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*Arming Pilots Against Terrorism: Implementation Issues for  
the Federal Flight Deck Officer Program*

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January 9, 2004

**Abstract.** The Homeland Security Act of 2002 (P.L. 107-296, H.R. 5005) contains provisions to arm pilots of passenger aircraft and gives deputized pilots the authority to use force, including lethal force, to defend the flight deck against criminal and terrorist threats. Participation in the Federal Flight Deck Officer Program, established under the Arming Pilots Against Terrorism Act contained in P.L. 107-296, is limited to pilots of air carriers providing passenger air transportation or intrastate passenger air transportation. Pilots of cargo air carriers may not participate in the program. However, several bills (H.R. 765; H.R. 1049; H.R. 2115 (H.Rept. 108-334); S. 165; S. 516; S. 1657; S 1657) seek to include all-cargo air carrier pilots in the program. With enactment of this legislation, focus on the issue of arming pilots has turned to implementation of the Federal Flight Deck Officer Program. These implementation issues fall into four broad categories: 1) pilot selection and screening; 2) equipment (i.e., firearms and ammunition and the risks they may pose to aircraft and passengers); 3) training; and 4) operational procedures. This report describes several implementation issues within each of these areas that may require continued legislative oversight and possible clarification regarding the intent of the legislation. The report also examines cost issues associated with the program and explores policy options regarding potential future expansion of the program to other pilot groups such as air cargo carrier pilots.

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## **Arming Pilots Against Terrorism: Implementation Issues for the Federal Flight Deck Officer Program**

**Updated January 9, 2004**

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# Arming Pilots Against Terrorism: Implementation Issues for the Federal Flight Deck Officer Program

## Summary

The Homeland Security Act of 2002 (P.L. 107-296, 116 Stat. 2135) contains provisions to arm pilots of passenger aircraft and gives deputized pilots the authority to use force, including lethal force, to defend the flight deck against criminal and terrorist threats. Participation in the Federal Flight Deck Officer Program, established under the Arming Pilots Against Terrorism Act contained in P.L. 107-296, was initially limited to pilots of passenger aircraft. However, a provision in the FAA reauthorization act (Vision 100; P.L. 108-176, 117 Stat. 2490) expanded the program to include flight engineers as well as flight crews of all-cargo aircraft.

During debate over legislation to arm pilots, proponents argued that the potential benefits of deterring or thwarting terrorist and criminal acts against passenger aircraft outweighed the inherent risks associated with arming pilots. However, opponents of policy allowing pilots to be armed with lethal weapons argued that such a program's safety risks and monetary costs significantly outweighed these potential benefits. Risks cited included potential distraction to the flight crew, dangers that a weapon discharge could pose to the aircraft or its occupants, and security concerns associated with carrying firearms in secured areas of the aviation system. Proponents countered that these risks could be effectively mitigated, but recognized that these are important issues to be addressed for successful implementation of the policy to arm pilots.

With enactment of this legislation, focus on the issue of arming pilots has turned to implementation of the Federal Flight Deck Officer Program. These implementation issues fall into four broad categories: 1) pilot selection and screening; 2) equipment (i.e., firearms and ammunition and the risks they may pose to aircraft and passengers); 3) training; and 4) operational procedures. This report describes several implementation issues within each of these areas that may require continued legislative oversight and possible clarification regarding the intent of the legislation. The TSA has fully implemented the program over the last year. However, continued concerns voiced by pilot groups over the implementation of the program include: the extensive background checks required of applicants; the requirement to transport issued firearms in lock boxes; and the inconvenient location of training facilities. These issues, along with the possibility of using private contractors to provide recurrent training for deputized pilots may be the topics of continued congressional oversight.

This report will not be updated.

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# Arming Pilots Against Terrorism: Implementation Issues for the Federal Flight Deck Officer Program

The Homeland Security Act of 2002 (P.L. 107-296) contains provisions to deputize volunteer pilots of air carriers providing passenger air transportation or intrastate passenger air transportation as Federal law enforcement officers, permitting them to carry firearms and use force, including lethal force, to defend the flight deck against acts of criminal violence or air piracy. These provisions are collectively known as the Arming Pilots Against Terrorism Act. The program established under this Act is the Federal Flight Deck Officer Program and qualified pilots deputized under this program are referred to as Federal flight deck officers. Participation in the program was initially limited to pilots of passenger aircraft, but has recently been extended to include other flight crew members, such as flight engineers and flight crews of all-cargo air carriers (see P.L. 108-176). The Arming Pilots Against Terrorism Act specified that within three months of enactment, the TSA was to begin the process of training and deputizing qualified pilots as Federal Flight Deck Officers. The TSA conducted a prototype training class in April 2003, and began full implementation of the program in July 2003. Pilot organizations have estimated that as many as 30,000 eligible pilots may volunteer to participate in the program.<sup>1</sup> However, the Transportation Security Administration (TSA) expects that number may be much lower.<sup>2</sup> Pilot groups have voiced concerns that as the program has evolved over the past year, smaller numbers of pilots than expected have applied for the program, because, in their opinion, the application procedures imposed by TSA and the remote location of training facilities is overly burdensome to many pilots considering participation in the program.<sup>3</sup>

## Legislative Background

During the 107<sup>th</sup> Congress, Representative Don Young and Representative John Mica introduced the Arming Pilots Against Terrorism Act (H.R. 4635, 107<sup>th</sup> Congress). At that time, the Bush administration voiced initial opposition to the

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<sup>1</sup> Sara Kehaulani Goo. "Pilots Press for Firearms Instruction," *The Washington Post*, 15 November 2002, pg. E1; Alan Levin, "Armed Pilots Are Months Away," *USA Today*, 25 November 2002, pg. A1.

<sup>2</sup> Sara Kehaulani Goo. "Pilot Gun-Training Deadline Set," *The Washington Post*, 25 November 2002, p. E3.

<sup>3</sup> Matthew Weinstock. "TSA, pilots wage war of words over gun program." *Government Exec Daily Briefing*, August 26, 2003.

concept of arming pilots with lethal weapons. As amended by the Aviation Subcommittee of the House Committee on Transportation and Infrastructure on June 19, 2002 (and as ordered reported by the full committee on June 26, 2002), the bill contained a provision that capped participation in the program at 2% of eligible pilots and limited the program to a two-year test period. On July 10, 2002, Representative Peter DeFazio offered an amendment on the floor to remove the 2% cap on the number of pilots who could participate in the program and also deleted the 2-year sunset provision contained in the bill. The amendment was adopted twice by large majorities and H.R. 4635 passed by a vote of 310-113. On May 25, 2002, Senator Robert Smith introduced the Arming Pilots Against Terrorism and Cabin Defense Act of 2002 (S. 2554, 107<sup>th</sup> Congress) which contained similar language to the final version of H.R. 4635 (107<sup>th</sup> Congress) passed by the House.

On September 4, 2002, Senator Smith offered an amendment to the Senate version of H.R. 5005 (107<sup>th</sup> Congress), a bill introduced to create a Department of Homeland Security, that included provisions for arming pilots similar to those contained in H.R. 4635 (107<sup>th</sup> Congress). On November 12, 2002, Representative Richard Armey introduced H.R. 5710 (107<sup>th</sup> Congress) as a new vehicle for establishing the Department of Homeland Security and for other purposes which contained provisions for arming pilots. However, in response to lobbying efforts by the air cargo industry, the language in this legislation limited participation in the program to pilots of passenger air carrier aircraft. On November 19, 2002, the Senate amended H.R. 5005 (107<sup>th</sup> Congress), incorporating provisions virtually identical to H.R. 5710 (107<sup>th</sup> Congress). The House agreed to the Senate amendment to H.R. 5005 (107<sup>th</sup> Congress) on November 22, 2002, and it was signed by President Bush on November 25, 2002 becoming P.L. 107-296.

Debate over the issue of arming pilots focused on the benefits, risks, and costs associated with implementing the program. Proponents, principally pilots and pilot unions, argued that the potential benefits of deterring or thwarting terrorist and criminal acts against passenger aircraft outweighed the inherent risks associated with arming pilots. Opponents of policy allowing pilots to be armed with lethal weapons, including the airlines and several prominent aviation safety experts, argued that such a program's safety risks and monetary costs outweighed these potential benefits. Key risks cited by critics of the program include:

- Added workload and responsibilities associated with participation in the program that may distract pilots from primary flying duties and safety-related functions;
- Risks of a firearm discharge to innocent passengers or aircraft structure and systems; and
- A proliferation of firearms on aircraft and in secured areas of the aviation system that is counter to other security objectives.<sup>4</sup>

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<sup>4</sup> See GAO-02-822R, "Information Concerning the Arming of Commercial Pilots", for a detailed outline of reasons presented by those favoring and opposing the arming of pilots.

Many of these concerns raised by critics of the plan to arm pilots have been recognized by both Congress and proponents of the plan as key issues to be addressed in program implementation.

In the first session of the 108<sup>th</sup> Congress, debate focused on whether pilots of all-cargo aircraft should be included in the Federal Flight Deck Officer Program. All-cargo pilots were initially excluded from the program in the final wording of the Homeland Security Act of 2002 (P.L. 107-296). In the first session of the 108<sup>th</sup> Congress, several legislative vehicles were introduced to expand the program to cargo pilots as well as to other flight crew members, such as flight engineers. On February 13, 2003, Rep. John Mica introduced H.R. 765, and on March 5, 2003 Sen. Bunning introduced S. 516. Both bills sought to include cargo pilots in the Federal Flight Deck Officer Program, while S. 516 sought to also include other flight crew members such as flight engineers. A separate stand-alone bill (S. 1657) introduced by Senator Bunning was passed by the Senate on November 10, 2003. Similar legislation (H.R. 1049 and H.R. 3262,) was also introduced in the House. Also, the Air Cargo Security Act (S. 165), passed by the Senate on May 9, 2003, contained a provision that sought to include all-cargo pilots in the Federal Flight Deck Officers Program. An Amendment offered by Senator Bunning (S.Amdt. 903 to S. 824) was included in the FAA reauthorization legislation (P.L. 108-176) and was enacted into law on December 12, 2003. This provision expands the Federal Flight Deck Officer Program to include other flight crew members such as flight engineers and to flight crew members flying for all-cargo air carriers.

## Implementation Issues

Implementation of the Federal Flight Deck Officer Program requires assessments of the standards and guidelines for: 1) pilot selection and screening; 2) equipment; 3) training; 4) operational procedures; and 5) costs. To implement the program, the TSA formed a task force to address these issues and developed a plan for implementation of the program. While Congress has noted that the TSA's decisions regarding the methods for implementing procedural requirements of the program shall be subject to review only for abuse of discretion, continued legislative oversight of the program is likely to be an issue for the 108<sup>th</sup> Congress. Furthermore, the 108<sup>th</sup> Congress debated and passed legislation (P.L. 108-176) allowing pilots of all-cargo air carriers and flight engineers to participate in the program.

### Pilot Selection and Screening

**What types of screening and selection criteria are needed for volunteer pilots prior to and while participating in the program.**

Issues considered during implementation of the program include the process for selecting and screening of volunteer pilots seeking to become Federal flight deck officers. The legislation requires further assessment to determine whether additional background checks should be required beyond that specified by section 44936(a)(1)

of Title 49, Code of Federal Regulations.<sup>5</sup> Additional selection and screening criteria could help to ensure that pilots selected to participate are physically and psychologically capable of carrying out the duties and responsibilities associated with participation in the program and maintain the standards set forth by the program while serving as Federal flight deck officers. Screening measures could be used to assess whether a pilot poses a security or safety threat by possessing a firearm on the flight deck or by being trained in the use of lethal force.

Proponents of this new law point out that pilots already undergo rigorous pre-employment evaluations and screening throughout their careers with an air carrier. Captain Stephen Luckey, chairman of the National Flight Security Committee of the Air Line Pilots Association (ALPA), International noted that:

Pilots are undoubtedly the most highly scrutinized employees in the work force, submitting to a battery of pre-employment evaluations, a flight physical every six months, random drug and alcohol testing, and a criminal history records check, among other formal examinations. Additionally, pilots are constantly interacting with and undergoing de facto monitoring by their airline's management, their peers, FAA personnel, and others.<sup>6</sup>

On the other hand, despite pre-existing measures for screening and evaluating pilots, recent examples of confirmed and suspected suicides and sabotage of aircraft by flight crew personnel suggest a potential need for more detailed background checks of pilots wishing to participate in the Federal Flight Deck Officer Program.<sup>7</sup> However, there is little agreement on whether additional screening including psychiatric evaluation of pilots would be able to detect pilots who would pose a risk by participating in the program. Some argue that current screening and peer monitoring of pilots are insufficient, and detailed psychiatric screening and psychological testing is needed to adequately assess the mental health of pilots.<sup>8</sup> Others argue that many common mental health conditions can be masked during

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<sup>5</sup> This section describes requirements for criminal history record checks and reviews of available law enforcement databases and records of other governmental and international agencies for certain airport and airline employees.

<sup>6</sup> Statement of Captain Stephen Luckey, Chairman, National Flight Security Committee, Air Line Pilots Association, International Before the Committee on Commerce, Science, and Transportation, U.S. Senate, on Aviation Security, July 25, 2002.

<sup>7</sup> Examples of confirmed deliberate acts by flight crew personnel to crash commercial aircraft include an intentional crash of a Japan Airlines DC-8 in 1982, an attempted hostile takeover of a Federal Express DC-10 in 1994 by an off-duty flight engineer who intended to crash the airplane into FedEx headquarters, and the 1999 theft and intentional crash of an Air Botswana ATR-42 into two other Air Botswana aircraft. Additionally, there have been other high profile crashes of passenger air carrier aircraft, such as the 1997 crash of a Silk Air Boeing 737 in Indonesia and the 1999 crash of an EgyptAir Boeing 767 off the coast of Rhode Island, where intentional pilot action was suspected but never conclusively determined. It should, however, be noted that none of these crashes involved flight crews of U.S. flag carriers providing passenger air service.

<sup>8</sup> See, e.g., James N. Butcher. "Assessing Pilots with 'The Wrong Stuff': A Call for Research on Emotional Health Factors in Commercial Aviators," *International Journal of Selection & Assessment*, 10(1-2), March 2002, 168-184.



these evaluations. They assert that the costs of implementing such elaborate screening measures would far outweigh the marginal improvement in assessing the mental health of pilots beyond that obtained through the scrutiny pilots already undergo. Proponents for arming pilots also argue that by having access to the flight deck, a pilot intent on causing harm already possesses the means to do so, and introducing a firearm on the flight deck does little to add to that already existing capability. They argue that, historically, incidents of deliberate acts by pilots to harm the airplane and its occupants are extremely unusual and current background checks, screening, and evaluations of pilots are more than adequate for assessing their fitness to participate in the Federal Flight Deck Officer Program.

The Arming Pilots Against Terrorism Act specifies that pilots who are former military or law enforcement personnel should be given preference to participate in the Federal Flight Deck Officer Program. This could be one way to mitigate the risks identified above, at least among the initial cadre of deputized Federal flight deck officers by giving preference for participation in the program to persons that were already deemed fit to carry a firearm. It is also of note that the law does not limit participation to U.S. citizens. Therefore, another implementation issue is whether additional background checks will be required for non-U.S. citizen pilots volunteering to participate in this program. While provisions for waiting periods and background checks have been established for foreign pilots seeking certain types of advanced flight training in the United States since September 11, 2001, it is uncertain whether additional background checks and waiting periods would be needed for foreign pilots seeking to participate in the Federal Flight Deck Officer Program, particularly if the pilot has an extensive employment record flying for U.S. air carriers.

Currently, TSA procedures require that pilots applying for the program undergo additional psychological screening, background checks, and a medical examination beyond those already required of airline pilots. The Airline Pilots Security Alliance (APSA), a grass-roots organization supporting efforts to arm pilots, has called the TSA screening requirements unacceptable and redundant with many existing FAA and airline screening requirements.<sup>9</sup> However, the TSA asserts that the proposed screening measures are similar to those used in selection of federal law enforcement officers, including federal air marshals, to determine an individual's fitness to carry a firearm and act in a law enforcement capacity and are necessary to ensure that participating pilots meet these same standards.<sup>10</sup> According to TSA, about 6 percent of the applicants for the program are screened out prior to initial training – 2 percent fail to meet the qualifications specified by law, 3 percent are eliminated through psychological screening, and 1 percent have problems identified by the background check.<sup>11</sup>

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<sup>9</sup> See [<http://www.secure-skies.org>]

<sup>10</sup> Keith L. Alexander, "Some Pilots Oppose Gun Rules." *The Washington Post*, 13 February 2003, p. A13.

<sup>11</sup> Matthew Weinstock. *TSA, pilots wage war*.

## Equipment

### **What are the tradeoffs between firearms effectiveness and risk to the aircraft?**

The legislation identifies the selection of firearms and ammunition as an issue to be addressed in developing procedural requirements for the program. The legislation also specifies that an analysis shall be conducted to assess the risk of catastrophic failure of an aircraft as a result of the discharge (including an accidental discharge) of a firearm into the avionics, electrical systems, or other sensitive areas of the aircraft. The legislation further specifies that information developed in this analysis shall be treated as classified information and not disclosed. If significant risks are determined to exist, the Under Secretary shall take actions to minimize these risks.

The selection of firearms and ammunition for use in the program is an important consideration because the unique environment of the flight deck and the fact that pilots are not primarily law enforcement officers make this program quite different than other law enforcement applications of firearms. Opponents of arming pilots have argued that a stray bullet could cause serious damage to aircraft systems and structures and jeopardize flight safety. Speaking before the Senate Committee on Commerce, Science and Transportation, Captain Edward M. Davidson, Director of Flight Safety and Quality Assurance for Northwest Airlines, cautioned that bullets could pierce flight deck windows creating a potentially catastrophic cockpit decompression, could strike one of the flight deck's many multi-functional instruments putting at risk numerous safety critical systems, or could strike critical electronic navigation equipment located beneath the flight deck.<sup>12</sup> A depressurization of the airplane at altitude would necessitate that the flight crew use supplemental oxygen and complete checklist procedures in response to the depressurization. Similarly, loss of critical aircraft systems may require a flight crew's immediate attention. Accomplishing required safety-related tasks may prove difficult during a struggle with intruders in the cockpit.

However, in testimony before the House Subcommittee on Aviation, Mr. Ron Hinderberger, Director of Aviation Safety for the Boeing Company stated that "[t]he risk of loss of the aircraft due to a stray round from a handgun is very slight. Boeing commercial service history contains cases of gunfire onboard in-service airplanes, all of which landed safely." Hinderberger further noted that "[c]ommercial airplane structure is designed with sufficient strength, redundancy, and damage tolerance that single or even multiple handgun bullet holes would not result in loss of the aircraft. A single bullet hole in the fuselage skin would have little effect on cabin pressurization."<sup>13</sup>

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<sup>12</sup> Statement of Captain Edward M. Davidson, Director, Flight Safety and Quality Assurance, Northwest Airlines before the Senate Committee on Commerce, Science and Transportation, July 25, 2002.

<sup>13</sup> House Committee on Transportation and Infrastructure, Press Release #253, May 2, 2002.

It has been reported that the weapon initially chosen for the program was a Smith & Wesson .40-caliber semiautomatic pistol that is commonly used by law enforcement agencies.<sup>14</sup> More recently, it was announced that German weapons manufacturer Heckler & Koch who makes a similar .40-caliber handgun was awarded the TSA contract to supply up to 9,600 guns for the program.<sup>15</sup> This award was questioned, particularly by other bidders and supporters of “buy American” principles. This prompted TSA to reevaluate the contract bids, but Heckler & Koch again came out on top in the reevaluation process. The company is building a manufacturing facility in Columbus, Georgia that will eventually supply guns for the Federal Flight Deck Officer program and create about 200 U.S. manufacturing jobs.<sup>16</sup>

As the program evolves, further research and development of firearms and ammunition more specifically tailored to the needs of Federal Flight Deck officers and the unique environment of the flight deck may be needed. Factors to be examined include enhancement of firearm effectiveness in the flight deck environment and mitigation of the risks of accidental discharges, inadvertent shootings of innocent passengers, and possible depressurization of the cabin or disabling of aircraft systems from a firearm discharge. The law provides for temporary suspension of the program if the firearm of a Federal flight deck officer accidentally discharges due to a shortcoming in standards, training, or procedures until the shortcoming is corrected.

## Training

### Who should conduct the training?

The law specifies that training of Federal flight deck officers was to begin within three months after enactment. Following enactment, the TSA convened a task force to define the training program and address other implementation issues. The law provides that the training program may be administered either by the Under Secretary or by a firearms training facility approved by the Under Secretary. This leaves to the Under Secretary’s discretion whether the training will be provided by TSA facilities and staff, by facilities and staff of other Federal law enforcement agencies or organizations, or by contractor facilities. One advantage of using TSA facilities is that doing so could maximize standardization of training for pilots and compliance with the standards and guidelines established by the Under Secretary. It could also improve coordination of training and procedures between Federal flight deck officers and Federal air marshals who will need to coordinate and communicate effectively when dealing with in-flight situations that may arise. However, TSA training facilities may become overburdened if large numbers of pilots wish to participate in the program. TSA facilities and staff may lack the ability to administer

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<sup>14</sup> Ricardo Alonso-Zaldivar. “In Test, Some U.S. Airline Pilots May Carry Guns as Early as April.” *The Los Angeles Times*, 20 February 2003.

<sup>15</sup> Richard H. P. Sia. “TSA revisits gun contract.” *Congress Daily*, July 30, 2003.

<sup>16</sup> “TSA Reaffirms Decision On German Firearm Supplier.”, *Congress Daily*, October 22, 2003.

training in a timely manner that meets scheduling constraints of the pilots, especially given that the pilots will need to complete this training during their time off.

One alternative that has been considered is to use Federal Bureau of Investigation (FBI) training facilities. In December 2001, the FBI released its proposal for training airline pilots termed the “Cockpit Protection Program.” The advantage of this plan is that it is already well defined and includes assessments of the facility and staff requirements needed to administer the training. The disadvantage of this program is that it removes the training from the direct control of the TSA, who would instead assume an oversight role to ensure that training standards established by the Under Secretary are maintained. Also, this arrangement may not offer the opportunity for specific training regarding the coordination of duties and responsibilities between Federal flight deck officers and Federal air marshals. Another federal entity named as possible provider of training for Federal flight deck officers is the Federal Law Enforcement Training Center (FLETC) which has facilities in Glynco, Georgia; Charleston, South Carolina; and Artesia, New Mexico. These facilities may provide capabilities to train larger groups of pilots at locations that may be more convenient to some, but like the FBI facilities, these facilities may have limited oversight by TSA and may not offer the opportunity for training on coordination with Federal air marshals.

Using contractor facilities and/or contractor staff to administer training to Federal flight deck officers are also options, but ones that pose several challenges. Extensive oversight of contractor provided training may be necessary to ensure that established curriculum and qualifications standards are maintained. If multiple contracts are used to train Federal flight deck officers, standardization of training across vendors may be difficult to maintain. One advantage of using contract training for the program might be the reduction of capital investment for facilities and personnel.

A prototype training program was held in April, 2003 used FLETC facilities in Glynco, Georgia to train an initial group of 48 pilots. Full implementation of the program began in July 2003 at the Glynco facilities as well as facilities in Artesia, New Mexico. In September 2003, the program was moved in its entirety to the Artesia, New Mexico facilities because that site has aircraft mockups for training that were not available at Glynco and other law enforcement training at Glynco, Georgia was limiting facilities available for the program there. Some pilot groups have complained that the TSA’s reliance on a single site, and the remote location of the Artesia, New Mexico facility (269 miles from the nearest major airport in Albuquerque) creates a considerable inconvenience for attending the training.<sup>17</sup>

Admiral Loy noted that while the initial training is being conducted at federal facilities, as the program evolves “...there very well may be a private sector opportunity...” to provide the training.<sup>18</sup> More recently, the TSA has indicated that

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<sup>17</sup> Brock N. Meeks. “Pilot gun training resumes amid flap.” *MSNBC News* July 15, 2003.

<sup>18</sup> Hearing of the Aviation Subcommittee of the Senate Commerce, Science and (continued...)

they view initial training of the pilots as a federal function, so that trainees can be appropriately evaluated before being deputized, but remain open to the possibility that private firms can provide for recurrent training and re-qualification of federal flight deck officers. However, TSA has indicated that it will make no decision on whether re-qualification training should take place at federal facilities or TSA-approved private facilities or some combination thereof until they have more experience with the program.<sup>19</sup>

### **What will the training consist of ?**

The Act specifies that the training of a Federal flight deck officer shall include:

- Training to ensure that the Federal flight deck officer attains a level of proficiency with a firearm comparable to the level of proficiency required of Federal air marshals;
- Training to ensure that the officer maintains exclusive control over the officer's firearm at all times, including training in defensive maneuvers; and
- Training to assist the officer in determining when it is appropriate to use the officer's firearm and when it is appropriate to use less than lethal force.

The Act specifies that the Under Secretary shall base the requirements for training Federal flight deck officers on the training standards applicable to Federal air marshals, taking into account the differing roles and responsibilities of Federal flight deck officers and Federal air marshals. While many of the details of the Federal air marshal training program are classified and cannot be disclosed, it has been reported that the program consists of 10 ½ weeks of progressive training starting with basic marksmanship, followed by reactive firearms training scenarios, followed by advanced firearms techniques specific to the aircraft cabin environment, followed by scenario-based exercises using wide-body and narrow-body aircraft mockups.<sup>20</sup>

Pilot groups including ALPA and the Allied Pilots Association (APA) have suggested that initial training for Federal flight deck officers could be completed in a 48-hour training program. Such a training program was derived from details released in December 2001 regarding the FBI Cockpit Protection Program that proposed a five-day, 48-hour training course in firearms handling, legal aspects, tort

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<sup>18</sup> (...continued)

Transportation Committee on Aviation Security and Impacts Associated with the Regulatory and Statutory Requirements of the Aviation and Transportation Security Act (ATSA), Wednesday, February 5, 2003.

<sup>19</sup> Statement of Stephen J. McHale, Deputy Administrator, Transportation Security Administration. Before the Committee on Transportation and Infrastructure, Subcommittee on Aviation. U.S. House of Representatives. *Status of the Federal Flight Deck Officer Program*. May 8, 2003.

<sup>20</sup> J. Croft. "TSA Provides Rare Peek at Air Marshals," *Aviation Week & Space Technology*, 156(23), 10 June 2002, p. 54; Leslie Miller. "Pilots Anticipate Guns in Cockpit by Spring," *Associated Press*, Washington Dateline, 27 November 2002.

law, and policies regarding use of lethal force. The current TSA program similarly consists of a 48-hour curriculum of classroom instruction, firearms training, and tactical drills.

The legislation also specifies that Federal flight deck officers will have to re-qualify at an interval required by the Under Secretary. The FBI Cockpit Protection Program specified an annual re-qualification interval. The selection of a re-qualification interval will need to strike a balance between adequately ensuring that qualification standards are maintained while ensuring that the process does not overburden TSA resources or place an undue schedule burden on Federal flight deck officers who will need to re-qualify during time away from their flying jobs.

### **How will the effectiveness of the training be evaluated?**

The law does not specify any criteria or guidelines for assessing the effectiveness of the program or the training provided under the program. Given that the primary objective of the program is deterrence of terrorism and criminal acts against the flight deck, effectiveness of the program in this regard will be difficult if not impossible to assess. Successful deterrence may be indicated by statistics regarding security incidents aboard aircraft. However, it will be difficult to attribute any reduction in security incidents directly to this program. This is especially true in consideration of the fact that the Federal flight deck program is but one component of a larger effort to heighten aviation security in response to terrorist threats that also includes enhanced passenger and baggage screening and the deployment of Federal air marshals. Nonetheless, the effectiveness of certain elements of the program can be assessed. For example, the effectiveness of training can be assessed through evaluation of performance during re-qualification. Also, effectiveness of the program with regards to risk management can be assessed through analysis of data on incidents of firearms mishandling, accidental discharges, lost and stolen weapons, and so on.

## **Operational Procedures**

### **Storage and Transportation of the Firearm.**

#### ***Should the weapon be stored at secure airport facilities or carried by the Federal flight deck officer traveling to and from duty?***

The legislation identifies storage and transportation of firearms as an issue to be addressed in establishing the procedural requirements for the program. The legislation specifies that particular attention should be given to storage and transportation of firearms on international flights and when the pilot leaves the airport to remain overnight away from the pilot's base airport. Pilot groups have argued for allowing Federal flight deck officers to retain the firearm, particularly at the pilot's home base, and further advocate that Federal flight deck officers be given the opportunity to train with the firearm to maintain proficiency in its use.<sup>21</sup>

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<sup>21</sup> See, e.g., Allied Pilots Association, Committee for the Armed Defense of the Cockpit. Report submitted to the National Officers and Board of Directors, Winter Board of Directors (continued...)

Opponents of such a plan argue that pilots carrying weapons both in airports and to and from work could be the target of terrorists and criminals seeking to steal their firearms and increases the potential for mishandling of the firearm and accidental discharges.

In February 2003, a TSA task force studying the implementation issues for the Federal Flight Deck Officer Program recommended the use of lock boxes for transporting the firearms. Pilot groups have voiced concerns that the use of lock boxes undermines the intent of the legislation which they believe specifies that "...the officer maintains exclusive control over his or her firearm at all times..."<sup>22</sup> The TSA has indicated that its decision is based on the very specific nature of the mission outlined in the legislation which permits pilots to use their weapons only in defense of the flight deck. The TSA considers the lock box as a means to minimize the risk that the firearms will be used in other situations. However, the Airline Pilots' Security Alliance (APSA) is concerned that the use of lock boxes to transport firearms may make pilots particularly vulnerable targets for thieves seeking to steal their weapons and provides pilots with no means for personal security to protect against this threat.<sup>23</sup> Currently, TSA requires the firearm to be carried in a secured lock box and only opened inside a secure cockpit.

### ***Should the firearm be concealed?***

Concealment of the issued firearm is not specifically addressed in the legislation but was a significant issue considered in establishing the procedural requirements of the program. Carrying a concealed firearm would prevent the flying public from determining which pilots were Federal flight deck officers. Doing so could prevent Federal flight deck officers from becoming targets of attempts to seize or steal firearms. Concealing the firearms could also benefit pilots who are not participants in the program since individuals intending criminal acts against a flight deck will not have foreknowledge of whether the pilots on the flight deck are armed or not. On the other hand, carrying a concealed weapon in the airport terminal, outside controlled access areas of airports, and during travel to and from work could complicate security screening and law enforcement efforts to establish a pilot's status as a Federal flight deck officer authorized to carry a concealed firearm. Pilot groups have also raised the issue of whether Federal flight deck officers will be permitted to carry backup firearms.<sup>24</sup> It is common practice among law enforcement officers to carry concealed backup firearms. Currently, the flight deck officers are only issued one weapon which must be transported in a secured lock box that is concealed in pilots cases, but not readily accessible to the pilot when outside the secured cockpit.

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<sup>21</sup> (...continued)

Meeting, February 14, 2002. Fort Worth, TX: Author.

<sup>22</sup> Air Line Pilots Association. "News Release: ALPA Criticizes Serious Deficiency in TSA Firearms Carriage Recommendation.", Release #03.010, February 20, 2003. Available at [<http://www.alpa.org/alpa/DesktopModules/ViewDocument.aspx?DocumentID=2096>].

<sup>23</sup> Sara Kehaulani Goo. "TSA Nearly Ready to Begin Gun Training for Pilots." *The Washington Post*, 20 February 2003, p. A8.

<sup>24</sup> *Ibid.*

## **Airport Security Screening.**

### ***What identification will verify that a pilot is a deputized Federal flight deck officer authorized to possess a firearm?***

The legislation identifies methods for ensuring that security personnel will be able to identify whether a pilot is authorized to carry a firearm under the program as an issue that was addressed in establishing the procedural requirements for the program. Adequate methods for preventing forgery of identification and accounting for misplaced or stolen identification are needed to ensure that terrorists and criminals cannot breach security checkpoints by impersonating Federal flight deck officers. The Aviation and Transportation Security Act (ATSA, P.L. 107-71; 115 Stat. 597) mandated the establishment of a uniform system of identification for all State and local law enforcement personnel for use in obtaining permission to carry weapons in aircraft cabins and in obtaining access to a secured area of an airport, if otherwise authorized to carry such weapons. The TSA also currently has several research efforts examining technologies for establishing a standardized Transportation Worker Identification Card (TWIC) and for exploring the use of biometric technologies for identification. Future deployments of systems using these technologies may provide enhanced capability to assure positive identification of Federal flight deck officers. Federal flight deck officers are identified by credentials issued by TSA, but specific procedures for verifying these credentials is considered security sensitive information.

### ***Where should screening and identification checking of Federal flight deck officers take place?***

If it is determined that concealing the identity of Federal flight deck officers would be a desirable aspect of the program, then security screening of Federal flight deck officers and other flight crew at security checkpoints in open public spaces may diminish the effectiveness of the program. As previously noted, public identification of Federal flight deck officers may have negative consequences for both Federal flight deck officers who may be targeted in attempts to seize firearms and for pilots not participating in the program whose flights may be targeted if it is determined that a Federal flight deck officer is not on board. Screening of pilots in open view may also compromise specific security procedures to validate the identity of Federal flight deck officers. However, alternative arrangements for screening of flight crew may be impractical, particularly at smaller airports where employee and passenger screening are collocated.

## **Flight Deck Operational Procedures.**

### ***Where should the firearm be placed during flight operations?***

The legislation identifies the placement of a Federal flight deck officer's firearm on board the aircraft to ensure security and ease of retrieval as an issue to be addressed in developing the procedural requirements of the program. A holstered weapon may present a safety hazard as it may interfere with the pilots full range of motion and prevent performance of normal flight deck duties. A holstered weapon may also be difficult to access from a seated position. However, alternative options



involving aircraft modifications for securing firearms on the flight deck would require industry retrofitting of flight decks for all affected transport category airplanes and FAA certification of these designs. Simple designs may be easily approved and implemented. However, more elaborate designs for housing firearms on the flight deck may require more detailed test and evaluation as part of the certification process. Due to significant differences in flight deck layouts among transport category aircraft, standardization across aircraft types in a manner that optimizes positioning of the firearm may be difficult to achieve. These designs may also have difficulty accommodating differences in physical dimensions and handedness among Federal flight deck officers.

***What coordination of flight crew and law enforcement personnel is needed?***

The legislation identifies interaction between a Federal flight deck officer and a Federal air marshal on board the aircraft and methods for ensuring that pilots are able to identify law enforcement officers authorized to carry a firearm aboard the aircraft as issues to be addressed in establishing the procedural requirements of the program. Such coordination will need to address concerns over concealing the identity of Federal air marshals while allowing sufficient coordination between them and Federal flight deck officers. Airlines have procedures in place for identifying armed law enforcement officers and making these individuals known to flight crews. These procedures may need to be enhanced and further standardized by TSA to ensure that flight crews can easily recognize armed law enforcement officers on board and coordinate with them if needed.

The legislation also identifies the division of responsibility between pilots in the event of an act of criminal violence or air piracy for instances where either one or both of the flight crew are Federal flight deck officers as an additional issue to be addressed in implementing the program. This raises a question of what, if any, training and educational materials regarding the Federal flight deck officer program will be made available to non-participating flight crew and cabin crew members. Currently, only very limited information about the program is available to them. While, flight crews and cabin crews already receive initial and recurrent training in FAA mandated crew resource management (CRM) training programs that facilitates coordination of duties and responsibilities, airlines are unlikely to address the subject of division of responsibility when a pilot must perform duties as a Federal flight deck officer, citing that this is a Federal function and possibly fearing liability issues if such matters are addressed in training.<sup>25</sup> Furthermore, there is no requirement in the legislation for training or education of non-participating flight crew personnel regarding the program and most details of the program have not been released because of their security sensitive nature. Thus, it has been largely left up to individual Federal flight deck officers to brief non-participating flight crew on the

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<sup>25</sup> While the Act contains language limiting the liability of air carriers and Federal flight deck officers for damages arising from a Federal flight deck officer's use or failure to use a firearm, there is ambiguity whether this protection would extend to other flight crew actions, particularly actions related to flight operations, during periods when one pilot is performing Federal flight deck officer functions.

coordination of flight duties if the flight deck were attacked. The coordination among multiple flight crew members who are deputized Federal flight deck officers is likely much less troublesome as they have undergone the same standard training and thus have a better understanding of the division of responsibilities during an attack.

### ***How should disturbances in the passenger cabin be handled?***

The legislation specifies procedures for ensuring that the firearm of a Federal flight deck officer does not leave the cockpit if there is a disturbance in the passenger cabin as an issue to be addressed in establishing the procedural requirements of the program. Current guidelines and procedures prohibit Federal flight deck officers from intervening in cabin disturbances. Rather, Federal flight deck officers are instructed to use their weapons and training only in the defense of the flight deck which is consistent with the intent of the law establishing this program.

Disturbances in the passenger cabin are left to be handled by flight attendants, federal air marshals, or any other law enforcement personnel on the aircraft. Federal flight deck officers are instructed to use their judgment and any available information they can ascertain from flight attendants and so on to determine the best course of action for diverting the aircraft to a location where ground based law enforcement can intervene if needed. While the Aviation and Transportation Security Act (P.L. 107-71) specifies that the FAA may develop and implement methods, such as video monitors or other surveillance technologies, to alert pilots in the flight deck to activity in the cabin, such devices are not yet available, but are being developed.

### ***What procedures should be established for opening the cockpit door and leaving the cockpit?***

Additionally, the legislation specifies procedures for ensuring that the firearm of a Federal flight deck officer does not leave the cockpit if the pilot leaves the cockpit for personal reasons as an issue to be addressed in establishing the procedural requirements of the program. Procedures relating to opening the cockpit door for other reasons are not specifically addressed in the legislation but were examined in the implementation of the program. Reasons for opening the cockpit door and leaving the cockpit during flight include flight crew meal and beverage service, flight crew changes on long-duration flights, use of the lavatory, and abnormal or emergency situations that require actions outside of the cockpit. Such events may result in a physical separation between the Federal flight deck officer and his or her firearm if the firearm is to be secured on the flight deck at all times. Occasions when the cockpit door is opened and when the flight crew is moving about may in fact be the most risky times with regard to a potential attack. Procedures may be needed to address these various scenarios and mitigate the risks associated with opening the cockpit door.

## Costs

### What will the costs to the Federal government be?

The law specifies that the Under Secretary shall be obligated to provide all training, supervision, and equipment needed for the program at no expense to the pilot or the air carrier employing the pilot. Thus, direct training costs will be the obligation of the Federal Government. This will include initial training and qualification as well as recurrent training and re-qualification of pilots in the program. The Federal Government is also obligated to provide equipment needed for the program. These equipment expenses will primarily consist of issued firearms and ammunition as well as any equipment needed to maintain the firearms. This may also include facilities to house firearms at airports. The Federal Government will also incur the costs of additional background checks or screening that may be necessary to determine the fitness of a pilot to participate in the program.

Total costs to the Federal Government for the program will be highly dependent on the number of pilots that volunteer and qualify to participate in the program as well as the rate at which pilots are trained and deputized. Congressional Budget Office (CBO) cost estimates for the program were based upon earlier proposed legislation (107<sup>th</sup> Congress, H.R. 4635) that limited participation to 2 percent of pilots employed by air carriers. In this estimate, the CBO assumed that it would cost about \$8,000 per pilot annually to cover the costs of equipment, training, and travel.<sup>26</sup> This figure does not include costs required to manage the program. In preparing to implement the prototype program, TSA has indicated that it will cost about \$10,400 per pilot for training and equipment. The TSA budgeted a total \$500,000 to conduct the prototype program.<sup>27</sup> In the Consolidated Appropriations Resolution for FY2003 (P.L. 108-7), the TSA was given \$8 million to startup the Federal Flight Deck Officer program and begin full scale implementation of the program which began in July, 2003. The Homeland Security Appropriations for FY 2004 (P.L. 108-90, 117 Stat. 1137) gave the TSA \$25 million for continuing the program. At this funding level, more than 2,000 pilots could be deputized as Federal Flight Deck Officers by the end of FY 2004 assuming TSA is able to conduct the background screening and training for this number of pilots over the course of the fiscal year. Currently, TSA is conducting weekly initial training classes of 48 pilots each.<sup>28</sup>

### What will the costs to participants and airlines be?

The law specifies that pilots participating in the program shall not be eligible for compensation from the Federal Government for services provided as a flight deck officer. The law further states that the Federal Government and the air carriers shall not be obligated to compensate the pilots for any training, qualification, or re-qualification to carry firearms under this program. Consequently, pilots are not

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<sup>26</sup> Congressional Budget Office. "Congressional Budget Office Cost Estimate, H.R. 4635, Arming Pilots Against Terrorism Act.", p. 2.

<sup>27</sup> Ricardo Alonso-Zaldivar. *Op. cit.*; Sara Kehaulani Goo, "TSA Nearly Ready to Begin..."

<sup>28</sup> Matthew Weinstock. *TSA, pilots wage war of words.*

compensated by the Federal Government while attending training. While the air carriers employing pilots participating in this program are not obligated to compensate pilots, such compensation may be a topic for negotiations between air carriers and pilot unions. Consequently, policies may vary from one air carrier to another. Similarly, indirect costs of training, such as travel to and from the training site and lodging and per diem while in training, could either be paid by the individual pilots participating in the program or by the air carriers employing these pilots. While pilots may use their access to free airline transportation on a space available basis for travel to and from the training site, it is likely that most other indirect costs arising from participation in the program will be the responsibility of the pilots themselves. Given the airlines' early opposition to this program, it is unlikely that compensation for pilots and payment of their indirect costs associated with participation in this program would be a concession that airlines are likely to make in negotiations with pilot unions. This is especially true in light of the economic difficulties facing many airlines that prompted them to request tax relief from the Federal Government and ask for concessions from pilot unions and other labor groups rather than vice versa. Consequently, in the current economic environment, pilots will most likely have to complete training, qualification, and re-qualification during their own time and are likely to pay the indirect costs for training and participating in the program out of pocket. One issue that may arise is whether these out of pocket expenses incurred by pilots participating in the program will be tax deductible.

While the law specifies that equipment cost is a Federal obligation, it is uncertain who would pay for cockpit modifications if it is determined that such modifications are needed to store or secure firearms used in the program onboard the aircraft. Even if the direct costs for making such modifications are covered by the Federal Government, air carriers may be burdened by indirect costs associated with removing aircraft from service to make any needed modifications. The current program does not require any cockpit modifications.

## **Scope of the Federal Flight Deck Officer Program**

The Arming Pilots Against Terrorism Act initially limited participation in the Federal Flight Deck Officer Program to volunteer pilots of air carriers providing passenger air transportation or intrastate passenger air transportation. The legislation defines a pilot as a pilot-in-command (i.e., a captain), or a second-in-command (i.e., first officer) when a second pilot is required, and does not include flight engineers or other members of the flight crew not meeting this definition. From the time the legislation was introduced, pilot organizations have argued that the program should be expanded to include other pilots and flight crew members, principally pilots of cargo air carriers and flight engineers.

### **Should the Federal flight deck officer program be expanded to include other pilots?**

Proponents for arming pilots voiced concerns that the legislative language of the Arming Pilots Against Terrorism Act did not include all air carrier pilots. Specifically, the language limits inclusion to pilots providing passenger air transportation or intrastate passenger air transportation. Consequently, pilots of

cargo flights initially could not participate in the program. Nor could flight engineers or other flight crew members who are not formally considered pilots. However, a provision in the FAA reauthorization legislation (P.L. 108-176) expanded the program to include all flight crew members of both passenger and all-cargo air carrier aircraft.

Proponents for including cargo pilots among the cadre of Federal flight deck officers note that layers of security protection similar to those in place to protect passenger air carrier aircraft are not required for air cargo operations. They argue that this leaves cargo flight crews vulnerable to potential terrorist threats against cargo aircraft, including large and heavy aircraft that could be used in an attack similar to that launched on September 11, 2001. They suggest that this vulnerability can be mitigated by allowing cargo air carrier pilots to participate in the program. In a statement issued November 15, 2002, Captain David Webb chairman of Air Line Pilot Association's FedEx unit, expressed the following view:

A cargo aircraft is devoid of cabin attendants and air marshals. However, at airlines such as FedEx, employees and vendors are routinely boarded. Political maneuvering by the cargo industry has shielded them from the level of security screening mandated for the passenger terminal. The entire burden for the security of the aircraft rests on the two or three pilots in the cockpit. There is little we can do to defend the aircraft against a terrorist attack. Stripping us of the ability to carry firearms in the post-9/11 environment is an appallingly irresponsible act. And the worst part is that it is our own managements that did this to us, with no discussion, no warning, no justification whatsoever.<sup>29</sup>

Opponents argued that the general public does not have authorized access to cargo aircraft and therefore, enhanced ground-based security measures to better protect cargo aircraft and improve screening of employees authorized to access these aircraft would make deputizing cargo pilots as Federal flight deck officers unnecessary. Some also argued that costly training for Federal flight deck officers is not needed for cargo pilots, because the operational environment of cargo aircraft does not introduce the same risks associated with arming pilots of passenger aircraft.<sup>30</sup> Consequently, a separate program, with separate standards, training, and guidelines was considered by some to be more suitable for implementation in the air cargo industry.

Besides cargo air carrier pilots, other pilots, such as on-demand air charter pilots and pilots flying for fractional-ownership programs, may also seek participation in the program, although this has not happened to date. Proponents for including these pilots in the Federal Flight Deck Officer Program may argue that currently there are

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<sup>29</sup> ALPA news release #02.101, "ALPA President Blasts Industry for Watering Down Cargo Security", November 14, 2002. Viewed November 18, 2003 at: [http://www.alpa.org/alpa/DesktopModules/ViewDocument.aspx?DocumentID=870].

<sup>30</sup> Risk factors in passenger air carrier service that are not applicable to cargo air carrier operations include the presence of large numbers of passenger on board the aircraft, carrying firearms in controlled access areas where large numbers of people are present, and coordination of law enforcement duties and responsibilities with Federal air marshals and other law enforcement officers on board the aircraft.

few, if any, security protections to guard against threats of air piracy and criminal violence in these types of aviation operations. Arming these pilots, they argue, may serve as the most viable means for providing security in these highly varied operations where control of access to the aircraft and flight deck is more difficult. Opponents of such a proposal argue that the inclusion of these pilots in the Federal flight deck officer program would significantly increase the costs of the program and would lead to further proliferation of firearms in the aviation environment that may compromise other security initiatives. Thus far, there have been no legislative initiatives to include these types of pilots in the FFDO program.