammartar	William Fink	Donald F. Huycke	James Lyons
Tony Cantu	Debra Fischer	David Hyde	Daniel Mahoney
Col. John Canyock	Matilde Flores	Richard Hyman	Michael Mahoney
Peter Caram	Kathleen Flynn	Ronald Ives	Kurt Maier
Robert Carpenter	Lord Peter Fraser	Jim Jack	Richard Mainey
Patricia Carr	Darlene Freeman	Wilfred A. Jackson	Lyle Malotky
Charles Carrington	Kerstin Frowick	William Jackson	Claude Manno
Douglas Casipit	Mrs. Robert H. Frowick	Alon Jaffe	Richard Marquise
Lawrence Chanen	Sabrina Fuchs	Peter Jenkins	Cathy Marrs
Mick Charles	Jane C. Fuller	Steven Jenkins	Willard Marsden
Cathy Christianson	Neil Gallagher	John Johnson	Irina Martynova
Chris A. Christie	Delia Gardner	Lawrence Johnson	Stan Maslowski
Joan Clark	Jeffrey Garrison	Michael Johnson	Roy Mason
Evelyn Cohn	Thomas Gibson	P. R. Johnson	Ray Mathis
Nancy Cohn	Charles Giddens	Quinten Johnson	Jack C. Matlock
Kathy Collins	James Gilchrist	Don E. Jones	Ann Matthews
Yvonne Conde	Karen Gilmore	Douglas Jones	Ken Maxwell
Anthony Cooke	Sandy Gilmore	Ralph K. Joseph	Sgt. Michael McCarthy
Donald Cooper	John Gilmour	John Joyce	Carl W. McCollum
Lt. Col. Dan Corm	Geoff Goslin	Frank Kataria	James McDougall
Lt. Col. William Corr	Terrence Grady	Keelin Kavanagh	Alec McElroy
Doyle R. Cowden	Thomas Graham	Encu Kebede	Kenneth W. McFadden
Terry Cox	Maurice Gralnek	William C. Kelley	John B. McGowan
William Creelman	Joan Gravett	LaRae Kemp	Neil McIntosh
Victoria Cummock	Jack Gregory	Christopher Kenyon	Ray McIntyre
Edward Cunningham	Michael Gulino	Laurence Kerr	Beulah McKee
Ambassador Henry Catto	Janet Gunther	David Keyes	Greg McLaughlin
James Dahl	Christian Haefner	Robert R. Kierce	Scott McMahan
Eric Dahlston	Angelynn C. Hall	Michael King	Angella Meadows
Ross Daly	Ian Hamilton	Daniel J. Kinghorn	Sheila Meads
Joseph A. Daniels	Rebecca Hammelright	David Knudsen	Varsha Mehta
Kevin Darcey	Mark Hansen	Jean Kobis	Sonny Merrick
Jane Davis	Hart Hanstein	Ronald Koch	Julius Meszaros
Anthony A. Dean	Capt. Ed Harris	Walter Korsgaard	Wolfgang Meurer
Raymond DeCarli	Chris Harris	Art Kosatka	Jane F. Miller
Marina DeLarracoechea	Robert Harris	Norbert Krieg	Norio Mitsuya
Karen Decker	Stephen Haynes	Wolf Krommes	Elizabeth Monro
Henry I. DeGeneste	Doug Heeps	Stephen J. Kruchko	Thomas Montgomery
Tom Delare	Doug Helfer	Alfred Kunz	Joyce Moody
Benjamin Demps	Duncan Henderson	Deborah Kyle	Thomas G. Moore

John Moran
Heather Morris
Michael Morse
Frank E. Moss
James Mottley
Rolf Mowett-Larson
Gunther Mueller
George Murphy
Patrick Murphy
Berry D. Nassberg
Nancy Wright Nassberg
Gerry Neill
Jean Neitzke
Donald Ness
George Clay Nettles
John Nicholls
Vera Nordall
Richard Norland
John Norman
Ralph Noyes
Robert O'Brien
Janet H. Oliver
Curtis Olsen
Roland O'Neill
James E. Orlando
Chris Lionel Osborn
Chris Osborne
Lynne Osmus
Cecil Parkinson
Maureen Parks
Sir Norman Payne
Margery Pedry
Larry Peer
John Pervis
George Pfromm
Patrick Poe
John Polanskey
C. L. Price
Brad Primeau
Joe Del Principe
Gideon Pringle
Malik Ramzan
Alexander L. Rattray
Lt. Col. Phil Raymond
Ronald Reams
J. Brayton Redecker
Phil Reed
Carrie Reilly
Peter Reiss
Paul Rendich
Julie Rethmeier
Oliver B. Revell
Ron Reynolds
Max R. Robinson

John Rodgers
Ross Rodgers
A. Rommel
Pete Rose
Frank Rosenkranz
Glenn Ross
Robert Rota
Peter Saguardis
Raymond A. Salazar
Mark A. Sanna
Naomi Saunders
David Schaffer
Manfred Schoelch
Uwe Schroeder
James Schuler
Lt. John Schultz
Andrea Caslis-Schwab
Wolfgang Schwab
Floyd Seeley
Bertram Seesaran
Norman Shanks
James M. Shaughnessy
Alan Shaw
David Shaw
David Schiele
Thomas Shehan
Herbert K. Shera
Paul Shilling
Allison Shropshire
John Shutty
Phyllis DE Smet-Howard
Bruce Smith
David A. Smith
Ray Smith
Raymond F. Smith
Daniel Sonesen
Robert Sorenson
Margo Squire
Herr Stark
Richard Steiner
Mark Stenetz
Keri Stoddard
Joan Suter
Chris Swan
Beverly Sweatman
Ann Swift
Otis Talley
Elizabeth Tamposi
David Teitelbaum
Daniel Tennenbaum
Michael Theobald
Gregg Thielmann
Harvey Thomson
Richard Todd

Elmer Torro
Jim Treweek
Theofolus P. Tsacoumis
Louis Turpen
Kilins Aslan Tuzcu
Donald Tyson
Syndee Tyson
Raymond Uhl
Nancy H. Van Duyne
Ed Vasquez
Calvert Walbert
Brian Wall
William Wall
Gaston Wallace
James Wallace
Rodney Wallis
Lyle Webb
Steve Weglian
A. Daniel Weingendt
Michael Weinstein
Ron Welling
Dan Weygandt
Alan R. Whetlor

John Whitby
Robert Whittington
Caroline Whorley
Kenneth Wilde
Beverly M. Wiley
Anthony Wilkins
Peter Wilkins
Paul Wilkinson
Edgar Williams
Frank Williams
Karin Winhold
Glen E. Winn
Rosemary Wolfe
David Wookey
Jerry Wright
Betty Young
Gerald R. Young
Jennifer Young
Posey Young
S. Donald Youso
Ben Zaduk
Philip Zaglool
Philip Zimmer

Resource Persons

David Abshire
Thomas Blatchford
Barry Bowman
Charles Bowser
Robert Kent Boyer
Terry Bresnihan
Claude Brinnegar
Edward C. Bryant
James Burnley
William Cohen
William Colby
Walter Cruickshank
Peter Dailey
Brian Duffy
Steven Emerson
Michael Epstein
Milton Finger
Robert Gates
Michael Goldfarb
Michel Guyard
David A. Heymsfeld
Brian Jenkins

Alton Keel
Edward Lutwak
Ted Macklin
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Robert Odom
Davis Robinson
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Donald Rumsfeld
Pierre Salinger
Andre Serena
Jeffrey Shane
John L. Sullivan
Paul Schott Stevens
David F. Traynham
Toni Verstandig
Kent Walker
Vernon Walters
William Webster
John Whitehead
Charles Ziegler

Our special thanks to Rear Admiral Bennett "Bud" Sparks, USCGR, and the Reserve Officers Association for hosting the Commission's hearings.

Executive Orders

Title 3—

Executive Order 12686 of August 4, 1989

The President

President's Commission on Aviation Security and Terrorism

By the authority vested in me as President by the Constitution and laws of the United States of America, and in order to establish a Commission on Aviation Security and Terrorism, it is hereby ordered as follows:

Section 1. *Establishment.* (a) There is 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 Commission shall consist of seven members appointed by the President. Two members shall be Senators, and two shall be Members of the House of Representatives; they shall represent both parties equally. The President shall consult with the Majority and Republican Leaders of the Senate and the Speaker and Minority Leader of the House of Representatives in making appointments from the Senate and House of Representatives, respectively.

(b) The President shall designate a Chairman from among the members of the Commission.

Sec. 2. *Functions.* (a) The Commission shall conduct a comprehensive study and appraisal of practices and policy options with respect to preventing terrorist acts involving aviation. In conducting this effort, the Commission shall evaluate the adequacy of existing procedures for aviation security, compliance therewith, and enforcement thereof. The Commission also shall review options for handling terrorist threats, including prior notification to the public. Further, the Commission shall investigate practices, policies, and laws with respect to the treatment of families of victims of terrorist acts.

(b) Within 6 months of the date of this order, the Commission shall submit a report to the President, which shall be classified if necessary, containing findings and recommendations. If the Commission's report is classified, an unclassified version shall be prepared for public distribution.

Sec. 3. *Administration.* (a) To the extent permitted by law and fully protecting intelligence sources and methods and the ongoing investigations into the destruction of Pan American World Airways Flight 103 of December 21, 1988, the heads of executive departments, agencies, and independent instrumentalities shall provide the Commission, upon request, with such information as it may require for purposes of carrying out its functions.

(b) Members of the Commission appointed from among private citizens may receive compensation for their work on the Commission at the daily rate specified for GS-18 of the General Schedule. While engaged in the work of the Commission, members appointed from among private citizens of the United States may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by law for persons serving intermittently in the Government service (5 U.S.C. 5701-5707).

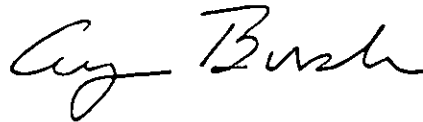
(c) To the extent permitted by law and subject to the availability of appropriations, the Department of Transportation shall, among other Administrative functions, provide the Commission with administrative services, funds, facilities, staff, and other support services necessary for the performance of its functions, and the Secretary of Transportation shall perform the functions of the President under the Federal Advisory Committee Act, as amended (5 U.S.C. App. 2), except that of reporting to the Congress, in accordance with the

guidelines and procedures established by the Administrator of General Services.

(d) The Commission shall adhere to the requirements set forth in the Federal Advisory Committee Act, as amended. All executive branch officials assigned duties by the Federal Advisory Committee Act shall comply with its requirements with respect to this Commission.

Sec. 4. General Provision. The Commission shall terminate 30 days after submitting its report to the President.

THE WHITE HOUSE,
August 4, 1989.



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Filed 8-7-89; 2:50 pm]
Billing code 3195-01-M

Editorial note: For a White House statement, dated Aug. 4, on the establishment of the Commission, see the *Weekly Compilation of Presidential Documents* (vol. 25, no. 31).

Title 3—

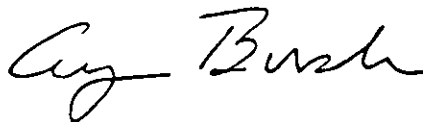
Executive Order 12705 of March 3, 1990

The President

Extending the President's Commission on Aviation Security and Terrorism

By the authority vested in me as President by the Constitution and laws of the United States of America, and in order to extend the President's Commission on Aviation Security and Terrorism, it is hereby ordered that the first sentence of section 2(b) of Executive Order No. 12686 is amended to read as follows: "No later than May 15, 1990, the Commission shall submit a report to the President, which shall be classified if necessary, containing findings and recommendations."

THE WHITE HOUSE,
March 3, 1990.



[FR Doc. 90-5312
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Billing code 3195-01-M

Review of Statistical Data with Respect to Pan American Flight 103 on December 21, 1988

by Edward C. Bryant (*Consultant in Statistics*)

Introduction

This report presents an analysis of available data with respect to passengers flown, booking histories and cancellations designed to determine whether such data are consistent with patterns shown by other Pan American flights before and after December 21, 1988, and whether the Pan American flight data are consistent with patterns of another American carrier serving the same route. The objective of the analysis is to assist in answering questions raised by families of victims of the December 21, 1988 bombing and others.

The sections that follow present data on passengers carried, bookings (i.e., reservations) and cancellations and no-shows. A final section offers some conclusions. To facilitate cross referencing, charts and tables presenting data on passengers carried begin with the letter "P", those presenting data on bookings with the letter "B" and those concerned with cancellations with the letter "C." The numbers following the letter designations are consistent between the figures and tables, that is, the data for Figure P-3 are shown in Table P-3, and so on.

Passengers Carried

Passengers Carried by Pan Am in 1987, 1988 and 1989

Pan Am Flight 103 originated in Frankfurt (FRA), carried passengers to London Heathrow (LHR), where passengers were transferred to a larger aircraft, and continued on to New York's

John F. Kennedy Airport (JFK). Passengers on Flight 103 could book passage from Frankfurt to London, from Frankfurt to New York, or from London to New York. Flight 103 has been redesignated Flight 11 following the Lockerbie tragedy.

Two other Pan American flights serve the Frankfurt to New York route. They are Flight 67 and Flight 73. Both fly nonstop from Frankfurt to New York. As an initial indication of whether 1988 traffic differed materially from other years, the total passengers carried by the three flights on each day were compared for 1987, 1988, and 1989. Only the passengers on the London to New York leg of Flight 103 (or Flight 11 in 1989) were used in the comparison, since the equipment used on this leg of the flight is comparable to the equipment used on the other two flights. The data on total passengers carried are compared for the three years in Fig. P-1 for each day in December for which data were available. The actual data from which the three curves are drawn are shown in Table P-1.

It will be observed that the 1988 data reached a peak on December 15 and thereafter dropped to a lower level. In comparing the three years of data, one should be aware that weekends came on different days of the month for each of the three years, making comparisons somewhat imprecise. Even so, the three years show substantial similarity in the pre-Christmas traffic.

Comparison of Passengers Carried on Flight 103 with Passengers Carried on other Pan Am Flights from Frankfurt to New York

Fig. P-2 shows that the drop in passenger traffic after December 15, 1988 was caused by a drop in the passengers carried by the London to New York leg of Flight 103. Note that, although the Helsinki warning referred to a Pan Am flight from Frankfurt to the United States, the two nonstop flights from Frankfurt showed no unusual drop in passengers comparable to the drop on Flight 103 from London to New York. Fig P-2a compares number of passengers carried on the two legs of Flight 103 during December, 1988. The levels are quite different but the patterns of movement are quite similar, although the peak in traffic on the 14th and 15th of December from London to New York is more extreme than the peak on the same dates from Frankfurt to London.

Fig. P-3 compares passengers carried in December by Flight 103 in 1987 and 1988. Note that the 15th of December came on Thursday in 1988. The comparable Thursday in 1987 came on December 17. Taking this two day shift into account and the fact that the 18th (the absolute peak in 1987) came on Friday, the two series of data are quite comparable.

Pan Am also provided data on passengers carried during December, 1987 on two other flights from London to New York, Flights 1 and 101. These flights originate in London. Fig. P-4 shows that the pattern of passengers carried during December, 1987 is quite similar for the three flights serving this route. In particular, all three flights showed a decrease in passengers carried after the December 17 (or 18) peak in the year prior to the tragedy. The graph also shows that the decrease in passengers is greater for Flight 103 than for Flights 1 and 101. Similar data were not available for 1988, but Fig. P-4 shows that a drop in passenger traffic on Flight 103 after December 15, 1988 was not unexpected.

Comparison with Passengers Carried by TWA

The route from Frankfurt to New York is also served by TWA. TWA's Flight 741 is a nonstop flight from Frankfurt to JFK, and thus is directly comparable with Pan Am Flights 67

and 73. The comparison is shown in Figure P-5. Because there are differences in the aggregate number of passengers flown on the three flights, the number of passengers on each day was expressed as a percentage of the average of the daily number of passengers carried on the given flight during the period December 7 through December 21, 1988. The consistency between TWA and Pan Am during the pre-Christmas period of 1988 is remarkable.

TWA also provided service in 1988 through London on Flight 715. New York passengers arriving in London on TWA Flight 715 were transferred to a larger aircraft and proceeded on to New York on a continuation of that flight. Two additional graphs compare TWA Flight 715 with Pan Am Flight 103, after expressing the daily passenger loads as a percentage of average loads in the period December 7 through 21, as described above. Fig. P-6 compares the two flights with respect to the Frankfurt to London leg and Fig. P-7 compares them with respect to the London to New York leg. Again, the patterns are remarkably consistent.

One must conclude, then, that the data on passengers carried do not indicate any unusual patterns, either with respect to all passengers carried from Frankfurt to JFK or, specifically, with respect to passengers carried on Flight 103.

Booking Histories

Pan Am provided a cumulative history of passengers booked on Flight 103, by fare class, for each day leading up to the day of the fatal flight. It also provided similar data for flights 67, 73 and 11 (the renumbered 103) for 1989. No such data are available for 1987. The aggregate bookings data (the sum of first class, business class, and economy) are shown in Fig. B-1 for Flight 103 for 1988 and the other three flights for 1989. The data for Flight 103 in 1988 and Flight 11 for 1989 are for the London to JFK leg. It may be seen that Flight 103 was never fully booked prior to its departure and that bookings continued to rise as the date for departure neared. Note also, that a substantial shortfall in bookings existed prior to the receipt of the Helsinki warning on December 5, so that the light passenger load was due to factors that occurred prior to the Helsinki warning.

In view of some reports from family members that Flight 103 was at some time "fully booked" it is important to know something about the way space is allocated for the various fare classes. Information supplied by Pan American identifies bookings on each date for first class, F, business (or Clipper Class), C, and economy (or coach class), Y. In addition, there are up to five different segments of Y class, not all of which are used on any given flight. There is a flight manager for each flight departure who allocates space to the various classes on the aircraft. An "authorization limit", usually greater than the amount of seats allocated, is assigned to each class and when the authorization limit is reached no more bookings are permitted for that class. Depending on the demand for space as flight departure approaches the flight manager may reallocate space, so that it is possible that a given class could be fully booked at a given time and yet be available for further booking at a later date. Cancellations and upgrades further complicate the interpretation of bookings data.

Keeping in mind the complexities identified above, the data supplied by Pan American with regard to bookings on Flight 103 on December 21, 1988 show that, at some time prior to departure, one of the Y classes was fully booked, that is, that no further bookings were permitted in that fare class.

Fig. B-2 compares the bookings on the Frankfurt to London leg of the flight for 1988 and 1989. Recall that Flight 11 is the renumbered Flight 103. The same shortfall as shown for the London to JFK leg, above, appears in the period prior to the Helsinki warning.

One must conclude, then, that the booking histories reveal nothing unusual in the period between the Helsinki warning and the departure of the flight on December 21, 1988.

Cancellations

Frankfurt to New York

Pan American supplied data that made it possible to construct the number of cancellations, by day of cancellation, for Flight 103 for each of the three legs of the flight. The relevant data are shown in Table C-1. Because the number of cancellations could be related to the passenger load, cancellations were subdivided into two groups for each year: (1) those occurring

within seven days of flight departure, and (2) those occurring in the previous two weeks. A substantial number of cancellations were undated, and "no-shows" were not available for 1987.

Dividing the number of cancellations in the seven days prior to departure by the number in the previous two weeks provides a rough index of the rate of cancellation as time for departure approaches. For the dominant leg of the flight (LHR to JFK) the ratio is 1.74 for 1987 and 1.64 for 1988, so that there was actually a relative decrease in cancellations as flight time approached in 1988 as compared to 1987. Thus, the smaller number of passengers carried in 1988 is not due to an increase in cancellations over those in 1987. Adding the other two legs (FRA to LHR and FRA to JFK) provides a ratio of 1.93 for 1987 and 1.87 for 1988. Again, cancellations as flight time approached were relatively smaller for 1988 than for 1987. The numbers of cancellations are small and a shift of a few cancellations from one period to another might have changed their relative values, but the observed data do not indicate any difference between the two years.

Moscow to Frankfurt

Pan Am also provided data on cancellations on Flight 065 from Moscow to Frankfurt for various dates. This flight departs twice per week and did not fly on the day of the fatal Pan Am 103. It did fly on December 20. This was almost a week after the posting of the Helsinki warning by the U. S. Embassy in Moscow. Therefore, it should be informative to compare the cancellations on that flight of December 20 with the cancellations on flights leaving December 6 and December 9, before the Helsinki warning was posted.

The data provided by Pan Am permitted an identification of the cancellations of persons who had been booked from Moscow to JFK. A summary of the data for the three flights is shown in Table C-2. Seven cancelled in the week prior to departure of the December 20 Flight, compared to 19 who cancelled two weeks earlier, for a ratio of 0.37. For the other two departures, the ratio is 15 compared to 20 or a ratio of 0.75. Thus, there is no evident increase in cancellations prior to departure time. Again, however, the numbers are small.

The cancellations were examined by individual date as well as by seven day periods and no increase in number of cancellations above that expected due to normal variation was observed in the days immediately following the posting of the Helsinki warning.

Conclusions

Examination of data on passengers carried reveals no unusual patterns with respect to

total passengers carried by Pan Am during the period studied or with respect to passengers carried on Flight 103 on the day of the bombing. Also, patterns of bookings are consistent with patterns on other flights for which data are available. Finally, the data on cancellations prior to the fatal flight show no unusual patterns.

Fig. P-1. Total Passengers Carried during 1987 through 1989 by Pan Am on Flights 67 and 73 (FRA/JFK) and 103 (LHR/JFK)

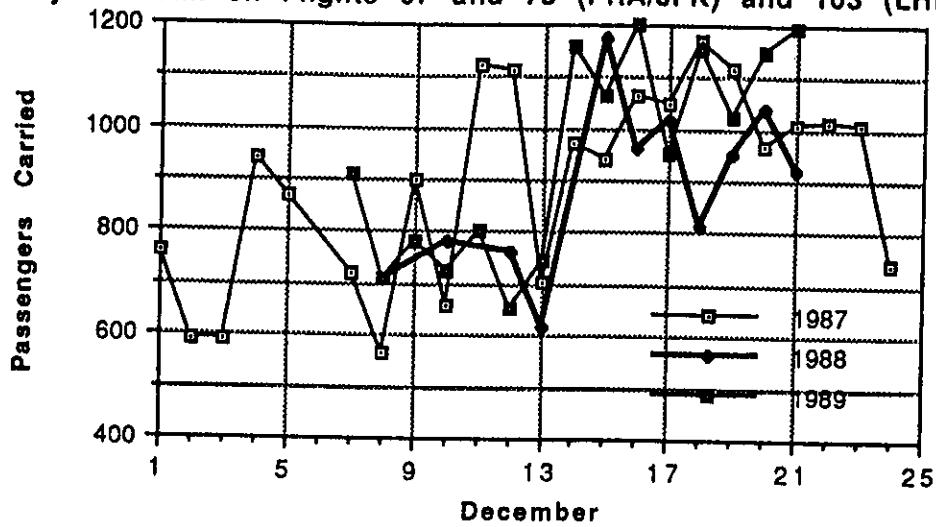


Table P-1. Total Passengers Carried by Pan Am for Years 1987 through 1989, Flights 67 and 73 (FRA/JFK) and Flights 103 and 11 (LHR/JFK), December 1 through December 24.

December	1987	1988	1989
1	759		
2	591		
3	591		
4	941		
5	869		
6			
7	719		911
8	563	711	711
9	900		784
10	657	781	723
11	1122		805
12	1110	762	651
13	705	615	747
14	974		1160
15	940	1174	1067
16	1064	962	1199
17	1049	1020	954
18	1169	813	1153
19	1117	952	1023
20	969	1038	1150
21	1008	923	1196
22	1016		
23	1008		
24	741		

Note: Blanks appear on days when any of the three flights did not occur, or data were otherwise unavailable.

Fig. P-2. Passengers Carried on Pan Am Flights 67 and 73 (FRA/JFK) and 103 (LHR/JFK), December, 1988

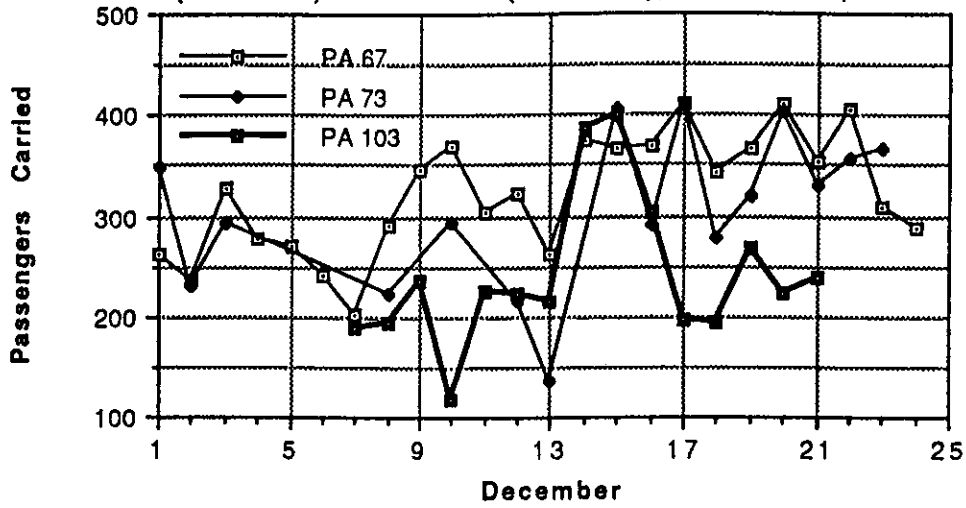


Fig. P-2a. Passengers Carried during December, 1988 on the Two Legs of Pan Am Flight 103

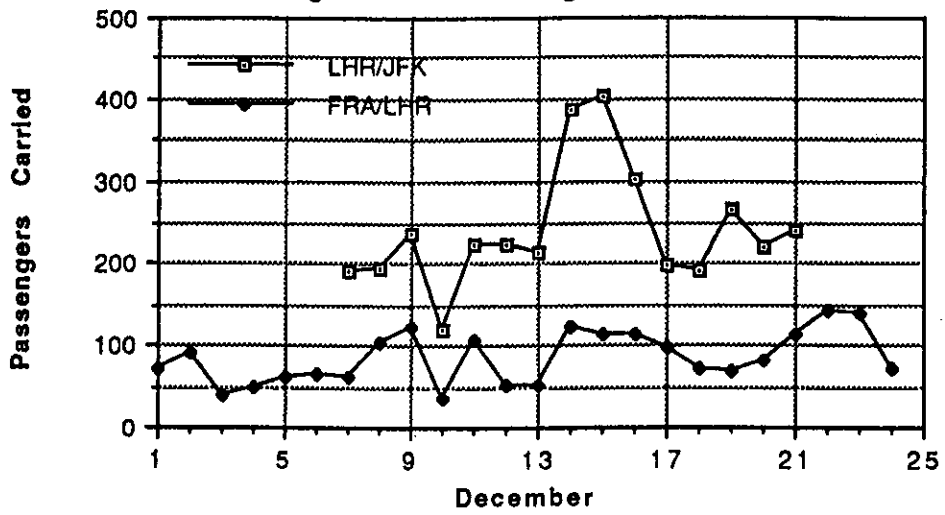


Table P-2. Passengers Carried on Pan Am Flights from Frankfurt to New York during December, 1988.

December	FRA/JFK PA67 88	FRA/JFK PA73 88	LHR /JFK PA103 88	FRA/LHR PA 103 88
1	262	348		71
2	235	231		92
3	327	293		39
4	279			49
5	270			63
6	242			65
7	203		190	61
8	292	224	195	105
9	347		236	122
10	368	294	119	35
11	304		225	106
12	323	215	224	51
13	263	137	215	53
14	374		387	124
15	366	407	401	114
16	369	290	303	115
17	410	412	198	96
18	343	277	193	71
19	366	319	267	69
20	412	404	222	81
21	354	330	239	114
22	406	356		144
23	310	367		139
24	288			73

Note: Blanks appear on days when flight did not occur, or data were otherwise unavailable.

Fig. P-3. Passengers Carried in December 1987 and 1988 on Pan Am Flight 103, London to New York

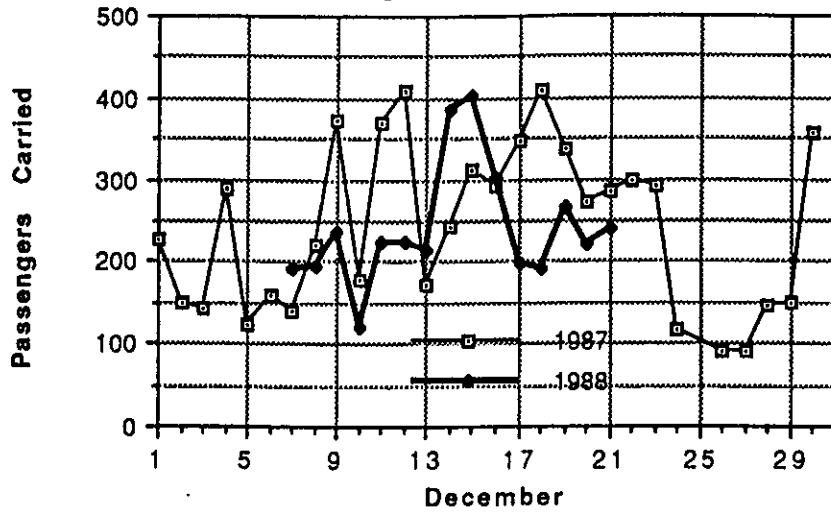


Table P-3. Passengers Carried in December, 1987 and 1988 on Pan Am Flight 103, London to New York

December	LHR/JFK PA103 87	LHR /JFK PA103 88
1	228	
2	150	
3	142	
4	288	
5	122	
6	160	
7	139	190
8	221	195
9	372	236
10	177	119
11	370	225
12	409	224
13	171	215
14	242	387
15	313	401
16	293	303
17	348	198
18	408	193
19	338	267
20	274	222
21	286	239
22	299	
23	293	
24	118	
25		
26	90	
27	91	
28	145	
29	148	
30	358	
31		

Note: Blanks appear on days when flight did not occur, or data were otherwise unavailable.

Fig. P-4. Passengers Carried on Pan Am Flights 103, 1, and 101, (LHR/JFK), December, 1987

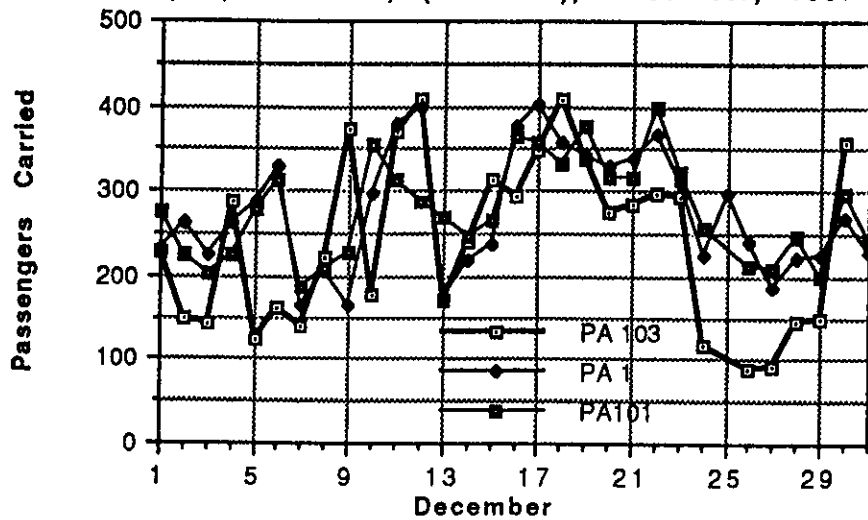


Table P-4. Passengers Carried, LHR/JFK, on Pan Am Flights in December, 1987

December	PA103	PA 1	PA 101
1	228	232	276
2	150	264	224
3	142	226	204
4	288	263	226
5	122	287	280
6	160	329	314
7	139	163	186
8	221	205	208
9	372	165	228
10	177	296	355
11	370	379	312
12	409	399	289
13	171	175	270
14	242	217	247
15	313	238	265
16	293	377	364
17	348	403	359
18	408	357	333
19	338	342	378
20	274	328	317
21	286	340	318
22	299	368	398
23	293	310	323
24	118	226	256
25		296	
26	90	242	212
27	91	188	210
28	145	223	248
29	148	226	198
30	358	270	299
31		229	245

Note: Blanks appear on days when flight did not occur, or data were otherwise not available.

Fig. P-5. Passengers Carried FRA/JFK as Percent of Daily Average for December 7 through December 21, 1988

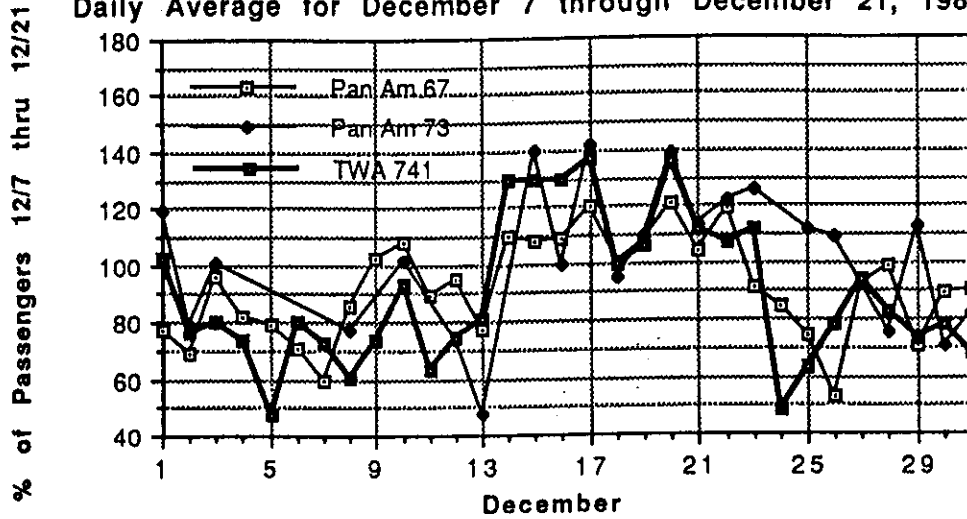


Table P-5. Passengers Carried on Pan Am Flights 67 and 73 and TWA Flight 741, (FRA/JFK) during December, 1988, as a Percent of Average Daily Number of Passengers, December 7 through December 21

December	PA67	PA73	TW 741
1	77.1	119.8	102.7
2	69.2	79.5	76.1
3	96.3	100.8	80.3
4	82.2		73.7
5	79.5		47.5
6	71.3		80.3
7	59.8		72.3
8	86.0	77.1	60.6
9	102.2		74.1
10	108.4	101.2	93.4
11	89.5		63.4
12	95.1	74.0	74.8
13	77.4	47.1	81.3
14	110.1		129.9
15	107.8	140.1	129.5
16	108.7	99.8	129.5
17	120.7	141.8	137.1
18	101.0	95.3	99.6
19	107.8	109.8	106.4
20	121.3	139.0	136.4
21	104.2	113.6	111.6
22	119.6	122.5	107.1
23	91.3	126.3	112.0
24	84.8		48.2
25	74.5	111.8	63.0
26	53.3	109.1	78.2
27	92.5	92.6	93.7
28	98.4	75.0	83.0
29	71.3	112.5	73.4
30	89.8	70.9	77.9
31	90.7	81.9	67.9

Note: A blank appears on days when flight did not occur, or data were otherwise unavailable.

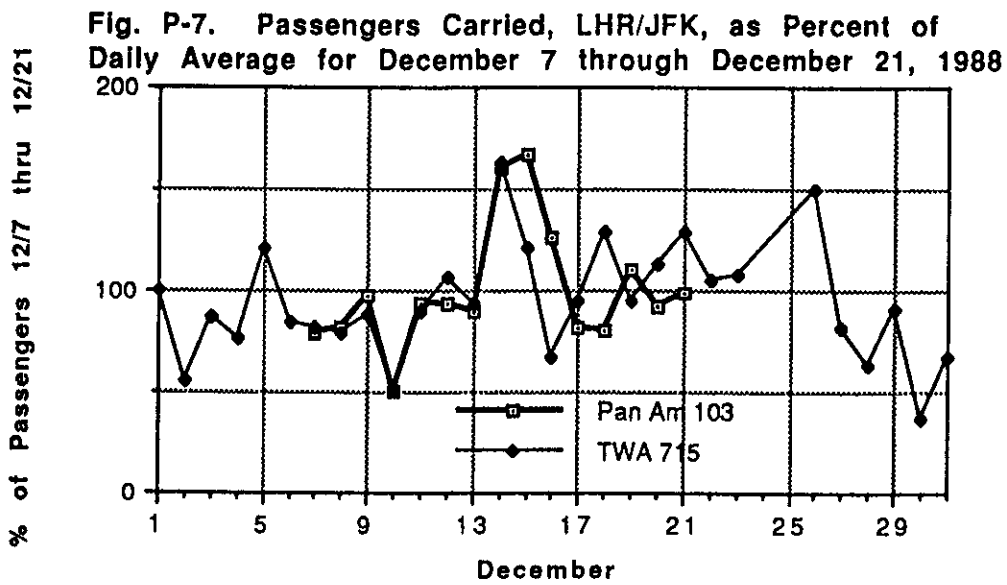
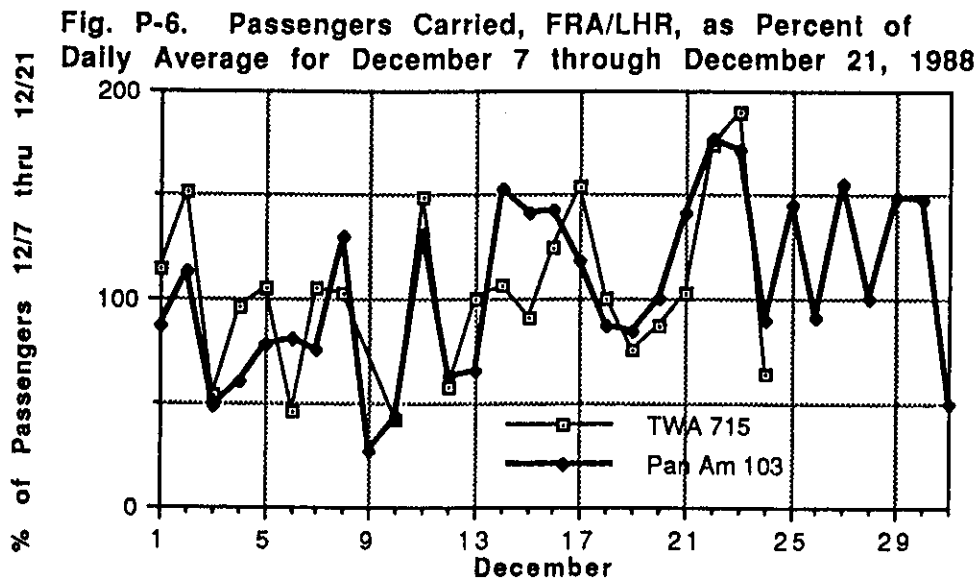


Table P-6(7). Passengers Flown on Pan Am Flight 103 and TWA Flight 715 in December, 1988, by Leg of Flight, as a Percent of Average Daily Number of Passengers Carried between December 7 and December 21, 1988

December	PA Flt 103 FRA/LHR	PA Flt 103 LHR/JFK	TWA Flt 715 FRA/LHR	TWA Flt 715 LHR/JFK
1	87.5		113.6	100.1
2	113.4		151.4	54.8
3	48.1		53.5	87.0
4	60.4		95.8	76.0
5	77.7		104.7	120.6
6	80.1		46.8	84.8
7	75.2	78.9	104.7	81.1
8	129.5	80.9	102.4	78.9
9	27.1	98.0		88.5
10	43.2	49.4	42.3	51.9
11	130.7	93.4	149.2	89.2
12	62.9	93.0	57.9	106.7
13	65.4	89.2	100.2	92.8
14	152.9	160.6	106.9	163.0
15	140.6	166.5	91.3	120.6
16	141.8	125.8	124.7	67.3
17	118.4	82.2	153.7	95.0
18	87.5	80.1	100.2	129.4
19	85.1	110.8	75.7	94.3
20	99.9	92.2	86.9	112.6
21	140.6	99.2	102.4	128.7
22	177.6		173.7	105.3
23	171.4		189.3	107.5
24	90.0			64.6
25	145.5			
26	91.2			150.6
27	155.4			81.9
28	99.9			63.6
29	149.2			91.4
30	148.0			37.3
31	50.6			67.3

Note: A blank appears on days when flight did not occur, or data were otherwise unavailable.

Fig. B-1. Booking Histories during December of Pan Am Flights to JFK Departing December 21, 1988 and 1989

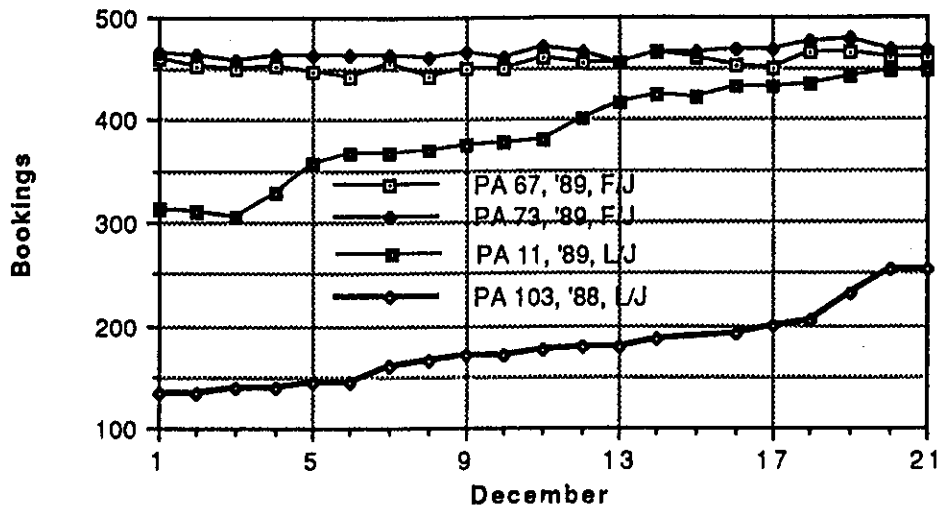


Fig. B-2. Booking Histories of Pan Am Flights, FRA to LHR, Departing on December 21, 1988 and 1989

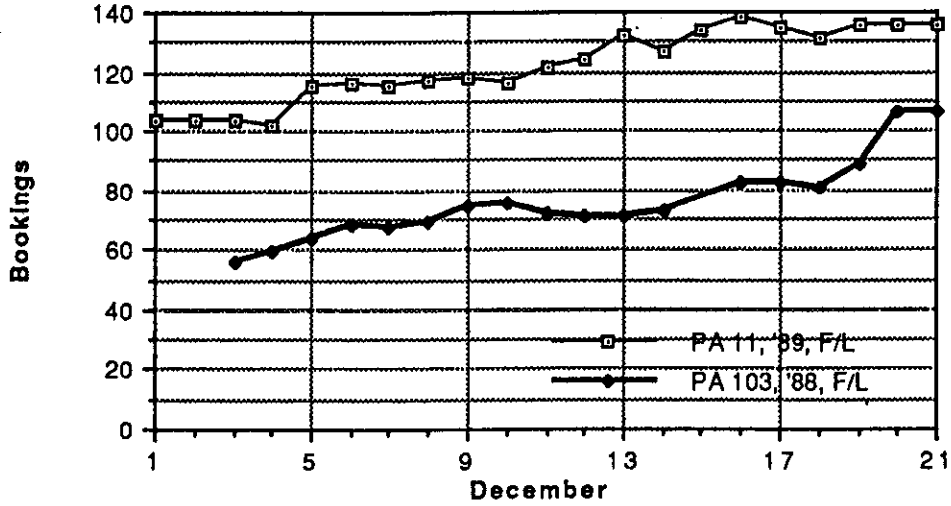


Table B-1. Booking Histories during December of Pan Am Flights from Frankfurt to JFK, 1988 and 1989

December	FRA/JFK "Fit 67, '89"	FRA/JFK "Fit 73, '89"	LHR/JFK "Fit 11, '89"	LHR/JFK "Fit 103, '88"	FRA/LHR "Fit 11, '89"	FRA/LHR "Fit 103, '88"
1	461	466	312	134	104	
2	453	463	310	135	104	56
3	451	458	306	139	104	59
4	452	463	329	140	102	64
5	447	464	356	145	115	68
6	444	463	368	143	116	67
7	455	464	368	160	115	69
8	443	462	370	165	117	74
9	451	465	375	170	118	75
10	451	462	379	171	116	72
11	460	472	381	175	121	71
12	457	466	400	179	124	71
13	456	456	418	177	132	73
14	465	465	425	185	127	
15	462	465	423		134	
16	453	469	433	192	138	82
17	450	468	433	200	135	82
18	466	476	436	205	131	81
19	467	480	443	229	136	89
20	460	468	447	253	136	106
21	460	468	447	253	136	106

Note: A blank appears on days for which booking information is not available.

Table C-1. Cancellation Histories of Pan Am Flights 103 Leaving Frankfurt, Wednesday, December 23, 1987, and Wednesday, December 21, 1988 by Leg of Flight.

Flight and Periods Compared	Frankfurt to London Total Rebooked on PA	London to JFK Total Rebooked on PA	Frankfurt to JFK Total Rebooked on PA
Dec. 23, 1987			
Dec. 17 - Dec. 23	9	33	12
Dec. 3 - Dec. 16	4	19	5
Undated	2	28	11
No-Shows	(Not available)		5
Dec. 21, 1988			
Dec. 15 - Dec. 21	7	41	8
Dec. 1 - Dec. 14	4	25	1
Undated	2	45	8
No-Shows	13	35	17

Table C-2. Cancellations of Passengers Booked on Pan Am Flight 065 from Moscow to Frankfurt for Flights Leaving Moscow on December 6, 9, and 20, 1988.

Flights and Periods Compared	Total Cancellations	Rebooked on Pan Am
December 20, 1988		
Dec. 14 through Dec. 20	7	0
Nov. 30 through Dec. 13	19	0
Undated	15	8
December 9, 1988		
Dec. 3 through Dec. 9	4	0
Nov. 19 through Dec. 2	7	2
Undated	10	6
December 6, 1988		
Nov. 30 through Dec. 6	11	0
Nov. 16 through Nov. 29	13	0
Undated	3	1
Totals for Dec. 6 and 9 Flts.		
Week before Departure	15	0
2nd and 3rd week before Departure	20	2
Undated	13	7

Note: The data are for passengers booked from Moscow to New York through Frankfurt.

Acts of Aviation Sabotage

EXPLOSIONS ABOARD AIRCRAFT—1949 THROUGH 1989

Date	Airline	Aircraft Location when Explosion Occurred	Circumstances	Casualties
05/07/49	Philippine Airlines (Philippines)	Between Daet and Manila, Philippines	Crashed into sea. Time bomb delivered to the aircraft by two ex-convicts who were hired for the job by a woman and a man who were attempting to kill the woman's husband, a passenger on the aircraft.	13 killed
09/09/49	Quebec Airways (Canadian Pacific Airlines) (Canada)	Near Sault Au Cochon, Quebec Canada	Aircraft exploded 40 miles from Quebec. Explosion due to bomb in No. 1 forward <i>baggage</i> compartment. Three individuals executed for the crime.	23 killed
04/13/50	British European Airways (Great Britain)	English Channel near Hastings, England	Explosion in <i>lavatory</i> severe damage to rear of aircraft. Aircraft flown back and landed at Northolt at night. Explosive device was placed in used <i>towel receptacle</i> in <i>lavatory</i> .	1 injured
09/24/52	Mexicana (Mexico)	Near Mexico City, Mexico	Explosion in flight 15 minutes after takeoff. Seven-foot hold in fuselage. Bomb exploded in a suitcase in forward <i>baggage</i> compartment. Aircraft landed successfully. Two men convicted and sentenced to 30 years.	2 injured
04/11/55	Air India (India)	Near Great Natuna Island in South China Sea	About 5 hours after takeoff violent explosion in No. 3 engine nacelle. Aircraft caught fire and crashed. Explosive device with clockwork timing device was in starboard wing root in <i>wheel well</i> .	16 killed
11/01/55	United Air Lines	Near Longmont, CO, U.S.A.	11 minutes after takeoff an explosion disintegrated the aircraft in flight. A dynamite bomb detonated in No. 4 <i>baggage</i> compartment. 39 passengers; 5 crew. J. Graham executed for the crime.	44 killed
03/04/56	Skyways Ltd. (Great Britain)	On ground at Nicosia, Cyprus	Explosion in forward <i>freight compartment</i> while on the ground at Nicosia airfield.	None
07/25/57	Western Airlines	Over Daggett, CA, U.S.A.	47 minutes after takeoff, cruising at 7,500 feet, cabin pressurized at 4,000 feet, explosion occurred in the <i>lavatory</i> . A hole was blown through the side, and a passenger who had detonated the bomb (a charge of dynamite) was blown out of the aircraft. The plane landed successfully 17 minutes after occurrence. 13 passengers; 3 crew.	1 killed
12/19/57	Air France (France)	Over Central France	An explosion due to a bomb being detonated in <i>lavatory</i> . The damaged aircraft with its 89 passengers and crew landed successfully at Lyons airport.	None

EXPLOSIONS ABOARD AIRCRAFT—1949 THROUGH 1989—Continued

Date	Airline	Aircraft Location when Explosion Occurred	Circumstances	Casualties
09/08/59	Mexicana (Mexico)	Over Central Mexico	In-flight explosion tore a hole in the side of the fuselage and one of the <i>passengers</i> believed to have detonated the bomb fell 11,000 feet to his death. The aircraft, with its 13 passengers and 3 crew, was landed successfully. Eight occupants injured, and a small fire extinguished in flight.	1 killed, 8 injured
01/06/60	National Airlines	Over Bolivia, NC, U.S.A.	3 hours 4 minutes after takeoff, while in cruising flight, the aircraft exploded at 18,000 feet. Wreckage scattered some 13 miles. Explosion due to detonation of dynamite by means of dry cell batteries located in <i>passenger compartment</i> right of seat row No. 7 under seat. Flew 16 miles before loss of control.	34 killed
04/28/60	Linea Aeropostal Venezolana (Venezuela)	Near Calabozo, Venezuela	On scheduled flight when about 14 km from Calabozo airport, an explosion totally destroyed the cockpit. An explosion device detonated in the <i>cockpit</i> destroyed the aircraft.	13 killed
05/22/62	Continental Air Lines	Over Unionville, MO, U.S.A.	While flying at 39,000 feet an explosion in the right rear <i>lavatory</i> blew off the tail of the aircraft. Wreckage scattered many miles. Some pieces down wind 120 miles. Dynamite detonation in <i>towel container</i> .	45 killed
12/08/64	Alas Airlines (Bolivia)	Over Bolivia	Aircraft crashed after in-flight explosion occurred. Probable cause determined <i>dynamite charge</i> planted by heavily insured passenger.	15 killed
07/08/65	Canadian Pacific Airlines (Canada)	Over British Columbia, Canada	An explosion occurred separating the tail section. An explosive device detonated within the <i>fuselage</i> caused the aircraft to crash.	52 killed
11/22/66	Aden Airways (Aden—now Southern Yemen)	Near Aden, Southern Yemen	Shortly after the aircraft reached 6,000 feet and about 20 minutes after taking off, from Meifah (Maysaah) an explosion occurred which disintegrated the aircraft. An explosive device had been detonated in a <i>hand baggage</i> on port side of <i>passenger cabin</i> .	8 killed
05/29/67	Aerocondor (Colombia)	Between Barranquilla and Bogota, Colombia	On flight to Bogota with 18 passengers and 4 crew, an explosion tore a 3-foot diameter hole in the rear fuselage. Safe landing made at Bogota. Investigation disclosed evidence of a time bomb.	None
06/30/67	Aden Airways (Aden—now Southern Yemen)	On ground at Aden, Southern Yemen	An explosion occurred while the empty aircraft was parked on the tarmac at Aden airport. The aircraft caught fire and was destroyed. Plastic explosive thought to have been used in <i>forward compartment</i> with time device. Piece of time detonator pencil found.	None
10/12/67	British European Airways (Great Britain)	Over Mediterranean off Island of Rhodes	On scheduled flight Athens to Nicosia, at about 29,000 feet, explosive device detonated in <i>tourist passenger cabin</i> . Aircraft crashed into sea and was lost. A few floating pieces of debris recovered together with some bodies. Two cushions and one body revealed evidence of detonation of a high explosive which had occurred in the passenger cabin.	66 killed
11/12/67	American Airlines	Over Alamosa, CO, U.S.A.	About 1 hour 4 minutes after takeoff, en route Chicago-San Diego and when over Alamosa, Colorado, a small explosion occurred in rear <i>baggage compartment</i> . Three bags destroyed. Aircraft landed successfully 3 hours after taking off. Homemade and crude explosive device found. FBI arrested man; 72 passengers and 6 crew on board. Landed 1 hour 45 minutes after occurrence.	None
11/19/68	Continental Airlines	Over Gunnison, CO, U.S.A.	Fire and explosion in <i>lavatory</i> at 24,000 feet. Fire extinguished by crew, and aircraft landed safely; 63 passengers and 8 crew. One of the passengers was arrested.	None

EXPLOSIONS ABOARD AIRCRAFT—1949 THROUGH 1989—Continued

Date	Airline	Aircraft Location when Explosion Occurred	Circumstances	Casualties
03/11/69	Ethiopian Airlines (Ethiopia)	On ground at Frankfurt, West Germany	Two explosions in tourist class <i>passenger compartment</i> . Aircraft was parked on the ground. Passengers had deplaned.	None
08/05/69	Philippine Airlines (Philippines)	Near Zamboanga, Philippines	Passenger apparently set off an explosive, believed gelignite, in <i>lavatory</i> and blew himself out of aircraft; 27 passengers and 4 crew. Aircraft landed successfully.	1 killed, 4 injured
08/29/69	Trans World Airlines	On ground at Damascus, Syria	Two Arab terrorists hijacked the aircraft shortly after departure from Rome and diverted it to Damascus. Upon landing, the passengers and crew were evacuated through emergency chutes. One hijacker threw hand grenades and a canister explosive device into the <i>cockpit</i> causing an explosion which destroyed the front section of the aircraft.	No injuries due to explosion, but several injured during evacuation of aircraft.
12/2/69	Air Vietnam (South Vietnam)	Near Nha Trang, South Vietnam	Explosion in <i>lavatory</i> in flight injured pilot and damaged braking systems. On landing, the aircraft ran off end of runway and crashed into a school; 70 persons aboard aircraft.	32 killed, many others injured
02/21/70	Swiss Air Transport Co.	Over Wurenlingen, Switzerland	About 9 minutes after takeoff from Zurich pilot reported explosion in <i>aft compartment</i> . A few minutes later reported fire and smoke. Lost control and crashed in forest.	47 killed, no survivors
02/21/70	Austrian Airlines (Austria)	Near Frankfurt, West Germany	Twenty minutes after takeoff from Frankfurt explosion in <i>freight hold</i> blew hole 3' x 2' through bottom of fuselage. Aircraft landed safely at Frankfurt, Germany; 33 passengers and 5 crew.	None
03/14/70	United Arab Airlines (Egypt)	Near Alexandria, Egypt	During approach to land, explosion occurred in <i>landing gear well</i> . Extensive damage; device in rear of left engine. Aircraft landed safely.	2 injured
04/21/70	Philippine Airlines (Philippines)	Near Pant Bangan, 75 miles north of Manila, Philippines	At 10,500 feet in clear air, explosion in rear of aircraft ripped off the tail section. Evidence of explosive device in <i>lavatory</i> .	36 killed, no survivors
06/02/70	Philippine Airlines (Philippines)	Over Roxas, Philippines	At 13,000 feet a hand grenade located <i>under a seat</i> exploded. Nine square foot hole in fuselage; 40 passengers and 4 crew. Aircraft landed safely at Roxas.	1 killed, 12 injured
09/07/70	Pan American World Airways	On ground at Cairo, Egypt	Two Popular Front for the Liberation of Palestine (PFLP) guerrillas hijacked aircraft at gunpoint on 09/06/70, shortly after departure from Amsterdam en route to New York and diverted it to Beirut, Lebanon. A third man boarded at Beirut with demolitions which he enplaned during flight to Cairo. The aircraft was demolished on the ground at Cairo following emergency evacuation of crew, passengers, and hijackers.	No injuries due to explosion but several persons injured during evacuation.
09/12/70	Trans World Airlines	On ground at Dawson Field, Jordan	Aircraft hijacked by PFLP guerrillas on 09/06/70. Diverted to Dawson Field, Zerka, Jordan, and subsequently destroyed by demolitions on the ground.	None
09/12/70	Swissair (Switzerland)	On ground at Dawson Field, Jordan	Aircraft hijacked by PFLP guerrillas on 09/06/70. Diverted to Dawson Field, Zerka, Jordan, and subsequently destroyed by demolitions on the ground.	None
09/12/70	British Overseas Airways (Great Britain)	On ground at Dawson Field, Jordan	Aircraft hijacked by PFLP guerrillas on 09/06/70. Diverted to Dawson Field, Zerka, Jordan, and subsequently destroyed by demolitions on the ground.	None
08/24/71	Royal Jordanian Airlines (Jordan)	On ground at Madrid, Spain	Explosive device in <i>aft lavatory complex</i> . Aircraft was parked on ground. Hole blown in top of fuselage with tear 3 feet long.	None
11/20/71	China Airlines (Taiwan)	Over South China Sea	Explosion—probable bomb. Aircraft crashed at sea.	25 killed

EXPLOSIONS ABOARD AIRCRAFT—1949 THROUGH 1989—Continued

Date	Airline	Aircraft Location when Explosion Occurred	Circumstances	Casualties
12/29/71	General Aviation (United States)	In a hangar at Elkhart, IL, U.S.A.	An explosive device placed on a <i>seat in a cabin</i> detonated, destroying the aircraft and making a large hole in the roof of the hangar. Door of hangar and door of aircraft had been forced open prior to the explosion. Suspect identified.	Unknown
01/26/72	Jugoslovenski Aero-transport (Yugoslavia)	Over Ceske Kamenice, Czechoslovakia	Homemade bomb in forward <i>luggage compartment</i> . Aircraft crashed; 28 persons aboard. (Note: Sole survivor fell approximately 15,000 feet in tail section.)	27 killed, 1 injured
03/08/72	Trans World Airlines, U.S.A.	On ground at Las Vegas, NV	Explosive device in right rear portion of <i>cockpit</i> . Aircraft parked.	None
05/25/72	Lan-Chile (Chile)	Over Caribbean Sea, near Cuba	Homemade pipe bomb in <i>ice water fountain service compartment</i> . Extensive damage to rear end of aircraft. Landed safely at Montego Bay, Jamaica.	None
06/15/72	Cathay Pacific Airways (Hong Kong)	Over Central Highlands of South Vietnam	Bomb in <i>suitcase under passenger seat</i> on right side over wing. Aircraft crashed. A police officer whose fiancée and daughter were aboard was charged with the crime.	81 killed, no survivors
08/16/72	El Al Israel Airlines (Israel)	Over Rome, Italy	Bomb in <i>portable phonograph record player stored in the aft baggage compartment</i> exploded shortly after take-off. Approximately 200 grams of explosive. Crack in rear of door and hole in baggage compartment. Aircraft landed safely at Rome.	None
09/16/72	Air Manila (Philippines)	Near Roxas, Philippines	Explosion occurred at about 11,000 feet. Large hole blown in <i>cargo compartment</i> , and one propeller damaged. Landing made at Roxas City; 38 passengers and 4 crew. No injuries. Explosion due to hand grenade. Two hand grenades found in aircraft.	None
12/08/72	Ethiopian Airlines (Ethiopia)	Near Addis Ababa, Ethiopia	During attempt to hijack aircraft, security guards and the seven hijackers shot at each other. Six hijackers killed; one seriously wounded. One hijacker exploded hand grenade which tore a 12 to 15 inch diameter hole in the <i>floor</i> in first class cabin section. Electrical wires and some control cables damaged. Aircraft landed safely.	6 killed, 11 wounded by small arms fire and grenade explosion.
03/19/73	Air Vietnam (South Vietnam)	Over Ban Me Thuot, South Vietnam	During approach to land, explosion occurred in the <i>cargo area</i> near the main wing span.	59 killed, no survivors
04/24/73	Aeroflot (USSR)	Near Leningrad, USSR	Hijacker standing in area <i>between passenger compartment and cockpit</i> caused a bomb device to explode. Hole blown in right side of fuselage. Aircraft landed safely.	2 killed
07/20/73	Japan Air Lines (Japan)	Over Germany and on ground at Benghazi, Libya	Woman hijacker killed and purser wounded in accidental explosion of explosive carried by the woman. After stops at Dubai, United Arab Emirates, and at Damascus, Syria, aircraft finally landed at Benghazi, Libya, on 07/24/73. All passengers and crew were released. An explosion blew up the cockpit, and subsequent explosions destroyed the entire aircraft.	In flight explosion (one hijacker killed, purser wounded). Explosion on ground (no casualties).
09/21/73	General Aviation (United States)	On ground at Crestwood, IL, U.S.A.	Explosion occurred in the <i>front</i> of a privately owned aircraft. Device was placed in the engine manifold and ignited by an exterior fuse.	Unknown
12/17/73	Pan American World Airways	On ground at Rome, Italy	While the aircraft was loading passengers, a group of Arab males shot at the plane and threw exploding incendiary grenades, probably phosphorous, through the open doors. Explosions and fire occurred in the <i>cabin area</i> causing severe fire damage to forward and aft sections of the fuselage. Following this, the Arabs hijacked a Lufthansa Airlines B-737 standing nearby.	30 killed, many injured

EXPLOSIONS ABOARD AIRCRAFT—1949 THROUGH 1989—Continued

Date	Airline	Aircraft Location when Explosion Occurred	Circumstances	Casualties
02/20/74	Air Vietnam (South Vietnam)	On ground at Hue, South Vietnam	Hijacker ordered the flight to go to Dong Hoi, North Vietnam. Pilot convinced hijacker that fuel was low, engines were malfunctioning, and that landing at Dong Ha (a North Vietnamese controlled area) was necessary. Actually landed at Hue, South Vietnam. Hijacker detonated the explosives he carried in a bag when he realized he had been tricked. A hole about 2 by 3 meters was made in the port side of the fuselage, and three starboard windows were broken. The aircraft was not considered economically repairable. Hijacker and two passengers killed.	3 killed
03/22/74	Air Inter (France)	On ground at Bastia, Corsica	Bomb placed in <i>forward landing gear compartment</i> on movable flap of the wheel housing. Exploded at 0400 hours. Forward landing gear, everything under forward galley floor and flight deck mangled. Parts of fuselage, underflooring and cabin area damaged.	None
08/22/74	Trans World Airlines	On ground at Rome, Italy	After aircraft landed, a fire was discovered in <i>aft baggage compartments</i> . Fire was confined to area near a suitcase which contained an explosive device which malfunctioned, causing the fire.	None
09/08/74	Trans World Airlines	Over Ionian Sea the Coast of Greece	Pilot radioed that he was having trouble with one engine. Aircraft subsequently entered a steep climb and then went into a steep nose down spin and crashed into the sea. National Transportation Safety Board determined that the detonation of a high order explosion took place in the <i>aft cargo compartment</i> .	88 killed
09/15/74	Air Vietnam (South Vietnam)	Over Phan Rang, South Vietnam	Hijacker ordered flight to Hanoi, North Vietnam. The pilot attempted to convince hijacker that landing at Phan Rang was necessary to refuel. While in landing pattern hijacker, who was in <i>cockpit</i> detonated two hand grenades. Aircraft veered off course, blew up and crashed.	70 killed
02/03/75	Pan American World Airways	Approximately 60 miles west of Rangoon, Burma	A passenger poured petrol from a whiskey bottle into a restroom toilet bowl and then broke the filler needle off a butane refill cartridge causing the fumes to spray around the room. He repeated the same procedure in another restroom. He then struck a match and a fire and explosion occurred in the <i>restroom</i> . The fire was quickly extinguished by the crew. The passenger who set the fire received minor burns.	1 injured
06/03/75	Philippines Airlines	200 miles Southwest of Manila, Philippines	A bomb placed in a <i>lavatory</i> in the rear of the plane exploded, badly damaging the tail section of the aircraft. The plane made a safe emergency landing.	1 killed, 45 injured
07/05/75	Pakistan Airlines (Pakistan)	On ground at Rawalpindi, India	A bomb placed under a <i>passenger seat</i> exploded while the plane was on the ground. The explosion ripped a 3- to 4-foot hole in the aircraft fuselage.	None
12/19/75	General Aviation (United States)	On ground near Angels Camp, CA U.S.A.	Blasting caps placed <i>near fuel tank</i> detonated causing \$10,000.00 in damage to the aircraft.	None
01/01/76	Middle East Airlines (Lebanon)	Between Saudi Arabia and Kuwait	The jetliner crashed into the Arabian desert after an explosion aboard the aircraft caused a high order explosion in <i>forward baggage compartment</i> .	82 killed
05/21/76	Philippine Airlines (Philippines)	On ground at Zamboanga, Philippines	Moslem rebels, during course of hijacking, exploded grenades on aircraft.	13 killed, 14 injured
07/02/76	Eastern Airlines	On ground at Boston, MA U.S.A.	Explosive device placed between <i>strut and landing gear</i> detonated, completely destroying the aircraft.	1 injured
09/07/76	Air France (France)	On ground at Ajaccio, Corsica	Masked group of 7 men set dynamite charges aboard aircraft and caused the explosion to occur.	None

EXPLOSIONS ABOARD AIRCRAFT—1949 THROUGH 1989—Continued

Date	Airline	Aircraft Location when Explosion Occurred	Circumstances	Casualties
10/06/76	Cubana (Cuba)	Barbados, West Indies	Internal explosion reported 9 minutes after takeoff. Forced to ditch about 5 miles west of Barbados near Bridgetown, Barbados.	73 killed
05/01/77	General Aviation (United States)	On ground at Salinas, CA, U.S.A.	Explosions occurred on 5 helicopters parked at Salinas Airport. Minor damage was sustained.	None
05/24/78	General Aviation (Kenya)	Over Nairobi, Kenya	Explosion occurred aboard the aircraft shortly before it crashed near Nairobi.	4 killed
08/18/78	Philippine Airlines (Philippines)	In flight over Philippines	Explosion occurred in <i>rear lavatory</i> . Explosion blew a hole in fuselage, killing the bomber and injuring 3 others.	1 killed, 3 injured
09/07/78	Air Ceylon (Sri Lanka)	On ground at Colombo, Sri Lanka	Aircraft destroyed by blast which occurred shortly after all had disembarked at Colombo.	None
04/26/79	Indian Airlines (India)	Airborne over Madras, India	Explosion occurred in the <i>forward restroom</i> . Explosion blew out the walls, severed controls leading from the cockpit and blew a hole in the fuselage.	8 injured
11/15/79	American Airlines	In flight 30 minutes after leaving Chicago IL, U.S.A.	Bomb device in a wooden box in a <i>small bag</i> which was in a metal postal container detonated causing a hole in the side and a fire in the metal container. Pressure fluctuations were noted on instruments and smoke appeared in cabin. Aircraft landed safely at Dulles International Airport, Washington, D.C.	None
09/09/80	United Airlines	At boarding gate, Sacramento, CA, U.S.A.	Explosion occurred in <i>cargo hold</i> while passengers were deplaning and cargo being unloaded. Damage to baggage and aircraft minimal.	2 injured
08/31/81	Middle East Airlines (Lebanon)	On ground at Beirut, Lebanon	Explosion estimated at 5 kilograms of dynamite severely damaged the empty aircraft. Explosion occurred shortly after the aircraft completed a flight from Libya.	None
10/13/81	Air Malta (Malta)	On ground at Cairo, Egypt	As luggage was being off loaded two parcels exploded about 15 minutes apart. The <i>baggage compartment</i> was severely damaged, a third bomb which did not detonate was located later.	2 killed, 8 injured
12/12/81	Aeronica (Nicaragua)	On ground at Mexico City, Mexico	Explosion occurred between the <i>rearmost cabin seat on the left aisle and the cabin wall</i> . The blast tore a hole 3 feet in diameter in the left side of the fuselage and broke windows in the terminal building.	5 injured
07/25/82	CAAC (People's Republic of China)	In flight between Xian and Shanghai, China	Explosive device carried aboard by hijackers was thrown and exploded in or near a <i>restroom between the forward and rear passenger compartments</i> . The explosion blew a hole in the fuselage but did not cause the plane to depressurize. Twelve people were injured as a result of the hijacking; however, no one was injured by the blast. The aircraft landed safely at Shanghai.	None
08/11/82	Pan American World Airways	140 miles from Honolulu, Hawaii	Bomb located <i>under seat cushion in rear cabin seat</i> . Explosion caused damage in area of the seat, the ceiling and overhead racks were torn, a hole was ripped in the floor and rivets were popped causing a break in the fuselage. No decompression. Aircraft landed safely at Honolulu.	1 killed, 15 injured
08/19/83	Syrian Airlines (Syria)	Rome, Italy	Incendiary device located <i>under seat in passenger area</i> . Fire swept through the aircraft a few minutes before departure for Damascus. Aircraft was completely gutted. All passengers evacuated safely.	None
09/23/83	Gulf Air (Bahrain)	30 miles from Abu Dhabi United Arab Emirates	Bomb exploded in the <i>baggage compartment</i> . The aircraft crashed in the desert while preparing to land.	112 killed

EXPLOSIONS ABOARD AIRCRAFT—1949 THROUGH 1989—Continued

Date	Airline	Aircraft Location when Explosion Occurred	Circumstances	Casualties
01/18/84	Air France (France)	70 miles from Karachi, Pakistan	Aircraft departed Karachi for Dharan en route to Paris. 70 miles from Karachi the pilot heard a noise then experienced a loss in pressurization. Aircraft returned to airport and landed safely. Inspection revealed a 2 by 2 meter hole external to right rear cargo hole #4.	None
03/10/84	Union Des Transport (France)	On ground at N'djamena, Chad	During a stopover at N'djamena Airport in Chad, bomb exploded in central baggage compartment 20 minutes after landing, injuring 4 passengers. The aircraft was completely destroyed.	24 injured
07/31/84	Air France (France)	On ground at Tehran, Iran	The aircraft was hijacked by 3 men. The hijackers took the passengers and crew off the aircraft while in Tehran and destroyed the cockpit by explosion.	None
01/23/85	Lloyd Aereo Boliviano (Bolivia)	In flight between La Paz and Santa Cruz, Bolivia	A passenger went into a forward lavatory reportedly carrying dynamite in a briefcase. The dynamite exploded killing the passenger and caused some damage to the aircraft. Although the cockpit filled with smoke, the pilot was able to land normally.	1 killed
03/03/85	General Aviation (United States)	On ground at Bieber, CA, U.S.A.	The twin engine aircraft was blown up while parked at the airport. Reportedly the bomb was a high velocity explosive.	None
03/09/85	Royal Jordanian Airlines (Jordan)	On ground at Dubai, United Arab Emirates	A bomb in a suitcase exploded in a baggage compartment. The aircraft was not damaged. Reportedly the bomb had unsuccessfully been timed to explode after the aircraft was in the air.	None
06/11/85	Royal Jordanian Airlines (Jordan)	On ground at Beirut, Lebanon	The aircraft was hijacked by 5 men after flying to Cyprus, Sicily and then back to Beirut, Lebanon. The passengers and crew were released. The hijackers using explosives then blew up the cockpit.	None
06/23/85	Air India (India)	About 90 miles off the coast of Ireland	As the aircraft neared Ireland, it disappeared from the radar screen and crashed in the ocean. After examining the wreckage, scientists reported a powerful explosion occurred in the front cargo hold.	329 killed
10/30/85	American Airlines	On ground at Dallas/Ft. Worth, TX, U.S.A.	Explosion occurred in a forward baggage compartment shortly after the aircraft landed while the baggage was being unloaded. The device was located in a tote bag in a cargo unit load container. The only damage to the aircraft was scorched panels in the cargo bay.	None
11/23/85	Egyptair (Egypt)	On ground at Valletta, Malta	The aircraft was hijacked and flown to Valletta where after several hours of negotiations, Egyptian troops broke into the aircraft. During the ensuing battle in the passenger cabin, the hijackers threw hand grenades. The explosion and resulting fire caused severe damage to the aircraft.	60 killed, 35 injured
04/02/86	TWA	Near Athens	Located in cabin area. Landed safely.	4 killed, 9 injured
05/03/86	Air Lanka	On ground at Colombo, Sri Lanka	Located in cargo hold.	16 killed, 41 injured
10/26/86	Thai Airways	Near Japan	Located in rear lavatory. Landed at Osaka.	62 injured
11/29/87	Korean Air	Destroyed in flight	Located in cabin area.	115 killed
03/01/88	BOP Air (Republic of South Africa)	Destroyed in flight	Located in cabin area.	17 killed
12/21/88	Pan Am	Lockerbie, Scotland	Located in baggage compartment.	259 killed on aircraft, 11 killed on ground
09/19/89	UTA	Over Sahara, Niger	Mid-air explosion.	171 killed
11/27/89	Avianca	Soacha, near Bogota, Colombia	Bomb located under seat.	107 killed

Sources: Collected from various public source documents including: *Explosions Aboard Aircraft*. Updated: January 1, 1986, Department of Transportation, Federal Aviation Administration—Office of Civil Aviation Security. *Criminal Acts Against Civil Aviation: 1988*, Appendix C. Department of Transportation, Federal Aviation Administration—Office of Civil Aviation Security.

Other Sabotage Attempts

The following are selected items involving sabotage attempts which did not lead to the destruction of an aircraft. It should be noted that this is not an exhaustive listing of the sabotage acts against civil aviation. The source of this listing is testimony given by Billie H. Vincent before this Commission on November 17, 1989, and his follow-up letter of April 19, 1990. This compilation is presented to demonstrate the extent of the terrorist bombing threat against civil aviation.

August 25, 1982

An unexploded, improvised explosive device was discovered on a Pan Am B-747 at the Rio de Janeiro Airport. The FAA and FBI were given custody of the bomb and returned it to the U.S. for examination and testing. The bomb's triggering mechanism contained an electronic timer, a barometric sensor, and two AAA batteries. The explosive was a 4 by 10-inch sheet of 1/8 inch thick plastic explosive [approximately 300 grams (2/3 lb)].

December 1983/January 1984

A British national unknowingly carried a bomb concealed in the lining of her suitcase from Athens, Greece to Tel Aviv, Israel, to London, England, and back to Athens. The suitcase bomb failed to detonate as designed and was recovered by the Greek Police. The bomb's triggering mechanism contained an electronic timer and a barometric sensor. The suitcase had 1/8 inch sheets of plastic explosive concealed inside the lining of the suitcase.

December 29, 1983

A terrorist attempted to check a piece of luggage on an Alitalia flight from Istanbul, Turkey to Rome, Italy and then to New York on a Pan Am B-747 flight as interline luggage. The Turkish Police removed the bag and discovered a bomb after the passenger failed to board the Alitalia flight to Rome.

May 18, 1984

Two men were arrested at the Leonardo Da Vinci International Airport after explosives, without detonators, were discovered beneath false bottoms in their suitcases. Additional searches of their carry-on luggage revealed detonators and false Iraqi passports. The two arrived in Rome via Syrian Arab Airlines from Damascus, Syria. They were making a connection with an Iberian Airline flight to Madrid, Spain.

June 25, 1984

Police in West Berlin, acting on a tip that Palestinian terrorists might attempt to transport suitcases filled with explosives into the city, searched an apartment in the U.S. sector and found two suitcases. Each suitcase contained approximately two pounds of explosives concealed in sheet form inside the lining of the suitcases. The bombs had electric blasting caps for initiators, although no power sources were found. It is believed that the two suitcases were being transported for use at another location, possibly for an aviation target.

August 2, 1984

As many as 40 people were killed and 19 injured when a suitcase bomb exploded in the International Arrival Hall at Madras International Airport, Madras, India. The powerful explosion ripped apart the airport terminal and caved in the ceiling of the arrival lounge. The bomb was inside a suitcase of an individual who purchased a ticket to Sri Lanka, checked two bags, obtained a boarding pass, but never boarded the flight. A passenger/bag match isolated the two bags, which were taken to the customs area for disposition.

November 7, 1984

Security forces at the Frankfurt International Airport arrested a Palestinian with a forged Tunisian passport attempting to board a Lufthansa flight to Athens, Greece. Physical examination of his suitcases revealed a false bottom containing approximately three pounds of plastic explosives. There were no detonators found.

December 29, 1984

A Lebanese woman was arrested at Beirut International Airport after a security official discovered explosives in her luggage. The suitcase contained one kilo of explosives and two detached detonators. The woman, who was scheduled to travel to Athens, Greece, on Middle East Airlines, claimed that she had bought the suitcase enroute to the airport and that she had no idea that the suitcase contained explosives. Reportedly, the woman was also carrying a false passport.

February 19, 1985

Authorities at Frankfurt International Airport discovered a suitcase and carton containing bomb components and apprehended a passenger who was transporting these items from Damascus, Syria to Barcelona, Spain. The 10 1/2 kilos of explosives were concealed in the suitcase and detected by a security dog searching for drugs in the baggage area. The passenger had in his possession two passports, which appeared to have been falsified.

June 23, 1985

Within one hour of the loss of an Air India B-747 in the Atlantic Ocean southwest of Cork, Ireland, a bomb aboard another Air India B-747 detonated in the baggage handling area of the Narita Airport, Tokyo, Japan, killing two baggage handlers and injuring several others. A bag, which contained the bomb, was being transferred from a Canadian Pacific flight to an Air India B-747. The explosive device was concealed in a radio. The amount of explosives is thought to have been around one pound.

July 1, 1985

Fifteen baggage handlers were injured when a bomb, apparently contained in a suitcase, exploded at Leonardo Da Vinci Airport. The explosion occurred in an open-air luggage bay under the main airport building, shattering glass and causing minor structural damage. The bomb scattered dozens of suitcases over the tarmac. Since the baggage had not been sorted at the time of the explosion, authorities were unable to determine where the suitcase came from or its destination.

October 15, 1985

Two individuals arriving from Baghdad, Iraq aboard an Iraqi Airlines aircraft were arrested in Rome, Italy. One of the two, arrested at the Rome Airport with a 20 pound bomb concealed in the false bottom of his suitcase, was quoted as saying that he intended to use the device against Israelis and Americans but not Italians. The second man was arrested as he got off an airport bus at the central train station where a similar bomb was found in his suitcase.

February 1986

A sophisticated suitcase bomb was discovered by the Israeli authorities at one of their security screening points. This bomb had plastic explosives molded into the sides, corners, bottom, and top of the suitcase concealed beneath the lining. The bomb had a barometric sensor, a timer,

and an electric blasting cap either entirely or partially embedded in the plastic explosives. A connector was provided to attach the batteries for the power source. An arming switch permitted the suitcase bomb to be safely transported.

April 17, 1986

An Irish national attempted to board an El Al flight at the Heathrow Airport in London, England on April 17, 1986. She was discovered to be unwittingly carrying a functioning bomb in a handbag. The bomb detonating mechanism, including the initiator (electric blasting cap), a small amount of plastic explosive, and timer, was contained in a fully functioning calculator. The calculator was lying on the bottom of the bag. Concealed inside the false bottom were approximately 3 pounds of plastic explosives.

May 1, 1986

A Japanese national who resided in Athens, Greece, was arrested by Dutch authorities after components of an explosive device were discovered in his luggage at Schiphol Airport, Amsterdam. Concealed in the suitcase in separate containers was approximately one kilogram of explosives (possibly TNT). Reportedly, the individual arrived in Amsterdam from Belgrade, Yugoslavia, via Yugoslavia's national carrier JAT. The sus-

pect indicated his objective was to attack Americans or Israelis in the Netherlands.

June 26, 1986

A suitcase bomb exploded at the El Al Airlines check-in counter at Barajas International Airport, Madrid, Spain. The bomb began to smoke while the suitcase was open and was being inspected by a member of the El Al security team. The individual transporting the suitcase was arrested, and a Palestinian associated with the Abu Musa group was later apprehended. The Spaniard carrying the suitcase was reportedly duped into thinking that he was transporting illegal drugs. If the bomb had escaped detection and if the timing device had functioned properly, it would have exploded two hours after takeoff.

January 13, 1987

West German authorities arrested Mohammed Ali Hamadei at the Frankfurt International Airport when he was found to be carrying a powerful liquid explosive concealed in liquor bottles. Hamadei had flown to Frankfurt from Beirut, Lebanon on a Middle East Airlines flight and was carrying a false passport when arrested. The intended destination of the explosive is not known. Hamadei has since been convicted of the 1985 hijacking of TWA Flight 847 from Athens, Greece to Beirut, Lebanon.

International Civil Aviation Organization

ICAO CONVENTIONS, PROTOCOL AND ANNEX 17

The Chicago Convention on International Civil Aviation established ICAO in 1944. There are three additional Conventions and one Protocol which govern aviation security. Annex 17 to the Chicago Convention establishes international aviation security standards and recommended practices.

The Tokyo Convention of 1963, Convention on Offenses and Certain Other Acts Committed on Board Aircraft. Parties: There are 138 parties to the Convention including the United States.

Provisions:

- ensure that there will always be a jurisdiction in which a person who has committed a crime on board an aircraft can be tried;
- provide the pilot with law enforcement authority aboard an aircraft; and
- provide for Contracting States to take measures to restore control of the aircraft to the pilot before and during cases of interference.

The Hague Convention of 1970, Convention for the Suppression of the Unlawful Seizure of Aircraft. Parties: There are 142 parties to the Convention including the United States.

Provisions:

- define unlawful seizure, hijacking;

- provide for universal jurisdiction, arrest and custody over the suspected offender; and
- provide that prosecution or extradition of the suspected offender take place without restrictions.

The Montreal Convention of 1971, Convention for the Suppression of Unlawful Acts Against the Safety of Civil Aviation. Parties: There are 143 parties to the Convention including the United States.

Provisions:

- consider sabotage, and other violent acts against a person on board an aircraft; and
- provide for universal jurisdiction over the offender and, in general, contains provisions on custody, extradition, and prosecution similar to those in the Hague Convention.

The Montreal Protocol of 1988, Protocol for the Suppression of Unlawful Acts of Violence at Airports Serving International Civil Aviation, Supplementary to the Montreal Convention. Parties: There are 17 parties to the Protocol. The United States has signed the Protocol but it is not yet in effect.

Provisions:

- provide for acts of violence against civil aviation which occur at airports and ticket offices which were overlooked in the Montreal Convention. The Protocol is a response to the Rome and Vienna airport massacres which took place in the airports, not on board a plane.

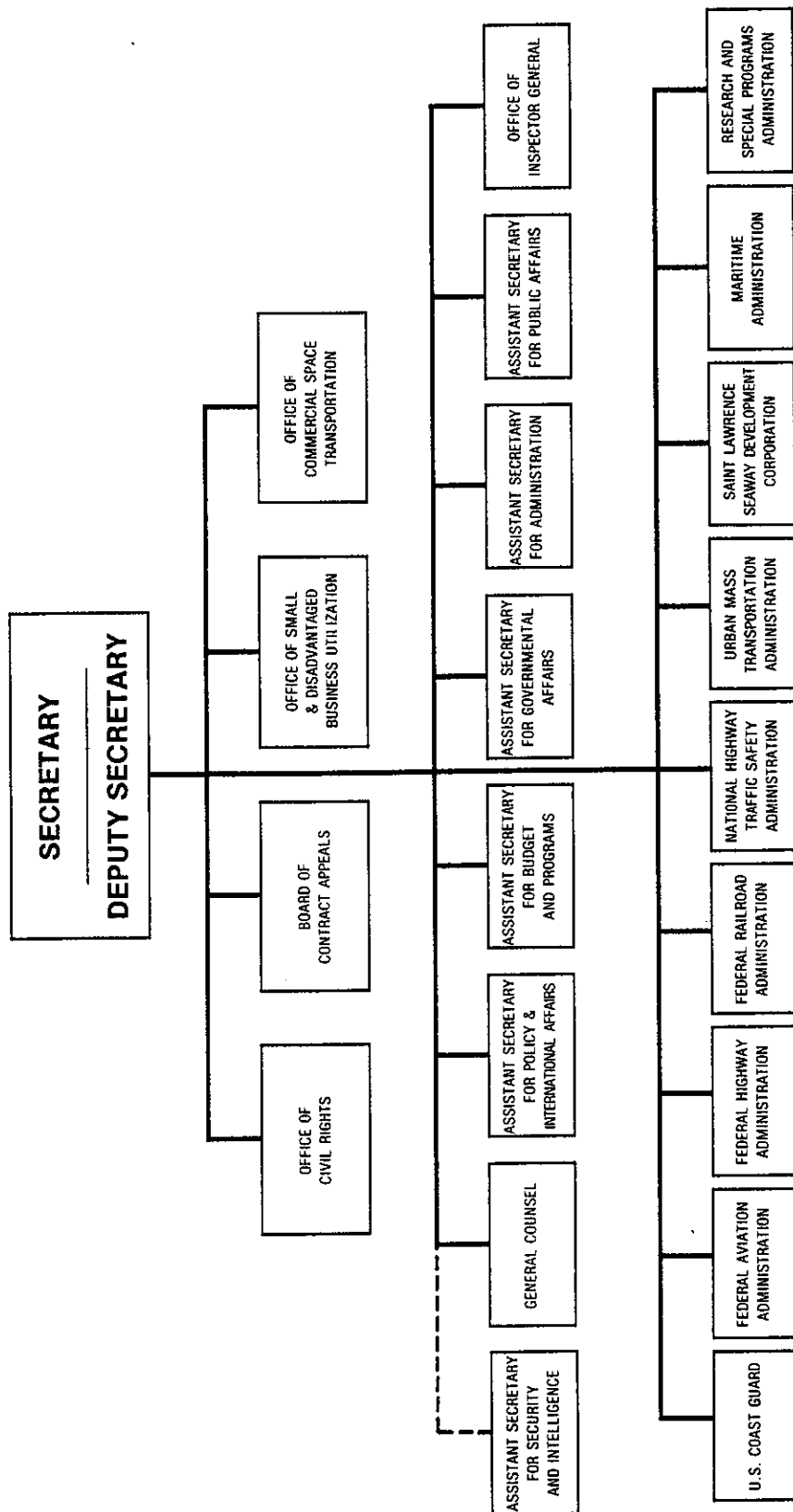
Annex 17, International Standards and Recommended Practices, Security, Safeguarding International Civil Aviation Against Acts of Unlawful Interference, fourth edition—October 1989. Parties: There are 162 Contracting States including the United States.

Provisions:

- establish 40 standards and 17 recommended practices to be applied by Contracting States;
- require each State to create a national civil aviation program which includes measures to prevent weapons and explosives on board planes;
- arrange for surveys and inspections of security measures;
- ensure 100 percent baggage passenger reconciliation;
- control transfer and transit passengers and their cabin baggage to prevent unauthorized items from being brought aboard an aircraft;
- protect against the tampering of cargo, baggage and mail;
- prevent unauthorized access to aircraft and to secure parts of the airport;
- recommend the inclusion of aviation security clauses in bilateral agreements; and
- recommend pre-flight checks of aircraft to discover weapons and bombs.

Organizational Charts

U.S. DEPARTMENT OF TRANSPORTATION



----- Proposed New Assistant Secretary

OFFICE OF CIVIL AVIATION SECURITY

OFFICE OF THE DIRECTOR
ACS-1

- 54-6
- Advice and assistance to the Administrator on civil aviation and internal security programs
- Accountability for agency investigations and security programs
- Represents FAA in meetings with other agencies on security matters
- Direction of the office and field

CIVIL AVIATION SECURITY DIVISION
ACS-100

- 54-10
- Aviation incident management
- Domestic and foreign air carrier, corporate and general aviation and airport security policies, standards, systems, procedures, and program plans
- Prevention of crimes against domestic and international aviation
- Coordination of international aviation security matters
- Assessment of the threat of criminal actions against aviation from domestic and international sources
- International airport assessment program
- Safe air transportation of hazardous materials

SPECIAL PROGRAMS DIVISION
ACS-200

- 54-11
- Federal Air Marshal Program
- Prevention of crimes against domestic international aviation
- Liaison with domestic inter-agency, intergovernmental, and foreign aviation security committees and law enforcement agencies
- Aviation explosives security and K-9 programs
- Atmospheric/radiological contamination incidents program
- Research and development
- Technical assistance
- Support of the Department of State Anti-Terrorism Assistance Program

INVESTIGATIONS AND SECURITY DIVISION
ACS-300

- 54-12
- Investigation in support of FAA mission
- Physical security policies and standards
- Identification media programs
- Personnel and industrial security programs
- Technical and communication security programs
- Automatic information security
- Information security program
- Support to law enforcement agencies
- FAA drug interdiction program
- Liaison with interagency and intergovernmental law enforcement agencies on personal crime matters

INTELLIGENCE DIVISION
ACS-400

- 54-13
- Intelligence activities with other Government agencies
- Assessment of the threat of criminal actions against domestic and international aviation and FAA facilities
- International interagency and intergovernmental aviation security committees and working groups on Intelligence matters
- Semiannual Report to Congress Section 315(a) of the FAA Act
- Liaison with other Government agencies having special security interests
- FAA support of El Paso Intelligence Center

Selected Aviation Security Initiatives by the Department of Transportation

DEPARTMENT OF TRANSPORTATION

SELECTED AVIATION SECURITY INITIATIVES

- EMERGENCY SECURITY RULE. On December 29, 1988, the FAA issued an emergency rule setting forth "extraordinary" security measures for U.S. airlines in Western Europe and the Mideast, including requirements to x-ray or physically search all checked baggage, conduct additional random checks of passengers' baggage and achieve a positive match of passengers and luggage to keep unaccompanied bags off airplanes.

- AIRPORT ACCESS TO SECURED AREAS.

On January 8, 1989, the FAA published a final rule requiring domestic airports to install computer controlled access systems, or similar systems, to limit unauthorized entry into secure areas. Since that time, the FAA has worked closely with airports to develop guidance material related to implementation of the rule. On May 3, 1989, an Advisory Circular was issued which explained how the requirement was interpreted.

The FAA has agreed to conduct a test program at Baltimore-Washington International Airport to examine and evaluate an integrated systems approach to airport and air carrier security. The results of the test program, which will be completed by the end of the year, will assist all airports and air carriers, as well as the FAA, by providing viable concepts for enhancing security.

- ICAO. On February 2, 1989, Secretary Skinner led a U.S. delegation to a special session International Civil Aviation Organization (ICAO) session in Montreal on aviation security to discuss more stringent international security standards. ICAO already has in place a set of minimum security standards and recommended practices, incorporated into Annex 17 of the Chicago Convention, which created ICAO. Over 160 countries have acceded to that convention. Although the measures described in Annex 17 and ICAO's security manual are fundamentally sound, they are being continually reviewed and updated with the U.S. delegation. Nine other ministers responsible for civil aviation attended the February meeting, as well as representatives from 23 other Member States.

As a result of that meeting, the 33-member ICAO Council unanimously adopted a resolution describing a high priority plan of action to review and improve all existing international standards applicable to all operations. ICAO also agreed to

consider developing a set of extraordinary measures for use when increased threat levels exist. DOT has since been working multilaterally with the Department of State to accelerate efforts to develop uniform approaches and broaden international security standards.

ICAO has also encouraged States to expedite research and development on the detection of explosives and is actively working on establishing an international regime for the marking or "tagging" of explosives to facilitate detection. On January 11, 1990, the FAA participated in the work of a special subcommittee of the ICAO Legal Committee which completed work on a draft treaty to require the addition of taggants to explosives manufactured by Contracting States. The taggants would render explosives detectable by gas analysis methods which are currently available. On April 12, 1990, the United States participated as one of 68 countries represented on the full ICAO Legal Committee in the preparation of a new international convention on taggants. The Legal Committee will present the draft convention to a Diplomatic Conference for consideration in early 1991.

The Triennial Session of the ICAO Assembly, to which the Council reports, was held from September 19 through October 6, 1989. The Assembly discussed the implementation of the current Assembly resolution on aviation security, drafted a new resolution and developed a statement of "continuing ICAO policies related to the safeguarding of international civil aviation against acts of unlawful interference". Generally, we are quite pleased with the results of the Assembly and very pleased with its new resolution on aviation security. The scheduled May session of the Aviation Security Panel has been moved up to April 17-28, 1990 so that the Panel can immediately begin to implement the new aviation security resolution and draft Amendment 8 to ICAO Annex 17 on Security.

The FAA has arranged to have two FAA security experts detailed to ICAO. The first expert is on site and will serve as Chief of the Security Implementation and Assistance Section in the new Aviation Security Branch. The other expert has been selected and is awaiting only formal confirmation by ICAO.

ICAO now has the capability to conduct more security surveys and airport security assessments, and provide more training. The U.S. has been paired by ICAO with seven countries in need of special assistance and the FAA in partnership with the State Department has been providing it. In addition, the U.S. has pledged \$100,000 to ICAO expressly to support international aviation security enhancement. Contributions have also been pledged by Finland, France, Greece, India, Saudi Arabia and Switzerland.

- SECRETARIAL INITIATIVES.

On April 3, 1989, Secretary of Transportation Skinner announced several new aviation security initiatives after an intensive internal review of the U.S. aviation security system and after meeting with the families of the Pan Am 103 victims, Members of

Congress and the President. A status report on each of those initiatives is given below.

o Deployment of explosives detection systems (EDS). The rule enabling the FAA to require U.S. air carriers to deploy explosives detection systems (EDS) over the next few years to screen checked baggage for international flights is in effect. Thus far, only two of six FAA owned units have been installed, as TNA deployment has encountered a number of legal and insurance problems in both the United States and abroad. The status of the six FAA-owned TNA deployments follows:

-- JFK International. The first operational unit is in place at TWA's terminal at JFK and has been actually screening baggage since September 18, 1989. The unit is only being used a few hours a day, but the results have been encouraging. Through April 1, over 58,000 bags were run through the system.

-- Miami International. The second unit is installed at Miami for use by Pan American. A press conference announcing the installation was held in Miami on February 9. Delays resulted from protracted negotiations on insurance liability related to the use of radioactive materials. The unit became operational in March and after calibration, will start screening bags in April.

-- Dulles International. Negotiations for the installation of the third unit for United Airlines next to their check-in counter are in their final stages. The Nuclear Regulatory Commission has granted permission for a public area license, which is necessary for the TNA to be placed near the ticket counter. The unit can now be installed after site preparation and machine modifications have been made. Our present schedule calls for installation in May 1990.

-- London Gatwick. Consultations with the U.K. authorities have concluded, and the unit is scheduled to be shipped to London in May.

-- Frankfurt. Discussions with the German authorities regarding testing of a TNA system are continuing. The tests to be conducted with live explosives at SAIC's labs are tentatively scheduled for May 1990.

-- The Sixth TNA. A number of locations here and abroad are being considered. No final decision has been made on the location for the last FAA-TNA.

SAIC is already working on a next-generation device which is a smaller version, possibly available in 1991. Gamma Metrics, in a joint venture with the French, will have a TNA machine for the FAA to test in June. This machine will use an electronic neutron source, rather than a radioactive isotope. To ensure that the FAA is prepared to evaluate these and other explosive detection systems, the FAA has contracted with Sandia, an independent testing laboratory, to develop test protocols.

These protocols will allow the FAA to evaluate and certify systems that meet the regulatory requirements for explosive detection systems.

o Deployment of additional FAA security specialists overseas. An additional 120 security positions were requested and approved in the FY 1990 budget, including a net increase of 27 overseas for a total of 41 positions to cover Europe, the Middle East and Africa. The total FAA security force will now be almost 700. The FAA is also requesting 164 additional positions for FY 1991, including additional overseas positions subject to approval by the Department of State. The latter request is currently being discussed within the Department.

The Ambassador in Brussels has agreed to the establishment of a Civil Aviation Security International Field Office (CASIFO) and an augmented headquarters staff with regional responsibilities. In fact, a Brussels based Civil Aviation Security Liaison Officer (CASLO) has been selected and is in place. The location of the Middle East regional CASIFO has been agreed upon and will be announced shortly.

The Ambassador to the United Kingdom has agreed to station a CASLO at his post, and on March 3, 1990, the Security Liaison Officer arrived in London. This security specialist has over 10 years experience with the Minneapolis/St. Paul airport police department and has served for the last three years as an FAA security specialist in Brussels, Belgium. Security liaison officers have been approved for assignment in Copenhagen, Madrid and Paris. In addition, personnel assignments are planned for two other locations in Europe. The most important element of the deployment is that we will have 10 liaison officers overseas who will be able to provide on-site technical expertise and the full range of liaison and coordination functions to U.S. and foreign air carriers as well as the host governments to promote and enhance cooperation at the operational level.

o The FAA security bulletin process. Information Circulars are now used to notify U.S. airlines of general situations and security information for which the FAA will not require mandatory countermeasures. Security Directives are used to pass on specific, credible threats and mandatory countermeasures, requiring acknowledgment of receipt and a report of implementation. It is a regulatory violation, subject to a civil penalty to fail to comply with a security directive or to release information from security directives without authorization.

The process does not provide for public notification of threats. We firmly believe that threats against aviation are best handled by security professionals who are in a position to implement countermeasures. If a specific, credible threat cannot be countered, the flight should be cancelled. The FAA

will recommend that airlines cancel the threatened services. If they choose not to do so, the FAA will order the airlines to cancel the threatened flights. In addition, the Department of State may issue a public travel advisory to alert air travelers in a timely manner.

In an effort to consider fully the issue of public notification of threats, the FAA Administrator conducted a series of informal meetings with air carrier, airport, passenger interest group and employee union organization representatives. These discussions focused on actions taken by airlines to counter credible threat information, including the cancellation of flights and the notification of passengers prior to boarding flights against which threats are received.

o Elevating standards for x-ray and metal detection equipment. Revision of these standards continues. An NPRM to phase out old x-ray equipment that does not meet new, higher performance standards is being developed. Work on metal detector standards is also underway. Proposed Standard Security Program (SSP) changes are to be completed and published later this year for both metal detector and x-ray standards.

o The Aviation Security Advisory Committee. The first meeting of the Aviation Security Advisory Committee (ASAC) was held on October 20 and the second was held on December 15, 1989. The Committee at its second session decided upon the creation of four subcommittees: Threat Analysis and Communications; Security Operations; Equipment and Technology; and Policy, Procedures and Public Awareness. This last subcommittee was the first to hold a formal session on February 14. The Committee will have substantive input into FAA decisions.

o Review of U.S. carriers compliance with security requirements. A comprehensive review of carrier compliance with the extraordinary security measures required on December 29, 1988 was completed last year. All carriers are now in compliance with the requirement for screening checked baggage in extraordinary security countries.

Carriers are having some difficulty complying with other parts of their approved security programs because of conflicts with host country laws, regulations and traditional practices. For example, U.S. carriers lose direct supervision over screening when they are required to hire locally approved security contractors which cannot be tested by the FAA. When discrepancies cannot be solved on site by the carriers, government to government negotiations are necessary. Again, the placement of civil aviation security liaison officers overseas is designed to alleviate many of these problems.

In June, 1990, the FAA will issue changes to the Standard Security Program to strengthen passenger bag match procedures

in accordance with new ICAO standards, and to institute new procedures for reporting threat information to the FAA.

o Discussions with foreign governments. Secretarial trips to selected European capitals last April and the recent trip this March included productive discussions with high level officials about the deployment of both personnel and equipment, and arrangements for the exchange of information on threats and security in general. The Secretary and the Administrator of the FAA met with the Secretary of State for Transportation from the United Kingdom to discuss the status of the investigation of the Pan Am 103 bombing and other security matters of interest. In addition, the FAA has negotiated directly with foreign civil aviation and airport authorities on many occasions at high levels to solve specific security problems. The deployment of additional security specialists abroad charged with the task of improving coordination with foreign governments will greatly assist these efforts. This is an on-going process involving many elements of both the Department of Transportation and the Department of State, as well as other agencies.

- FOREIGN AIRPORT SECURITY ASSESSMENTS.

The International Security and Development Cooperation Act of 1985 requires an assessment at intervals determined by the Secretary of Transportation of the effectiveness of security measures at those foreign airports served by U.S. air carriers and those foreign airports from which foreign air carriers serve the U.S. Since the inception of this program in 1986, the FAA has conducted more than 900 visits to over 200 foreign airports in more than 100 countries. These assessments are conducted in a manner which emphasizes the need for cooperation rather than a unilateral approach to solving security problems. The procedures for public notification of uncorrected problems at foreign airports as prescribed by the Act are both workable and appropriate. Generally speaking, the Department has been pleased by the cooperation shown by host governments and the overall success of the program in encouraging additional security improvements at many foreign airports.

By the end of 1991, the FAA will develop a comprehensive system to use information from the Foreign Airport Assessment Program to prioritize security technical assistance needs. This information will be coordinated with the Department of State and the ICAO security assistance matching program to ensure that FAA resources are directed to the highest priority needs.

- FOREIGN AIRLINE SECURITY PROGRAMS.

In March of last year, Federal Aviation Regulation Part 129.25 was amended to require foreign airlines flying to the U.S. to submit their security programs in writing and in English to the

FAA for acceptance. The standards and recommended practices contained in ICAO Annex 17 are used as the yardstick against which security programs are measured. A total of 136 foreign air carriers are required to submit security programs or acceptable interim responses. All except two new carriers have done so and 65 have been reviewed and "accepted". However, 41 carriers from 21 countries have referred the FAA to their governments for last point of departure information as an interim response.

In cases when the carrier refers the FAA to its government, the carrier is nevertheless required to provide the FAA with last point of departure information, the name of the pertinent government agency, the responsible official therein and a list of the specific security services provided by the government. The FAA is contacting the governments involved through the State Department. Cooperation has been good, considering the sensitivities involved with issues of extraterritorial application of U.S. laws. In taking these actions, the FAA is better able to ensure that the security precautions followed by foreign airlines serving the United States are adequate to meet the level of threat ascribed to those operations.

Through these security programs, the FAA will be able to require foreign air carriers to implement procedures to test the effectiveness of their security systems through the use of test objects, to incorporate ICAO standards for passenger bag match, to prohibit off-airport baggage acceptance in the United States, and to prohibit passengers and others from bypassing security screening in the United States.

- SCREENING OF ELECTRONIC DEVICES.

In June of 1989, in an action related to the bombing of Pan Am 103, the FAA established new screening procedures for portable electronic equipment before it can be checked or carried aboard an aircraft operated by U.S. air carriers departing from cities in Europe and the Middle East. The new security requirement for pre-flight screening includes radios, cassette players, laptop computers and other electronic devices to ensure they are not being used to hide an explosive device. A careful screening process is conducted using criteria designed to identify suspicious articles. These items are then subjected to close examination by security personnel using a system of progressively greater scrutiny until the item can be cleared. Any item that can not be cleared will be kept off the aircraft.

- INTELLIGENCE LIAISON.

The FAA has negotiated the placement of intelligence liaison officers at the Central Intelligence Agency and the State Department. A liaison officer reported to the CIA on April 2, 1990; the second officer is expected to report to the State Department on April 25, 1990. These experts will enhance the

flow of information relating to civil aviation from the intelligence community, through the FAA, to the security specialists placed overseas and the airlines. In addition to filling these new liaison positions, the FAA hired 7 additional personnel in its Intelligence Division, to increase its effectiveness, and to improve the quality of its intelligence analysis and threat assessments.

- PASSENGER SCREENING.

The FAA plans to require U.S. carriers, by the end of 1990, to adopt and use a Comprehensive Passenger Screening Profile at designated foreign airports. This new system will identify passengers and baggage which should undergo additional scrutiny and screening. It has been tested by the FAA in cooperation with one of the major air carriers.

For over a year, the FAA has been working with the Air Transport Association to improve selection and training standards for security screeners at U.S. airports. On March 6, 1990, ATA presented the FAA with a proposed program that will require improved testing, training and evaluation of screeners, as well as enhanced employment benefits and compensation. The FAA accepted the proposed program and is developing a revision to the Standard Security Program to incorporate these standards into each air carrier's program.

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