Final Report of the Gore Commission on Aviation Safety and Security

White House Commission on Aviation Safety and Security, Final Report to President Clinton by Vice President Al Gore, Chairman | February 12, 1997

Introduction

Change.

That one word sums up both the challenges in aviation safety and security, and the means by which government and industry must respond. Change is nothing new in this field. The first powered flight, covering 120 feet in twelve seconds, took place just over ninety years ago. Today, planes cross the Atlantic Ocean in a matter of hours, as hundreds of passengers watch movies and dine. An industry that essentially did not even exist before World War I now occupies a central position in our economy. Today, commercial aviation generates over $300 billion annually, and accounts for close to one million American jobs.

The changes taking place in aviation today are as profound as any this industry has seen before. Since 1992, sixty new airlines have started service, opening up new markets, attracting new passengers, and impacting the economics of the industry significantly. The number of passengers flying in the United States over the last decade has grown to more than half a billion. The FAA has certified twenty new aircraft models in the last ten years, and plans are under consideration for a new High-Speed Civil Transport.

As dramatic as these changes have been, even more significant change looms on the horizon. Information technology presents opportunities that will again revolutionize the industry, in ways as significant as the introduction of the jet engine forty years ago. Air traffic today is still controlled through ground-based radar, and on a point-to-point basis. Satellite-based navigation will bring a fundamental change in the way that air traffic is directed, and may make the notion of "highway lanes in the sky" as obsolete as the bonfires that used to guide early fliers. Digital technology will replace analog systems, making communications with and among aircraft dramatically faster, more efficient, and effective. These and other new technologies offer tremendous opportunities for improved safety, security and efficiency, and will transform aviation in the same way that the Internet and World Wide Web are transforming the way the world does business.

Other changes are even more imminent. By the end of the century, the commercial fleet serving the United States will have been completely overhauled, with aircraft that make a fraction of the old noise and emit far less pollution. Continuing success in the United States' efforts to open up foreign markets to competition by our airlines likely will mean more airlines, serving more markets, carrying more people. A continuation of the trend toward greater competition and lower fares will make flying even more available to average Americans than it is today. In fact, the FAA projects that, in 2007, more than 800 million passengers will fly in the United States —- three times the number who flew in 1980.

This is a time of change for government, as well. President Clinton's declaration that "the era of big government is over," coalesced a bipartisan drive to make government work better and cost less. The Administration's commitment to government reform resulted not just from a desire to bring down government spending, but from a recognition that the same types of changes facing industries such as aviation face government, as well. Like the private sector, government must change with the times. The question is, how?

Establishment of the Commission on Aviation Safety and Security

President Clinton created the White House Commission on Aviation Safety and Security to address that question, and assigned it three specific mandates:

1. to look at the changing security threat, and how we can address it;
2. to examine changes in the aviation industry, and how government should adapt its regulation of it;
3. to look at the technological changes coming to air traffic control, and what should be done to take best advantage of them.

In the wake of concerns over the crash of Trans World Airlines Flight 800, President Clinton asked the Commission to focus its attention first on the issue of security. He asked for an initial report on aviation security in 45 days, including an action plan to deploy new high technology machines to detect the most sophisticated explosives.

On September 9, 1996, the Commission presented that initial report to the President. It contained twenty recommendations for enhancing aviation security which are presented again in Chapter 3 of this report. The response to the initial report was unprecedented. In October 1996, at the request of President Clinton, the Congress appropriated over $400 million, in direct accord with the Commission's recommendations, for the acquisition of new explosives detection technology and other security enhancements. In the five months since they were presented, implementation has begun on virtually all of the initial recommendations.

From its inception, the Commission took a hands-on approach to its work. President Clinton announced the formation of the Commission on July 25, 1996. A few days later, Vice President Gore led a site visit to Dulles International Airport, where he and other Commissioners saw airport and airline operations first-hand, and discussed issues with front line workers. This was the first of dozens of such visits. Over the next six months, the Commission visited facilities throughout the United States and in various locations abroad. Seeking to reach the broadest possible audience, the Commission established a homepage on the Internet (http://www.aviationcommission.dot.gov), both to make the Commission's work available and to receive input. The web site has had almost 7,000 contacts, many providing valuable insights. The Commission held six public meetings, hearing from over fifty witnesses representing a cross section of the aviation industry and the public, including families of victims of air disasters. Recognizing the increasingly global nature of aviation, the Commission co-sponsored an International Conference on Aviation Safety and Security with the George Washington University, attended by over 700 representatives from sixty-one countries.

Out of this extensive process, the Commission compiled the recommendations presented in this final report.

A Vision for the Future

To compete in the global economy of the 21st Century, America needs a healthy, vibrant aviation industry. In turn, the health and vibrancy of aviation depend on improved levels of safety, security and modernization. For the last fifty years, the United States has led the field of aviation. But, that position is being challenged, both by competition from abroad and by weaknesses in our own systems.

These weaknesses can be overcome. The Commission believes that it should be a national priority to do so. This report outlines steps that can set government and industry on a course to achieve that goal together. Heading into the next century, our activities, programs, and results should define aviation safety and security for the rest of the world.

Leadership in aviation goes far beyond having strong, competitive airlines. It means assuring leadership in communications, satellite, aerospace, and other technologies that increasingly are defining the global economy. It means more than the highest possible levels of safety and security for travelers.

The Commission's report reflects a focus on this vision: to ensure greater safety and security for passengers; to restructure the relationships between government and industry into partnerships for progress; and to maintain global leadership in the aviation industry.

Key Recommendations

In the area of safety, the Commission believes that the principal focus should be on reducing the rate of accidents by a factor of five within a decade, and recommends a re-engineering of the FAA's regulatory and certification programs to achieve that goal.

In the area of air traffic control, the Commission believes that the safety and efficiency improvements that will come with a modernized system should not be delayed, and recommends that the program be accelerated for to achieve full operational capability by the year 2005. In addition, a more effective system must be established to finance modernization of the National Airspace System and enhancements in safety and security.

In the area of security, the Commission believes that the threat against civil aviation is changing and growing, and that the federal government must lead the fight against it. The Commission recommends that the federal government commit greater resources to improving aviation security, and work more cooperatively with the private sector and local authorities in carrying out security responsibilities.

Although not specifically directed to do so, the Commission also took up the issue of responding to aviation disasters. In this area, the Commission believes that a better coordinated and more compassionate response is necessary, and that the responsibility for coordinating the response needs to be placed with a single entity. The Commission is pleased with the progress made to date in this area, including the designation of the National Transportation Safety Board as that single entity.

Many of the Commission's recommendations apply equally to each of the three major areas of focus, including those relating to regulation and certification. Primary among these recommendations is the call for greater use of partnerships in meeting goals. Regulatory and

enforcement agencies such as the Customs Service, the Occupational Safety and Health Administration, and the Food and Drug Administration have put new emphasis on partnerships with industries, and are achieving tremendous results: seizing more drugs while expediting travel for legitimate travelers; reducing workplace accidents while increasing productivity; and getting important new AIDS and cancer-fighting drugs to market in a fraction of the time it used to take.

The premise behind these partnerships is that government can set goals, and then work with industry in the most effective way to achieve them. Partnership does not mean that government gives up its authorities or responsibilities. Not all industry members are willing to be partners. In those cases, government must use its full authority to enforce the law. But, through partnerships, government works with industry to find better ways to achieve its goals, seeking to replace confrontation with cooperation. Such partnerships hold tremendous promise for improving aviation safety and security. A shift away from prescriptive regulations will allow companies to take advantage of incentives and reach goals more quickly.

Transportation Secretary Peña's cooperative program with airlines to establish a single level of safety is an example of innovative government-industry partnership. Another is Vice President Gore's January 15, 1997 announcement that Boeing, in concert with government agencies, had developed a plan to modify the rudders on hundreds of its 737 aircraft. By acting without waiting for a government mandate, Boeing will complete many of these safety-enhancing modifications before the government could complete a rule requiring the action.

Partnership must extend not only to regulated entities, but also to the various federal agencies involved with aviation safety and security. A number of agencies outside the Department of Transportation have expertise and resources that can have a direct impact on improving safety and security. The Commission urges the Administration to continue to work to expand and improve these intergovernmental relationships.

In the last few years, the FAA has begun to recognize and respond to the tremendous changes it faces. Reviews such as the Challenge 2000 report examined ways of improving the way the FAA regulates operators and manufacturers. Now is the time for the FAA to build on that work, and aggressively reengineer itself to adapt to the demands of the 21st Century.

It is important to note that the FAA, alone among federal agencies, has been given some critical new tools to help shape its own future. A new Management Advisory Council will provide valuable input to the agency's decision-making process. In 1995, the Congress granted the Clinton Administration's request for unprecedented reforms of the FAA's personnel and procurement systems. These reforms give the FAA almost unlimited latitude to design new systems to meet the agency's unique and particular needs. The first phases of these reforms were implemented in April 1996, and are already producing dividends. The FAA used to have 233 procurement documents, and today there are less than 50. Using its streamlined process, the FAA recently completed a billion dollar procurement in six months, with no protests. Under the old system, it would have taken three times as long, and likely would have been delayed by costly protests. A stack of personnel rules that used to be one-foot high has been reduced to 41 pages, and will allow the agency to hire people where they're needed and when they're needed.

This flexibility will be critical to meeting the challenges of the next century. As former FAA Administrator David Hinson recently noted, this type of reform is "the seed for what needs to happen at the FAA." The incoming leadership at the Department of Transportation and the FAA

must utilize fully the flexibilities that have been granted if the agency is to keep pace with the rapidly changing industry it regulates.

Responsibility for Implementing Change

The Commission's goal for aviation in the next century may be summed up by the words of Robert Crandall, Chairman of American Airlines, when he said, "We would like the public to take safety and security as a given. If that is going to happen, change is necessary."

The responsibility for achieving that change lies with all the partners in aviation. The Administration, the Congress, the entire aviation industry and its employees must work together to make the changes that are necessary to keep pace with the challenges facing them. Commitments must be made at the highest levels of every organization, in government and in the private sector.

To ensure that the government remains focused on the goals established in this report, the Commission recommends three steps:

> (1) that the Secretary of Transportation report publicly each year on the implementation status of these recommendations;
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> (2) that the President assign the incoming leadership at the Department of Transportation and the FAA the clear mission of leading their agencies through the necessary transition to re-engineered safety and security programs; and
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> (3) that the performance agreements for these positions, which the documents that senior managers sign with the President outlining their goals and specific means of measuring progress, include implementation of these recommendations.

Chapter One: Improving Aviation Safety

> *"The FAA, despite its professionalism and many accomplishments, was simply never created to deal with the environment that has been produced by deregulation of the air transport industry."*
>
> - Stuart Matthews, President and CEO, Flight Safety Foundation.

Commercial aviation is the safest mode of transportation. That record has been established not just through government regulation, but through the work of everyone involved in aviation — manufacturers, airlines, airport operators, and a highly-skilled and dedicated workforce. Their combined efforts have produced a fatal accident rate of 0.3 per million departures in the United States. The accident rate for commercial aviation declined dramatically between 1950 and 1970. But, over the last two decades, that rate has remained low, but flat. Heading into the next century, the overall goal of aviation safety programs is clear: to bring that rate down even lower.

Focusing on the accident rate is critical because of the projected increases in traffic. Unless that rate is reduced, the actual number of accidents will grow as traffic increases. Given the international nature of aviation, cutting the accident rate is an imperative not just for the United States, but for all countries involved in aviation. Accident rates in some areas of the world exceed those in the U.S. by a factor of ten or more. Boeing projects that unless the global accident rate is reduced, by the year 2015, an airliner will crash somewhere in the world almost weekly.

While fatality rates in general aviation are higher than in commercial operations, the principal causes of general aviation accidents are similar to commercial aviation accidents. The Commission's recommendations will help address the safety of general aviation as well.

Lessons from reinventing government must be applied to aviation programs. Improvements in safety and security will result from a focus on several key areas: expanded use of partnerships; reengineering of the FAA's regulatory and certification processes; greater focus on human factors and training; and, the faster introduction of proven new technologies. These technologies are enabling the introduction of increasingly sophisticated automation into virtually every aspect of aviation operations. They offer opportunities for improved safety, security, and efficiency, and are driving the aviation industry toward an integrated system that will alter many of the things that have remained unchanged in aviation for decades.

Adapting to these changes will require renewed commitments from all partners, and a willingness to re-engineer long-standing practices and procedures. This change also calls for a cultural transformation of the FAA to improve its ability to regulate and lead the development of the integrated aviation system on the horizon. In the areas of regulation and certification, the Challenge 2000 report represents a good first step. However, it and other internal reviews have not provided a comprehensive, agency-wide assessment of the need for change. That is what is needed.

A strong government-industry partnership is needed to develop and integrate the research, standards, regulations, procedures, and infrastructure needed to support the aviation system of the future. The FAA has applied this approach successfully to cooperative research projects with NASA in the development of advanced air traffic technologies. The Commission encourages

these agencies and others to expand their cooperative efforts in aviation safety research and development.

Regular and random inspection of airlines and facilities should remain an important part of the FAA's safety and security oversight programs. However, given the tremendous growth and globalization in the industry, it is neither realistic nor desirable to expect the FAA to rely on hands-on inspections to ensure safety. It is critical that industry be given the incentives and flexibility to be full partners in this effort, and be encouraged to monitor and improve their own performance. This will not only produce better focus on results, but will also allow the FAA to deploy its resources more effectively.

Recommendations

1.1 Government and industry should establish a national goal to reduce the aviation fatal accident rate by a factor of five within ten years and conduct safety research to support that goal.

Historically, major advances in aviation safety have been driven by technological improvements in airframes, engines, communications, radar and other areas. Today, information technology can help aviation make the next leap forward in safety.

Aviation safety experts at the FAA and at NASA are confident that a five-fold reduction in the fatal accident rate could be achieved in the next decade given the right resources and focus. The Commission urges the FAA, NASA and industry to step up to this challenge. Achieving this goal will require the combined efforts of government and industry focused on three objectives: preventing equipment malfunctions; reducing human-caused mishaps; and ensuring separation between aircraft and other air or ground hazards. Government can play a strong role in research and development, but it must be in partnership with industry, which ultimately is responsible for operating safely. The Commission urges NASA, which has considerable expertise and resources in the area of safety research, to expand its involvement in the promotion of aviation safety.

1.2. The FAA should develop standards for continuous safety improvement, and should target its regulatory resources based on performance against those standards.

The FAA should promote aviation safety and security by setting high standards, requiring aviation businesses to monitor and improve their own safety performance, and by developing objective methods of measuring the ability of companies to monitor and improve its own safety. Significant efforts have already been made in this direction. Current regulations, for example, require commercial air carriers to implement a Continuing Analysis and Surveillance Program to evaluate the effectiveness of their maintenance and inspection processes. Significant investment and effort have been put into developing the Safety Performance Analysis System, which will allow safety inspectors to compare the performance of similar operators to identify trends that could lead to reduced levels of safety. Such approaches to aviation safety oversight should be broadened. Operators should be encouraged to implement systems that ensure their continued compliance with regulations and that promote continuous improvements in aviation safety and security.

Last year, the FAA undertook an independent review of its regulatory and certification programs. That effort, known as Challenge 2000, recommended in part that the agency move toward implementing rules that establish performance standards where possible, and that the rulemaking process be streamlined and reengineered. Further, the report urged that the regulatory process be

restructured to provide compelling technical and business incentives for industry to develop and certify products that help fulfill priority safety needs.

The Commission recognizes the value of the Challenge 2000 report, and urges the FAA and industry to work together to develop standards for continuous safety and security improvement that recognize variations in company maturity and best industry practices. These standards should serve as the basis for certification, regulation and oversight of the aviation industry. Objective criteria should be developed that enable the FAA to assess each organization's safety improvement processes and performance, and use this assessment to improve performance throughout the industry. As an incentive to implement effective safety and security improvement programs, FAA oversight should be adjusted to recognize the maturity and actual performance of individual operators and manufacturers. Such an approach will allow the FAA to target its inspector resources on those operators demonstrating the greatest risk, while allowing mature operators and manufacturers to manage their organizations without unproductive FAA involvement. The FAA should adjust its internal classifications and rankings of inspectors to reflect this change.

1.3 The DOT and the FAA should be more vigorous in the application of high standards for certification of aviation businesses.

In the past, both the FAA and the DOT have devoted significant resources to helping new companies meet regulatory requirements and manage their operations. The recent 90 Day Safety Review conducted by the DOT and the FAA determined that this is an inappropriate role for the government and recommended many actions that will improve the certification process. The Commission agrees. While the government should assist companies in improving the safety and security of their operations, it should not use its resources to compensate for lack of experience, technical expertise or judgment in a company's day-to-day operations.

In some cases, the FAA's certification standards and processes have not kept up with the changing needs of civil aviation. For example, current standards for hiring security personnel do not take into account changes in explosives detection technology. And the certification of engines and airframes still reflects a time when these systems were produced as completely independent systems. Today, engine and airframe development is integrated, so the certification process must take into account the entire system rather than its individual parts. In the future, as the airplane becomes an integral component of the air traffic management system, the certification of the aircraft, as part of an integrated aviation system, will become even more important.

The FAA demonstrated its ability to integrate these processes and work effectively with industry in the certification of the Boeing 777 airplane. Lessons from the 777 certification should be applied to the way the FAA certificates airplanes in the future. Additional certification tools and processes should be developed to encourage the introduction of new technologies.

Considerable attention has been given to the issue of outsourcing of maintenance and other work, particularly in the wake of the Valujet crash. The Commission does not believe that outsourcing, in and of itself, presents a problem — if it is performed by qualified companies and individuals. The proper focus of concern should be on the FAA's certification and oversight of any and all companies performing aviation safety functions, including repair stations certificated by the FAA but located outside of the United States,.

1.4. The Federal Aviation Regulations (FARs) should be simplified and, as appropriate, rewritten as plain English, performance-based regulations.

The Commission believes that government can achieve better regulatory compliance if its objectives are stated clearly and its focus is on goals, not process. While that sounds simple, the FAA's rules too often do not meet those criteria.

The Commission urges the FAA to take two steps to address this problem. First, as appropriate, all new rules should be rewritten as performance-based regulations, and in plain English. Second, within 18 months, a bottom-up review of existing regulations should be conducted to identify those in need of rewriting as performance-based, plain English regulations. Such clarifications would improve compliance and help the FAA resolve serious problems created by differences in interpretation of regulations by FAA officials across the country.

The current FARs and supporting Handbooks, Technical Standards Orders, Security Directives, and Advisory Circulars have become too prescriptive and complex and are increasingly open to misinterpretation. Sometimes they provide conflicting policy or procedural guidance. They often stifle the creativity of those who would do more than the rules require. In many cases, the FARs do not allow for advances in technology that increase security, safety or efficiency. For example, the FARs currently have no provisions for design criteria to protect aircraft from high intensity electromagnetic fields such as those emanating from TV antennas, radars, cellular phones, portable stereos, and laptop computers. These electromagnetic fields are potentially hazardous to aircraft using digital communications, avionics and flight controls. The FAA has been working for more than eight years to develop standard certification requirements to address these hazards, but today each certification is handled through the use of special conditions. Mandating performance rather than dictating procedures will break the regulatory logjam.

1.5. Cost alone should not become dispositive in deciding aviation safety and security rulemaking issues.

As noted earlier, the rate of fatal accidents in commercial aviation in the U.S. is less than 0.3 per million departures. The rarity of accidents can make it difficult to justify safety and security improvements under benefitcost criteria applied to regulatory activities. Nevertheless, benefitcost analysis can enlighten the regulatory decisionmaking process. For example, such analysis can help identify the most costeffective way to achieve a safety or security objective. Cost considerations and mathematical formulas, however, should never be dispositive in making policy determinations regarding aviation safety they are one input for decisionmaking. Further, non-quantifiable safety and security benefits should be included in the analysis of proposals.

1.6. Government and industry aviation safety research should emphasize human factors and training.

Over the past ten years, flight crew error accounted for over 60% of all aviation accidents world-wide. And over the past five years, two types of flight crew error, loss of control in flight and controlled flight into terrain, accounted for over 70% of all airline fatalities. Moreover, recent airport testing of explosive detection systems revealed significant deficiencies in the performance of security personnel. Research, technology, training and sharing of safety data can reduce human error. Aviation safety and security have always depended upon a talented and dedicated workforce. Today, changes in technology are presenting that workforce — flight

crews, ground and air traffic controllers, maintenance technicians — with new challenges. The aviation system will continue to rely on these highly skilled people to be responsible for all aspects of operations, and it is critical to assess and address issues relating to human interaction with changing technologies.

The FAA, NASA, the DoD, and the aviation industry jointly developed a National Aviation Human Factors Plan that describes a strategic approach to solving the problem of human-caused mishaps. Two additional studies, one by the FAA dealing with flight deck human factors and the other published by representatives from government, industry, and union organizations as their 1997 Aviation Safety Plan, identify a wide range of safety issues, including human factors. The Commission acknowledges the importance of all three of these reports and urges the immediate development of an implementation plan.

1.7. Enhanced ground proximity warning systems should be installed in all commercial and military passenger aircraft.

The introduction of ground proximity warning systems (GPWS) in commercial aircraft in the late-1970s led to significant reductions in controlled flight into terrain, the second-leading cause of aviation accidents. These accidents occur when pilots cannot reconcile their positions with changing terrain. Current GPWS systems are not predictive, however, and only warn pilots when ground impact is imminent. Several recent incidents indicate the need for a forward-looking system that can provide better situational awareness and advanced warning to pilots when they are approaching hazardous terrain. Digital terrain elevation data developed for military purposes can help provide this capability.

On January 15, 1997, Vice President Gore announced that the Department of Defense is releasing a version of its global digital terrain elevation database for use in the civilian sector. Combined with advanced navigation systems, this will provide pilots with the tools that they need to reduce, and maybe even eliminate, these kinds of accidents in the future.

The Commission applauds the voluntary introduction of advanced ground proximity warning systems in commercial aircraft, and urges all segments of the aviation community to install this vital safety system. To achieve this goal, the Commission urges the FAA to work with industry to develop and promote the use of such equipment in general aviation aircraft.

1.8. The FAA should work with the aviation community to develop and protect the integrity of standard safety databases that can be shared in accident prevention programs.

The identification of deviations from normal operations, adverse trends, and other incidents can be a valuable tool in preventing accidents. The most effective way to identify incidents and problems in aviation is for the people who operate in the system (pilots, mechanics, controllers, dispatchers, etc.) to self-disclose the information. There are a number of separate safety data collection efforts ongoing within government and industry. Many of these efforts either duplicate existing data, report the same information, or are not interconnected or integrated. The FAA should work with the aviation community to develop standard databases of safety information that can be shared openly and encompass operations within the aviation industry as well as those within the FAA, such as air traffic control.

People and companies will not provide or assemble safety data or information if the information will disclose trade secrets, if it can threaten a person's job or be used in an enforcement action

against a person or company, or if it can in any way cause them a liability. Data protection is the key to self-disclosure. The Flight Safety Foundation has studied this issue and concluded that legislation is the only way to guarantee protection of safety data. The joint industry/DOT Aviation Safety Plan cites data protection as a key to achieving Zero Accidents. The Congress, at the request of the Administration, recently enacted legislation providing for the protection from public disclosure of certain safety and security data voluntarily provided to the FAA. The FAA needs to expeditiously complete its rulemaking to implement this legislation. Since adequate legislative protection is key to building the trust necessary for self disclosure and safety monitoring, the FAA should assess the adequacy of the new legislative authority and implementing regulations one year after the regulations take effect. Any necessary regulatory or legislative modifications identified at that time should be promptly addressed.

1.9. In cooperation with airlines and manufacturers, the FAA's Aging Aircraft program should be expanded to cover non-structural systems.

The average age of commercial airline fleets is continuing to increase. In 1975, few large commercial aircraft were in service beyond their original design life, typically twenty years. But with increased competition and growth in passenger and cargo traffic brought on by deregulation, service lives of dependable aircraft models were extended through expanded maintenance and overhaul programs. By the year 2000, more than 2,500 commercial aircraft in the United States may be flying beyond their original design life.

In 1988, a Boeing 737 in Hawaii suffered severe structural failure of its forward fuselage sections due to corrosion not visible during normal maintenance inspections. As a direct result of this accident, the FAA greatly expanded its structural integrity inspection program and formed the Airworthiness Assurance Working Group (AAWG). Its focus has been almost exclusively on structural integrity, and the effects of structural corrosion and fatigue. The programs in existence under the AAWG have been effective and are considered adequate to deal proactively with the structural problems associated with aging commercial aircraft.

However, much less is known about the potential effects of age on non-structural components of commercial aircraft. Non-structural components include electrical wiring; connectors, wiring harnesses, and cables; fuel, hydraulic and pneumatic lines; and electro-mechanical systems such as pumps, sensors, and actuators. Neither the manufacturers nor the commercial airlines consider the aging of non-structural components to pose serious safety problems primarily because they consider their redundancy, replacement upon failure, and periodic, programmed maintenance to be sufficient to assure aircraft safety.

The Commission is concerned that existing procedures, directives, quality assurance, and inspections may not be sufficient to prevent safety related problems caused by the corrosive and deteriorating effects of non-structural components of commercial aircraft as they age. To address this, the Commission recommends that the FAA work with airlines and manufacturers to expand the aging aircraft program to include non-structural components, through steps including: full and complete tear-downs of selected aircraft scheduled to go out of service; the establishment of a lead-the-fleet research program; an expansion of the FAA-DoD-NASA cooperative aging aircraft program; an expansion of programs of the Airworthiness Assurance Working Group to include non-structural components; and encouraging the development of modern technical means to ensure and predict the continued airworthiness of aging non-structural components and systems.

1.10. The FAA should develop better quantitative models and analytic techniques to inform management decision-making.

The FAA is called upon to evaluate many proposals for safety and security improvements and capacity enhancements as part of its NAS modernization, and other programs. The FAA does not have a developed model for the air traffic control system that permits the systematic evaluation and comparison of these proposals with respect to their life-cycle cost and their likely effects on the operation of the air traffic control system. If available, such analysis would be of great assistance to support decision-making by the FAA and the DOT leadership.

The Commission urges the FAA to strengthen its analytic and planning tools, especially through the development of models that give insight into the system-wide consequences of alternative courses of action and the development of a credible cost accounting system, as mandated in the Federal Aviation Reauthorization Act of 1996.

1.11. The DOT should work with the Department of Justice to ensure that airline crew members performing their duties are protected from passenger misconduct.

Passenger behavior that amounts to criminal conduct is a matter of growing concern to U.S. airlines. When crew members are called upon to enforce in-flight safety and security rules and regulations, they are working to ensure that our aviation system remains safe and secure. Their responsibilities at times require them to confront passengers who are unwilling to comply with lawful instructions and become abusive. Such conduct by passengers threatens the well-being of all those on the plane, and is subject to federal prosecution. The Commission urges the DOT to work with the Department of Justice and the United States Attorneys to ensure that priority is given the prosecution of offending passengers to the fullest extent of the law for interfering with airline crew members in the performance of their duties.

1.12. Legislation should be enacted to protect aviation industry employees who report safety or security violations.

In a number of important industries, statutory protection is provided to "whistleblowers" who report violations of safety procedures. The Commission believes that aviation safety and security will be enhanced if employees, who are a critical link in safety and security, are able to report unsafe conditions to the FAA without fear of retribution from their employers. Some aviation employees are provided protections through contractual agreements. However, the Commission believes that statutory protection, such as that provided to workers under the Occupational Health and Safety Act, would provide uniformity within the industry and provide coverage to those not already protected.

1.13. The FAA should eliminate the exemptions in the Federal Aviation Regulations that allow passengers under the age of two to travel without the benefit of FAA-approved restraints.

Current regulations require that all passengers over the age of two have their own seats, and that those seats are equipped with FAA-approved restraints. The Commission believes that it is inappropriate for infants to be afforded a lesser degree of protection than older passengers. The FAA should revise its regulations to require that all occupants be restrained during takeoff, landing, and turbulent conditions, and that all infants and small children below the weight of 40 pounds and under the height of 40 inches be restrained in an appropriate child restraint system, such as child safety seats, appropriate to their height and weight. The Commission also notes and

commends the FAA's ongoing efforts in collaboration with major airframe and seat manufacturers to develop standards for integrated child safety seats.

1.14. The Commission commends the joint government-industry initiative to equip the cargo holds of all passenger aircraft with smoke detectors, and urges expeditious implementation of the rules and other steps necessary to achieve the goal of both detection and suppression in all cargo holds.

In December 1996, most of the nation's major airlines announced a voluntary action to install smoke detection systems in the cargo holds of commercial airplanes and to study additional measures for fire suppression. This announcement broke a deadlock that had existed for most of the last decade. The Commission commends this initiative as an example of the partnership that will be necessary to enhance safety and security.

Chapter Two: Making Air Traffic Control Safer and More Efficient

> *"While the airlines are posting record traffic figures and profits, the ground-based air traffic control infrastructure is outdated and unable to keep pace with expansion."*
>
> - Barry Krasner, President of the National Air Traffic Controllers Association

It is essential that the air traffic system of the United States be modernized. Although the current system remains safe, it is showing signs of aging. System outages, brownouts, inefficiencies in air traffic control, and capacity limitations on the ground add costs to the FAA and to users of the airspace system. The Air Transport Association estimates that inefficiencies in the system cost airlines in excess of $3 billion in 1995 — costs ultimately paid by passengers and anyone who purchases goods shipped by air.

In 1996, a government-industry task force defined a future operational concept known as Free Flight. Under this concept, national airspace system (NAS) operations will transition from ground-based air traffic control (using analog radios, navigational beacons and radar) to more collaborative air traffic management based on digital communication, satellite navigation, and computer-aided decision support tools for controllers and pilots. This proposed new system offers significant benefits for users of the NAS, for the safety and convenience of the traveling public, and for greater FAA operational efficiency.

The FAA's proposed technical approach and schedule for NAS modernization are documented in its recently published National Airspace System Architecture. The proposed NAS architecture is generally consistent with industry's vision for the future of air traffic management, but the proposed schedule for modernization is too slow to meet projected demands and funding issues are not adequately addressed. Unless the schedule is accelerated, the United States may lose its position of global leadership in civil aviation.

The technology needed to modernize the ATC system by and large exists, and is available off-the-shelf. The challenge is completing the transition to the new system in a timely and cost-effective manner, and ensuring that all users participate in the upgrade. Unfortunately, the FAA has encountered serious problems in its modernization program. Before major changes were made in 1994, the centerpiece of the FAA's modernization program had, according to the General Accounting Office, fallen eight years behind schedule, and was $5 billion over budget. Cost overruns in five other key programs ranged from 50 to more than 500%, and delays averaged close to four years.

These problems have been traced to inadequate user input, poor management and contractor performance, and inadequate oversight. Although availability of funds does not appear to have been a problem in the past, the capital needs of the future could well outstrip the ability to fund them through the traditional budget process, particularly as capital improvements are accelerated, as recommended by the Commission.

Traditionally, the FAA has seen it necessary to design, own and operate its air traffic control system, in cooperation with the Department of Defense. Current off-the-shelf technology allows the FAA to consider its needs differently, particularly in areas such as the acquisition of communications systems. In other critical areas of government, including Defense, the private sector has proved its ability to provide critical services with increased quality and lower costs. A number of major U.S. manufacturers are producing new ATC systems for deployment in other

countries. The FAA should seek collaborative opportunities with the private sector in order to accelerate the transition to a new NAS.

There have been several important changes that should allow the modernization program to move forward more effectively. The Commission notes, in particular, the following factors which should help avoid problems of the past: the redefinition of the modernization program; the personnel and procurement reforms granted the FAA, which give it unprecedented ability to hold managers accountable for results and to streamline procurement processes; and the creation of the new Management Advisory Committee by the Congress, which will give users a more effective voice in decision-making. However, the Commission believes that a new long-term financing mechanism is also necessary to ensure that modernization occurs on an acceptable schedule, and that the resulting safety and efficiency benefits are realized faster.

The FAA must take advantage of personnel, procurement, and other reforms to ensure that it is spending existing resources more effectively in order to gain approval of innovative funding proposals from the Administration and the Congress. Additionally, the Commission believes that it is critical that the senior management at the DOT and the FAA take additional steps to ensure that past problems are being dealt with, and that an accelerated modernization schedule can proceed.

Recommendations

2.1. The FAA should develop a revised NAS modernization plan within six months that will set a goal of the modernized system being fully operational nationwide by the year 2005; and the Congress, the Administration, and users should develop innovative means of financing this acceleration.

Modernization of our aging airspace system is critical to the safety of the traveling public, to maintaining our world leadership in aviation, and to our economic interests. The FAA's current plan calls for the modernized system to be operational after 2012. That is simply too long to postpone the safety and economic benefits that will derive from the modernized system. Therefore, the Commission recommends that 2005 be set as the date when all elements of the communication, navigation, and surveillance and air traffic management capabilities defined in the NAS architecture should be fully operational. This accelerated implementation must be coordinated with the Department of Defense, which is a major user and provider of air traffic control services. Implementation of the initiative announced by Vice President Gore on January 15, 1997 to demonstrate these systems in Hawaii and Alaska is an important step toward full operational status.

Achieving this goal depends on the availability of several tools, as discussed in the following recommendations. Chief among these tools is the need to find non-traditional means of financing the capital improvements. Innovative approaches to federal financing of major infrastructure projects have been proposed in the past, including leveraging the revenues coming into the FAA, multi-year appropriations and non-traditional budget scoring. Non-federal financing approaches have also been proposed, such as the creation of private infrastructure banks. The Commission expects that the National Civil Aviation Review Commission (NCARC), established in the Federal Aviation Reauthorization Act of 1996 by Congress to explore funding options for the FAA, will consider these options. Whatever the funding mechanism selected, the Commission

believes it is critical to our global leadership in civil aviation to finance an accelerated modernization of the NAS.

2.2. The FAA should develop plans to ensure that operational and airport capacity needs are integrated into the modernization of the NAS.

The FAA's current NAS modernization program focuses on equipment and infrastructure. However, there is no clear plan for how the people who operate the system will make the transition, and what their roles and responsibilities will be under the new systems. The FAA should develop immediately a NAS Operational Plan to address these issues.

The FAA should also develop a National Airport System Modernization Plan that presents a strategic vision, plan and schedule for modernization of U.S. airports that is consistent with modernization of the NAS. This plan, produced in collaboration with local airport officials, should identify critical system capacity enhancement needs and should address major safety issues at airports. These plans, when incorporated into the revised NAS implementation plan called for in recommendation 2.1, would provide a balanced strategic plan for aviation in the United States.

2.3. The FAA should explore innovative means to accelerate the installation of advanced avionics in general aviation aircraft.

The safety and efficiency benefits of the modernized NAS will not be realized fully until all users have incorporated its features. Delays in the installation of the equipment needed to operate in the future NAS will put off the benefits for all system users. Therefore, it is essential that the FAA, as it accelerates its modernization, works with users to ensure that they keep pace.

Savings from more efficient operations provide significant incentive for commercial carriers to install the required digital radios, GPS receivers, and automatic dependent surveillance equipment. But it is essential to find ways to ensure general aviation users are equipped for future NAS operations.

2.4. The U.S. government should ensure the accuracy, availability and reliability of the GPS system to accelerate its use in NAS modernization and to encourage its acceptance as an international standard for aviation.

Satellite-based navigation and positioning is a core element of our NAS modernization plans, and is critical to achieving a seamless, efficient global aviation system in the future. The U.S. Global Positioning System (GPS), which is a dual civil-military system operated by the U.S. Air Force, is the current and foreseeable backbone for any global navigation satellite system. Full acceptance of GPS as an international standard for aviation is dependent on greater assurance to the user community — both foreign and domestic — of its accuracy, availability and reliability. As part of its NAS modernization plans, the FAA is currently developing a Wide Area Augmentation System (WAAS) that will enhance the basic GPS civil service to meet the requirements of civil aviation users. Many other nations, including Europe and Japan, are planning similar augmentations, but are still somewhat reluctant to base their own airspace management on a GPS system which they perceive to be controlled by the U.S. military.

The recent U.S. GPS policy made considerable progress in addressing these international concerns by assuring the continued availability of basic civil GPS services worldwide, free of

direct user fees. This new policy also established a joint civil-military Executive Board to manage GPS and its augmentations, and initiated formal international discussions aimed at developing agreements on the provision and use of GPS services. But, there are still a number of important technical and policy issues that must be resolved if GPS is to become the system of choice for global aviation navigation and positioning.

First, the U.S. must provide stronger strategic leadership for civil users of GPS. The acceptance of GPS as an international standard is key to continued U.S. leadership in aviation, and can only be achieved through strong civilian participation in GPS planning and decision-making. A number of working groups and advisory committees currently exist throughout the Federal government and the private sector to coordinate and represent the needs of civil users of GPS. The Commission recommends that civilian leadership be strengthened by establishing a Civil GPS Users Advisory Council, with representatives from both the users and providers of GPS equipment and services, reporting to the GPS Executive Board. The Commission also encourages the Administration to work rapidly on the development of international guidelines on the provision and use of GPS services called for in the President's recent GPS policy directive.

Second, greater redundancy is needed to enhance the ability of users to cross-check GPS accuracy and to verify the system's reliability. The most effective means of achieving this redundancy is to provide additional civil GPS precision ranging signals in space. Studies have shown that additional precision ranging capability can be achieved at relatively little cost while providing enormous benefits to all civil GPS users. The Commission recommends that this capability be added to the FAA's WAAS system. This action will result in a more robust and inherently more reliable system and will provide a major boost to the international acceptance of GPS as a standard for aviation navigation and positioning.

Third, the GPS Executive Board should resolve the remaining issues over funding and frequency assignment for a second civil frequency as quickly as possible so that this needed improvement can be included in the next generation of GPS satellites. The GPS Executive Board is considering enhancements to future GPS satellites that would include an additional broadcast frequency. This additional frequency would expand the base of civil GPS users worldwide and would send a strong message to the international community that the U.S. intends to maintain a long-term commitment to providing civil GPS services. Moreover, the FAA's WAAS system requires two frequencies to meet the accuracy needs of civil aviation users, and the additional frequency would allow for complete independence of civil and military GPS services in the future.

Fourth, the GPS system must be protected from both intentional and unintentional interference. The GPS system will be a core, safety-critical component of the future global aviation information system. The security of GPS should be a major consideration in carrying out Recommendation 3.6 for protecting all aviation information systems.

2.5. The users of the NAS should fund its development and operation.

The current system of funding the ATC system provides little direct connection between the excise taxes paid and services provided or the amount made available to the FAA through the budget and appropriations process. Replacing the traditional system of excise taxes with user fees offers the potential to correlate revenues and spending more closely.* Importantly, a financing system would not only help ensure adequate availability of funding , but would also

build incentives for efficiency and safety into the system — both for the users and for the FAA. The National Civil Aviation Review Commission is the proper venue for resolving the details of a new user fee system, and the Commission expects that it will be formed and begin its work in the very near future. The Commission urges the NCARC, in designing a new financing system, to ensure that any changes in the relative amount of revenues generated from any segment of the aviation industry do not result in undue economic disruption within any segment of the industry, and that the fees are not discriminatory or anti-competitive among carriers. In addition, non-business general aviation users of the NAS should not be adversely impacted by any new financing system. This will help ensure that general aviation users will be full and willing participants in the modernized NAS.

* Commissioner. Coleman takes no position with respect to the first two sentences of recommendation 2.5 as he feels this is among the issues NCARC is to resolve.

2.6. The FAA should identify and justify by July 1997 the frequency spectrum necessary for the transition to a modernized air traffic control system.

Expansion of telecommunications and other industries is creating greater competition for frequency spectrum. The FAA has indicated a need to retain large segments of its current spectrum allocation, but has provided insufficient justification for doing so. To ensure that the FAA's spectrum needs during modernization are not compromised the Commission recommends that the FAA complete a full justification, as well as a plan for freeing up spectrum as older systems are modernized or decommissioned. This process must be completed not later than July, 1997, and the results included by the DOT in the Federal Radio Navigation Plan and the RTCA 185 Report: Aeronautical Spectrum Planning for the Years 1997-2010.

Chapter Three: Improving Security for Travelers

> *"We know we can't make the world risk-free, but we can reduce the risks we face and we have to take the fight to the terrorists. If we have the will, we can find the means."*
>
> - President Clinton

The Federal Bureau of Investigation, the Central Intelligence Agency, and other intelligence sources have been warning that the threat of terrorism is changing in two important ways. First, it is no longer just an overseas threat from foreign terrorists. People and places in the United States have joined the list of targets, and Americans have joined the ranks of terrorists. The bombings of the World Trade Center in New York and the Federal Building in Oklahoma City are clear examples of the shift, as is the conviction of Ramzi Yousef for attempting to bomb twelve American airliners out of the sky over the Pacific Ocean. The second change is that in addition to well-known, established terrorist groups, it is becoming more common to find terrorists working alone or in ad-hoc groups, some of whom are not afraid to die in carrying out their designs.

Although the threat of terrorism is increasing, the danger of an individual becoming a victim of a terrorist attack — let alone an aircraft bombing — will doubtless remain very small. But terrorism isn't merely a matter of statistics. We fear a plane crash far more than we fear something like a car accident. One might survive a car accident, but there's no chance in a plane at 30,000 feet. This fear is one of the reasons that terrorists see airplanes as attractive targets. And, they know that airlines are often seen as national symbols.

When terrorists attack an American airliner, they are attacking the United States. They have so little respect for our values — so little regard for human life or the principles of justice that are the foundation of American society — that they would destroy innocent children and devoted mothers and fathers completely at random. This cannot be tolerated, or allowed to intimidate free societies. There must be a concerted national will to fight terrorism. There must be a willingness to apply sustained economic, political and commercial pressure on countries sponsoring terrorists. There must be an unwavering commitment to pursuing terrorists and bringing them to justice. There must be the resolve to punish those who would violate sanctions imposed against terrorist states.

Today's aviation security is based in part on the defenses erected in the 1970s against hijackers and on recommendations made by the Commission on Aviation Security and Terrorism, which was formed in the wake of the bombing of Pan Am 103 over Lockerbie, Scotland. Improvements in aviation security have been complicated because government and industry often found themselves at odds, unable to resolve disputes over financing, effectiveness, technology, and potential impacts on operations and passengers.

Americans should not have to choose between enhanced security and efficient and affordable air travel. Both goals are achievable if the federal government, airlines, airports, aviation employees, local law enforcement agencies, and passengers work together to achieve them. Accordingly, the Commission recommends a new partnership that will marshal resources more effectively, and focus all parties on achieving the ultimate goal: enhancing the security of air travel for Americans.

The Commission considered the question of whether or not the FAA is the appropriate government agency to have the primary responsibility for regulating aviation security. The

Commission believes that, because of its extensive interactions with airlines and airports, the FAA is the appropriate agency, with the following qualifications: first, that the FAA must improve the way it carries out its mission; and second, that the roles of intelligence and law enforcement agencies in supporting the FAA must be more clearly defined and coordinated. The Commission's recommendations address those conditions.

The terrorist threat is changing and growing. Therefore, it is important to improve security not just against familiar threats, such as explosives in checked baggage, but also to explore means of assessing and countering emerging threats, such as the use of biological or chemical agents, or the use of missiles. While these do not present significant threats at present, it would be short-sighted not to plan for their possible use and take prudent steps to counter them.

The Commission believes that aviation security should be a system of systems, layered, integrated, and working together to produce the highest possible levels of protection. Each of the Commission's recommendations should be looked upon as a part of a whole, and not in isolation. It should be noted that a number of the Commission's recommendations outlined in the previous chapter, particularly those relating to certification and regulation, apply to the FAA's security programs, as well.

Recommendations

3.1. The federal government should consider aviation security as a national security issue, and provide substantial funding for capital improvements.

The Commission believes that terrorist attacks on civil aviation are directed at the United States, and that there should be an ongoing federal commitment to reducing the threats that they pose. In its initial report, the Commission called for approximately $160 million in federal funds for capital costs associated with improving security, and Congress agreed. As part of its ongoing commitment, the federal government should devote significant resources, of approximately $100 million annually, to meet capital requirements identified by airport consortia and the FAA. The Commission recognizes that more is needed. The Commission expects the National Civil Aviation Review Commission to consider a variety of options for additional user fees that could be used to pay for security measures including, among others, an aviation user security surcharge, the imposition of local security fees, tax incentives and other means.

3.2. The FAA should establish federally mandated standards for security enhancements.

These enhancements should include standards for use of Explosive Detection System (EDS) machines, training programs for security personnel, use of automated bag match technology, development of profiling programs (manual and automated), and deployment of explosive detection canine teams.

3.3. The Postal Service should advise customers that all packages weighing over 16 ounces will be subject to examination for explosives and other threat objects in order to move by air.

The Postal Service now requires that packages weighing over 16 ounces must be brought to a post office, rather than be placed in a mailbox. To improve security further, the Postal Service should mandate that all mail weighing over 16 ounces contain a written release that allows it to be examined by explosive detection systems in order to be shipped by air. The Postal Service should develop and implement procedures to randomly screen such packages for explosives and

other threat objects. If necessary, the Postal Service should seek appropriate legislation to accomplish this.

3.4. Current law should be amended to clarify the U.S. Customs Service's authority to search outbound international mail.

Currently, the Customs Service searches for explosives and other threat objects on inbound mail and cargo. This recommended legislative enhancement parallels the Customs Service's existing border search authority.

3.5. The FAA should implement a comprehensive plan to address the threat of explosives and other threat objects in cargo and work with industry to develop new initiatives in this area.

The FAA should place greater emphasis on the work of teams, such as the Aviation Security Advisory Committee and the Baseline Cargo Working Group, to address cargo issues. The Commission believes that the FAA should implement the Baseline Group's recommendation with regard to profiling by "known" and "unknown" shippers. In addition, unaccompanied express shipments on commercial passenger aircraft should be subject to examination by explosives detection systems; the FAA should work with industry to develop a computer assisted cargo profiling system that can be integrated into airlines' and forwarders' reservation and operating systems; requirements should be implemented requiring that trucks delivering cargo for loading on planes be sealed and locked; the FAA should develop and distribute air cargo security training materials; and enhanced forwarder and shipper employee screening procedures should be developed.

3.6. The FAA should establish a security system that will provide a high level of protection for all aviation information systems.

In addition to improving the physical security of the traveling public, information systems critical to aircraft, air traffic control and airports should also be protected. Although government is responsible for a great number of aviation related information systems, a partnership must be formed in order to create integrated protection among these and related private sector systems. Some protective measures will become the responsibility of airlines, some that of the airports and others of the aircraft and air traffic control systems manufacturers and maintenance providers. The National Security Agency must play a role in coordinating information security measures, setting standards and providing oversight of system security to ensure protection against outside interference, disruption and corruption. Specific legislation should be reviewed that makes willful interference with information systems a federal crime with substantial penalties to provide a clear deterrent.

3.7. The FAA should work with airlines and airport consortia to ensure that all passengers are positively identified and subjected to security procedures before they board aircraft.

Curb-side check-in, electronic ticketing, advance boarding passes, and other initiatives are affecting the way passengers enter the air transportation system. As improved security procedures are put into place, it is essential that all passengers be accounted for in that system, properly identified and subject to the same level of scrutiny. The Commission urges the FAA to work with airlines and airport consortia to ensure that necessary changes are made to accomplish that goal.

3.8. Submit a proposed resolution, through the U.S. Representative, that the International Civil Aviation Organization begin a program to verify and improve compliance with international security standards.

Although 185 nations have ratified the International Civil Aviation Organization convention, and the security standards contained in it, compliance is not uniform. This creates the potential for security vulnerabilities on connecting flights throughout the world. To help raise levels of security throughout the world, the International Civil Aviation Organization needs greater authority to determine whether nations are in compliance. Strong U.S. sponsorship for adding verification and compliance capabilities to the International Civil Aviation Organization could lead to enhanced worldwide aviation security.

3.9. Assess the possible use of chemical and biological weapons as tools of terrorism.

FAA should work with the Department of Defense and the Department of Energy on programs to anticipate and plan for changing threats, such as chemical and biological agents.

3.10. The FAA should work with industry to develop a national program to increase the professionalism of the aviation security workforce, including screening personnel.

The Commission believes it's critical to ensure that those charged with providing security for over 500 million passengers a year in the United States are the best qualified and trained in the industry. One proposal that could accomplish this goal is the creation of a nationwide non-profit security corporation, funded by the airlines, to handle airport security. This concept, under consideration by the major airlines, merits further review.

The Commission recommends that the FAA work with the private sector and other federal agencies to promote the professionalism of security personnel through a program that could include: licensing and performance standards that reflect best practices; adequate, common and recurrent training that considers human factors; emphasis on reducing turnover rates; rewards for performance; opportunities for advancement; a national rank and grade structure to permit employees to find opportunities in other areas; regional and national competitions to identify highly skilled teams; and, an agreement among users to hire based on performance, not just cost.

3.11 Access to airport controlled areas must be secured and the physical security of aircraft must be ensured.

Air carriers and airport authorities, working with FAA, must develop comprehensive and effective means by which to secure aircraft and other controlled areas from unauthorized access and intrusion. Use of radio frequency transponders to track the location of people and objects in airport controlled areas, including aircraft, offers significant advantages over the current security measures commonly used today. Where adequate airport controlled area and aircraft security are not assured by other means, this technology should be considered for use at both international and domestic airports.

The Following Recommendations Were Presented to President Clinton on September 9, 1996

3.12. Establish consortia at all commercial airports to implement enhancements to aviation safety and security.

Recommendation from Initial Report dated September 9, 1996

Establish consortia at all commercial airports to implement enhancements to aviation safety and security. The Commission is convinced that safety, security, efficiency, and affordability can go hand in hand if all parties work as partners. The FAA should direct its officials responsible for oversight of security procedures at the nation's 450 commercial airports to convene relevant aviation and law enforcement entities for the purpose of implementing the Commission's recommendations and further improving aviation safety and security. At each airport, these partners will: (1) immediately conduct a vulnerability assessment; and (2) based on that assessment, develop an action plan that includes the deployment of new technology and processes to enhance aviation safety and security.

The FAA will approve these action plans on an expedited basis; procure and allocate, based on availability, new equipment; and test airports to ensure that the plans are being implemented properly.

Status

Forty-one major airport consortia have submitted action plans for FAA review.

The Commission's most important recommendation in its initial report was that local consortia be convened to identify vulnerabilities and propose action plans. The Federal Aviation Administration (FAA) called for initial consortia meetings by September 27, 1996, at 41 major U.S. airports where FAA personnel are permanently deployed. By December 2, 1996, all consortia action plans or reports from these airports had been presented to the FAA for review. The consortia action plans defined local security threat conditions based on input from FAA and the Federal Bureau of Investigation. Consortia also assessed other areas such as personnel training, passenger screening, access control measures, and equipment and technology needs.

Augmenting Recommendation

The FAA should formalize the establishment of consortia at all Category X through Category III airports by September 30, 1997, and, after consultation with industry, issue guidance on the future of consortia.

3.13. Conduct airport vulnerability assessments and develop action plans.

Recommendation from Initial Report dated September 9, 1996

Conduct airport vulnerability assessments and develop action plans.

Using models already developed by Sandia National Laboratory, periodic vulnerability assessments of the nation's commercial airports should be conducted. Based on the results, action plans tailored to each airport will be developed for expedited approval by the FAA.

Status

Law enforcement agencies are conducting assessments and addressing problems.

The FAA Authorization Act of 1996 required the FAA and FBI to conduct joint threat and vulnerability assessments on security every three years, or more frequently if necessary, at each airport determined to be high risk.

In November 1996, officials from the FBI, FAA and Department of Transportation (DOT) established a working group to define "high risk" airports. Discussions have been held on the criteria to be used to identify an airport facility as high risk, methodology to use in conducting joint FAA/FBI vulnerability assessments, and which airports should be assessed on a priority basis. The target date for completing the procedures for conducting vulnerability assessments is April 30, 1997, and initial assessments are to begin by late June, 1997.

3.14. Require criminal background checks and FBI fingerprint checks for all screeners, and all airport and airline employees with access to secure areas.

Recommendation from Initial Report dated September 9, 1996

Require criminal background checks and FBI fingerprint checks for all screeners, and all airport and airline employees with access to secure areas.

Currently, employees, including those with unescorted access to secure areas of airports, are not subject to such review. Given the risks associated with the potential introduction of explosives into these areas, the Commission recommends that screeners and employees with access to secure areas be subject to criminal background checks and FBI fingerprint checks.

Status

The FBI has reduced fingerprint check turnaround time to at most seven days.

The FBI has expedited the processing of aviation related fingerprint submissions. The FBI will accelerate its efforts to make software modifications and purchase additional computer hardware to adapt its Electronic Fingerprinting Image Print Server (EFIPS) system to accept civil fingerprint cards.

Augmenting Recommendation

The Commission reiterates that the overall goal is FBI fingerprint checks of all airport and airline employees with access to secure areas, no later than mid-1999.

3.15 Deploy existing technology.

Recommendation from Initial Report dated September 9, 1996

Deploy existing technology. The Commission has reviewed numerous machines designed to detect explosives in cargo, checked baggage, carry-on bags, and on passengers. There is no silver bullet. No single machine offers a solution to the challenges we face. Each machine has its own advantages and its own limitations. Even machines that work fairly well in the laboratory need to be tested in actual use at busy airports. We recognize that the FAA has certified only one technology for baggage screening, but we believe we must get a variety of machines, including some in use in other countries, into the field. There day-to-day operators can figure out which equipment works best in what situations and combinations, and what features need to be improved. Finding the strengths and weakness of existing technology will spur industry's creativity, leading to the invention of better and better instruments. Ultimately, the goal should

be to deploy equipment that can be certified by the FAA to detect explosives likely to be used by terrorists.

The Commission recommends the government purchase significant numbers of computed tomography detection systems, upgraded x-rays, and other innovative systems. By deploying equipment widely, passengers throughout the aviation system will receive the benefits of the enhancements. The Commission strongly believes it would be improper to discuss the details of such deployment, as to do so would serve only to compromise the integrity of an enhanced security system.

The Commission recommends that this initial equipment purchase be paid for with appropriated funds. This recommendation does not settle the issue of how security costs will be financed in the long run. That will be dealt with in our final report.

Status

Congress funded the purchase of commercially available advanced security screening equipment.

The FAA has ordered 54 advanced explosives detection systems.

In November and December 1996, FAA awarded six fixed priced contracts to various manufacturers of explosives trace detection technologies.

Augmenting Recommendation

The Commission recognizes that deployed technology for examining carry-on baggage may be outdated. New developments such as computerized systems with high resolution digital displays, innovative use of color to highlight threat objects, and ability to accommodate technologies such as threat image projection to maintain screener performance, can provide enhanced security. The FAA should review available technology for screening carry on items, regularly update minimum standards for new installations, and develop programs for upgrading deployed technology.

Cross Reference to Related Recommendations

This recommendation is related to recommendation 3.2.

3.16. Establish a joint government-industry research and development program.

Recommendation from Initial Report dated September 9, 1996

Establish a joint government-industry research and development program. The Commission recommends the establishment of a new joint government - industry partnership whose mission will be to accelerate research and development to enhance the security of air travel.

This could be modeled on the Partnership For A New Generation Vehicle (PNGV), in which the federal government and auto makers are combining resources to develop automobiles with significantly enhanced fuel economy, safety, and reduced emissions. We propose to increase federal funding and to ask the private sector to contribute.

Status

The FAA is working with industry to develop agreements and award research grants.

Congress increased the federal funding of R&D as required.

The FAA is moving in the direction of interacting more closely with industry, having set up advisory mechanisms such as the Aviation Security Advisory Committee; participating in individual Cooperative Research and Development Agreements with individual firms; giving grants to airlines and airports to conduct demonstrations and otherwise involve themselves in security technology development; entering into cost-sharing arrangements with firms to develop security technology.

Augmenting Recommendation

The FAA received additional funding and has aggressively accelerated systems to (1) improve screener performance, (2) reduce aircraft vulnerability, (3) screen cargo, and (4) to develop options for dealing with threats other than explosives. The FAA is encouraged to use the best technology available to solve security and safety challenges throughout the air transportation system.

3.17. Establish an interagency task force to assess the potential use of surface-to-air missiles against commercial aircraft.

Recommendation from Initial Report dated September 9, 1996

Assess the viability of anti-missile defense systems.. Whether or not the explosion of TWA 800 turns out to have been due to a surface-to-air missile attack, as some eye-witness accounts suggest, missile attacks have downed passenger planes in other countries, and it is a risk that should be evaluated. The Commission will continue to analyze this problem in cooperation with the Department of Defense and other government agencies.

Status

DoD will convene an interagency task force to examine the threat to civil aircraft.

Initial analyses of both the missile threat and electronic systems available to counter it support a decision to take positive steps. Experts from the Department of Defense (DoD), the intelligence community, defense contractors and research scientists contributed to analysis of the viability of anti-missile defense systems for civil aviation.

Augmenting Recommendation

Within ninety days, the Department of Defense should convene an interagency task force including the DOT, the FAA and the intelligence community to address the potential threat from surface-to-air missiles against commercial aviation. Working with airport consortia, this task force should develop plans to provide increased surveillance, and, if necessary, the deployment of countermeasures. The task force should make recommendations to the DOT regarding the testing, evaluation and preparation for deployment of measures to protect civil aircraft against an increased threat from surface-to-air missiles.

Appropriate steps should be taken by the intelligence community and through international diplomacy to reduce the possibility that terrorists could obtain or use surface-to-air missiles. The State Department should study the expansion of conventional arms agreements to include man-portable surface-to-air missiles, and the U.S. Representative to the International Civil Aviation Organization (ICAO) should propose a new convention addressing these weapons.

3.18. Significantly expand the use of bomb-sniffing dogs.

Recommendation from Initial Report dated September 9, 1996

Significantly expand the use of bomb-sniffing dogs. Canines are used to detect explosives in many important areas, but only sparingly in airport security. The Commission is convinced that an increase in the number of well-trained dogs and handlers can make a significant and rapid improvement in security, and recommends the deployment of 114 additional teams.

Status

The FAA received funding for 114 new dog teams and training has begun.

Augmenting Recommendation

Additionally, the Commission recommends that ATF continue to work to develop government-wide standards for canine teams.

3.19. Complement technology with automated passenger profiling.

Recommendation from Initial Report dated September 9, 1996

Complement technology with automated passenger profiling. Profiling can leverage an investment in technology and trained people. Based on information that is already in computer databases, passengers could be separated into a very large majority who present little or no risk, and a small minority who merit additional attention.

Such systems are employed successfully by other agencies, including the Customs Service. By utilizing this process Customs is better able to focus its resources and attention. As a result, many legitimate travelers never see a customs agent anymore — and drug busts are way up.

The FAA and Northwest Airlines are developing an automated profiling system tailored to aviation security, and the Commission supports the continued development and implementation of such a system.

To improve and promote passenger profiling, the Commission recommends three steps. First, FBI, CIA, and BATF should evaluate and expand the research into known terrorists, hijackers, and bombers needed to develop the best possible profiling system. They should keep in mind that such a profile would be most useful to the airlines if it could be matched against automated passenger information which the airlines maintain.

Second, the FBI and CIA should develop a system that would allow important intelligence information on known or suspected terrorists to be used in passenger profiling without compromising the integrity of the intelligence or its sources. Similar systems have been developed to give environmental scientists access to sensitive data collected by satellites.

Third, the Commission will establish an advisory board on civil liberties questions that arise from the development and use of profiling systems.

Status

Profiling systems are being developed.

The Federal Aviation Administration (FAA) and Northwest Airlines are completing final programming changes to an automated profiling system. A tentative completion date for programming changes and implementation of Computer Assisted Passenger Screening (CAPS) on Northwest flights is April, 1997. Additional programming will begin for use of CAPS on other airline reservations systems, with a tentative completion date of August, 1997.

On January 17, 1997, a Civil Liberties Advisory Board met with Commissioners to discuss civil liberties concerns pertaining to profiling. The Board submitted recommendations to the Commission. (Appendix A)

Augmenting Recommendation

The Commission believes that profiling is one part of a comprehensive, layered security program. As with other measures, it becomes less necessary with the introduction of efficient screening technology. Based on readily-available information, passengers could be separated into a very large majority about whom we know enough to conclude that they present little or no risk, and a small minority about whom we do not know enough and who merit additional attention. The Customs Service uses this approach successfully to better focus its resources and attention. As a result, many legitimate travelers never see a customs agent anymore — and drug busts are way up.

The Commission supports the development and implementation of manual and automated profiling systems, such as the one under development by the FAA and Northwest Airlines. The Commission strongly believes the civil liberties that are so fundamentally American should not, and need not, be compromised by a profiling system. Consistent with this viewpoint, the Commission sought the counsel of leading experts in the civil liberties field. Those experts provided a series of recommendations found in Appendix A. The Commission recommends the following safeguards:

No profile should contain or be based on material of a constitutionally suspect nature - e.g., race, religion, national origin of U.S. citizens. The Commission recommends that the elements of a profiling system be developed in consultation with the Department of Justice and other appropriate experts to ensure that selection is not impermissibly based on national origin, racial, ethnic, religious or gender characteristics.

Factors to be considered for elements of the profile should be based on measurable, verifiable data indicating that the factors chosen are reasonable predictors of risk, not stereotypes or generalizations. A relationship must be demonstrated between the factors chosen and the risk of illegal activity.

Passengers should be informed of airlines security procedures and of their right to avoid any search of their person or luggage by electing not to board the aircraft.

Searches arising from the use of an automated profiling system should be no more intrusive than search procedures that could be applied to all passengers. Procedures for searching the person or luggage of, or for questioning, a person who is selected by the automated profiling system should be premised on insuring respectful, non-stigmatizing, and efficient treatment of all passengers.

Neither the airlines or the government should maintain permanent databases on selectees. Reasonable restrictions on the maintenance of records and strict limitations on the dissemination of records should be developed.

Periodic independent reviews of profiling procedures should be made. The Commission considered whether an independent panel be appointed to monitor implementation and recommends at a minimum that the DOJ, in consultation with the DOT and FAA, periodically review the profiling standards and create an outside panel should that, in their judgment, be necessary.

The Commission reiterates that profiling should last only until Explosive Detection Systems are reliable and fully deployed.

The Commission urges that these elements be embodied in FAA standards that must be strictly observed.

3.20. Certify screening companies and improve screener performance.

Recommendation from Initial Report dated September 9, 1996

Certify screening companies and improve screener performance. Better selection, training, and testing of the people who work at airport x-ray machines would result in a significant boost in security. The Commission recommends development of uniform performance standards for the selection, training, certification, and recertification of screening companies and their employees. The Commission further recommends that in developing these standards, the FAA give serious consideration to implementing the National Research Council recommendations. The Commission also recommends the purchase and deployment of SPEARS, a computerized training and testing system.

Status

The FAA has begun rulemaking procedures to require new certifications.

The Federal Aviation Administration is developing an Advanced Notice of Proposed Rulemaking (ANPRM) which will establish the requirement for screening companies to be certified in order to provide screening services to air carriers. The rule will include requirements to improve the training and testing of security screeners through development of uniform performance standards for providing security screening services. Congress gave FAA authority to certify screening companies, but did not provide FAA authority to certify individual screeners. This Commission urges Congress to provide that additional authority.

Augmenting Recommendation

The Commission also recommends that the purchase and deployment of SPEARS, a computerized training and testing system, be completed at all major airports by the end of 1997.

3.21. Aggressively test existing security systems.

Recommendation from Initial Report dated September 9, 1996

Aggressively test existing security systems. "Red team" (adversary) type testing should also be increased by the FAA, and incorporated as a regular part of airport security action plans.

Frequent, sophisticated attempts by these red teams to find ways to dodge security measures are an important part of finding weaknesses in the system and anticipating what sophisticated adversaries of our nation might attempt. An aggressive red team strategy will require significant increases in the number of FAA personnel currently assigned to these tasks.

Status

The FAA is hiring 300 new special agents to test airport security.

3.22. Use the Customs Service to enhance security.

Recommendation from Initial Report dated September 9, 1996

Use the Customs Service to enhance security. The Customs Service has many responsibilities that are parallel to the FAA's in dealing with airlines and contraband. As a law enforcement agency, Customs has authorities and tools not available to the FAA. Further, it has developed successful partnership programs with the airlines. By using the Customs Service to complement the FAA, FBI, and other agencies, the Commission believes that aviation security would be significantly enhanced.

The Customs Service has thousands of agents currently stationed at US international airports. Customs has statutory authority to search people and cargo to stop contraband from coming in or going out of the country. Customs has arrangements with most airlines to receive automated passenger and cargo manifests. These arrangements could be adapted for use in security procedures. Customs, as a law enforcement agency, has access to automated law enforcement databases that could be an invaluable tool in fighting not just drugs but terrorism. The Commission recommends that Customs upgrade and adapt its computer systems to take on this additional responsibility.

Status

The Customs Service is deploying 140 inspectors and investigators to critical airports.

The U.S. Customs Service is in the process of deploying 140 inspectors, intelligence analysts, and criminal investigators (special agents) to critical airports, for aviation security; anti-terrorism efforts, and to perform increased searches of passengers, baggage, and cargo departing the United States. Customs is purchasing and deploying additional x-ray vans, tool trucks and radiation detector pagers at critical airports to assist in these searches.

The Customs Service and the Federal Aviation Administration (FAA) are working with an FAA contractor to study the technical issues associated with converting Customs' Automated Targeting System (ATS), which is designed for sea cargo analysis, to air cargo analysis. Although ATS is designed for contraband analysis and detection in the sea cargo environment, the plan would be to add anti-terrorism criteria to the system and convert it to an air cargo environment. The study should be completed in the Spring of 1997.

3.23. Give properly cleared airline and airport security personnel access to the classified information they need to know.

Recommendation from Initial Report dated September 9, 1996

Give properly cleared airline and airport security personnel access to the classified information they need to know. The red tape of classification is getting in the way of security. There are two problems that must be solved. The first involves intelligence information about specific terrorist threats. The CIA or FBI pass the threat information to the FAA, which in turn alerts the airlines. But the information gets progressively "sanitized" to avoid jeopardizing the source. Often, airlines are just told what to do but not why they are to do it. If airlines were provided more information about the threat, they could help design more effective responses.

Corporate personnel are often cleared to know the most secret information when national security is at stake. Defense contractors with access to highly classified intelligence information are far from rare. For that matter, airline personnel were cleared to know highly classified information during Operation Desert Storm, when commercial aircraft transported 80% of our troops to Saudi Arabia.

The other classified information problem involves the airport vulnerability assessments in recommendation number 2. These assessments become classified information if they conclude that a high degree of vulnerability exists. Some people responsible for security at the airports are not cleared to receive classified information.

The Commission recommends that the FAA arrange for appropriate airline and airport security personnel to be cleared to address this problem.

Status

The FAA is arranging for adequate clearance levels at airports and airlines.

The FAA has agreed to collaborate more closely with airlines and airports in developing responses to threat information, and has agreed to disseminate vulnerability assessments to properly cleared officials.

3.24. Begin implementation of full bag-passenger match.

Recommendation from Initial Report dated September 9, 1996

Begin implementation of full bag-passenger match. Matching bags to passengers ensures that the baggage of anyone who does not board the plane is removed. Full bag match ensures that no unaccompanied bag remains on board a flight.

Manual and automated systems to conduct full bag match have been employed in international aviation for several years, but need additional work to ensure they can be phased into domestic airline operations. The Commission recommends implementing full bag match at selected airports, including at least one hub, within sixty days to determine the best means of implementing the process system-wide.

Status

The Commission remains committed to baggage match as a component of a comprehensive, layered security program aimed at keeping bombs and explosive devices off airlines. New technologies are available which facilitate positive and automated identification of the bag as it is tracked through the system. Automatic bag tracking systems can also facilitate the removal of bags from aircraft if required by security concerns. The Commission feels that these technologies

can be combined with the development of a passenger manifest to implement a passenger-bag matching system as one component of a layered approach to aviation security.

The Commission urges the industry and the FAA to work together to hasten the development of sophisticated technology for determining the presence of explosives in checked baggage. Until such machines are widely available, the Commission believes that bag match, initially based on profiling, should be implemented no later than December 31, 1997. The Commission's recommendation is consistent with that of the Baseline Working Group's recommendation in this contentious and difficult area.

By that date, the bags of those selected either at random or through the use of automated profiling must either be screened or matched to a boarded passenger. No unaccompanied bag should be transported on a passenger aircraft unless (1) it has been screened by a screening method that meets the FAA standard, or (2) it belongs to a passenger who at the time of check in was neither randomly selected for security review nor selected by the profile for further review. This approach is the most effective methodology available now. It would allow the aviation industry to remove the unaccompanied bag or bags which represent the greatest threat.

3.25. Provide more compassionate and effective assistance to families of victims.

Recommendation from Initial Report dated September 9, 1996

Providing more compassionate and effective assistance to families of victims. The tragedy of losing a loved one in an aviation disaster can be unnecessarily and cruelly compounded by disjointed or incomplete information in the aftermath of the incident. At the Commission's urging, the President is directing the National Transportation Safety Board to take the lead in coordinating provision of services to families of victims. The NTSB will work with the Departments of State, Defense, Transportation, Health and Human Services, the Federal Emergency Management Agency, and private organizations like the Red Cross.

Status

The NTSB was given responsibility to coordinate response.

On October 9, 1996, Congress passed the Aviation Family Disaster Act of 1996 giving the National Transportation Safety Board (NTSB) the responsibility for aiding families of aircraft accident victims and coordinating the federal response to major domestic aviation accidents.

Since the signing of the law, NTSB has completed the initial phase of coordinating the federal response to a major domestic aviation accident. The NTSB is in the process of finalizing existing interim Memoranda of Understanding with the Department of State, Department of Defense, Department of Health and Human Services, Department of Justice, Department of Transportation, Federal Emergency Management Agency, and the American Red Cross (ARC). The NTSB has been vigorously assisting the airline industry to develop a model plan to address the needs of aviation disaster victims and their families. Letters from Chairman Jim Hall and DOT Secretary Federico Peña went out in November, 1996, to airlines informing them of their responsibility for producing an emergency response plan as specified in section 703 of the Aviation Disaster Family Assistance Act of 1996.

An interim federal response has been developed by the NTSB that assigns responsibilities to the airlines and participating federal agencies. The ARC will be responsible for family care and

mental health; the Department of Health and Human Services (HHS) will be responsible for identification and preparation of human remains (with support by the Department of Defense, as needed); and the Department of State will assist the airlines and NTSB when foreign passengers are involved in an aviation accident. The Federal Emergency Management Agency will provide the NTSB with communications equipment and additional public affairs personnel. If the aviation disaster is officially determined to be a criminal act, the Department of Justice will provide information to families on entitlements and benefits under the Victims of Crime Act. Many elements of the interim NTSB plan were successfully implemented and tested following the United Express Flight 5925/5926 accident in Quincy, Illinois on November 19, 1996.

The Department of Transportation and the NTSB have formed a task force to provide recommendations on the issues elaborated in section 704 of the Aviation Disaster Family Assistance Act of 1996. The task force includes officials from the NTSB, Federal Emergency Management Agency, American Red Cross, airlines, family groups, and organizations considered appropriate by the Secretary of Transportation. Airlines are required by the Act to submit their plans to the Secretary of Transportation and to the Chairman of the NTSB by April 9, 1996.

Cross Reference to Related Recommendations

This recommendation is related to recommendations 4.2 and 4.3.

3.26. Improve passenger manifests.

Recommendation from Initial Report dated September 9, 1996

Improve passenger manifests. The Commission believes that Section 203 of the 1990 Aviation Security Improvement Act, which requires airlines to keep a comprehensive passenger manifest for international flights, should be implemented as quickly as possible. While Section 203 does not apply to domestic flights, the Commission urges the Department of Transportation to explore immediately the costs and effects of a similar requirement on the domestic aviation system.

Status

The DOT is proceeding with rulemaking to require international and domestic manifests.

The DOT has developed a draft rule covering domestic flight manifesting, and an Advance Notice of Proposed Rulemaking (ANPRM), should be issued in early 1997. The DOT anticipates an extensive comment period for the ANPRM, because no data exist related to domestic flights. The final rule for domestic manifesting is likely to be published in 1998.

3.27. Significantly increase the number of FBI agents assigned to counterterrorism investigations, to improve intelligence, and to crisis response.

Recommendation from Initial Report dated September 9, 1996

Significantly increase the number of FBI agents assigned to counter-terrorism investigations, to improve intelligence, and to crisis response. The Commission recognizes the vital role that the FBI plays in fighting terrorism against Americans, and recommends that the agency's ability to assess vulnerabilities, gather and analyze intelligence, and conduct forensic investigations be augmented.

3.28 Provide anti-terrorism assistance in the form of airport security training to countries where there are airports served by airlines flying to the US.

Recommendation from Initial Report dated September 9, 1996

Provide anti-terrorism assistance in the form of airport security training to countries where there are airports served by airlines flying to the US. The Commission believes that it is important to raise the level of security at all airports serving Americans. Assisting foreign countries through training in explosive detection, post-blast investigation, VIP protection, hostage negotiation, and incident management is an important means of achieving this goal.

Status

The State Department and the FAA are sponsoring domestic and foreign courses.

The Department of State and the FAA continue to jointly sponsor Anti-Terrorism Assistance Training Programs. In FY 1997, six domestic law enforcement classes and six international/foreign classes will be held.

3.29. Resolve outstanding issues relating to explosive taggants and require their use.

Recommendation from Initial Report dated September 9, 1996

Resolve outstanding issues relating to explosive taggants and require their use. The use of taggants can be a critical aid when investigating explosions on aircraft and in bringing terrorists to justice. The Commission recommends that remaining issues relating to the use of these taggants, including the analysis of black and smokeless powder, be resolved as quickly as possible, and that requirements for the use of taggants then be put into place.

Status

Studies by the ATF have been initiated, with results expected in April, 1997.

ATF has contracted with the National Academy of Sciences/National Research Council to conduct an independent study. The International Fertilizer Development Center is under contract with ATF to conduct a study on the economic and agronomic effects of tagging ammonium nitrate fertilizer. A report is due to Congress on the study findings late in April, 1997.

3.30. Provide regular, comprehensive explosives detection training programs for foreign, federal, state, and local law enforcement, as well as FAA and airline personnel.

Recommendation from Initial Report dated September 9, 1996

Provide regular, comprehensive explosives detection training programs for foreign, federal, state, and local law enforcement, as well as FAA and airline personnel. The Commission believes that law enforcement agencies with expertise in explosives detection can provide valuable training to those involved in aviation security.

Status

The ATF and FAA are preparing a training course for airport law enforcement agencies.

The ATF is developing a curriculum on Improvised Explosive Devices. The pilot program is planned for Spring, 1997. In addition to ongoing explosives training for ATF personnel, three

states and local Advanced Explosives Investigative Techniques classes are scheduled at the Federal Law Enforcement Training Center in Glynco, Georgia. Finally, post blast and improvised explosive device recognition training will be conducted by 198 ATF certified explosive specialists for State and Local law enforcement personnel throughout the United States.

3.31. Create a central clearinghouse within government to provide information on explosives crime.

Recommendation from Initial Report dated September 9, 1996

Create a central clearinghouse within government to provide information on explosives crime. The Commission recommends that a central clearinghouse be established to compile and distribute important information relating to previously encountered explosive devices, both foreign and domestic.

Status

The Secretary of the Treasury has established a national repository at the ATF.

The Secretary of the Treasury was authorized to establish a national repository of information on incidents involving arson and the suspected criminal misuse of explosives. All Federal agencies having information concerning such incidents report the information to the Secretary. The ATF National Repository committee, has established a target date of October 1, 1997, for the implementation of the pilot project, with full implementation by the end of FY 1998. The system will be designed and constructed in incremental stages providing varying levels of service as early as April, 1997.

Chapter Four: Responding to Aviation Disasters

> *"I am testifying today to give a sense of purpose to the death of my daughter and the others who lost their lives on TWA flight 800. I believe that by identifying areas in need of improvement, we can successfully generate a change in policy and action for the future. We will create a living memorial to their death."*
>
> - Aurlie Becker.

The Commission's recommendations included setting a goal of reducing the rate of fatal accidents by a factor of five over the next ten years, and outlined a course of action that would help achieve that goal. Additionally, the Commission has recommended specific steps to reduce the threat of terrorism against commercial aircraft. However, it must be recognized that, in spite of the strongest efforts of all involved, disasters may still occur. While government and industry must do everything possible to prevent them, they must also be prepared to respond quickly and compassionately when one does take place. The tragedy of losing a loved one in a plane crash can be cruelly and needlessly compounded by an uncoordinated, ineffective, or uninformed response to family members.

The infrequency of commercial aviation accidents has complicated the response to such disasters. For example, when TWA Flight 800 crashed on July 17, 1996, it had been over twenty years since that airline's last fatal accident. Most crashes simply overwhelm state and local response teams, and take a tremendous toll on airline employees, who must immediately begin addressing the concerns of family members at the same time that they are coping with the loss of their own colleagues.

Responding to the frustrations and complaints of family members over the treatment they received after accidents, President Clinton signed an executive memorandum giving the National Transportation Safety Board (NTSB) the responsibility for coordinating federal services to families after aviation disasters. Congress subsequently passed legislation further expanding and clarifying the NTSB's new responsibilities.

Since its creation in 1967, the NTSB is the one entity that has been on the site of every transportation disaster. The Commission applauds the designation of the NTSB as the coordinating agency after aviation disasters, and commends the agency for its diligence in carrying out its new responsibilities.

Recommendations

4.1. The National Transportation Safety Board (NTSB) should finalize by April, 1997, its coordinated federal response plan to aviation disasters, and Congress should provide the NTSB with increased funding to address its new responsibilities.

The NTSB has developed an interim plan for a coordinated federal response to aviation disasters, which should be finalized as quickly as possible. That interim plan was put to the test in two recent disasters involving commuter aircraft, and resulted in clear improvements in service. The Commission commends the work of the NTSB and believes that only through a coordinated effort, and establishment of a standard protocol, can effective support be provided to local governments and airlines to meet the needs of family members. The Commission recommends

that Congress provide such additional funds necessary to allow the NTSB to carry out the new responsibilities described in the Aviation Disaster Family Assistance Act of 1996.

4.2. The Department of Transportation should coordinate the development of plans for responding to aviation disasters involving civilians on government aircraft.

The families of civilians killed while traveling on government aircraft face the same traumas and challenges as those whose loved ones were killed on commercial flights. However, the response to such disasters is covered under different laws and procedures. Those differences, and a clear statement regarding their rights and benefits in the event of an aviation disaster, should be provided to passengers on government aircraft prior to boarding. The Commission believes that it is essential that those families receive assistance comparable to that provided after commercial disasters through the enhanced role of the NTSB. The Commission urges the DOT to work with the NTSB, DoD, other agencies, and family members to develop plans to accomplish that goal by September 1997 and to evaluate the need to revise existing laws and regulations governing the rights and benefits of civilians on government aircraft.

4.3. The Department of Transportation and the NTSB should implement key provisions of the Aviation Disaster Family Assistance Act of 1996 by March 31, 1997.

This Act authorized the formation of a task force to study the need for modifications to laws or regulations that would result in improvements to the treatment of family members of victims of aviation disasters. This task force will consider, among other things, issues relating to treatment of families by the media and legal community. Additionally, the Commission urges the task force to consider the development of uniform guidelines for notification, autopsies and DNA testing and other issues raised by family members, including rights and treatment of foreign citizens and non-traditional families, securing crash sites, availability of cockpit voice recorder transcripts, and the composition of accident investigation teams. The Commission expects that establishment of the task force will be one of the first priorities for the new Secretary of Transportation, and that it will be accomplished without delay.

In November 1996, the Chairman of the NTSB and the Secretary of Transportation (DOT) sent a joint letter to airlines to underscore the importance of this Act and to advise on the responsibilities of airlines to formulate disaster response plans. Those plans are due to the DOT and the NTSB by early April 1997.

In addition, the NTSB should work with the State Department through Memoranda of Understanding or other mechanisms to provide direct services to the families of U.S. citizens who are victims of disasters on U.S. carriers abroad.

4.4. The United States Government should ensure that family members of victims of international aviation disasters receive just compensation and equitable treatment through the application of federal laws and international treaties.

Certain statutes and international treaties, established over 50 years ago, historically have not provided equitable treatment for families of passengers involved in international aviation disasters. Specifically, the Death on the High Seas Act of 1920 (Act) and the Warsaw Convention of 1929 (Convention), although designed to aid families of victims of maritime and aviation disasters, have inhibited the ability of family members of international aviation disasters from obtaining fair compensation. An recent agreement by U.S. airlines waived the liability

limits of the Warsaw Convention from the current $75,000 to about $143,000. However, the Death on the High Seas Act may still limit recoveries available after certain aviation disasters to $2,300.

Congress passed the Justice for Victims of Terrorism Act of 1996 as a first step to remedy this situation. The Commission urges the Administration and the Congress to take additional steps necessary to ensure fairer and more equitable treatment of families of victims of international aviation disasters, including the establishment of an advisory board, pursuant to section 211 of the Aviation Security Improvement Act of 1990, to develop a plan for equitable compensation of victims of aviation disasters.

4.5 Provisions should be made to ensure the availability of funding for extraordinary costs associated with accident response.

The NTSB and other federal, state, and local government agencies can incur significant costs in the course of an accident response. Those costs cannot be anticipated nor budgeted for in advance, and their recovery has been made on an ad hoc basis, further complicating an already difficult situation. The Commission urges the Administration and Congress to address this issue, through the consideration of measures such as requirements for increased insurance coverage for companies involved in air transportation.

4.6. Federal agencies should establish peer support programs to assist rescue, investigative, law enforcement, counseling and other personnel involved in aviation disaster response.

The men and women who respond on the scene of aviation disasters can suffer from considerable trauma and emotional impact. Specially trained peer support counselors, who are themselves investigators who have had similar experiences, should be dispatched to the scene of a disaster to help those involved in the response effort. The Bureau of Alcohol, Tobacco, and Firearms (ATF), because of its frequent investigations of arson and bombings, has developed such a program for its agents. The NTSB, the FAA, and other agencies should work with the ATF to develop programs for their personnel within existing budgets.

Conclusions

The Commission believes that each of its recommendations is achievable. But, the Commission has no authority to implement its recommendations. That responsibility lies with government and industry. Many of the proposals will require additional funding. Some of them will require legislation. Each of them requires sustained attention. We now urge the President to make these recommendations his own. We urge Congress to provide the necessary legislation and funding. We urge the incoming leadership of the DOT and the FAA to make fulfillment of these recommendations a cornerstone of their work. We urge the commercial aviation industry to take up the technical and organizational challenges. We urge the thousands of private pilots across the nation to convert their enthusiasm for flying into a commitment make the changes necessary to enhance safety for everyone flying. And, we urge the American people to demand that this country take the steps now to do what is needed.

By virtually any measure, the aviation system in the United States is the best in the world. But, every system can be improved; made safer, more secure, and more efficient. Every crash is a stark reminder of that reality.

The world is changing, and so, too, must our aviation policies and practices. They should challenge everyone involved in aviation to improve. They should serve as the model for the rest of the world, and lead to improvements that will make passengers safer, regardless of where they board their flight.

There are few areas in which the public so uniformly believes that government should play a strong role as in aviation safety and security. Aviation is an area over which the average person can exert little control; therefore, it becomes government's responsibility to work with industry to make sure that Americans enjoy the highest levels of safety and security when flying. Problems in these areas contribute to an erosion of public faith in aviation, and in government itself. The Commission has laid out an aggressive agenda to help address those concerns, and believes that the implementation of this course of action must be the top priority for all those involved in aviation.

The Commission expresses its appreciation to: President Clinton, for his heartfelt interest and his strong support for this work; to the 104th Congress, for its decisive action in response to the initial report; to the men and women in numerous government agencies, for their work in identifying issues and in implementing recommendations; and to the representatives of airlines, airports, labor, and general aviation who provided invaluable input.

Finally, and especially, the Commission thanks the families of those who have lost loved ones in crashes, for their commitment and their insights, and for ensuring that the Commission always kept its focus on the ultimate goals.

APPENDICES

Appendix A

Recommendations of the Members of the Civil Liberties Advisory Panel to the White House Commission on Aviation Safety and Security

The members of the civil liberties advisory panel were invited to meet with the Commission on January 17, 1997, to pose questions and offer their thoughts on the draft proposal to "implement an automated profiling system for all passengers on all flights." Draft Proposal II.8. In the absence of any specific information about the profiling system that is being considered, our individual comments at the meeting, and our collective statements set forth below are, of necessity, general in nature. In addition, those comments and these recommendations are limited to the general proposal to finalize and deploy an automated profiling system on a system-wide basis. They do not address the civil liberties implications of other elements of Draft Proposal II.8 (dealing with "watch lists," "real time" feedback to airlines, and the creation of a permanent consortium for sharing strategic aviation intelligence), or any other proposals considered by the Commission.

In light of the serious civil liberties issues raised by any profiling system, we urge the Commission and the President to consider carefully whether any profiling system is appropriate.

Should the Commission decide to recommend an automated profiling system, we urge the Commission to include the following principles among its recommendations (without suggesting that this exhausts the possible civil liberties concerns):

1. Any profile should not contain or be based on material of a constitutionally suspect nature — e.g., race, religion, national origin of U.S. citizens — and should be consistent with the constitutional right of freedom to travel.
2. Factors to be considered for elements of the profile should be based on measurable, verifiable data indicating that the factors chosen are reasonable predictors of risk, not stereotypes or generalizations. Efforts should be made to avoid using characteristics that impose a disproportionate burden of inconvenience, embarrassment, or invasion of privacy of members of minority racial, religious or ethnic groups. Law enforcement data

should be used with caution and only to the extent that the data used is a reasonable predictor of risk, because these data may be incomplete or inaccurate and may not be directly relevant to the goal of enhancing aviation security.

3. Passengers should be informed of the airlines' security procedures and of their right to avoid any search of their person or luggage by electing not to board the aircraft. When the use of an automated profiling system leads to a request to open luggage or to submit to a personal search, an explicit reminder of the option not to board the aircraft should be given.
4. Searches arising from the use of an automated profiling system should be no more intrusive than search procedures that could be applied to all passengers. For example, imaging devices which project an image of a passenger's body underneath his or her clothing should not be used on a passenger solely because the passenger fits the profile or has been selected at random. The procedures applied to those who fit the profile should also be applied on a random basis to some percentage of passengers who do not fit the profile.
5. Procedures for searching the person or luggage of, or for questioning, a person who is selected by the automated profiling system should be premised on insuring respectful, non-stigmatizing, and efficient treatment of all passengers.
6. The panel is concerned that the maintenance or dissemination of records compiled in connection with an automated profiling system may invade the privacy of passengers. Reasonable restrictions on the maintenance of records and strict limitations on the dissemination of records should be developed. To the extent that records are maintained, there should be means for passengers to challenge the accuracy of personally identifiable information.
7. An independent panel should be appointed and given appropriate authority to monitor implementation of airport security procedures to insure that they do not unduly limit the exercise of civil liberties of the traveling public and do not unduly require augmented searches of the person or baggage of any particular group or groups.
8. Any profiling system should have a sunset provision which requires it to be terminated by a date certain unless an affirmative decision is made to continue use of the system. The assessment of the system should take account of its efficacy and necessity in light of improvements in detection technology as well as the civil liberties impact of the program.
9. Air carrier security plans submitted for approval by the Federal Aviation Administration to implement an automated profiling system should be consistent with these guidelines.

Floyd Abrams, Esq., Cahill Gordon & Reindel
Nihad Awad, Council on American-Islamic Relations
Kevin T. Baine, Esq., Williams & Connolly
David J. Bodney, Esq., Steptoe & Johnson LLP
Dr. Morton H. Halperin, Council on Foreign Relations
Professor David A. Harris, Univ. of Toledo College of Law
Professor Gerard E. Lynch, Columbia Univ. School of Law
Gregory T. Nojeim, American Civil Liberties Union
Robert Ellis Smith, Privacy Journal
- Affiliation of each member listed for purposes of identification only

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Appendix B

Chart of Recommendations to be Implemented by the FAA

Appendix C

White House Commission on Aviation Safety and Security Membership

Lieutenant General James A. Abrahamson, USAF (Ret), is the founder of International Air Safety, LLC., and Air Safety Consultants, Inc. He has a global reputation in the fields of technical program management, international business, and Air Traffic Management. He served as Chairman of the Board of Oracle Corporation and President of Hughes' Transportation Sector.

Jesse (Jack) Beauchamp. B.S., California Institute of Technology, 1964; Ph.D. Harvard University, 1967; Professor of Chemistry, California Institute of Technology, 1967 - Present; member, National Academy of Sciences. He has served on numerous scientific advisory committees and panels of the NRC and the Department of Defense. He has expertise in the identification of chemical species using a wide range of instrumental methods. His current research activities include the development of new methods for the detection of explosives.

In 1973 Dr. Franklin R. Chang-Diaz became involved in the United States' controlled fusion program and in the design and operation of fusion reactors. As a visiting scientist with the M.I.T. Plasma Fusion Center from October 1983 to December 1993, he led the plasma propulsion program there to develop this technology for future human missions to Mars. In December 1993, he was appointed Director of the Advanced Space Propulsion Laboratory at the NASA Johnson Space Center. Dr. Chang-Diaz became an astronaut in August 1981 and is a veteran of five space flights. He has logged over 1,033 hours in space. Dr. Chang-Diaz received a bachelor of science degree in mechanical engineering from the University of Connecticut in 1973 and a doctorate in applied plasma physics from the Massachusetts Institute of Technology in 1977.

Antonia Handler Chayes is a Senior Advisor and Board Member of Conflict Management Group (CMG), a non-profit conflict resolution consulting firm, and a Senior Consultant to JAMS/Endispute, a firm that provides cost-effective alternatives to traditional litigation. Ms. Chayes is also an Adjunct Lecturer at the Kennedy School of Government at Harvard Law School. Previously she served as Assistant Secretary and as Under Secretary of the United States Air Force. Ms. Chayes served as a Commissioner with the Commission on Roles and Missions of the United States Armed Forces and the DOD-CIA Joint Security Commission. She has been a director of United Technologies since 1981, and is a member of the American Law Institute and the Council on Foreign Relations. Ms. Chayes serves on Advisory Boards of Columbia University School for International and Public Affairs and the Center for Preventive Action at the Council on Foreign Relations.

William T. Coleman, Jr. - Senior Partner, O'Melveny & Myers; former U.S. Secretary of Transportation in the Ford Administration; Chairman, NAACP Legal Defense and Educational Fund, Inc.; Officer of the French Legion of Honor; Recipient of the Presidential Medal of Freedom conferred by President Clinton in September, 1995.

Mrs. Victoria Cummock is President of Families of Pan Am 103/Lockerbie and a member of the FAA Security Baseline Work Group. As a disaster victims advocate, she has worked with hundreds of victims families including Oklahoma City, Valujet 592 and TWA 800. Her work in

Disaster Crisis Management, Aviation Security and Counter-terrorism, has brought about many legislative changes including the "1990 Aviation Security Improvement Act", the "1996 Iran-Libyan Sanctions Act", the "1996 Anti-terrorism and Effective Death Penalty Act" and the "Aviation Disaster Family Assistance Act of 1996."

John M. Deutch, professor at Massachusetts Institute of Technology (MIT); government assignments include former Director of the Central Intelligence Agency, Deputy Secretary of Defense, Under Secretary of Defense for Acquisition and Technology, Director of Energy Research and Acting Assistant Secretary for Energy Technology at the Department of Energy. Born in Brussels, Belgium, Mr. Deutch became a US citizen in 1945; B.A. in history and economics from Amherst College, a B.S. in chemical engineering and a Ph.D. in physical chemistry from MIT; married, three sons.

Kathleen Flynn is the mother of four children and is an educator by profession. She is currently the Director of Development at the Academy of Saint Elizabeth, Convent Station NJ. Mrs. Flynn graduated from Marymount College in Tarrytown, NY with a Bachelor of Arts degree in Political Science and has done graduate studies at the University of Rochester. An anti-terrorism/airport security and safety advocate, Mrs. Flynn's activism was triggered by the murder of her oldest child on Pan Am Flight 103 over Lockerbie, Scotland on December 21, 1988. Mrs. Flynn is committed to the fight for justice and truth in the bombing of Flight 103 and is dedicated to: increased safety/security for all airline passengers and the obliteration of terrorism throughout the world.

Louis J. Freeh served as an FBI Special Agent from 1975 to 1981 in the New York City Field Office and at FBI Headquarters in Washington, DC. In 1981, he joined the U.S. Attorney's Office for the Southern District of New York as an Assistant U.S. Attorney. Subsequently, he held positions there as Chief of the Organized Crime Unit, Deputy U.S. Attorney, and Associate U.S. Attorney. In July 1991, former President George Bush appointed Director Freeh a United States District Court Judge for the Southern District of New York. He was serving in this position when nominated to be Director of the FBI by President Bill Clinton on July 20, 1993. He was confirmed by the U.S. Senate on August 6, 1993, and was sworn in as Director of the FBI on September 1, 1993.

James Evan Hall has been Chairman of the National Transportation Safety Board since June 1994. In June 1996, he was presented an Aviation Laurel by Aviation Week and Space Technology magazine for his efforts to resolve what happened to USAir flight 427. Mr. Hall chaired the Board's hearings into the flight 427 disaster, the 1994 runway collision in St. Louis, and air safety in Alaska.

Brian Jenkins is Deputy Chairman of Kroll Associates, an international investigative and consulting firm, and one of the world's leading authorities on international terrorism. From 1972 to 1989 he directed RAND Corporation's research on political violence and international crime and was also Chairman of RAND's Political Science Department for four years.

As Under Secretary of the Treasury for Enforcement, Raymond W. Kelly supervises Treasury's law enforcement bureaus, including the Customs Service, the Secret Service, the Bureau of Alcohol, Tobacco and Firearms, the Federal Law Enforcement Training Center, FinCEN, and the IRS Criminal Investigation Division. Mr. Kelly has over 30 years of law enforcement experience, including serving as New York City Police Commissioner during the World Trade

Center bombing investigation. As the Director of the International Police Monitors of the Multinational Force, Mr. Kelly helped establish an interim security force in Haiti. Additionally, Mr. Kelly is the United States' representative on the Executive Committee of Interpol.

General John Michael Loh, USAF (retired) concluded his thirty five year Air Force career in 1995 as the first commander of Air Combat Command, the command responsible for providing all U.S. based Air Force combat and support forces for action worldwide. He has extensive experience leading large organizations toward greater levels of quality and productivity improvement and his organization was cited by the Vice- President as the model for reinventing government and understanding the principles of quality improvement. General Loh is a consultant for defense companies and specializes in strategic requirements planning, business development, proposal preparation and evaluation, program management support, quality improvement, and congressional relations. General Loh is a graduate of the U.S. Air Force Academy and holds a Master's degree in aero engineering from M.I.T.

Bradford Parkinson of Stanford University, the original Department of Defense (DoD) Global Positioning System (GPS) Program Director, has a broad background in management, modern control, astrodynamics, simulation, avionics, and navigation. He manages the NASA/Stanford Relativity Mission, Gravity Probe B (GPB) and also directs Stanford research on innovative uses of GPS. He is Chair of the NASA Advisory Council and a member of the Presidential Commission on Air Safety and Security. Dr. Parkinson is a member of the AIAA, AAS, IEEE, ION, and Royal Institute of Navigation (RION). He has received many distinguished awards and authored more than 80 papers on Guidance, Navigation and Control. He is a fellow of the AIAA and the RION, and a member of the National Academy of Engineering.

Federico Peña is currently the 12th US Secretary of Transportation. From 1983-91, Secretary Peña was Mayor of Denver leading an urban and economic renaissance. He also has served as a Colorado legislator and a civil rights lawyer. Mr. Peña did his undergraduate work at the University of Texas where he also received his law degree. Born in Laredo, Texas, in 1947, Secretary Peña is the third of six children of a cotton broker. He and his wife, world-class marathon runner and attorney Ellen Hart-Peña, live with their two children in Northern Virginia.

Franklin D. Raines is the Director of the Office of Management and Budget

Patrick A. Shea is President of Patrick A. Shea, PC. He currently practices law in Utah and Washington, DC and is an Adjunct Professor of Political Science at the University of Utah. He serves as President of the Franklin Quest Championship and is a member of the Board of Advisors, Huntsman Center for Global Competition and Innovation, Wharton School of Business, University of Pennsylvania. He served as Counsel to the U.S. Senate Foreign Relations Committee and as Assistant Staff Director to the U.S. Senate Intelligence Committee. He is past President of the Stanford Alumni Association. He is past Chair of the Utah Democratic Party and Chair of the Credential Committee to the Democratic National Committee.

Laura D'Andrea Tyson is the former Chair of the Council of Economic Advisors.

Carl W. Vogt - Senior partner, Fulbright & Jaworski, L.L.P.; Chairman of the National Transportation Safety Board (1992-94); member, FAA Aviation System Capacity Advisory Committee (1990) and Ninety Day Safety Review Committee (1996); Governor, Flight Safety

Foundation; Fellow, Royal Aeronautical Society; former Marine, carrier based, jet fighter pilot; licensed commercial pilot.

Born in Baltimore, Maryland, George H. Williams, a retired real estate broker, served in the Korean War from 1951-52 as a Scout-sniper in the US Marine Corps. Mr. Williams' son and only child, George Watterson Williams was killed on Pan Am Flight 103 over Lockerbie, Scotland on Dec 21, 1988. Since that day, Mr. Williams has dedicated his life to the cause of justice for all victims of terrorism. He has served on the Board and is now President of The Victims of Pan Am 103, Inc., a proactive group instrumental in the passage of the Airline Safety and Security Improvement Act of 1990 and several subsequent anti-terrorist legislative initiatives.

Appendix D

Executive Order 13015 of August 22, 1996

White House Commission on Aviation Safety and Security

By the authority vested in me as President by the constitution and the laws of the United States, including section 301 of title 3, United States Code, it is hereby ordered as follows:

Section 1. Establishment. There is established the White House Commission on Aviation Safety and Security (the "Commission"). The Commission shall be of not more than 25 members, to be appointed by the President from the public and private sectors, each of whom shall have experience or expertise in some aspect of safety or security. The Vice President shall serve as Chair of the Commission.

Section 2. Functions.

(a) The Commission shall advise the President on matters involving aviation safety and security, including air traffic control.

(b) The Commission shall develop and recommend to the President a strategy designed to improve aviation safety and security, both domestically and internationally.

(c) The Chair may, from time to time, invite experts to submit information to the Commission; hold hearings on relevant issues; and form committees and teams to assist the Commission in accomplishing its objectives and duties, which may include individuals other than members of the Commission.

Sec. 3. Administration.

(a) The heads of executive departments and agencies shall, to the extent permitted by law, provide the Commission such information with respect to aviation safety and security as the Commission requires to fulfill its functions.

(b) The Commission shall be supported, both administratively and financially, by the Department of Transportation and such other sources (including other Federal agencies) as may lawfully contribute to Commission activities.

Sec. 4. General.

(a) I have determined that the Commission shall be established in compliance with the Federal Advisory Committee Act, as amended (5.U.S.C. App.2). Notwithstanding any other Executive Order, the functions of the President under the Federal Advisory Committee Act, as amended, shall be performed by the Secretary of Transportation in accordance with the guidelines and procedures established by the Administrator of General Services, except that of reporting to the Congress.

(b) The Commission shall exist for a period of 6 months from the date of this order, unless extended by the President.

William Jefferson Clinton

The White House August 22, 1996

(FR Doc. 96-21996)

Appendix E

List of White House Commission Hearings with Agendas

Appendix F

White House Commission Staff

- Gerald B. Kauvar, Staff Director
- Audrey Adams, U.S. Customs Service
- Nancy Best, National Aeronautics and Space Administration
- William R. Boesch, Consultant (ret. American Airlines)
- Patricia R. Burgess, Bureau of Alcohol, Tobacco, and Firearms
- James Chapek, Sandia Laboratories
- Mary Ellen Cole, Central Intelligence Agency, DCI Counterterrorism Center
- Lt Col Rick Dugan, HQ USAF/LGMY
- Gerald L. Epstein
- U.S. Department of Energy/White House Office of Science and Technology Policy
- Doug Farbrother, National Performance Review
- Carolina E. Forrester, Federal Aviation Administration
- D. Lynn Gordon, U.S. Customs Service
- Eric Johnson, U.S. Department of Transportation
- Lisa A. Jung, Office of the Secretary of Defense
- Charles E. Keegan, Federal Aviation Administration
- John F. Hennigan Jr., Federal Aviation Administration
- Charles H. Huettner, National Aeronautics and Space Administration
- Doug Lambert, Bureau of Alcohol, Tobacco, and Firearms
- John F. Lenihan, U.S. Customs Service
- Howard W. Luker II, Federal Bureau of Investigation
- Laurie Lyons, National Performance Review
- Major Diana R. Malone, United States Air Force

- Jeff Morales, National Performance Review
- Stephen G. Moran, Office of Science Technology and Policy
- Major Steve Moss, USAF; National Performance Review
- Max D. Payne, Federal Aviation Administration
- Richard K. Pemberton, U. S. Department of Transportation
- Michael Perron, U.S. Customs Service
- Christina Quash, Office of the Secretary of Defense
- Armen A. Sahagian, Federal Aviation Administration
- Daniel P. Salvano, Federal Aviation Administration
- Herb Schlickenmaier, National Aeronautics and Space Administration
- Dr. Russell D. Shaver, The MITRE Corporation
- Lisa T. Simmons, U.S. Department of Transportation
- Bob Stone, National Performance Review
- H. Lee Tucker, Federal Aviation Administration
- Greg Woods, National Performance Review
- Edwin L. Worthington, Federal Bureau of Investigation

Appendix G

We wish to extend our thanks to the following people who provided special assistance to the Commission

- Mr. James J. Aldo, Vivid Technologies
- Ms. Evie Burch, Department of Transportation, Directorate of Security
- Ms. Carol Carmody, U.S. Representative to the ICAO
- Ms. Linda Hess, Department of Commerce
- Mr. John Klinkenberg, Northwest Airlines
- Mr. James Lytle, GSA, Office of the Chief Information Officer
- Mr. Douglas L. McMakin, Battelle Pacific Northwest Laboratories
- Ms. Kathy Montgomery, General Services Administration Security Office
- Mr. James F. Padgett, Federal Aviation Administration
- Lt Col Jim Pennock, Office of Assistant Secretary of the Air Force for Acquisition
- Mr. Paul Pillar, Central Intelligence Agency Counterterrorism Center
- Rear Admiral Paul J. Pluta, Office of Intelligence & Security, Dept. of Transportation
- Mr. Allan Rivlin, Department of Health and Human Services
- Mr. Ron Smith, Georgia Tech Research, Inc.
- Ms. Karen Wehner, Senior Advisor to the Under Secretary of the Treasury

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Appendix H

Special Acknowledgments from the Commissioners

Each of the Commissioners wish to express our thanks to President Clinton for giving us the opportunity to serve on the White House Commission on Aviation Safety and Security and thereby to contribute to these important issues.

We wish to especially thank Vice President Gore, our chairman, for his strong personal leadership and in-depth involvement with us throughout our effort.

Finally, we wish to salute Dr Gerry Kauvar and all of the members of the Commission staff. They worked tirelessly and made extraordinary efforts to ensure that every issue was fully researched and that individual Commissioners had every opportunity to personally talk to many experts with opinions on all sides of the issues before us. We are grateful to the staff members for their dedication and wish to acknowledge that the success of the Commissioners efforts rest in a large part on the quality and effectiveness of this superb staff.