

DEPARTMENT OF HOMELAND SECURITY
TRANSPORTATION SECURITY ADMINISTRATION

STATEMENT OF

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ON
PASSENGER AND BAGGAGE SECURITY SCREENING

BEFORE THE
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Good morning Mr. Chairman, Congressman DeFazio, and Members of the Subcommittee. I am pleased to have this opportunity to appear before you today on behalf of the Transportation Security Administration (TSA) to report on TSA's progress in passenger and baggage security screening programs. Last October, Deputy Secretary James M. Loy testified before this Subcommittee on aviation security, providing many details on TSA's plans and programs for improving passenger and baggage screening. Today I would like to focus on new screening technologies in passenger and baggage screening, provide an overview of TSA's research and development (R&D) program, and highlight the progress TSA has made in carrying out its plans for screening improvement since last October.

Passenger and baggage screening is an essential component of TSA's many-layered rings of aviation security. Each day, TSA intercepts more than 15,000 prohibited items at airports around the country. Since February 2002, TSA has intercepted more than 1650 firearms, more than 3 million knives, and over 57,000 incendiaries. While the majority of cases are not intentional violations, too frequently individuals are deliberately attempting to circumvent security or test the security system. We have intercepted a knife concealed inside a soda can, a sword hidden inside a cane, and a knife hidden within a prosthetic leg, just to name a few examples. During December 2003, checkpoint screeners reported intercepting 37 firearms. Daily TSA intelligence reports shared among airport security officials detail a startling array of concealed prohibited items discovered by screeners and reports on the ever-changing methods that terrorists may employ in their attempt to foil security measures. No single component of our rings of security is infallible; however, as just illustrated, our system of reinforcing rings of security has substantially improved the security of the traveling public. TSA strives to stay well ahead of those who attempt to game the system, using every tool within our means.

Technology plays a critical role in TSA's passenger and baggage screening programs. The President's Fiscal Year 2005 budget includes a request for \$49 million for TSA Applied R&D and \$50 million for Next Generation Explosives Detection Systems (EDS). Working closely with the Department of Homeland Security (DHS) Science and Technology (S&T) Directorate, we have established an ambitious program to develop and deploy new security technologies and use technology to enhance human performance. Technology can help us make our screening operations more effective, more efficient, less time consuming, and less costly.

TSA operates a state-of-the-art research laboratory, the Transportation Security Laboratory (TSL), in Atlantic City, New Jersey. Several screening and other security technologies are under development at the TSL, including an explosives detection portal for passengers to determine if explosives are being carried on an individual's person, document scanners to detect trace amounts of explosive materials on items such as boarding passes, and scanners for better screening of casts and prosthetic devices. We are also developing EDS for carry-on baggage and improving explosives detection technology for screening liquids.

We are continuing work on the Next Generation of EDS for checked baggage screening to increase throughput capacity, improve detection capabilities, and lower false positive alarm rates. Simultaneously, we are collaborating with new vendors to develop technologies that will enable us to detect explosives in smaller amounts than are currently established in our certification standard and that will occupy a smaller footprint at airports. In Jacksonville, Florida, the airport's state-of-the-art in-line EDS system is piloting an on-screen alarm resolution protocol. We hope to be able to deploy the protocol to more airports this fall based on the results obtained at Jacksonville and the two other pilot locations. Within the Next Generation program, we are also looking at new applications of X-ray, electro-magnetic, and nuclear technologies to better probe sealed containers for materials that pose a threat to aviation security.

We are planning FY '05 R&D efforts to combine expanded technological capabilities in conjunction with sensor fusion development. Unfortunately, the restricted space at airports and other transportation facilities will not support continuing additions to the footprints of our screening areas. Therefore, we must design systems that will address multiple threats within very confined spaces. The challenge of moving new technology from the laboratory to the real world is significant.

TSA's R&D program focuses on far more than passenger security technologies, with major efforts underway in commerce, conveyance, and infrastructure security as well. Last month, TSA issued a market survey requesting submissions and participation of vendors of commercial off-the-shelf explosives detection technology to support cargo inspection. A number of vendors have been tentatively selected for laboratory evaluation of their products against the current EDS certification criteria. We will soon issue a request for proposals (RFP) for potential inventors of explosives detection technology for the screening of break bulk cargo to be transported on passenger aircraft. This RFP will

lead to the award of R&D grants to assist in the development of promising technologies. At TSL, we are conducting a cargo characterization study to determine the feasibility of using currently deployed explosives detection technology (EDS and ETD) to screen cargo while new systems are under development. The President's FY '05 budget requests a total of \$55 million for TSA air cargo security R&D.

We are continuing our efforts to design systems to mitigate the impact of an explosion on an aircraft through use of blast resistant cabin and cargo liners, as well as overhead bin mitigation technological solutions. We are working with FAA and aircraft manufacturers to determine which solutions might be candidates for retrofitting and which are appropriate for incorporation into initial aircraft designs.

DHS, in partnership with other federal agencies, is taking an aggressive approach to counter the threat of Man Portable Air Defense Systems (MANPADS) to civilian commercial aircraft. The strategy includes proliferation control, tactical measures and recovery, and technical countermeasures. In January, the DHS S&T Directorate announced the selection of teams to develop plans and test prototypes to help determine whether a viable technology exists that could be deployed to address the potential threat of MANPADS. In cooperation with the DHS S&T Directorate, TSA is conducting R&D efforts related to MANPADS and stand off weapons. We are assessing the specific capabilities of different missiles and developing computer models that will allow us to determine if it is likely that an aircraft would be hit, and if it would be more susceptible during takeoff or landing. TSA is working with the Department of Defense and other partners to collect signature data from wide and narrow body aircraft to help better determine hit probability and location. With the data gathered during the susceptibility assessments, TSA will be able to model survivability scenarios and determine which R&D efforts could be undertaken to help improve the survivability of today's commercial fleet. In addition, as part of the overall MANPADS strategy, TSA is performing airport vulnerability assessments to identify and map the areas around an airport from which a MANPADS attack could be initiated.

TSA's R&D program also focuses on developing standards for biometric systems through ongoing pilot programs and laboratory efforts. Research in biometrics technologies continues to be applicable and useful in supporting several TSA initiatives such as the Transportation Workers Identification Credential program, the Registered Traveler program, infrastructure access control programs, and employee screening.

To boost airport terminal security, TSA recently issued 9 grants to airports totaling \$7.9 million to support a wide array of surveillance, sensor, and other terminal security technologies. As examples, in Jacksonville, funds will be used for full terminal video surveillance, and in Boston, funds will support a new network airport analysis tool for managing resources, equipment, and traffic flow at different threat levels.

TSA's Airport Access Control Pilot Programs will test and evaluate state-of-the-art access control technologies, including biometrics, in partnership with airport operators who have volunteered to be participants. Currently TSA is conducting site surveys to

match technology design plans with volunteer airports. TSA expects to initiate and complete 10 pilot projects by the end of the calendar year.

As reported to this Subcommittee in October, TSA recognizes that we must continually work to maintain and sharpen screener capabilities. Pulling talent from throughout TSA disciplines—security technology, information technology, training, Office of Internal Affairs and Program Review (OIAPR), human resources, and Aviation Operations—TSA created an integrated task force committed to improving screening performance over six months and to laying the ground work for continued, long-term screening performance improvement. This task force devised and implemented a Short-Term Screening Improvement Plan, a series of integrated interventions that include enhanced training and technology deployment, policy and process reengineering, increased support to the field, and increased covert testing. In the last three months we have already made significant progress in carrying out our screening improvement plan.

All passenger screeners must meet annual recertification standards, passing a Standard Operating Procedures Job Knowledge Test, an Image Certification Test, and a Practical Skills Demonstration, and achieve a fully successful performance rating. Recertification for 2003-2004 began on October 1, 2003, and will run through March 2004. As of February 1, 2004, all federal and contract security screeners had completed the first two steps to recertification, with over 55 percent of the federal screeners having completed all steps and been recertified. This percentage changes daily as screeners complete the required steps and we receive confirmation from airports, and we expect to see screeners to complete the recertification process on schedule.

The development of advanced screening technologies is only one aspect of our screening improvement plan. Technology is not only critical to TSA's threat detection capability, but it is being harnessed to help TSA's efforts to improve human performance. Deployment of an enhanced version of the Threat Image Projection (TIP) system is a major component of the screener improvement plan. TIP superimposes threat images on X-ray screens during actual operations and records whether or not screeners identify the threat object. Through a tremendous example of private-public partnership, a significantly enhanced 2400 Threat Image Projection (TIP) library was uploaded to every TIP Ready X-Ray (TRX) in the country during the height of the holiday travel season without interrupting service. This new TIP image library replaces the much smaller 200-image library developed by the Federal Aviation Administration (FAA) with images that will continuously provide screeners exposure to the most current threats, including improvised explosive devices (IEDs).

Since late October, an additional 150 TRXs have been delivered to airports around the country, bringing the total number of deployed TRX units to over 1770. Now 98 percent of all checkpoint security lanes are equipped with TRXs with the 2400 image TIP library. Delivery of approximately 30 remaining units will be completed this month. Through the combination of increased deployment of TRX machines and deployment of the expanded TIP image library, we will be able to collect and analyze significant amounts of performance data that has not been previously available.

TIP is an excellent tool for evaluating the skills of each individual screener so that we can focus directly on areas needing skill improvement. By regularly exposing screeners to a variety of threat object images, TIP provides continuous on-the-job training and immediate feedback and remediation. TIP allows supervisors to closely monitor screener performance and improvement.

In the past, collecting TIP data for analysis and reporting was a cumbersome task. Network connectivity to checkpoints will be the ultimate answer to efficient collection, analysis, and reporting of TIP data, but to bridge the gap until full connectivity is achieved, TSA has launched a secure TIP Data Collection and Reporting Web Site. TIP performance reports, including reports at the individual screener level, will be available to Federal Security Directors (FSDs) and other TSA managers for TIP data collected in February 2004.

Network connectivity has been installed in 71 airports to date, and TSA is moving forward on delivering connectivity to many more airports. This effort will provide the capability for continuous training, including real-time training on current threats; greater capacity for monitoring TIP performance; connectivity with checked baggage areas; and a foundation for planned implementations of additional administrative, surveillance, CAPPS II, and other security enhancements.

To maintain high levels of screener proficiency, TSA's screener improvement plan places a strong emphasis on recurrent screener training and supervisory training. Over 550 inert Modular Bomb Set (MBS II) and weapons training kits have been deployed to every airport in the country as an integral part of TSA's recurrent training for screeners, enabling them to see and touch the components of IEDs and weapons. TSA is also developing protocols to help FSDs conduct their own airport level screening testing. To blend nationally and locally developed training, TSA has established the "Excellence in Screener Performance" video training series. The first two videos, "Hand Held Metal Detector/Pat Down Search" and "X-ray Operator" have been delivered to the field. Training videos on physical bag search and screening persons with disabilities are now in production. The third part of our recurrent training program is a series of web-based and computer-based screener training. Eight training products are in production, with the first due to the field this month.

From the standpoint of training delivery, our most significant accomplishment is the launching of our learning management system, the TSA Online Learning Center (OLC). Now available to screeners through the TSA intranet or a secure site on the World Wide Web, the OLC makes available over 350 general training and development courses in addition to TSA specific training.

Finally, recognizing the need to provide our front line supervisors with the tools they need to effectively manage the screener workforce, we have sent over 2000 supervisors to introductory leadership training at the Graduate School, USDA. We will continue to offer 10 sessions each week until all screening supervisors have received this training.

We are currently adding a customized module to this training that includes airport-specific examples of leadership issues they might encounter.

TSA also has begun training some of its senior screeners to better recognize patterns of unusual or suspicious behavior. This additional skill set will further enhance aviation security.

We have increased support to the field by deploying Mobile Training Assist Teams (MTAT) to help FSDs identify and resolve short-term issues that may be affecting screening performance. MTATs have visited 10 airports, providing FSDs with airport-specific performance improvement recommendations. Professional Assist Teams have been deployed to help FSDs turn around any longer-term performance deficiencies. To encourage top screener performance, an “On-the-Spot” awards program has been established in the field. Finally, to help FSDs meet recruiting and hiring goals in some locations, recruiting incentive benefits have been developed. Some of these are currently being field tested at Dulles International Airport and may be deployed to other airports as needed. We have also increased accountability for screening performance. FSD performance standards have been revised to include accountability for screening performance at their airport(s), and new passenger screener performance and passenger screening effectiveness indices have been implemented.

We are in the final stages of revising both passenger and checked baggage Standard Operating Procedures. These revisions, based on data from more than a year of operation and input from the field, should significantly enhance screening processes.

While using all available means to enhance screener skills and equipment, TSA continually tests and challenges screeners to make sure they are on their toes. OIAPR’s special operations teams contribute to TSA’s Screener Improvement Program through increased and repeat testing at airports and by providing immediate feedback to FSDs, screener supervisors, screeners and TSA leadership on the results of the tests and other data affecting airport security.

TSA’s covert testing program increasingly introduces more difficult test objects and exposes screeners to real-life terrorist threats. Special operations teams use intelligence reports and training on advanced screening technology to create challenging protocols to test checkpoints and checked baggage. These teams also conduct tests of access to the aircraft, Air Operations Area (includes perimeter and general aviation), and Security Identification Display Area (SIDA); and whether individuals without appropriate identification in the SIDA are challenged by other employees. In addition, the special operations teams conducts Computer Assisted Passenger Prescreening System (CAPPS) tests to determine whether air carriers properly designate individuals as selectees and whether checkpoint and baggage screeners follow required screening procedures for selectee passengers and their baggage.

OIAPR is conducting repeat testing at airports so TSA officials have another indicator to assess whether screeners’ skills have improved and to gather data on TSA’s screener

performance initiatives. As part of post-test reviews with the screeners, OIAPR collects data on TIP installation and use, screener participation with the OLC videos, Mobile Training Assist Team visits, experience with MBS II and weapons training kits, and other performance improvement initiatives. OIAPR is also continuing to test new airports to build a baseline of airport test results to assess changes in performance in the future.

TSA covert testing has increased nationwide, and over 50 airports have been tested in the last three months. From September 9, 2002, to January 17, 2004, OIAPR conducted 1,095 checkpoint tests at 159 airports. Since September 2002, the overall pass rate for checkpoint testing has steadily improved, with an overall pass rate increase of 13 percent since that time. In addition, OIAPR has conducted 463 CAPPs tests, 192 checked baggage tests and 3,976 access tests during this time period.

Although the Aviation and Transportation Security Act mandated the federalization of airport security screening, it held open the possibility that airports could return to contract screening, provided the high standards required by law and instituted by TSA. TSA is currently operating a pilot program at five airports using private screeners that, by law, must meet TSA eligibility, training, and performance requirements and receive pay and other benefits not less than those of TSA screeners. Beginning on November 19, 2004, any airport operator may apply to have screening performed by a contract screening company under contract with TSA. TSA is assessing if and how it would expand contract screening, and to help us make these decisions we have awarded a contract to perform a thorough assessment of the pilot program. TSA is conducting covert testing at the five private screening pilot airports as well and plans semiannually testing to generate data for comparing performance between these airports and airports manned by TSA screeners. OIAPR is coordinating with TSA's evaluation contractor concerning information needed for the evaluation.

In addition to testing system performance, OIAPR investigates security breaches to determine how prohibited items may have entered sterile areas through checkpoints. OIAPR replicates the incidents to test equipment, policies, and personnel. Investigation results are analyzed and reviewed and form the basis for recommendations on improvements in airport security operations and screener performance and training, and for the development of testing protocols.

TSA has undertaken several human factors studies to identify appropriate adjustments in training, operational implementation of screening procedures, and physical layout of screening areas to improve screener efficiency and effectiveness. These efforts will help TSA better understand the causes for human errors and interactions with technology to help identify opportunities for performance improvements. This summer we expect to complete (1) an assessment of the screener work environment to help design ergonomically correct working conditions and determine whether improving the environment improves performance, and (2) a test and evaluation of a "best image first" (BIF) concept to see if this modification to technology can increase X-ray screener threat detection performance for IEDs. We are also evaluating changes in the physical environment for checkpoint supervisors that might enhance oversight and communication

and conducting controlled studies to determine the impact of time-on-task, fatigue, shift cycle, and equipment familiarity on detection performance and alarm resolution.

TSA recently carried out a screener workforce rightsizing effort. A complete review of the current screener staffing model was conducted to assess and identify the proper mix of full time and part time screeners to match the passenger flows at the nation's airports. Airport FSDs are given the flexibility to schedule the screening workforce to meet the peak travel periods. While this development will ultimately result in more efficient management of screener staffing to meet passenger throughput, matching staffing resources to the ever-changing needs at each airport remains an ongoing challenge. While the overall size of the workforce is declining, TSA is creating some additional capacity and greater efficiencies in the scheduling of screeners. FSDs at each airport now have access to scheduling tools that provide real-time information enabling them to forecast periods of peak demand for screening. TSA uses more split shifts and part-time screeners to maximize the operational flexibility available to FSDs when scheduling screeners to satisfy varying levels of demand. Balancing workload and screener scheduling is increasing TSA's options for meeting the demands at traditionally hard-to-fill airports. TSA continues to recruit and train screeners to fill vacancies and address normal attrition.

Today screeners are much better trained and prepared to meet the demands of screening both passengers and checked baggage. Over the holidays, the screener workforce responded well to the increased travel volume and heightened security procedures, capably carrying out their responsibilities with pride and professionalism. Over 1.7 million passengers and 2 million bags are processed through airport checkpoints on a daily basis. We are aggressively working with stakeholders to identify opportunities to increase efficiency.

In an effort to streamline and increase passenger throughput, TSA has instituted a pilot program to test the feasibility of remote baggage check-in. In Orlando, Florida, BAGS, Inc. is authorized to accept baggage at four offsite locations. BAGS, Inc. personnel are trained by air carriers to accept baggage and perform the responsibilities of ground security coordinator. The baggage undergoes EDS screening at Orlando International Airport. After a one-year trial, TSA will evaluate the success of the Orlando pilot to determine its applicability nationwide.

TSA has met the December 31, 2003, deadline for electronic screening of checked baggage at all but a handful of our Nation's airports. A classified report on the few airports where the deadline has not been met is provided to Congress each month. The report provides the status of our efforts to achieve compliance and a projected completion date. If Members of the Subcommittee would like additional details, further information could be provided in a setting appropriate for the discussion of classified information. TSA will continue to use congressionally-approved alternative methods for checked baggage screening, even after all airports have been provided the equipment capacity to screen all checked baggage. Although contingencies are built into each system to minimize the instances when non-electronic screening procedures would be required, we anticipate that there will always be situations when temporary circumstances require the

use of approved alternative measures to ensure the continued movement of passengers and baggage.

To date, six Letters of Intent (LOI) have been issued for in-line checked baggage screening systems at seven airports. Presently, TSA anticipates issuing additional LOIs and will make information regarding any future LOIs public, following the required Congressional notifications. TSA will continue to use a process to ensure that airports with the greatest security needs for an in-line system are given priority consideration for available Federal assistance.

I would like to take this opportunity to update you on the enormous contribution to being made by hundreds of pilots now trained as volunteer Federal Flight Deck Officers (FFDOs), another vital link in our rings of aviation security.

On February 25, 2004, TSA's FFDO program will have been in place for one year. TSA developed and implemented this program in close cooperation with organizations representing airline pilots, such as the Air Line Pilots Association (ALPA) and the Coalition of Airline Pilots Associations (CAPA). Pilots provided valuable insights to TSA during the formation of the FFDO program and many of their suggestions are reflected today in the initial qualifications, training, and standard operating procedures for FFDOs. In recent testimony before a Congressional subcommittee, ALPA characterized TSA's initial training curriculum as extremely effective and designed to prepare FFDOs for the challenges they will face when field deployed.

Last month, TSA began doubling the number of FFDO classes at our new site for training in Artesia, New Mexico, where there is capacity for further expansion if necessary. With the resources at hand, we plan to provide initial training and qualification for thousands of FFDOs by the end of this fiscal year. TSA has streamlined the process for pilots to become FFDOs. The selection process consists of an on-line application, an hour-long computerized assessment, an interview, and a background check. FFDO assessments are administered at over 200 locations throughout the United States, and more are being added. Classes are available continuously except during certain holidays.

TSA conducts an efficient screening process that is consistent with the process for other law enforcement personnel. Most FFDO volunteers are eligible to schedule training within 60 days of submitting an application.

Pilots also must attend re-qualification sessions twice a year to ensure that they maintain a high level of proficiency and familiarity with program requirements. Ten private and state and local government sites are available for self-scheduling of re-qualification training. Sites were selected in geographically diverse locations that would be convenient to pilots. As the numbers of FFDOs grows, TSA will expand the number of recurrent training sites to meet their needs.

With the enactment of Vision 100, the FFDO program has been expanded to include cargo pilots and other flight deck crewmembers. TSA is examining modifications to the

current FFDO curriculum and operating procedures to reflect the different environment in which cargo pilots operate. TSA initiated the on-line application process for cargo and other flight deck crewmembers on February 3 and expects to conduct its first cargo FFDO prototype program this April.

TSA is working to develop the components of crewmember basic and enhanced self-defense training programs based on the requirements of Vision 100. TSA will consult with the Federal Air Marshal Service, air carriers, flight attendants, training and terrorism experts, and individuals with expertise in counter-terrorism and self-defense training in the development of the program. The delivery of training to volunteer crewmembers will be carried out in partnership with air carriers.

Working with the DHS S&T Directorate, TSA is beginning a comprehensive review of the civil aviation security system now that two years have passed since the enactment of the Aviation and Transportation Security Act and over twelve years have passed since the Aviation Security Improvement Act of 1990. We are incorporating this review as part of our constant evaluation of the security measures we have put into place, and will be able to use the results of this report, along with our other evaluative efforts to consider other approaches to aviation security that may be available.

As a final note, I would like to comment on the extraordinary level of information sharing and cooperation that has been achieved during recent threats. When the alert level was raised to Orange over the holidays, TSA and DHS sister agency, U.S. Customs and Border Protection, maximized anti-terrorist efforts in the air environment by coordinating air security operations. Combined agency resources were utilized to screen passengers, cargo, aircraft, and airport personnel with access to aircraft. The Department of Transportation and the FAA were integral partners as we addressed the recent threat conditions. Furthermore, not only did TSA and DHS work closely with intelligence and law enforcement agencies to assess the threat, but we received invaluable cooperation and assistance from the State Department in addressing issues with our international partners. This is perhaps the most vivid evidence of the transformation that has taken place in aviation security since 9/11.

Thank you again for this opportunity to appear before the Subcommittee, and I will be happy to answer any questions you may have.