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AVIATION SECURITY

Federal Air Marshal Service Has Taken Actions to Fulfill Its Core Mission and Address Workforce Issues, but Additional Actions Are Needed to Improve Workforce Survey

GAO

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Why GAO Did This Study

By deploying armed air marshals onboard selected flights, the Federal Air Marshal Service (FAMS), a component of the Transportation Security Administration (TSA), plays a key role in helping to protect approximately 29,000 domestic and international flights operated daily by U.S. air carriers. GAO was asked to examine (1) FAMS's operational approach or "concept of operations" for covering flights, (2) to what extent this operational approach has been independently evaluated, and (3) the processes and initiatives FAMS established to address workforce-related issues. GAO analyzed documented policies and procedures regarding FAMS's operational approach and a July 2006 classified report based on an independent evaluation of that approach. Also, GAO analyzed employee working group reports and other documentation of FAMS's processes and initiatives for addressing workforce-related issues, and interviewed the FAMS Director, other senior officials, and 67 air marshals (selected to reflect a range in levels of experience). This report is the public version of a restricted report (GAO-09-53SU) issued in December 2008.

What GAO Recommends

To improve future workforce satisfaction surveys, GAO recommends that the FAMS Director take actions to ensure that (1) survey questions and response options are clearly worded and structured and (2) the response rate is as high as possible. TSA agreed.

To view the full product, including the scope and methodology, click on GAO-09-273. For more information, contact Steve Lord at (202) 512-4379 or lords@gao.gov.

What GAO Found

Because the number of air marshals is less than the number of daily flights, FAMS's operational approach is to assign air marshals to selected flights it deems high risk—such as the nonstop, long-distance flights targeted on September 11, 2001. In assigning air marshals, FAMS seeks to maximize coverage of flights in 10 targeted high-risk categories, which are based on consideration of threats, vulnerabilities, and consequences.

In July 2006, the Homeland Security Institute, a federally funded research and development center, independently assessed FAMS's operational approach and found it to be reasonable. However, the institute noted that certain types of flights were covered less often than others. The institute recommended that FAMS increase randomness or unpredictability in selecting flights and otherwise diversify the coverage of flights within the various risk categories. As of October 2008, FAMS had taken actions (or had ongoing efforts) to implement the Homeland Security Institute's recommendations. GAO found the institute's evaluation methodology to be reasonable.

To address workforce-related issues, FAMS's previous director, who served until June 2008, established a number of processes and initiatives—such as working groups, listening sessions, and an internal Web site—for agency personnel to provide anonymous feedback to management on any topic. These efforts have produced some positive results. For example, FAMS revised its policy for airport check-in and aircraft boarding procedures to help protect the anonymity of air marshals in mission status, and FAMS adjusted its flight scheduling process for air marshals to support a better work-life balance. The air marshals GAO interviewed expressed satisfaction with FAMS efforts to address workforce-related issues. Further, the current FAMS Director, after being designated in June 2008 to head the agency, issued a broadcast message to all employees, expressing a commitment to continue applicable processes and initiatives. Also, FAMS has plans to conduct a workforce satisfaction survey of all employees every 2 years, building upon an initial survey conducted in fiscal year 2007. Although the 2007 survey indicated positive changes since the prior year, it was answered by 46 percent of the workforce, well short of the 80-percent response rate that the Office of Management and Budget (OMB) encourages for ensuring that results reflect the views of the target population. OMB guidance gives steps, such as extending the cut-off date for responding, that could improve the response rate of future surveys. Also, several of the 2007 survey questions were ambiguous, and response options were limited. Addressing these design considerations could enhance future survey results.

Contents

Abbreviations

CONOPS	Concept of Operations
DHS	Department of Homeland Security
FAMS	Federal Air Marshal Service
ICE	U.S. Immigration and Customs Enforcement
OMB	Office of Management and Budget
PART	Program Assessment Rating Tool
PDA	personal digital assistant
SAC	special agent-in-charge
TSA	Transportation Security Administration

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Congressional Requesters

With a shared responsibility for protecting the approximately 29,000 domestic and international flights operated daily by U.S. commercial passenger air carriers, the Federal Air Marshal Service (FAMS) is a key component of the Transportation Security Administration's (TSA) layered approach for aviation security.[1] FAMS's overall mission is to help secure the nation's aviation system by detecting, deterring, and defeating hostile acts targeting U.S. air carriers, airports, passengers, and crews. In particular, FAMS's core mission is to deploy trained and armed federal air marshals—a workforce generally characterized as the nation's most mobile law enforcement officers—to provide an on-board security presence on selected flights.[2]

In response to the September 11, 2001, terrorist attacks and pursuant to the Aviation and Transportation Security Act, FAMS's mission was expanded to provide coverage of domestic as well as international flights, with priority given to nonstop, long-distance flights such as those targeted on September 11.[3] As a result, the agency's cadre of air marshals grew significantly. [4] Nonetheless, because the total number of air marshals is less than the approximately 29,000 domestic and international flights operated daily by U.S. commercial passenger air carriers, FAMS routinely must determine which flights are to be provided an on-board security presence. To facilitate making these decisions, FAMS developed an

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[1] FAMS is one layer among the multiple layers of aviation security. For example, prospective passengers are prescreened against applicable records in the consolidated watch list managed by the Federal Bureau of Investigation's Terrorist Screening Center. Also, at TSA checkpoints in airports across the nation, passengers and baggage are physically screened. Air marshals generally are characterized as being the last line of defense within this layered aviation-security framework.

[2] Air marshals are included in the GS-1801 federal law enforcement officer job series, as defined by the Office of Personnel Management. Law enforcement personnel with this series designation engage in general inspection and compliance activities. See GAO, *Federal Law Enforcement: Survey of Federal Civilian Law Enforcement Functions and Authorities*, GAO-07-121 (Washington, D.C.: Dec. 19, 2006).

[3] See Pub. L. No. 107-71, § 105, 115 Stat. 597, 606-08 (2001) (codified as amended at 49 U.S.C. § 44917).

[4] The specific number of federal air marshals is classified.

operational approach—commonly referred to as the agency's concept of operations—for deploying air marshals on selected flights.

In addition to flight-coverage decisions, FAMS also faces challenges in addressing various operational and quality-of-life issues that affect the ability of air marshals to carry out the agency's mission—issues that have been noted by our prior work and also have received extensive media coverage.[5] Such issues range, for example, from maintaining anonymity during aircraft boarding procedures to mitigating the various health concerns associated with frequent flying.

You requested that GAO evaluate FAMS's concept of operations and workforce-related issues. This report answers the following questions:

- What is FAMS's operational approach for achieving its core mission of providing an onboard security presence for flights operated by U.S. commercial passenger air carriers?

- To what extent has FAMS's operational approach for achieving its core mission been independently assessed?

- To what extent does FAMS have processes and initiatives in place to address issues that affect the ability of its workforce to carry out its mission?

This report is a public version of the restricted report (GAO-09-53SU) that we provided to you on December 8, 2008. DHS and TSA deemed some of the information in the restricted report as sensitive security information, which must be protected from public disclosure. Therefore, this report omits this information, such as the specific details associated with FAMS's concept of operations. Although the information provided in this report is more limited in scope, it addresses the same questions as the restricted report. Also, the overall methodology used for both reports is the same.

In studying FAMS's operational approach, we reviewed relevant legislation regarding FAMS's mission, and we analyzed the agency's policies and other documentation regarding the strategy and concept of operations for carrying out that mission, including the procedures for assigning or scheduling air marshals to selected flights. Also, we reviewed the results

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[5] For example, see GAO, *Aviation Security: Federal Air Marshal Service Could Benefit from Improved Planning and Controls*, GAO-06-203 (Washington, D.C.: Nov. 28, 2005).

of an evaluation conducted in 2003 by the Office of Management and Budget (OMB), which utilized its Program Assessment Rating Tool (PART) to assess the management and performance of FAMS.[6] Further, we also reviewed the follow-on reassessment of FAMS that OMB conducted in 2008.

To determine the extent to which FAMS's operational approach has been independently assessed, we reviewed a July 2006 classified report prepared by the Homeland Security Institute based on its independent evaluation of FAMS's concept of operations.[7] Our engagement team included a social science analyst and an economist with experience in risk assessment, who used generally accepted social science research standards in reviewing the Homeland Security Institute's report. Also, we interviewed applicable Homeland Security Institute officials to enhance our understanding of the evaluation's scope, methodology, findings, and recommendations. Based on our review and discussion, we determined the Homeland Security Institute's report to be sufficiently reliable for the purposes of our work. Further, we reviewed FAMS documentation—and interviewed the Director of FAMS and other senior officials at the agency's headquarters—regarding the status of efforts to address recommendations made by the Homeland Security Institute and any related initiatives involving strategic planning and the agency's concept of operations. We also reviewed two additional Homeland Security Institute reports, which FAMS provided to us in September 2008. One of the reports detailed the Homeland Security Institute's analysis regarding requirements for an improved mission scheduling tool for FAMS,[8] and the other report

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[6] PART consists of a standard series of questions intended to determine the strengths and weaknesses of federal programs. The PART questions cover four broad topics—(1) program purpose and design, (2) strategic planning, (3) program management, and (4) program results/accountability. See GAO, *Program Evaluation: OMB's PART Reviews Increased Agencies' Attention to Improving Evidence of Program Results*, GAO-06-67 (Washington, D.C.: Oct. 28, 2005).

[7] The Homeland Security Institute is a federally funded research and development center established pursuant to the Homeland Security Act of 2002. See Pub. L. No. 107-296, § 312, 116 Stat. 2135, 2176, as amended. The Institute's mission is to assist the Department of Homeland Security address relevant issues requiring scientific, technical, and analytical expertise. In response to OMB's 2003 PART review of FAMS, which concluded that key aspects of program design needed to be independently assessed, FAMS contracted for an independent evaluation to be conducted by the Homeland Security Institute.

[8] Homeland Security Institute, *Analysis for the Next-Generation Federal Air Marshal Service (FAMS) Mission Scheduling & Notification System (MSNS)*, final report (July 10, 2008).

presented the institute's benchmark analysis that compared FAMS's workday rules[9] and practices against those of similar occupations involving frequent air travel and the related operational challenges, including fatigue and other human factors.[10]

Regarding processes and initiatives to address issues affecting the ability of air marshals to carry out the agency's mission, we reviewed prior reports—including our September 2005 report on planning and controls for FAMS.[11] We also reviewed FAMS documentation regarding various working groups and other initiatives that FAMS had established to address issues that affect the ability of air marshals to carry out the agency's mission. For criteria in reviewing the agency's documentation regarding these efforts, we drew on our prior work regarding leading organizations and the best practices for strategically managing human capital.[12] Further, we interviewed the Director of FAMS and other senior officials at agency headquarters, and we visited 11 of the agency's 21 field offices, where we interviewed managers and a total of 67 air marshals. We selected the 11 field offices and the 67 air marshals based on nonprobability sampling.[13] Regarding field office selections, we considered various factors, such as geographic location and the involvement of local management in agencywide working groups to address issues affecting air marshals. Our selections of air marshals were made to encompass a variety of experience levels. Because we selected a nonprobability sample of FAMS field offices to visit and air marshals to interview, the information we obtained in these visits and interviews cannot be generalized either to all 21 field locations or to all air marshals in the offices we visited. However, the interviews

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[9] "Workday rules" refer to the parameters that FAMS uses for assigning air marshals to flights.

[10] Homeland Security Institute, *Federal Air Marshal Service (FAMS) Risk-Based Resource Allocation Study: Human Factors Analysis*, final report (July 10, 2008).

[11] GAO, *Aviation Security: Federal Air Marshal Service Could Benefit from Improved Planning and Controls*, GAO-05-884SU (Washington, D.C.: Sept. 29, 2005). The report is restricted (not available to the public) because it contains sensitive security information. The public version of the report is GAO-06-203 (Nov. 28, 2005).

[12] See GAO, *A Model of Strategic Human Capital Management*, GAO-02-373SP (Washington, D.C.: Mar. 15, 2002).

[13] Nonprobability sampling is a method of sampling where observations are selected in a manner that is not completely random, generally using specific characteristics of the population as criteria. Results from a nonprobability sample cannot be used to make inferences about an entire population because some elements of the population being studied had no chance or an unknown chance of being selected as part of the sample.

provided us a broad overview of issues important to air marshals. We also reviewed documentation regarding the implementation and results of a workforce satisfaction survey that FAMS conducted in 2007. Our engagement team, which included social science analysts with extensive survey research experience, reviewed the questionnaire used in the survey for clarity and the related response options for appropriateness. Also, we discussed with FAMS officials the extent to which efforts were made to obtain an overall response rate as high as possible. As criteria to guide our review of the survey results, we used OMB's Standards and Guidelines for Statistical Surveys (September 2006) and related guidance applicable to federal surveys.

We conducted this performance audit from April 2007 to December 2008 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. More details about the scope and methodology of our work are presented in appendix I.

Results in Brief

FAMS's operational approach (or concept of operations) is based on assessments of threat, vulnerability, and consequences to help ensure that high-risk flights operated by U.S. commercial air carriers—such as the nonstop, long-distance flights targeted on September 11, 2001—are given priority coverage by federal air marshals. Since it is not feasible for federal air marshals to cover all of the approximately 29,000 domestic and international flights operated daily by U.S. commercial passenger air carriers, FAMS aims to assign air marshals to selected, higher-risk flights. Under this approach, FAMS seeks to maximize coverage of high-risk flights in 10 targeted critical flight categories, such as flights to and from the national capital region and long-distance flights from various other locations. FAMS relies on a scheduling process for determining the most efficient flight combinations that will allow air marshals to cover the desired flights. According to FAMS officials, the overall coverage goals and the corresponding flight schedules of air marshals are subject to modification at any time based on changing threat information and intelligence.

In July 2006, the Homeland Security Institute, a federally funded research and development center, concluded that FAMS's operational approach for providing an on-board security presence on high-risk flights was

reasonable. However, the Homeland Security Institute noted that certain types of flights were covered less often than others. The Homeland Security Institute recommended that FAMS increase randomness or unpredictability in selecting flights and to otherwise diversify the coverage of flights. As of October 2008, FAMS had implemented or had ongoing efforts to implement the institute's recommendations. For example, FAMS is developing an automated decision-support tool for selecting flights; this effort is expected to be completed by December 2009. We reviewed the Homeland Security Institute's evaluation methodology and found it to be reasonable.

To better understand and address operational and quality-of-life issues affecting the FAMS workforce, the agency's previous director—who served in that capacity from March 2006 to June 2008—established various processes and initiatives, including 36 issue-specific working groups composed of managers and air marshals. The previous director also established listening sessions that provided a forum for employees to communicate directly with senior management and an internal Web site for agency personnel to provide anonymous feedback to management. These efforts have produced some positive results. For example, FAMS amended its policy for airport check-in and flight boarding procedures (effective May 15, 2008) to better ensure the anonymity of air marshals in mission status[14] and also adjusted its flight scheduling process for air marshals to support a better work-life balance. All of the 67 air marshals we interviewed in 11 field offices commented favorably about these efforts and credited the leadership of the previous FAMS Director. To reinforce a shared vision for workforce improvements and to sustain forward progress, the current FAMS Director has expressed a commitment to continuing applicable processes and initiatives.

Also, FAMS has plans to conduct a workforce satisfaction survey of all employees every 2 years, building upon an initial survey conducted in fiscal year 2007. A majority (79 percent) of the respondents to the 2007 survey indicated that there had been positive changes from the prior year, although the overall response rate (46 percent) constituted less than half of the FAMS workforce and was substantially less than the 80 percent encouraged by OMB in its guidance for federal surveys that require its

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[14] FAMS's changes to check in and boarding procedures concern air marshals' interactions with airline personnel. FAMS's policy continues to require air marshals to adhere to established TSA regulations and locally established airport procedures.

approval. According to the OMB guidance, a high response rate increases the likelihood that the views of the target population are reflected in the survey results. Although the FAMS workforce survey did not require OMB approval, we believe that OMB guidance provides direction in planning, designing, and implementing surveys. While FAMS made some efforts to obtain responses to the 2007 survey, other methods outlined in the OMB guidance, such as extending the cut-off date for responding, could improve the response rate of future FAMS surveys.[15] Also, 7 of the 60 questions in the 2007 survey questionnaire combined two or more issues, which could cause respondents to be unclear on what issue to address and result in potentially misleading responses. Moreover, none of the 60 questions in the 2007 survey questionnaire provided for response options such as "not applicable" or "no basis to judge"—responses that would be appropriate when respondents had little or no familiarity with the topic in question. Thus, the 2007 survey's results may not provide a complete assessment of employees' satisfaction.

To increase the usefulness of biennial workforce satisfaction surveys, we are recommending that the FAMS Director take steps to ensure that the surveys are well designed and that additional efforts are considered for obtaining the highest possible response rates. In November 2008, in written comments on a draft of our restricted report, the Department of Homeland Security and TSA agreed with our recommendation and noted that FAMS was in the initial stages of formulating the next workforce satisfaction survey, which included plans to implement the recommendation.

Background

Originally established as the Sky Marshal program in the 1970s to counter hijackers, the Aviation and Transportation Security Act expanded FAMS's mission and workforce in response to the September 11, 2001, terrorist attacks and mandated the deployment of federal air marshals on high-security risk flights. Within the 10-month period immediately following September 11, 2001, the number of air marshals grew significantly. Also, during years following the 2001 attacks, FAMS underwent various

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[15] FAMS officials attributed the 2007 survey's 46-percent response rate to the highly mobile nature of the agency's workforce and also noted that this rate is consistent with the response rates for similar workforce satisfaction surveys in the federal government. FAMS officials added that they view the workforce survey as one of a variety of tools—along with the numerous issue-specific working groups and other processes and initiatives—for raising issues of concern and providing feedback on actions taken by management.

organizational transfers. Initially, FAMS was transferred within the Department of Transportation from the Federal Aviation Administration to the newly created TSA. In March 2003, FAMS moved, along with TSA, to the newly established Department of Homeland Security. In November 2003, FAMS was transferred to U.S. Immigration and Customs Enforcement (ICE). Then, about 2 years later, FAMS was transferred back to TSA in the fall of 2005.[16]

FAMS is one layer among multiple layers of aviation security. For example, prospective passengers are prescreened against applicable records in the Terrorist Screening Center's consolidated watch list.[17] Passengers and baggage are also physically screened. Air marshals generally are characterized as being the last line of defense within the layered aviation-security framework. In this regard, FAMS officials stressed that air marshals constitute the only in-flight security layer deployed on the basis of risk.[18]

FAMS deploys thousands of federal air marshals to a significant number of daily domestic and international flights. In carrying out this core mission of FAMS, air marshals are deployed in teams to various passenger flights.[19]

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[16] The transfer of FAMS to ICE was premised partly on the assumptions that (1) air marshals would be afforded a broader career path by cross-training with ICE's investigative division and (2) ICE's special agents could provide a surge capability by serving as supplemental air marshals, if needed. See GAO, *Aviation Security: Federal Air Marshal Service Is Addressing Challenges of Its Expanded Mission and Workforce, but Additional Actions Needed*, GAO-04-242 (Washington, D.C.: Nov. 19, 2003).

[17] The Terrorist Screening Center, managed by the Federal Bureau of Investigation, maintains a consolidated watch list of known or appropriately suspected terrorists and sends records from the list to agencies to support terrorism-related screening. TSA currently provides airlines with portions of the Terrorist Screening Center's watch list—the No Fly and Selectee lists—and directs them to screen the names of passengers to identify those who may pose threats to aviation. In general, individuals on the No Fly List are to be precluded from boarding an aircraft, and individuals on the Selectee List are to receive additional physical screening prior to boarding an aircraft. See GAO, *Terrorist Watch List Screening: Opportunities Exist to Enhance Management Oversight, Reduce Vulnerabilities in Agency Screening Processes, and Expand Use of the List*, GAO-08-110 (Washington, D.C.: Oct. 11, 2007).

[18] Other in-flight security layers not employed based on risk include hardened cockpit doors and armed flight crew members who are part of TSA's Federal Flight Deck Officer program.

[19] The specific number of air marshals assigned to an on-board team, whether for a domestic flight or an international flight, may vary depending on such factors as duration of the flight, the type of aircraft, the departure and destination cities, and awareness of specific threat information.

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Such deployments are based on FAMS's concept of operations, which guides the agency in its selection of flights to cover. Once flights are selected for coverage, FAMS officials stated that they must schedule air marshals based on their availability,[20] the logistics of getting individual air marshals in position to make a flight, and applicable workday rules.

At times, air marshals may have ground-based assignments. On a short-term basis, for example, air marshals participate in Visible Intermodal Prevention and Response (VIPR) teams, which provide security nationwide for mass transit systems other than aviation.[21] Also, air marshals participate in Joint Terrorism Task Forces led by the Federal Bureau of Investigation.

Good marksmanship is considered a necessity for air marshals, particularly given the unique environment of the core mission—the relatively tight confines of an airplane, coupled with the presence of numerous passengers ("bystanders") and the possibility of air turbulence that creates an unstable "shooting platform" (see fig. 1). Thus, according to TSA, air marshals have the highest marksmanship standard in the federal government and also must be recertified on their firearm every quarter.

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[20] In determining air marshals' availability, FAMS officials stated that they must consider such factors as training requirements, other ground-based duties, and annual leave plans.

[21] After the March 2004 train bombings in Madrid, TSA created and deployed Visible Intermodal Prevention and Response teams to enhance security on U.S. rail and mass transit systems nationwide. Comprised of federal air marshals, surface transportation security inspectors, transportation security officers, behavior detection officers, and explosives detection canines, the teams are intended to work with local security and law enforcement officials to supplement existing security resources, provide a deterrent presence and detection capabilities, and introduce an element of unpredictability to disrupt potential terrorist activities.

Figure 1: Federal Air Marshals Are Trained for a Unique Working Environment

Source: GAO and the Federal Air Marshal Service (FAMS).

Note: Faces are intentionally blurred.

To preserve their anonymity on covered flights, air marshals are to blend in with other passengers by dressing appropriately and performing their duties discreetly without drawing undue attention.

The Federal Air Marshal Service's Operational Approach to Achieving Its Core Mission Is Based on Risk-Related Factors

FAMS's operational approach (concept of operations) is based on risk-related factors, such as assessments of threat, vulnerability, and consequences. FAMS is guided by the provisions of the Aviation and Transportation Security Act that specify the deployment of federal air marshals on flights presenting high-security risks, such as nonstop, long-distance flights targeted on September 11, 2001. FAMS seeks to maximize coverage of high-risk flights by establishing coverage goals for 10 targeted critical flight categories. In order to reach these coverage goals, FAMS uses a scheduling process to determine the most efficient flight

combinations that will allow air marshals to cover the desired flights. FAMS management officials stressed, however, that the overall coverage goals and the corresponding flight schedules of air marshals are subject to modification at any time based on changing threat information and intelligence.

Risk-Related Factors Are Considered in Assigning Air Marshals to Flights

Following the attacks of September 11, 2001, FAMS developed a risk-based concept of operations for deploying air marshals on U.S. commercial passenger air carriers. Because there are many more U.S. air carrier flights each day than can be covered by air marshals, FAMS relies on the methodology outlined in its concept of operations to assign air marshals to flights with the highest security risks. Under this approach, FAMS considers the following risk-related factors to categorize each of the approximately 29,000 domestic and international flights operated daily by U.S. commercial passenger air carriers into risk categories—high risk or lower risk:[22]

- Threat (intelligence): Available strategic or tactical information affecting aviation security is considered.[23]

- Vulnerabilities: Although FAMS's specific definition is deemed to be sensitive security information, DHS defines "vulnerability" as a physical feature or operational attribute that renders an entity open to exploitation or susceptible to a given hazard.

- Consequences: FAMS recognizes that flight routes over certain geographic locations involve more potential consequences than other routes.

FAMS attempts to assign air marshals to provide an on-board security presence on as many of the flights in the high-risk category as possible. However, other considerations can make covering only high-risk flights impractical from a scheduling perspective and potentially predictable to an adversary. Therefore, for purposes of scheduling efficiency and adversary uncertainty, FAMS may deploy some air marshals on lower-risk flights.

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[22] FAMS's criteria for determining high-risk flights are classified.

[23] FAMS considers "threat" and "intelligence" as separate risk-related factors.

Air Marshals Are Deployed on Flights to Meet Coverage Goals for Targeted Critical Flight Categories; the Concept of Operations Provides Flexibility for Responding to Changing Threats

FAMS has established a scheduling process intended to maximize the coverage of high-risk flights and meet the agency's desired coverage goals for 10 targeted critical flight categories.[24] FAMS's Domestic Planning Branch (within the Systems Operation Control Division) is responsible for scheduling air marshals to domestic missions. During the course of a year, the Domestic Planning Branch must prepare schedules for 13 roster periods of 28 days each. According to FAMS officials, each 28-day schedule takes approximately 3 weeks to prepare. The Domestic Planning Branch prepares each domestic schedule using an automated scheduling tool.[25] As part of the scheduling process, each FAMS field office is responsible for making available a specific percentage of their air marshals on a daily basis to cover targeted critical flights (both domestic and international flights) in the roster periods. FAMS utilizes the automated scheduling tool to determine the most efficient flight "pairings" of departure and return flights that will bring an air marshal back to his or her starting point and that would be within the parameters for mission assignment and rest for the air marshal. FAMS officials also perform other checks on the fairness or appropriateness of the schedules, such as ensuring that certain flights are not being covered repeatedly by the same air marshals.

FAMS officials noted that the schedules for deploying air marshals are altered as needed to cover specific, high-threat flights. For example, in August 2006, FAMS increased its coverage of international flights in response to the discovery, by authorities in the United Kingdom, of specific terrorist threats directed at flights from Europe to the United States. However, the officials added that a shift in resources of this type can have consequences because of the limited number of air marshals. FAMS officials noted that international missions require more resources than domestic missions partly because the trips are of longer duration.

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[24] FAMS's coverage rate goals for the 10 targeted critical flight categories are classified.

[25] According to FAMS officials, international mission schedules are prepared by Systems Operation Control Division officials (other than those in the Domestic Planning Branch) who use manual methods because of added complexities, such as the need to coordinate with foreign governments and make reservations at overseas locations.

An Independent Assessment Concluded That the Federal Air Marshal Service's Approach for Achieving Its Core Mission Was Reasonable; Recommendations for Enhancing the Approach Are Being Implemented

In its 2003 PART review of FAMS, OMB concluded that an independent evaluation should be conducted to assess FAMS's performance related to aspects of the agency's concept of operations—particularly aspects involving flight coverage risk categories, the distribution of covered flights, and target levels of coverage.[26] The Homeland Security Institute, a federally funded research and development center, performed this evaluation and issued a final report in July 2006. The report concluded that FAMS's approach for achieving its core mission of providing an onboard security presence for flights, as detailed in the agency's concept of operations, was reasonable and made several recommendations for enhancements.[27] The Homeland Security Institute recommended, for example, that FAMS increase randomness or unpredictability in selecting flights and otherwise diversify the coverage of flights within various risk categories. As of October 2008, FAMS had implemented or had ongoing efforts to implement the recommended enhancements.

In a July 2006 report, the Homeland Security Institute specifically noted the following regarding FAMS's overall approach to flight coverage:

- FAMS applies a structured, rigorous approach to analyzing risk and allocating resources.
- The approach is reasonable and valid.
- No other organizations facing comparable risk-management challenges apply notably better methodologies or tools.

As part of its evaluation methodology, the Homeland Security Institute examined the conceptual basis for FAMS's approach to risk analysis. Also, the institute examined FAMS's scheduling processes and analyzed outputs in the form of "coverage" data reflecting when and where air marshals were deployed on flights. Further, the Homeland Security Institute developed and used a model to study the implications of alternative strategies for assigning resources. We reviewed the Homeland Security Institute's evaluation methodology and generally found it to be reasonable.

In a 2008 PART reassessment of FAMS, OMB also reported that the Homeland Security Institute's evaluation employed quality evaluation methods and was comprehensive in scope. Further, OMB noted that an

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[26] Appendix II presents more details about the results of OMB's 2003 PART review of FAMS and the follow-on reassessment conducted in 2008.

[27] Much of the specific information in the report is classified.

interagency steering group—which was convened by the Homeland Security Institute and met in conference in April 2006—also had reviewed FAMS's concept of operations and considered it to be reasonable. In addition to FAMS and Homeland Security Institute participants, the interagency steering group consisted of representatives from various law enforcement and counterterrorism agencies, which included the Federal Bureau of Investigation, U.S. Customs and Border Protection, the Transportation Security Administration, the Federal Aviation Administration, the Homeland Infrastructure Threat and Risk Assessment Center,[28] U.S. Northern Command/North American Aerospace Defense command,[29] and the National Counterterrorism Center.

In its July 2006 report, the Homeland Security Institute made several recommendations for enhancing FAMS's approach for deploying air marshals on flights. As presented in table 1, FAMS had implemented or had ongoing efforts to implement all of the recommended enhancements, as of October 2008.

Table 1: Homeland Security Institute's Recommendations (July 2006 Report) to Improve the Federal Air Marshal Service's Approach for Achieving Its Core Mission

Topic	Discussion, specific recommendations, and implementation status (as of October 2008)
Definition of vulnerability	Discussion: According to the Homeland Security Institute, FAMS's definition of "vulnerability" is inconsistent with traditional risk-based methodologies.
	Recommendation: FAMS should engage the aviation security community to better understand vulnerabilities surrounding aircraft configuration or possible gaps in the air defense system.
	Implementation status: FAMS officials stated that they consulted with the aviation security community and believe that the agency's definition of vulnerability is appropriate for risk analyses relevant to the mission of FAMS. However, the officials also noted that a new automated decision-support tool for selecting flights is being developed with assistance from the Homeland Security Institute and will incorporate consideration of more traditional aspects of vulnerability. FAMS expects development of this tool to be completed by the end of calendar year 2009.

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[28] The center was established by the Department of Homeland Security. The center's intelligence analysts and infrastructure specialists work to identify the threat to critical infrastructures, vulnerabilities and interdependencies, and the overall risk inherent in any potential attack against critical infrastructure.

[29] The U.S. Northern Command provides command and control of Department of Defense homeland defense efforts and coordinates defense support of civil authorities. The North American Aerospace Defense Command is the binational American and Canadian command responsible for the air defense of North America and maritime warning for the United States and Canada.

Topic	Discussion, specific recommendations, and implementation status (as of October 2008)
Filtering process	Discussion: The Homeland Security Institute reported that FAMS's interpretation and implementation of impact (consequences) and the subsequent "filtering" process heavily bias the agency's allocation decisions.
	Recommendation: FAMS should engage the intelligence and security communities to validate these basic assumptions concerning threat and consequence.
	Implementation status: FAMS has modified its flight filtering approach to open up more flights for potential coverage. In addition, the Homeland Security Institute, as part of its ongoing work with FAMS after issuance of the July 2006 report, continued to examine FAMS's approach to flight coverage and will provide FAMS a report by the end of calendar year 2009.
Allocation process	Discussion: The Homeland Security Institute found that the allocation algorithm used by FAMS is biased and may not be consistent with effective risk reduction.
	Recommendation: FAMS should continue pursuing next-generation scheduling and analysis tools to better quantify scheduling efficiency and risk-reduction effectiveness.
	Recommendation: To compensate for a lack of resources and to deny predictability, FAMS should integrate randomness (unpredictability) in its scheduling process.
	Implementation status: As another part of its ongoing work, the Homeland Security Institute is assisting FAMS in modifying the current scheduling tool to provide more randomness in flight scheduling. In July 2008, the institute provided FAMS a report detailing requirements for a new scheduling tool. The institute's report recommended that FAMS continue to use its present automated scheduling tool but expand the capabilities of the software for determining flight risk and allocating resources based on that risk. In addition, the institute recommended an approach for using the scheduling tool to increase the randomness of flights selected for coverage—that is, an approach designed to randomly select some flights in each risk category while selecting other flights in the respective category based on efficient flight pairings and the need for scheduling efficiency. The institute also recommended that FAMS continue to research methods for incorporating more randomness into its scheduling process. FAMS officials indicated that these ongoing efforts with the institute, along with the modifications to the filtering process mentioned above, will help address the randomness issue. FAMS officials stated that a date for final completion of the new scheduling tool is uncertain since it is dependent on the agency's future budgets.
Performance measures	Discussion: The Homeland Security Institute reported that FAMS's primary performance measure—average coverage rates—can mask weaknesses in coverage patterns (variance).[a]
	Recommendation: FAMS should develop performance measures to track the distribution or coverage across certain categories of flights.
	Implementation status: FAMS contracted with the Homeland Security Institute to develop, as part of its ongoing work, proposals for alternative performance measures for FAMS to consider. The institute's final report is due to FAMS by the end of calendar year 2008.

Topic	Discussion, specific recommendations, and implementation status (as of October 2008)
Decision-support tools	Discussion: During the course of its analysis, the Homeland Security Institute noted that FAMS's decision makers did not have a tool for evaluating the resource implications of different threat scenarios and alternative coverage schemes.
	Recommendation: FAMS should consider building a decision-support tool, along the lines of the model that the Homeland Security Institute developed based on risk balancing, to facilitate a system-wide view of resource decisions.
	Implementation status: FAMS, with the assistance of the Homeland Security Institute, is developing an automated decision-support tool that will be linked to its flight-scheduling system. FAMS expects the new decision-support tool to consider every flight over critical infrastructure and include input for vulnerability of different types of aircraft and airports. Development of the decision-support tool is anticipated to be completed by the end of calendar year 2009. In the interim, FAMS is basing its resource-allocation decisions partly on manual processes whereby FAMS officials review the threat environment and determine the most beneficial mix of international and domestic flights, while observing budgetary and personnel constraints.

Source: Homeland Security Institute; GAO analysis.

Note: The "discussion" and the "recommendation" narratives are excerpts from the Homeland Security Institute's July 2006 report. For more details about the institute's report, see appendix III.

[a]Appendix IV presents more details about FAMS's key performance measure.

In reference to the core mission of FAMS, the Homeland Security Institute's recommendations regarding two processes—the filtering process for selecting flights and the allocation process for assigning air marshals to flights—are particularly important. To address the institute's recommendations, FAMS officials stated that a broader approach to filtering flights has been implemented—an approach that opens up more flights for potential coverage, provides more diversity and randomness in flight coverage, and extends flight coverage to a variety of airports.

The Homeland Security Institute's ongoing work has also resulted in two reports delivered to FAMS in July 2008. One of the reports detailed the institute's analysis regarding requirements for a next-generation-mission scheduling tool for FAMS,[30] and the other report presented the institute's benchmark analysis that compared FAMS's workday rules and practices against those of similar occupations involving frequent air travel and the related operational challenges, including fatigue and other human factors.[31] Also, in September 2008, the Homeland Security Institute provided FAMS a classified report assessing the deterrent effects of the

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[30] Homeland Security Institute, *Analysis for the Next-Generation Federal Air Marshal Service (FAMS) Mission Scheduling & Notification System (MSNS)*, final report (July 10, 2008).

[31] Homeland Security Institute, *Federal Air Marshal Service (FAMS) Risk-Based Resource Allocation Study: Human Factors Analysis*, final report (July 10, 2008).

agency's approach to flight coverage. Further, based on its continuing work, the institute expects to provide FAMS one additional final report by the end of calendar year 2008—a report regarding potential enhancements to performance measures.[32]

The Federal Air Marshal Service Has Taken Positive Actions to Address Issues Affecting Its Workforce and to Help Ensure Continued Progress

To identify and address issues affecting the ability of its workforce to successfully carry out its mission, FAMS has implemented various communication-oriented processes or initiatives—including 36 issue-specific working groups—that have produced some positive results. For instance, FAMS has revised and documented certain policies—including the policy related to aircraft check-in and boarding procedures—to better protect air marshals' anonymity. In addition, FAMS has modified its mission scheduling processes and implemented a voluntary lateral transfer program to address certain issues regarding air marshals' quality of life— and has plans to further address health issues associated with varying work schedules and frequent flying. As an additional initiative to help determine the effectiveness of management's actions to address issues affecting air marshals, FAMS conducted a workforce satisfaction survey of all staff in late fiscal year 2007. A majority (79 percent) of the respondents to the survey indicated that there had been positive changes from the prior year, although the overall response rate (46 percent) constituted less than half of the workforce. The 46 percent response rate was substantially less than the 80 percent rate encouraged by OMB in its guidance for federal surveys that require its approval. According to the OMB guidance, a high response rate increases the likelihood that the views of the target population are reflected in the survey results. Obtaining a higher response rate to FAMS's future surveys, which the agency plans to conduct every 2 years, and modifying the structure of some questions, could enhance the surveys' potential usefulness by, for instance, providing a more comprehensive basis for assessing employees' attitudes and perspectives. All 67 of the air marshals we interviewed in 11 field offices attributed progress under these efforts largely to the "tone at the top," particularly the commitment exhibited by the former FAMS Director who served in his position from March 2006 to June 2008. To reinforce a shared vision for workforce improvements and sustain forward progress, the current FAMS Director has expressed a commitment to continuing applicable processes and initiatives.

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[32] The Institute noted that it is coordinating its work on performance measures with OMB.

The Federal Air Marshal Service Implemented Various Processes or Initiatives to Address Issues Affecting Its Workforce

Our prior work has shown that leading organizations commonly sought their employees' input on a periodic basis—by, for example, establishing working groups or task forces, convening focus groups, and conducting employee satisfaction surveys—and used that input to adjust their human capital approaches.[33] Starting in March 2006, the then-serving FAMS Director implemented several communication processes or initiatives to better understand and address issues facing the agency's workforce. Chief among these processes or initiatives were issue-specific working groups established to study, analyze, and address a variety of issues ranging from mission, organizational, and operational topics to workforce satisfaction and quality-of-life concerns. Initially, based on his knowledge of issues facing the organization when he assumed the leadership position in March 2006, the FAMS Director established 12 working groups. Subsequently, based on feedback from these initial groups and other sources regarding issues of concern, the number of working groups expanded to 36 (see app. V).

Each working group typically included a special agent-in-charge, a subject matter expert, air marshals, and mission support personnel from the field and headquarters. FAMS management directed working group members to define each group's purpose, analyze specific issues, develop short- and long-term recommendations and determine their financial feasibility. As a final product, FAMS management expected each working group to submit a report, including recommendations, to the FAMS executive staff for managerial consideration.[34] According to FAMS management, the working groups typically disband after submitting a final report. FAMS management stressed, however, that applicable groups could be reconvened or new groups established as needed to address relevant issues.

In addition to the working groups, other processes or initiatives implemented by FAMS management to address workforce issues or

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[33] GAO, *A Model of Strategic Human Capital Management*, GAO-02-373SP (Washington, D.C.: Mar. 15, 2002).

[34] Regarding the status of the 36 working groups as of October 1, 2008, FAMS officials stated that (a) 18 working groups had completed their work and submitted final reports, which have been distributed by the FAMS Director to the workforce; (b) 9 working groups had submitted final reports that were still under review by FAMS management; (c) 5 working groups had yet to complete their work and prepare final reports; and (d) 4 working groups are to remain ongoing and present findings when applicable and by appropriate means.

otherwise improve management-workforce communication include the following:

- Field office focus groups—Each of the 21 FAMS field offices organized a local focus group composed of representatives from the respective office's air marshal squads and at least one mission support staff. All members serve on a rotating basis, and the groups are to meet at least quarterly to discuss issues of concern to the local workforce and bring these issues to the attention of the applicable field office's special agent-in-charge.

- Field office visits by the FAMS Director— In 2006, the FAMS Director began visiting field offices and holding informal gatherings with air marshals, outside the presence of local managers, to discuss their questions and concerns.

- Listening sessions—FAMS senior management established forums to allow direct communication between FAMS senior management and various personnel. In 2006, the FAMS Director and Deputy Directors conducted these sessions weekly in headquarters and the field offices with a total of 10 to14 staff selected for each meeting. In 2007, this format changed from weekly to monthly sessions and included larger groups of FAMS personnel.

- Dinners with the Director—In 2006, the FAMS Director began holding weekly dinners to meet with air marshals transiting through the Washington, D.C., area. These dinners provide an opportunity for air marshals to speak personally with the director about any questions or concerns. The FAMS Deputy Director and one assistant director also attend these dinners with selected air marshals.

- Director's e-mail in-box[35]—FAMS established an e-mail in-box for agency personnel to provide feedback to the FAMS Director. At any time, air marshals—whether at headquarters, in a field office, or deployed on mission—can send their insights, ideas, suggestions, and solutions to the FAMS Director.

- Anonymous Web site—FAMS established an internal Web site for agency personnel to provide anonymous feedback to FAMS management on any topic.

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[35] FAMS also refers to the e-mail in-box as the "working group e-mail address."

- Ombudsman Position—FAMS management assigned an air marshal to the position of Ombudsman in October 2006. According to FAMS management, the Ombudsman provides confidential, informal, and neutral assistance to employees to address workplace-related problems, issues, and concerns. FAMS reported that, in fiscal year 2007 (the first full year of the position), the Ombudsman handled 67 cases, and, through the first three quarters of fiscal year 2008, an additional 54 cases.

FAMS officials estimated that, as of October 2008, more than one-fourth of the agency's employees had participated in one or more of these activities which encompass the various working groups and other processes and initiatives.[36]

Based on input provided by the working groups and information obtained through the other processes and initiatives, FAMS has taken or is planning to take actions to address issues that affect the ability of air marshals to carry out the agency's mission. As discussed in the following sections, these actions address operational issues, such as check-in and boarding procedures that affect air marshals' anonymity as well as quality-of-life and health issues.

To Help Preserve the Anonymity of Air Marshals, the Federal Air Marshal Service Revised Its Policy and Procedures for Check-In and Boarding of Aircraft

To preserve their anonymity on covered flights, federal air marshals are to blend in with other passengers by dressing appropriately and performing their duties discreetly without drawing undue attention. In past years, air marshals frequently asserted that the check-in and boarding policy and procedures established by FAMS compromised their anonymity by requiring repeated interactions with airline personnel. In September 2005, we reported that the full extent of incidents that air marshals encounter was unknown because FAMS lacked adequate management controls for ensuring that such incidents were recorded, tracked, and addressed.[37]

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[36] In addition to the working groups and other processes and initiatives, in late fiscal year 2007, FAMS conducted the first in a series of biennial surveys of its workforce. FAMS expected the 2007 survey to help identify issues affecting the ability of air marshals and other agency personnel to perform their jobs and also to help management assess the effectiveness of actions taken to address various issues. We discuss the 2007 survey in greater detail later in this report.

[37] GAO-05-884SU (Sept. 29, 2005), which is a restricted report (not available to the public) because it contains sensitive security information. The public version of the report is GAO-06-203 (Nov. 28, 2005).

Accordingly, to facilitate management of incidents that affect air marshals' ability to operate discreetly during their missions, our September 2005 report recommended that FAMS take the following four actions:

- Develop a means for recording all incidents reported to the Mission Operations Center that affect air marshals' ability to operate discreetly and criteria for determining which incidents require federal air marshals to complete a mission report.
- Develop a means for tracking and retrieving data on mission reports to enable FAMS to analyze and monitor reported and systemic incidents.
- Establish written policies and procedures for reviewing and addressing reported incidents.
- Establish a means for providing feedback on the status and outcome of FAMS mission reports to the federal air marshals who submit them.

FAMS has taken steps to address all four of these recommendations and also address the related feedback received from air marshals through various working groups and other initiatives. In October 2005, FAMS issued a written directive establishing policies and procedures for reporting and managing mission incidents.[38] In November 2005, we reported that we had reviewed the directive and believed that it addressed two of our recommendations—the first and the third recommendations.[39] More recently, in March 2008, FAMS issued an addendum to its written directive establishing a means for providing feedback on the status and outcome of FAMS mission reports to the federal air marshals who submit them (fourth recommendation).

Additionally, FAMS revised its policy and procedures regarding interaction with airline personnel during the check-in and boarding processes in order to better protect the anonymity of air marshals in mission status.[40] To help ensure effective implementation, the new policy and procedures have been incorporated into TSA's Aircraft Operator Standard Security Program, which specifies requirements that domestic passenger air carriers must implement as part of their TSA-approved security programs. According to FAMS officials, the recent update constitutes the first time

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[38] FLD 7100, *Subject: FAMS Reporting System Policy and Procedure* (Oct. 18, 2005).

[39] GAO-06-203 (Nov. 28, 2005).

[40] FAMS's changes to check in and boarding procedures concern air marshals' interactions with airline personnel. FAMS's policy continues to require that air marshals adhere to established TSA regulations and locally established airport procedures.

that the Aircraft Operator Standard Security Program guidance specifically includes a section regarding the boarding of federal air marshals.

Through use of a database created in fiscal year 2006 to track mission incidents, FAMS senior executive staff noted that analysis and monitoring are conducted daily of reported incidents, including those that could compromise the ability of air marshals to operate discreetly (second recommendation). The first management report detailing overall incident patterns and trends was produced in July 2008. Going forward, FAMS officials stated that reports would be produced quarterly to allow management to review patterns or trends regarding mission incidents and the effectiveness of the new policy and procedures.

The Federal Air Marshal Service Modified Its Dress Code and Hotel Policies to Further Protect Air Marshals' Anonymity

To further protect the anonymity of air marshals while on missions, and in response to air marshals' feedback and the working groups' recommendations, FAMS management revised the dress code policy and the hotel policy for air marshals in August 2006 and February 2007, respectively. The revisions allow air marshals greater discretion in selecting appropriate attire to wear on missions and choosing hotels for overnight trips. Before the revisions, air marshals reported that the dress code policy was too restrictive and forced them to dress too formally for certain flights, such as those to vacation-oriented destinations. According to the air marshals, this restrictive policy resulted in their standing out from the other passengers, a situation that compromised their anonymity. Similarly, before being revised, FAMS's hotel policy directed air marshals to stay at certain hotels on overnight missions so that they could be located easily by management in an emergency. Additional considerations of FAMS management for restricting the hotel selection were to ensure that air marshals were able to stay at hotels within per diem rates and would have ready access to transportation between the hotel and the airport. Air marshals expressed concerns that repeatedly staying at the same hotels risked exposing their anonymity. The revised policy allows air marshals to select their own hotels, provided the hotels are within per diem rates and have adequate transportation options. To alleviate concerns of FAMS management about being able to contact air marshals in an emergency, the revised policy requires air marshals to report their hotel locations via the FAMS intranet.

All 67 of the air marshals we interviewed in the 11 field offices we visited said that the revised dress code and hotel policies adequately addressed their concerns.

The Federal Air Marshal Service Is Planning to Replace Its Inventory of Personal Digital Assistant Communication Devices by Early Fiscal Year 2009

FAMS has described the agency's personal digital assistant (PDA) communication device as being a lifeline for air marshals. The current device carried by air marshals is intended to function as a cell phone and personal computer and allow users to place phone calls, access the Internet, send e-mails, pull up basic Microsoft Word documents, store documents, and submit reports. However, the findings of FAMS's applicable working groups indicated that the current PDA communication device has proven unreliable. Similarly, all 67 of the air marshals we interviewed in 11 field offices stated that they had experienced problems with their PDA device while on missions. Examples of problems reported by air marshals included dropped calls or lost signals in certain geographical areas, limited audio quality and durability, and lack of ability to send certain required documents (such as time and attendance reports). Another reported problem was the frequent freezing or locking of the PDA device, which then necessitated use of a cumbersome reset process. As a result of such problems, air marshals reported that the PDA device has hindered their ability to communicate effectively with management while in mission status. Additionally, the air marshals we interviewed commented that the current PDA device is relatively large and bulky, which potentially contributes to loss of anonymity.

In response to air marshals' feedback and the working groups' recommendations, FAMS is taking steps to procure new PDA communication devices and distribute them to air marshals. Furthermore, according to FAMS officials, the procurement contract for the new PDA devices will provide for a 2-year replacement cycle. In the interim, to improve voice communication capabilities pending arrival of the new devices, FAMS officials reported that it issued new cell phones to air marshals in June 2008. The officials noted, however, that air marshals still must rely on the current PDA device for non-voice functions, such as sending and receiving e-mail messages and documents, until the new PDA devices are available.

To Address Quality-of-Life and Health Issues, the Federal Air Marshal Service Has Implemented Changes to Mission Scheduling and Enlisted the Assistance of Outside Experts

In reference to quality-of-life and health issues, mission scheduling constitutes the most significant concern of air marshals, according to feedback that FAMS management received from working groups and other communication processes and initiatives. To be fully effective, air marshals must be healthy, fit, and alert. However, FAMS's Medical Issues Working Group reported that air marshals have experienced various types of health issues—poor physical fitness as well as musculoskeletal injuries and upper respiratory infections—that may potentially be attributable to frequent flying and the overall nature of their jobs. The working group noted various challenges to ensuring that air marshals have adequate sleep, exercise, and recovery time. A contributing factor noted is that the agency's automated scheduling tool historically has lacked the capability to consistently program an air marshal's daily start and end times throughout a roster period, which makes normal sleep patterns difficult to maintain and often results in fatigue. For instance, an air marshal may have been scheduled to begin some days at 5 a.m. and other days at 10 a.m., with unpredictable ending times because of flight delays. In addition to inconsistent shifts, the Medical Issues Working Group noted that air marshals are subject to long hours—including arriving home late on a Friday and then having to depart early the following Monday morning. These types of schedules, according to the working group, make allowing adequate time for workouts and maintaining healthy eating habits difficult and also limit the amount of time available to take care of family and personal needs.

To address these scheduling issues, FAMS has implemented or is planning to implement various changes:

- Mission exchange program—This program, which FAMS initially piloted in 2006 and is now available to all 21 field offices, allows air marshals within the respective field office to exchange mission days based on a demonstrated need, such as medical issues or family-related issues. For instance, an air marshal with an 8 a.m. mission start time and a 9 a.m. medical appointment could exchange shifts with another air marshal for a later mission start time. The program is intended to reduce the amount of unscheduled leave taken by air marshals and otherwise mitigate the hardships or other effects associated with FAMS's current policy of requiring air marshals to submit requests for annual leave 38 to 66 days in advance.

- Preset ending time and 60-hour rule—In September 2006, FAMS instituted a change to its mission-scheduling policy. The change is designed to help ensure that air marshals complete their mission

flights by a preset time on the day before a regular day off (or the day before scheduled annual leave) and not begin a new mission until receiving a minimum of 60 hours rest.[41] For example, if an air marshal's regular days off are Saturday and Sunday, and this individual's mission ended on Friday evening, the next mission assignment (on Monday) would begin no earlier than Monday morning.

- Limit on number of flight days—In April 2007, FAMS implemented another change in mission-scheduling policy designed to distribute flight days equitably and improve the balance between work and personal life for air marshals. Specifically, under the new policy, each air marshal's total flight days are targeted to not exceed 18 days per roster period and 200 days annually.

- More rest time after completing extended international missions—Also in April 2007, FAMS issued guidance to field offices to make every attempt at increasing rest time for air marshals after completing an extended international mission. Under this guidance, air marshals returning from an international mission are to be given a non-flight day as their next duty day when any one of the following three conditions apply: (1) the return flight exceeds 10 hours in the air, (2) the flight crossed the international date line, or (3) the overall mission (round-trip flights plus overnight stays) was 4 days or longer in duration. Depending on an air marshal's schedule, a non-flight day could be a training day, a regular day off, or a non-mission status day.[42]

- More consistent start times—FAMS is currently developing a modification to its scheduling tool to provide a consistent, defined scheduling window (encompassing, for example, 3 hours) for air marshals in mission status to report for duty during a 7-day period. Under the planned modification, for instance, FAMS schedulers would assign an air marshal to flights departing during 5:00 a.m. to 8:00 a.m., 9:00 a.m. to 12:00 p.m., or other 3-hour window during the week. FAMS officials stated that this modification, which is intended to provide more consistent start times for each air marshal throughout the

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[41] A "regular day off" refers to each of the 2 days during the 7-day week when an air marshal will not be reporting to work. For example, if an air marshal worked a Monday to Friday schedule, the regular days off would be Saturday and Sunday.

[42] According to FAMS workday rules, an air marshal in "non-mission status" is at work performing administrative or other tasks and is not expected to fly while in this status. Under workday rules, air marshals generally have 11 days in non-mission status each year. In addition, air marshals are not expected to fly during training days (20 days annually).

applicable week, should be completed and ready for pilot testing by the middle of calendar year 2009.

The 67 air marshals we interviewed in 11 field offices generally expressed satisfaction with the various enhancements to mission scheduling, although most (43) mentioned that implementation of the mission exchange program was still evolving.

To more specifically address the health implications of flight scheduling, several efforts were recently completed or are planned. For instance, the Homeland Security Institute conducted a benchmark analysis and assessment of fatigue issues related to air marshals and issued a report to FAMS in July 2008.[43] In its analysis, the institute compared FAMS's workday rules against other occupations—largely in the aviation realm—that face challenges involving frequent travel, jet lag, long work hours, rotating shifts, and the stress of maintaining a schedule across multiple flights and airports. The Homeland Security Institute noted that although no other occupation is identical to that of air marshals, meaningful comparisons were made with similar occupations, such as commercial airline pilots and cargo pilots and law enforcement officers working in aviation (e.g., U.S. Marshals Service aviation enforcement officers responsible for transporting prisoners). In its July 2008 report, the Homeland Security Institute noted that while stress and fatigue issues are a part of all organizations and cannot be entirely eliminated, air marshals are provided considerable blocks of rest within their schedules, when assessed against similar occupations. Overall, the institute reported that the results of the benchmark analysis showed that air marshals are provided above-average time to recuperate from duty days.

Further, the institute noted that FAMS has taken various steps, including implementation of the mission exchange program, to improve aspects of mission scheduling. In addition, in October 2008, FAMS officials informed us that the agency has funded a contract with the National Institute of Justice to implement FAMS-specific research regarding mission scheduling, work-rest cycles, fatigue, and performance.

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[43] Homeland Security Institute, *Federal Air Marshal Service (FAMS) Risk-Based Resource Allocation Study: Human Factors Analysis*, final report (July 10, 2008).

To Further Address Quality-of-Life Issues, the Federal Air Marshal Service Has Implemented a Voluntary Lateral Transfer Program	According to FAMS officials, air marshals frequently cited the need for a voluntary lateral transfer program during listening group sessions and dinners with the director. FAMS working groups that examined quality-of-life issues also reported that the agency would benefit from implementing a transfer program for air marshals to express interest in relocating to another field office. Thus, in October 2006, FAMS management implemented a voluntary lateral transfer program. Under the program, an air marshal in good standing may request a transfer for up to three field offices, ranked by order of preference, and FAMS management is to make decisions based on the number of vacancies in each office and the seniority of air marshals who apply for transfer.

In December 2006, FAMS announced that 176 air marshals had been selected, during the first phase of the program, for transfer to new offices within 60 days. In the second phase, which occurred in the spring of 2007, FAMS management made transfer offers to 40 air marshals—all of whom accepted. In the third and most recent phase, which occurred in the spring of 2008, FAMS management made offers to 48 air marshals—of whom 45 accepted. FAMS expects to continue offering voluntary transfer opportunities during open seasons in the spring of each year.

The Federal Air Marshal Service Conducted a Workforce Satisfaction Survey in 2007; the Potential Usefulness of Future Surveys Could Be Enhanced by Improving the Response Rate and Redesigning Certain Questions	In late fiscal year 2007, FAMS conducted a workforce satisfaction survey of all staff—not just air marshals—to help determine issues affecting the ability of agency personnel to perform their jobs—and to obtain feedback on the effectiveness of measures already taken by management to address relevant issues. [44] The 2007 survey questionnaire consisted of a total of 60 questions that covered 13 topics—senior leadership; supervisor/management; resources and technology; training and education; career development; policies and procedures; employee involvement and autonomy; rewards and recognition; communication; safety, health, and medical issues; work and family life; organizational commitment; and job satisfaction.[45] According to FAMS management officials, the survey provided useful information on quality-of-life and

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[44] FAMS has conducted two other surveys of employees. One of these was conducted earlier in 2007 and focused on communications and operational concepts. The other survey, conducted in 2006, focused on quality-of-life issues.

[45] See appendix VI for a copy of the survey questionnaire. In addition to the 60 substantive questions, the survey questionnaire also had 10 questions that solicited demographic information from the respondents.

other issues affecting the ability of air marshals and other agency personnel to perform their jobs. In addition, the officials reported that survey results indicated that employees generally were pleased with the policy changes and other actions implemented by management to address relevant issues. For example, although the 2007 workforce satisfaction survey had an overall response rate (46 percent) that constituted less than half of the FAMS workforce, 79 percent of the respondents indicated that there had been positive changes from the prior year. Regarding future plans, FAMS expects to administer a workforce satisfaction survey every 2 years. FAMS officials stated that a purpose of the initial workforce satisfaction survey was to establish a baseline for use in comparing the results of future surveys.

In reviewing the 2007 survey's implementation and results, we made several observations that are important for enhancing the potential usefulness of future surveys. First, as noted previously, the overall response rate was 46 percent. FAMS officials expressed satisfaction with this response rate given the highly mobile nature of their workforce. The FAMS officials also noted that the 46 percent response rate was similar to the response rates for other federal workforce satisfaction surveys. However, the 46 percent response rate was substantially less than the 80 percent rate OMB encourages for federal surveys that require its approval. Although internal workforce surveys such as the one conducted by FAMS do not require OMB approval, we believe the OMB standards and guidance provide relevant direction on planning, designing, and implementing high-quality surveys—including the need to obtain a high response rate to increase the potential that survey responses will accurately represent the views of the survey population.[46]

Specifically, the OMB guidance stipulates that agencies must design surveys to achieve the highest practical rates of response to ensure that the results are representative of the target population and that they can be used with confidence as input for informed decision-making. OMB encourages agencies to obtain at least an 80 percent response rate, and its guidance states that response rates are an important indicator of the potential for nonresponse bias, which could affect the accuracy of a survey's results. For instance, survey estimates may be biased if the

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[46] The OMB guidance governs federal agency surveys of the public at large or outside individuals, groups, or organizations, such as local government entities. The FAMS workforce survey was administered internally to gather information from the agency's employees.

individuals who choose to participate (respondents) differ substantially and systematically in some way from those who choose not to participate (nonrespondents). In general, a higher response rate increases the likelihood that any bias problem is decreased, resulting in the views and characteristics of the target population being more accurately reflected in the survey's results. Thus, for any federal survey that must be approved by OMB, applicable guidelines stipulate that an analysis for possible nonresponse bias must be conducted if the final response rate is less than 80 percent.[47]

Regarding the 46 percent response rate for the 2007 survey, FAMS management reported that an analysis of potential nonresponse bias was conducted by comparing various demographic data provided by the respondents to the FAMS workforce as a whole. Based on the analysis of the available demographic data, FAMS concluded that nonresponse bias did not exist as the respondents were representative of the entire workforce. Although the analysis conducted by FAMS was a useful effort, the potential for a nonresponse bias still exists given that over half of the FAMS workforce did not respond to the survey.

As noted previously, concerns about nonresponse bias could be avoided or mitigated by obtaining a higher response rate. FAMS employees were given 3 weeks (August 23 through September 14, 2007) to complete the 2007 workforce satisfaction survey. According to FAMS management, even though all employees (not just nonrespondents) were sent four messages reminding them of the deadline for completing the voluntary survey, the final overall response rate was 46 percent. We believe that other widely acknowledged methods, outlined in OMB guidance, could improve the response rate of future FAMS surveys. These methods include, for example, promoting awareness of the survey through outreach efforts with groups of prospective respondents and extending the cut-off date for responding to the survey. Also, monitoring questionnaire returns and targeting extra follow-up efforts to air marshals in particular field locations that have comparatively low response levels could help.

Additional observations we made in reviewing the 2007 workforce satisfaction survey's questionnaire involve the sentence structure of

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[47] Office of Management and Budget, *Standards and Guidelines for Statistical Surveys* (Washington, D.C.: September 2006), p. 16; and, Office of Management and Budget, Office of Information and Regulatory Affairs, *Questions and Answers When Designing Surveys for Information Collections* (Washington, D.C.: Jan. 20, 2006), p. 56.

certain questions and the response options. Generally, any question that combines two or more issues—but does not provide for separate or respective answers—can cause uncertainty about how to respond if the answer to each issue is different.[48] Table 2 lists the seven 2007 workforce satisfaction survey questions that used these types of sentence structures. For instance, regarding the senior leadership of FAMS, question 3 cites two concepts ("visions" and "initiatives"), as well as two actions ("shared" and "supported") associated with these concepts. However, the response options did not account for the fact that experiences could be different with each of these concepts and actions. Similarly, question 10 addresses the reliability of equipment used by agency personnel and cites four different devices. However, the response options did not account for the fact that experiences could be different with each of these devices.

Table 2: FAMS 2007 Workforce Satisfaction Survey Questions That Combined Two or More Issues

Survey question topic, number, and wording		
Topic	Number	Wording
Senior Leadership	3	I believe that the Director's visions and initiatives are consistently shared and supported by my field management.
Resources and technology	10	Generally, the equipment I use (e.g., firearm, computer, cell phone, personal digital assistant, etc.) to perform my job works properly.
Training and education	16	Generally, I am satisfied with the content and variety of job-related training I receive in my office.
Communication	36	FAMS policies and procedures are clearly communicated and easy to understand."
Safety, health, and medical issues	43	I am satisfied that FAMS management is concerned for the health and safety of employees and is working continuously to offer improved services.
	44	I have been provided information and resources to take personal responsibility for my health and wellness as it relates to my job (e.g., proper diet, fitness, sufficient rest).

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[48] Specifically, a question containing the word "and" raises a concern about whether the respective portions of the question on either side of the conjunction are sufficiently related to be considered similar or are really different topics or concepts. Such questions are called "double barreled" within the social science community.

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Survey question topic, number, and wording		
Topic	**Number**	**Wording**
Work and family life	51	I have seen improvement in quality of work life and family life as a result of the recommendations from the Director's working groups.

Source: FAMS 2007 workforce satisfaction survey.

Note: See appendix VI.

Also, none of the 60 questions in the 2007 workforce satisfaction survey provided for response options such as "not applicable" or "no basis to judge"—responses that would be appropriate when respondents had little or no familiarity with the topic in question. Not providing response options such as "not applicable" or "no basis to judge" could lead to potentially misleading question responses. In the interest of being compliant, respondents might be compelled to give a response, such as "neutral," to a question when they actually have no opinion due to either non-applicability or lack of familiarity with the question topic. While it might be assumed that all individuals being surveyed should be familiar with the topic of all questions, this might not be the case and will not be known unless the questionnaire contains the relevant response options. For example, question 39 (see app. VI), reads as follows: "I am satisfied that the work-related concerns I address with management are addressed appropriately." As written, this sentence assumes that every employee has raised work-related concerns with management. If a respondent had never expressed work-related concerns with management, this individual might not know how to respond, given the question's existing response options.

Thus, based on the sentence structure of certain questions and the response options, the results from the 2007 survey may provide an incomplete assessment of employees' perspectives and attitudes to FAMS management. Regarding our observations on the design of survey questions and response options, FAMS officials stated that limited personnel resources precluded investing more time in development of the survey questionnaire and that the survey had served a useful purpose in providing information on issues of concern to be more fully explored through other communication processes or initiatives. Nonetheless, in developing future survey instruments, designing questions to avoid these types of ambiguities could provide FAMS management with information that is more focused and complete. Although we recognize that FAMS has a variety of other processes and initiatives—in addition to the customer satisfaction survey—for identifying and addressing workforce issues, customer satisfaction surveys can be particularly useful given that they are

distributed to all employees and provide for anonymity of respondents. Further, the design considerations that we discussed involve relatively minor technical aspects that could be addressed with a minimal investment of personnel resources.

The Federal Air Marshal Service Has Committed to Addressing Workforce Issues by Sustaining Applicable Processes and Initiatives

As highlighted in our prior work, agency leaders in best practice organizations view people as an important enabler of agency performance and recognize the need for sustained commitment to strategically manage human capital.[49] In developing approaches to managing the workforce, leaders of best practice agencies seek out the views of employees at all levels. Involving employees in the planning process helps agencies to develop goals and objectives that incorporate frontline insights and perspectives about operations. Further, such involvement can also serve to increase employees' understanding and acceptance of organization goals and objectives and improve motivation and morale. Our work has shown that leading organizations commonly sought their employees' input on a periodic basis and used that input to adjust their human capital approaches. Among other means, the organizations collected feedback by convening focus groups, providing opportunities for employees to participate in working groups or task forces, and conducting employee satisfaction surveys.

As discussed earlier in this report, FAMS has implemented a variety of processes and initiatives to address workforce issues by soliciting the views of front-line staff across the agency. Several key improvements in FAMS policies and procedures have resulted from these efforts. Among other improvements, for example, FAMS amended its policy for flight check-in and boarding procedures to better ensure the anonymity of air marshals in mission status. Also, the various processes and initiatives have helped to improve agency morale, according to the federal air marshals we interviewed. Moreover, agency officials noted that the processes and initiatives represented a significant commitment in management time and resources.

In our view, fostering continued progress in addressing workforce issues at FAMS is important. The current FAMS Director, after being designated in June 2008 to head the agency, issued a broadcast message to all

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[49] GAO, *A Model of Strategic Capital Management*, GAO-02-373SP (Washington, D.C.: March 2002).

employees, expressing a commitment to continue applicable processes and initiatives, including the working group process, listening sessions, field office visits, and the internal Web site for agency personnel to provide anonymous feedback to management on any topic. More recently, in response to our inquiry, FAMS's Chief of Staff reported in October 2008 that the various communications processes and initiatives "have become an institutionalized and positive aspect" of the agency's culture. Also, the Chief of Staff noted that FAMS was in the process of establishing an agencywide national advisory council—with representatives from headquarters and all field offices—to further enhance communication and outreach efforts, promote greater job satisfaction, and improve organizational effectiveness through cooperative problem solving and replication of best practices.

Conclusions

Federal air marshals are an important layer of aviation security. Thus, it is incumbent upon FAMS management to have sound management processes in place for identifying and addressing the challenges associated with sustaining the agency's operations and addressing workforce quality-of-life issues. FAMS, to its credit, has established a number of processes and initiatives—including a workforce satisfaction survey—to address various operational and quality-of-life issues that affect the ability of air marshals and other FAMS personnel to perform their aviation-security mission. Consistent with the human capital practices of leading organizations, the current FAMS Director has expressed a commitment to continuing relevant processes and initiatives for identifying and addressing workforce concerns, maintaining open lines of communications, and sustaining forward progress. Although the workforce satisfaction survey is only one of a number of processes or initiatives used by FAMS to identify and address workforce issues, such surveys play an important role given their agencywide scope and the provision for anonymous responses. A higher response rate and more clearly structured questions and response options could add to the usefulness of this effort.

Recommendation for Executive Action

To facilitate continued progress in identifying and addressing issues that affect the ability of FAMS personnel to perform the agency's aviation-security mission, we recommend that the FAMS Director take appropriate actions to increase the usefulness of the workforce satisfaction surveys that FAMS plans to conduct biennially. Such actions could include, for example, ensuring that the survey questions and the answer options are clearly structured and unambiguous and that additional efforts are considered for obtaining the highest possible response rates.

Agency Comments

We provided a draft of our restricted report for comment to the Department of Homeland Security and TSA. In November 2008, in written comments, the Department of Homeland Security and TSA agreed with our recommendation and noted that FAMS was in the initial stages of formulating the next workforce satisfaction survey, which included plans to implement the recommendation. Also, the Department of Homeland Security and TSA commented that our key findings and recommendation will facilitate continued progress in identifying and addressing issues that affect the ability of FAMS personnel to perform the agency's aviation security mission. The full text of the department's and TSA's written comments is reprinted in appendix VII.

As arranged with your office, we plan no further distribution until 30 days after the date of this report. At that time, we will send copies of this report to interested congressional committees and subcommittees. We will also make copies available to others upon request.

If you or your staff have any questions about this report or wish to discuss the matter further, please contact me at (202) 512-4379 or lords@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Other key contributors to this report are listed in appendix VIII.

Stephen M. Lord
Acting Director, Homeland Security and Justice Issues

List of Congressional Requesters

The Honorable Susan M. Collins
Ranking Member
Committee on Homeland Security and Governmental Affairs
United States Senate

The Honorable Daniel K. Akaka
United States Senate

The Honorable Bennie G. Thompson
Chairman
Committee on Homeland Security
House of Representatives

The Honorable Sheila Jackson-Lee
House of Representatives

The Honorable Christopher P. Carney
House of Representatives

Appendix I: Objectives, Scope, and Methodology

Objectives

This report addresses the following three principal questions:

- What is the Federal Air Marshal Service's operational approach for achieving its core mission of providing an onboard security presence for flights operated by U.S. commercial passenger air carriers?

- To what extent has the Federal Air Marshal Service's operational approach for achieving its core mission been independently assessed?

- To what extent does the Federal Air Marshal Service have processes and initiatives in place to address issues that affect the ability of its workforce to carry out its mission?

Scope and Methodology

Initially, to obtain contextual and overview perspectives regarding the principal questions, we reviewed information available on the Web sites of relevant federal entities—the Department of Homeland Security, the Transportation Security Administration (TSA), and the Federal Air Marshal Service (FAMS). To obtain additional perspectives regarding FAMS's mission and operations—and issues affecting its workforce—we conducted a literature search to identify relevant reports or studies and other publicly available information, including news media articles. In particular, we focused on reviewing congressional studies, Inspector General reports, and our previous reports. These included the following:

- U.S. House of Representatives, Committee on the Judiciary, *Plane Clothes: Lack of Anonymity at the Federal Air Marshal Service Compromises Aviation and National Security* (Washington, D.C.: May 25, 2006).

- GAO, *Aviation Security: Federal Air Marshal Service Could Benefit from Improved Planning and Controls*, GAO-05-884SU (Washington, D.C.: Sept. 29, 2005). The report is restricted (not available to the public) because it contains sensitive security information. The public version of the report is GAO-06-203 (Nov. 28, 2005).

- U.S. Department of Homeland Security, Office of Inspector General, *Review of Alleged Actions by Transportation Security Administration to Discipline Federal Air Marshals for Talking to the Press, Congress, or the Public*, OIG-05-01 (Washington, D.C.: Nov. 2004).

- GAO, *Budget Issues: Reprogramming of Federal Air Marshal Service Funds in Fiscal Year 2003*, GAO-04-577R (Washington, D.C.: Mar. 31, 2004).

- GAO, *Aviation Security: Federal Air Marshal Service Is Addressing Challenges of Its Expanded Mission and Workforce, but Additional Actions Needed*, GAO-04-242 (Washington, D.C.: Nov. 19, 2003).

This report is the public version of a restricted report that we provided to congressional requesters in December 2008.[1] Further details about the scope and methodology of our work regarding each of the three principal questions are presented in the following sections, respectively.

The Federal Air Marshal Service's Operational Approach for Achieving Its Core Mission

In addressing this topic, we reviewed relevant legislation regarding FAMS's mission and organizational structure. In particular, we reviewed a provision of the Aviation and Transportation Security Act that

- requires the deployment of federal air marshals on passenger airline flights and
- specifically requires the deployment of federal air marshals on every flight determined to present high security risks.[2]

We analyzed FAMS documentation regarding the agency's strategy and concept of operations for carrying out its mission. Also, we reviewed the results of an evaluation conducted in 2003 by the Office of Management and Budget (OMB), which utilized its Program Assessment Rating Tool (PART) to assess the management and performance of FAMS and concluded that key aspects of program design needed to be independently assessed.[3] Further, we reviewed the follow-on PART-related reassessment of FAMS that OMB conducted in 2008 (see app. II).

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[1] GAO, *Aviation Security: Federal Air Marshal Service Has Taken Actions to Fulfill Its Core Mission and Address Workforce Issues, but Additional Actions Are Needed to Improve Workforce Survey*, GAO-09-53SU (Washington, D.C.: Dec. 8, 2008).

[2] Pub. L. No. 107-71, § 105, 115 Stat. 597, 606-08 (2001) (codified as amended 49 U.S.C. § 44917).

[3] PART consists of a standard series of questions intended to determine the strengths and weaknesses of federal programs. The PART questions cover four broad topics—(1) program purpose and design, (2) strategic planning, (3) program management, and (4) program results/accountability. See GAO, *Program Evaluation: OMB's PART Reviews Increased Agencies' Attention to Improving Evidence of Program Results*, GAO-06-67 (Washington, D.C.: Oct. 28, 2005).

Independent Assessment of the Federal Air Marshal Service's Operational Approach

We reviewed the July 2006 classified report prepared by the Homeland Security Institute based on its independent evaluation of FAMS's concept of operations.[4] Our engagement team included a social science analyst and an economist with experience in risk assessment, who used generally accepted social science research standards in reviewing the institute's report. Also, we interviewed applicable Homeland Security Institute officials to enhance our understanding of the evaluation's scope, methodology, findings, and recommendations. Based on our review and discussion, we determined this report to be sufficiently reliable for the purposes of our work. Further, we reviewed FAMS documentation—and interviewed the Director of FAMS and other senior officials at the agency's headquarters—regarding the status of efforts to address recommendations made by the Homeland Security Institute and any related initiatives involving strategic planning and the agency's concept of operations.[5]

We also reviewed two additional Homeland Security Institute reports, which FAMS provided to us in September 2008. One of the reports detailed the institute's analysis regarding requirements for a next-generation mission scheduling tool for FAMS,[6] and the other report presented the institute's benchmark analysis that compared FAMS's workday rules[7] and practices against those of similar occupations involving frequent air travel

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[4] The Homeland Security Institute is a federally funded research and development center established pursuant to the Homeland Security Act of 2002. See Pub. L. No. 107-296, § 312, 116 Stat. 2135, 2176, as amended. The institute's mission is to assist the Department of Homeland Security address relevant issues requiring scientific, technical, and analytical expertise. In response to OMB's 2003 PART review of FAMS, which concluded that key aspects of program design needed to be independently assessed, FAMS contracted for an independent evaluation to be conducted by the Homeland Security Institute.

[5] Appendix III presents quoted excerpts that substantially replicate the executive summary in the Homeland Security Institute's July 2006 report. Appendix IV presents an overview of performance measures for assessing FAMS.

[6] Homeland Security Institute, *Analysis for the Next-Generation Federal Air Marshal Service (FAMS) Mission Scheduling & Notification System (MSNS)*, final report (July 10, 2008).

[7] "Workday rules" refer to the parameters that FAMS uses for assigning air marshals to flights. As applicable to non-overnight missions, for example, FAMS tries to assign air marshals to flights (or combinations of flights) that will return the air marshals back home during a scheduled 10-hour workday.

and the related operational challenges, including fatigue and other human factors.[8]

The Federal Air Marshal Service's Processes and Initiatives for Addressing Issues That Affect Its Workforce

Regarding operational or tactical issues as well as quality-of-life issues that affect the ability of air marshals to carry out the agency's mission, we reviewed published reports, including our September 2005 report (GAO-05-884SU) as well as news media accounts of relevant issues. We also reviewed FAMS documentation regarding various working groups (see app. V) and other initiatives that FAMS had established to address issues that affect the ability of air marshals to carry out the agency's mission. In particular, we reviewed the final report (if available) produced by the respective working group. For criteria in reviewing the agency's documentation regarding these efforts, we drew on our prior work regarding leading organizations and the best practices for strategically managing human capital.[9]

Further, we interviewed the Director of FAMS and other senior officials at agency headquarters, and we visited 11 of the agency's 21 field offices, where we interviewed managers and a total of 67 air marshals.[10] We selected the 11 field offices and the 67 air marshals based on nonprobability sampling.[11] In selecting the 11 field offices, we considered various factors, such as geographic location of the offices and the involvement of local management in agencywide working groups to address issues affecting air marshals.

At each of the 11 field offices, we first reviewed available work-related information about individual air marshals, such as their starting dates with FAMS and their involvement in ground-based assignments or any

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[8] Homeland Security Institute, *Federal Air Marshal Service (FAMS) Risk-Based Resource Allocation Study: Human Factors Analysis*, final report (July 10, 2008).

[9] See GAO, *A Model of Strategic Human Capital Management*, GAO-02-373SP (Washington, D.C.: Mar. 15, 2002).

[10] The field offices we visited are not listed in this report because TSA considers field office locations to be Sensitive Security Information.

[11] Nonprobability sampling is a method of sampling where observations are selected in a manner that is not completely random, generally using specific characteristics of the population as criteria. Results from a nonprobability sample cannot be used to make inferences about an entire population because some elements of the population being studied had no chance or an unknown chance of being selected as part of the sample.

agencywide working groups.[12] Based on these factors, we selected and interviewed 6 to 7 air marshals at each of the 11 field offices. Specifically, we selected 6 air marshals at each of 10 field offices and 7 air marshals at the remaining office. Our selections were made to encompass a variety of experience levels. Also, at each field office, rather than meeting separately with each individual, we conducted the interviews of the selected air marshals in group settings to encourage a wide array of perspectives, whether corroborating or contradictory. We conducted our interviews at the field offices during a 7-month time period, July 2007 through January 2008.

Because we selected a nonprobability sample of FAMS field offices to visit and air marshals to interview, the information we obtained in these visits and interviews cannot be generalized either to all 21 field locations or to all air marshals in the offices we visited. However, the visits and interviews provided us a broad overview of issues important to air marshals.

We reviewed documentation regarding the implementation and results of a workforce satisfaction survey that FAMS conducted in 2007. Our engagement team, which included social science analysts with extensive survey research experience, reviewed the questionnaire used in the survey for clarity and the related response options for appropriateness (see app. VI). Also, we discussed with FAMS officials the extent to which efforts were made to obtain an overall response rate as high as possible. As criteria to guide our review of the survey results, we used the following OMB guidance:

• *Standards and Guidelines for Statistical Surveys* (September 2006).
• *Questions and Answers When Designing Surveys for Information Collections* (Jan. 20, 2006).

We conducted this performance audit from April 2007 to December 2008 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence

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[12] Examples of ground-based assignments for air marshals included work in a field office's operations or training sections or in an airport liaison position. These assignments are temporary with varying lengths of service.

obtained provides a reasonable basis for our findings and conclusions
based on our audit objectives.

Appendix II: OMB's Program Assessment Rating Tool Results in 2003 and 2008 for the Federal Air Marshal Service

The Office of Management and Budget's (OMB) Program Assessment Rating Tool (PART) consists of a standard series of 25 questions intended to determine the strengths and weaknesses of federal programs. The 25 total questions cover 4 broad topics—(1) program purpose and design, (2) strategic planning, (3) program management, and (4) program results/accountability.

This appendix provides an overview of OMB's PART-based assessments of the Federal Air Marshal Service (FAMS) conducted in 2003 and 2008. Additionally, for each of the 25 questions used in the PART-based assessments, the appendix compares OMB's 2003 and 2008 answers and summarizes OMB's narrative findings (explanation and evidence). Also, when the answers in 2003 and 2008 differed for a particular question, the appendix briefly explains the basis for the respective answer.

More detailed information regarding the 2003 and 2008 OMB PART assessments of FAMS can be found on OMB's Web site: www.ExpectMore.gov.

Overview of the 2003 and 2008 Assessments of the Federal Air Marshal Service

OMB's PART assessments of federal agencies provide performance ratings that indicate how effectively tax dollars are spent. Following an assessment, OMB assigns an agency one of five possible overall ratings:

- Effective. Programs rated "effective" set ambitious goals, achieve results, are well-managed, and improve efficiency.
- Moderately effective. A "moderately effective" rating indicates a program that sets ambitious goals and is well-managed but needs to improve its efficiency or address other problems in the programs' design or management in order to achieve better results.
- Adequate. An "adequate" rating describes a program that needs to set more ambitious goals, achieve better results, improve accountability, or strengthen its management practices.
- Ineffective. An "ineffective" rating indicates a program that fails to use tax dollars effectively and is unable to achieve results because of a lack of clarity regarding the program's purpose or goals, poor management, or some other significant weakness.
- Results not demonstrated. A "results not demonstrated" rating indicates that a program has been unable to develop acceptable performance goals or collect data to determine whether it is performing.

In OMB's 2003 PART assessment, FAMS received a rating of "results not demonstrated" because at that time FAMS did not have measurable results. Additionally, OMB cited strategic planning deficiencies that included the absence of baselines, targets, and time frames associated with performance goals and performance measurements. OMB further noted the absence of a second long-term outcome measure,[1] proxy measures with respect to deterrence, and an efficiency measure.

In OMB's 2008 PART assessment, FAMS received a rating of "moderately effective." Regarding the improved rating, OMB recognized the Homeland Security Institute's independent evaluation, which endorsed FAMS's concept of operations. Also, OMB noted that FAMS had addressed other deficiencies by developing the following performance measures:[2]

- A second long-term outcome measure—the level of public confidence in air marshals' ability to promote aviation security—which is reflective of FAMS's purpose.
- Proxy measures of deterrence, such as air marshals' average annual rate of accuracy in firearms requalification testing.
- Efficiency measures, such as (a) cost per flight per air marshal and (b) percentage of air marshals meeting the targeted number of flying days per year.

Section-by-Section Details of the 2003 and 2008 Assessments of the Federal Air Marshal Service

The results of PART's 25 questions in reference to the 2003 and 2008 assessments of FAMS are presented in tables 3 through 6, specifically:

- The 5 questions in table 3 cover program purpose and design.
- The 8 questions in table 4 cover strategic planning.
- The 7 questions in table 5 cover program management.
- The 5 questions in table 6 cover program results/accountability.

As presented in tables 3 through 6, the narrative discussion (explanation and evidence) is our summary of OMB's key points. If needed for purposes of clarifying the respective topic or ensuring accuracy, we used additional or alternative wording to summarize OMB's findings. Also, in a few instances, we updated the information as appropriate.

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[1] At the time of OMB's 2003 PART assessment, FAMS had one long-term outcome measure: "Number of successful terrorist and other criminal attacks initiated from commercial passenger aircraft cabins with air marshal coverage."

[2] Appendix IV presents more detailed information about FAMS's performance measures.

Table 3: OMB's 2003 and 2008 PART Review of FAMS—Detailed Assessment of Program Purpose and Design

Section 1 questions, explanation, and evidence	Answer	
	2003	2008
Question 1.1: Is the program purpose clear?	Yes	Yes

Explanation and Evidence: The 2008 assessment noted that FAMS's purpose is to promote confidence in the nation's civil aviation system through the effective deployment of air marshals to detect, deter, and defeat hostile acts targeting U.S. air carriers, airports, passengers, and crews. Also, the assessment noted the following:

- 49 U.S.C. § 114(q)[a] authorizes the Secretary of Homeland Security—and by delegation, the Administrator of the Transportation Security Administration (TSA)—to designate employees of TSA as federal law enforcement officers. The authority provides that these officers may carry a firearm, make arrests, and seek and execute warrants for arrest or seizure of evidence.
- Section 1303 of the Implementing Recommendations of the 9/11 Commission Act of 2007 amended the Homeland Security Act of 2002[b] to authorize the Secretary of the Department of Homeland Security to develop Visible Intermodal Prevention and Response teams[c] for augmenting the security of any mode of transportation at any U.S. location.

| Question 1.2: Does the program address a specific and existing problem, interest, or need? | Yes | Yes |

Explanation and Evidence: The 2008 assessment stated that President Bush ordered the rapid expansion of FAMS as a result of the September 11th attacks in order to restore public confidence in air travel and prevent further attacks. Also, the assessment cited the following:

- In establishing the Department of Homeland Security (DHS), the Homeland Security Act of 2002 noted that FAMS is critical to aviation security.
- The National Strategy for Aviation Security categorizes protection of the air domain as a vital national interest and cites federal air marshal presence on commercial passenger aircraft as among the efforts responsible for enhancing aviation security on an ongoing basis.
- A message to DHS employees from Secretary Chertoff, dated August 10, 2006, stated that FAMS would expand mission coverage for U.K.-U.S. flights as a component of the U.S. government's response to the Heathrow plot[d] and DHS's responsibility to protect travelers.

| Question 1.3: Is FAMS designed so that it is not redundant or duplicative of any federal, state, local, or private effort? | Yes | No |

Explanation and Evidence: Regarding the "No" answer, the 2008 assessment indicated that the design of aviation security includes layers of redundancies and duplicate security measures to reinforce each and every layer for the strongest level of security. However, the assessment also noted the following:

- As a critical layer of aviation security, FAMS fills an important role in detecting, deterring, and defeating criminal terrorist activities on aircraft. For international flights, only air marshals are authorized to fly armed.
- Although the presence of other armed law enforcement officers and Federal Flight Deck Officers[e] on domestic flights may at times augment air marshals, the distinctive differences inherent in the FAMS program prevent redundancy or excessive overlap.

Section 1 questions, explanation, and evidence	Answer	
	2003	**2008**
Question 1.4: Is the program design free of major flaws that would limit the program's effectiveness or efficiency?	No	Yes
Explanation and Evidence: According to the 2003 assessment, key aspects of the program design needed to be independently assessed and validated. The 2008 assessment recognized that the Homeland Security Institute conducted an independent evaluation (document is classified) of the development and implementation of FAMS's concept of operations in 2006. Given FAMS's objectives and performance goals, the institute found that FAMS applies a valid approach to analyzing risk and allocating resources on the basis of threat, vulnerability, and consequence.		
Question 1.5: Is the program effectively targeted, so program resources reach intended beneficiaries and/or otherwise address the program's purpose directly?	NA[f]	Yes
Explanation and Evidence: According to the 2003 assessment, FAMS considered the entire flying public to be the intended beneficiaries of the air marshal security program. According to the 2008 assessment, the application of FAMS's concept of operations effectively targeted resources by prioritizing and scheduling missions on the basis of risk. The assessment noted that FAMS structures deployments so that program benefits reach highest risk beneficiaries at the micro level, while deterrence as a macro-level benefit reaches the flying public (collectively) and other intended beneficiaries.		

Source: OMB's 2003 and 2008 PART reviews of FAMS.

[a]The provision cited, which authorizes the Under Secretary of Transportation for Security (now the Assistant Secretary, TSA) to designate employees of TSA or other federal agencies to serve as law enforcement officers, has subsequently been redesignated §114(p).

[b]Section 1303 does not specifically amend the Homeland Security Act but does provide specific authority to the Secretary, acting through the Assistant Secretary, TSA, to establish Visible Intermodal Prevention and Response teams.

[c]After the March 2004 train bombings in Madrid, TSA created and deployed Visible Intermodal Prevention and Response teams to enhance security on U.S. rail and mass transit systems nationwide. Comprised of federal air marshals, surface transportation security inspectors, transportation security officers, behavior detection officers, and explosives detection canines, the teams are intended to work with local security and law enforcement officials to supplement existing security resources, provide a deterrent presence and detection capabilities, and introduce an element of unpredictability to disrupt potential terrorist activities.

[d]The Heathrow plot was a terrorist plan to blow up 10 commercial airplanes bound for the United States from the United Kingdom. On August 10, 2006, British law enforcement arrested 24 suspects regarding the plot to smuggle liquid explosive materials aboard the planes and assemble bombs.

[e]TSA developed the Federal Flight Deck Officer Program as an additional layer of aviation security. See Pub. L. No. 107-296, § 1402(a), 116 Stat. 2135, 2300-05 (2002) (codified as amended at 49 U.S.C. § 44912). Under the program, eligible flight crew members—a pilot, flight engineer, or navigator assigned to the flight—are authorized to use firearms to defend against an act of criminal violence or air piracy attempting to gain control of an aircraft. Federal Flight Deck Officers are trained by FAMS on the use of firearms, use of force, legal issues, defensive tactics, the psychology of survival, and program standard operating procedures.

[f]Not applicable.

Table 4: OMB's 2003 and 2008 PART Review of FAMS—Detailed Assessment of Strategic Planning

	Answer	
Section 2 questions, explanation, and evidence	**2003**	**2008**
Question 2.1: Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program?	Yes	Yes
Explanation and Evidence: The 2008 assessment noted that FAMS developed two long-term outcome measures: • The number of successful terrorist and other criminal attacks initiated from commercial passenger aircraft cabins on flights in identified risk categories. • The level of public confidence in air marshals' ability to promote aviation security.		
Question 2.2: Does the program have ambitious targets and time frames for its long-term measures?	No	Yes
Explanation and Evidence: According to the 2003 assessment, FAMS's long-term measures were under development. The 2008 assessment recognized FAMS's two defined targets: • The number of successful terrorist and other criminal attacks initiated from commercial passenger aircraft cabins on flights in identified risk categories. OMB noted that this target was ambitious because it quantified zero for all time frames. • The level of public confidence in air marshals' ability to promote aviation security. OMB noted that FAMS quantified ambitious targets for a 5-year time frame.		
Question 2.3: Does the program have a limited number of specific annual performance measures that demonstrate progress toward achieving the program's long-term measures?	Yes	Yes
Explanation and Evidence: The 2008 assessment stated that FAMS has two annual measures: • The average annual rate of accuracy in air marshals' firearms requalification. Because a very high level of firearms proficiency is required for air marshals to successfully defeat terrorist and criminal attacks onboard commercial passenger aircraft, the associated rate of accuracy is one proxy outcome for the number of successful attacks. • The percentage level in meeting FAMS's coverage targets for each individual category of identified risk.[a] With U.S. air carriers providing over 29,000 flights daily, the ability of FAMS to identify high-risk flights for air marshal deployment is one proxy outcome for the number of successful attacks.		
Question 2.4: Does the program have baselines and ambitious targets and time frames for its annual measures?	No	Yes
Explanation and Evidence: According to the 2003 assessment, FAMS's annual measures were under development. The 2008 assessment noted the following: • FAMS has the highest firearm requirement for rate of accuracy (85 percent) of any federal law enforcement agency. No other federal law enforcement agency is known to afford its officers a smaller margin of error (15 percent) on its agencywide course of fire. Further, FAMS strives for an even higher standard—that is, to achieve an average annual practical pistol course score of 95 percent among all air marshals. • FAMS established baselines and annual targets to measure the percentage of flights (in the various risk categories) covered by air marshals. The risk categories are based on vulnerability, threat, and consequence. The flight-coverage targets are highly ambitious (never striving for less than 100 percent) because FAMS, in accordance with its concept of operations, pursues flight coverage in the risk categories as a high priority.		

Section 2 questions, explanation, and evidence	Answer	
	2003	2008
Question 2.5: Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, etc.) commit to and work toward the annual and/or long-term goals of the program?	Yes	Yes

Explanation and Evidence: The 2008 assessment noted the following:

- Air carriers and foreign air marshal programs are key partners upon whom FAMS relies to support performance goals. FAMS interacts daily with the airlines to ensure that both planned and emergent reservation requirements are met in order to ensure both ticketing and tactically optimal seating for air marshals on high-risk flights.

- Section 4017 of the National Intelligence Reform Act of 2004[b] encouraged President Bush to pursue aggressively international agreements with foreign governments to allow the maximum deployment of air marshals on international flights. As a consequence of numerous such bilateral agreements, U.S. air marshals cover U.S. flights into and out of multiple foreign countries. In some instances, the partner country has air marshals, whose deployment into the United States on foreign airlines is also provided for in the bilateral agreement. These bilateral partnerships reduce the threat of terrorism against aircraft of both nations.

Question 2.6: Are independent and quality evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?	NA[c]	Yes

Explanation and Evidence: According to the 2003 assessment, FAMS had not been in existence long enough for its effectiveness to be assessed. OMB recommended that FAMS obtain an independent evaluation of its methods for risk analysis and resource allocation. The 2008 assessment noted that FAMS contracted with the Homeland Security Institute for an evaluation and that the institute's report, titled Federal Air Marshal Service Risk Assessment, was completed in July 2006. According to OMB, the institute's independent evaluation was comprehensive in its scope.

Question 2.7: Are budget requests explicitly tied to accomplishment of the annual and long-term performance goals and are the resource needs presented in a complete and transparent manner in the program's budget?	NA[c]	No

Explanation and Evidence: According to the 2003 assessment, FAMS had not been in existence long enough to present the resource needs in a complete and transparent manner in FAMS's budget. According to the 2008 assessment, FAMS did not yet meet the requirement to put forth budget justifications that define explicitly the relationship between increments/decrements in program performance and increases/decreases in funding levels. OMB noted that FAMS is working with independent experts of the Homeland Security Institute to develop a means of transparently quantifying and communicating the performance implications (outputs and outcomes) that various resource levels (inputs) would drive.

		Answer	
Section 2 questions, explanation, and evidence		**2003**	**2008**
Question 2.8: Has the program taken meaningful steps to correct its strategic planning deficiencies?		Yes	Yes

Explanation and Evidence: According to the 2003 assessment, FAMS received the rating of "results not demonstrated" because FAMS was unable to develop acceptable performance goals or collect data to determine whether it was performing. Specifically, OMB cited strategic planning deficiencies that included the absence of baselines, targets, and time frames associated with performance goals and performance measurements. Additionally, the 2003 assessment cited the absence of a second long-term outcome measure, proxy measures with respect to deterrence, and efficiency measures.

- According to the 2008 PART review, FAMS took steps to correct these strategic planning deficiencies by developing the following:

- A second long-term outcome measure—the level of public confidence in air marshals' ability to promote aviation security—which is reflective of FAMS's purpose.

- Proxy measures of deterrence, such as air marshals' average annual rate of accuracy in firearms requalification testing.

- Efficiency measures, such as (a) cost per flight per air marshal and (b) percentage of air marshals meeting the targeted number of flying days per year.

- Baselines, targets, and timelines associated with performance goals and performance measurements.

Source: OMB's 2003 and 2008 PART reviews of FAMS.

[a]In light of recent OMB guidance regarding the identification and constitution of proxy measures, FAMS believes that the coverage for categories of risk, while not a stand-alone outcome measure, is actually a "proxy" outcome for the number of successful attacks measure. That is, the ability to identify and deploy air marshals on higher risk flights reduces the likelihood of a catastrophic outcome.

[b]The provision cited is part of the Intelligence Reform and Terrorism Prevention Act of 2004.

[c]Not applicable.

Table 5: OMB's 2003 and 2008 PART Review of FAMS—Detailed Assessment of Program Management

Section 3 questions, explanation, and evidence	Answer	
	2003	2008
Question 3.1: Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?	Yes	Yes
Explanation and Evidence: According to the 2008 assessment, FAMS collects performance information every roster period (the period of mission scheduling that corresponds to two pay periods) and applies the optimal volume of air marshals where the most risk lies. Also, OMB noted that, with respect to partners, FAMS actively requests from international air marshal programs their increased coverage on foreign-flagged flights to the United States.		
Question 3.2: Are federal managers and program partners (grantees, sub-grantees, contractors, cost-sharing partners, etc.) held accountable for cost, schedule, and performance results?	Yes	Yes
Explanation and Evidence: According to the 2008 assessment:		
• FAMS's key managers are subject to the departmentally standardized DHS senior executive service pay-for-performance system. More specifically, the FAMS Director, Deputy Director, Assistant Directors, senior executive service-level Deputy Assistant Directors, and senior executive service-level Special-Agents-in-Charge each enter into an annual executive performance agreement under that system.		
• The performance agreements serve as vehicles for identifying (in writing) the managers who are responsible for achieving key program results and for clearly defining each manager's standards of accountability for achieving those results. FAMS's contract awards and renewals do consider past performance.		
Question 3.3: Are all funds (federal and partners') obligated in a timely manner and spent for the intended purpose?	NA[a]	Yes
Explanation and Evidence: According to the 2003 assessment, FAMS had not been in existence long enough to assess obligation data on a timely basis. The 2008 assessment noted the following:		
• According to sample fund status reports, the fiscal year 2007 financial plan, and the unobligated balance chart, FAMS obligated its funds in a timely manner and for intended purposes.		
• FAMS's financial analysts reviewed and certified all procurement requests to ensure that funds were available and that planned actions comply with established appropriation law standards.		
• As a result of these steps, FAMS achieved annual obligation rates of at least 99 percent.		
Question 3.4: Does the program have procedures (e.g., competitive sourcing/cost comparisons, information technology improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution?	Yes	Yes
• Explanation and Evidence: The 2008 assessment noted that FAMS gauges efficiency and cost effectiveness by measuring the following:		
• The percentage of federal air marshals providing the targeted number of flying days per year.		
• The cost per flight per air marshal.		

Section 3 questions, explanation, and evidence	Answer	
	2003	**2008**
Question 3.5: Does the program collaborate and coordinate effectively with related programs?	Yes	Yes

Explanation and Evidence: The 2008 assessment noted the following:

- Air marshals, TSA security officers (i.e., behavior detection officers), and airport police departments use FAMS's Tactical Information Sharing System to report suspicious activities.

- Additionally, managing overseas air marshals' deployments requires strong partnerships with both U.S. government entities (e.g., Department of State, U.S. Embassy, and TSA Transportation Security Area Representative) and each foreign locality's host government (particularly foreign law enforcement authorities). Partnerships address the diplomatic, security, and logistical matters required to accomplish FAMS's international mission deployments.

Question 3.6: Does the program use strong financial management practices?	Yes	No

Explanation and Evidence: According to the 2003 assessment, FAMS appeared to manage financial resources properly. The 2008 assessment stated that FAMS and TSA use strong financial management practices; however, in the annual DHS audit (for which DHS has contracted with KPMG), the auditors reported two TSA-wide material control weaknesses[b] for fiscal year 2007; one of these material control weaknesses, regarding undelivered order balances, involved FAMS.

Question 3.7: Has the program taken meaningful steps to address its management deficiencies?	Yes	Yes

Explanation and Evidence: The 2008 assessment noted that FAMS participates in a system for evaluating and correcting program-level management deficiencies. Specifically:

- The program's field offices undergo, on a 3-year cycle, inspections by the TSA Office of Inspection, whose mission is to ensure the integrity and effectiveness of TSA employees and programs.

- The inspectors determine whether management deficiencies are present, and recommend courses of action to address any deficiencies identified.

Source: OMB's 2003 and 2008 PART reviews of FAMS.

[a]Not applicable.

[b]A material weakness is a significant deficiency or combination of significant deficiencies that results in more than a remote likelihood that a material misstatement of the financial statements will not be prevented or detected.

Table 6: OMB's 2003 and 2008 PART Review of FAMS—Detailed Assessment of Program Results/Accountability

		Answer	
Section 4 questions, explanation, and evidence		**2003**	**2008**
Question 4.1: Has the program demonstrated adequate progress in achieving its long-term outcome performance goals?		No	Small extent

Explanation and Evidence: According to the 2003 assessment, FAMS had not been in existence long enough to assess its long-term outcome performance goals. The 2008 assessment noted that:

- FAMS made substantial and measurable progress in achieving its long-term performance goals to (1) detect, deter, and defeat hostile acts targeting U.S. air carriers, airports, passengers, and crews and (2) improve confidence in the security of our nation's civil aviation system.
- FAMS met its targets for the number of successful terrorist and other criminal attacks initiated from commercial passenger aircraft cabins on flights in identified risk categories. The absence of these successful attacks is the intended result of the program's activities and is of direct, significant benefit to the public.
- With respect to its public confidence goal, the program has some measurable evidence of public confidence in air marshals.

| Question 4.2: Does the program (including program partners) achieve its annual performance goals? | | No | Small extent |

Explanation and Evidence: According to the 2003 assessment, FAMS had not been in existence long enough to achieve its annual performance goals. The 2008 assessment noted the following regarding annual performance goals:

- The percentage level in meeting FAMS's coverage targets for each individual category of identified risk; FAMS exceeded its target in fiscal year 2006 and performed under its target in fiscal year 2007.
- The average annual rate of accuracy in federal air marshals' firearms requalification scores is a new measure, baselined in fiscal year 2007. FAMS met the target in the first and second quarters of fiscal year 2008.

| Question 4.3: Does the program demonstrate improved efficiencies or cost effectiveness in achieving program performance goals each year? | | No | Large extent |

Explanation and Evidence: According to the 2003 assessment, FAMS had not been in existence long enough to demonstrate improved efficiencies or cost effectiveness. The 2008 assessment noted that FAMS demonstrated cost efficiency by optimizing the allocation of federal air marshal teams to missions.

| Question 4.4: Does the performance of this program compare favorably to other programs, including government, private, etc., that have a similar purpose and goals? | | No | Yes |

Explanation and Evidence: According to the 2003 assessment, OMB directed FAMS to have an independent evaluation of its program performance with respect to flight coverage risk categories, the distribution of covered flights, and target levels of coverage. According to the 2008 assessment, the Homeland Security Institute's independent evaluation of FAMS considered other programs whose main business line is deterrence and/or protection via risk management. According to the institute, no other organizations that face a similar challenge apply significantly better tools or methodologies.

Section 4 questions, explanation, and evidence	Answer	
	2003	2008
Question 4.5: Do independent and quality evaluations of this program indicate that FAMS is effective and achieving results?	No	Large extent
Explanation and Evidence: As noted previously, following the 2003 assessment, OMB directed FAMS to have an independent evaluation of program performance. The 2008 assessment noted that the Homeland Security Institute conducted an independent evaluation of FAMS in 2006 and determined that FAMS ensures effective risk reduction by applying a reasonable and valid approach to analyzing risk and allocating resources. Additionally, the assessment noted that an interagency steering group—convened by the Homeland Security Institute and consisting of representatives from an array of law enforcement and counter-terrorism agencies—also considered FAMS's concept of operations to be reasonable.		

Source: OMB's 2003 and 2008 PART reviews of FAMS.

Appendix III: Excerpts from the Homeland Security Institute's July 2006 Report

The Homeland Security Institute, a federally funded research and development center, was established to assist the Department of Homeland Security in addressing relevant issues that require scientific, technical, and analytical expertise. The institute—after conducting an evaluation of the Federal Air Marshal Service's approach for achieving the agency's core mission of providing an onboard security presence for flights operated by U.S. commercial passenger air carriers—issued its final report in July 2006.

This appendix presents quoted excerpts that substantially replicate the executive summary in the Homeland Security Institute's July 2006 report.

Background and Tasking for an Independent Evaluation

"The Federal Air Marshal Service (FAMS) challenge to reduce risk in the aviation domain is daunting. U.S. commercial passenger carriers make roughly 28,000 domestic and international flights each day. These flights canvas the globe and originate, terminate, or fly in proximity to thousands of critical facilities. The FAMS must evaluate which flights it will defend and to what extent. It cannot cover every flight.

"In response to an Office of Management and Budget (OMB) direction, the FAMS asked HSI [Homeland Security Institute] for an independent evaluation of its methods for analyzing risk and allocating resources. In particular, it asked HSI to determine if its risk management processes and the application of its concept of operations (CONOPS) to scheduled commercial flights were valid."

Evaluation Approach Used by the Homeland Security Institute

"We defined 'validation' as a test of whether or not the FAMS risk management processes and the outcome of those processes are reasonable and consistent externally with stated guidance and internally with its own CONOPS. Our analysis involved three tasks. First, we examined the conceptual basis for the FAMS approach to risk analysis. Second, we examined the FAMS scheduling process and analyzed the output of that process in the form of 'coverage' data, i.e., when and where air marshals were deployed on flights. Third, we developed and employed a basic quantitative model to study the implications of alternative strategies for assigning resources."

Findings Reported by the Homeland Security Institute

"Based on our analysis, we find that the FAMS applies a valid approach to analyzing risk and allocating resources. In particular, its approach is reasonable given the scarcity of resources and the guidance it has received. It assesses risk as a function of threat, vulnerability, and consequence and employs a filtering process along with an allocation tool to optimize resource allocation. Moreover, the FAMS seeks to strengthen risk management processes by improving its scheduling tools and analytical techniques. We did not find any other organizations that face a similar challenge and apply significantly better methodologies or tools."

Additional Considerations Reported by the Homeland Security Institute

"During our analysis, we identified [the following] five issues that the FAMS should address itself or in conjunction with the Transportation Security Administration (TSA), the Department of Homeland Security (DHS), and the broader intelligence and security communities."

Vulnerability

"The FAMS definition of vulnerability … is inconsistent with traditional risk-based definitions, which focus on the probability that an attack will succeed. It shifts the focus away from other potential vulnerabilities. **We recommend that the FAMS reconsider its approach to vulnerability and engage the aviation security community on this issue.**" (The emphasis is in the original.)

Filtering Process

"The FAMS understanding of consequence and its subsequent 'filtering' process … bias its allocation decision. To focus limited resources, the FAMS filters flights according to … [various factors].

"Guidance in the form of legislation and departmental memoranda following 9/11 directed FAMS to focus on flights that present 'high security risks.' But, ultimately, that guidance was ambiguous and could be outdated. **These fundamental assumptions concerning risk, on which it** [FAMS] **allocates resources, warrant interagency review by the broader intelligence and security community.**" (The emphasis is in the original.)

Allocation Process

"The FAMS filtering process defines 'high risk' and directs its efforts toward flights fitting those characteristics. Its allocation process—a modified version of the SABRE software used by airlines to schedule flight crews—attempts to cover the maximum number of high risk flights within fixed resources. … The scheduling tool requires manual involvement to recognize and modify scheduling solutions, which may not be consistent with effective risk reduction.

"Our analysis of one month of FAMS coverage data reveals … [some concerns.] **To compensate for a lack of resources and deny predictability, the FAMS should integrate randomness into its allocations**." (The emphasis is in the original.)

"Contrary to the popular use of the term 'random,' allocating resources in such a way does not mean choosing them haphazardly or without a plan. The overall probability distribution for a group of comparable aircraft can be chosen based on risk analysis. For instance, the FAMS may choose to cover [a determined percentage of] flights in and out of [a particular geographic region]. But the tactical allocation decision concerning a specific flight must be random and converge around the overall category average over time. A terrorist group may be able to discern the overall category average through effective, long-term surveillance but will never know conclusively whether or not the flight it plans to hijack will be covered on a particular day."

Performance Measures

"The FAMS primary performance measure—average coverage rates—can mask weaknesses in coverage patterns. In particular, they can mask a situation in which certain flights within a category of comparable flights are heavily covered while others are rarely if ever covered. **Accordingly, the FAMS should develop performance measures to track coverage consistency**. One example involves tracking coverage deviation, defined as the average difference between the individual coverage rates of each flight in a comparable category and the overall category coverage rate." (The emphasis is in the original.)

Decision Support Tools

"During the course of our analysis, we noted that FAMS decision makers did not have a tool for evaluating the resource implications of different threat scenarios and alternative coverage schemes. The SABRE scheduler is not flexible enough to support quick-response analyses. **The FAMS should build a simple decision-support tool, along the lines of the model we developed based on risk balancing, to facilitate a system-wide view of resource decisions.**" (The emphasis is in the original.)

"Such a tool would augment, not replace its scheduling tool, by allowing decision makers to look across the entire aviation system and investigate the resource implications of alternative allocation scenarios. In other words, how easily could the FAMS adapt to a different threat environment? Could it significantly increase the number of marshals aboard specific flights? Where might those resources come from? How would these changes affect coverage elsewhere?"

Appendix IV: Performance Measures for Assessing the Federal Air Marshal Service

In 2003, the Office of Management and Budget (OMB) used its Program Assessment Rating Tool (PART) to assess the management and performance of the Federal Air Marshal Service (FAMS).[1] At that time, a key performance measure for assessing FAMS was based on coverage of targeted critical flights under various risk categories. This measure is still applicable currently; however, its designation has been changed from an output measure[2] to an outcome measure.[3] Moreover, this performance measure—the coverage of targeted critical flights—is now considered a proxy indicator[4] regarding air marshals' ability to defeat an attempted attack. Also, in further response to the findings of OMB's 2003 assessment, FAMS established two additional outcome measures, one of which serves as another proxy indicator of air marshals' ability to defeat an attempted attack:

- The additional proxy outcome measure is the average annual rate of accuracy in air marshals' firearms requalification testing.
- The additional, non-proxy outcome measure is based on a national survey of households to determine the level of public confidence in air marshals' ability to promote aviation security.

These updated measures have been approved by the Department of Homeland Security—and also were approved in 2008 by OMB during its PART-based reassessment of FAMS. An overview of FAMS's updated performance measures is presented in table 7.

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[1] PART consists of a standard series of questions intended to determine the strengths and weaknesses of federal programs. The PART questions cover four broad topics—(1) program purpose and design, (2) strategic planning, (3) program management, and (4) program results/accountability. See GAO, *Program Evaluation: OMB's PART Reviews Increased Agencies' Attention to Improving Evidence of Program Results*, GAO-06-67 (Washington, D.C.: Oct. 28, 2005).

[2] OMB defines an "output" measure as one pertaining to the internal activities of a program, such as the products or services delivered.

[3] Regarding types of performance measures, OMB defines an "outcome" measure as pertaining to the events or conditions of direct importance to the public/beneficiary that are external to the program.

[4] According to OMB, programs that have difficulty defining a quantifiable outcome measure may adopt a "proxy" outcome measure or indicator. These proxy measures need not meet the external event or condition criterion for a standalone outcome measure. The proxy measure need not be a public good unto itself, but rather be linked to the public good that is captured by the parent outcome measure—which is, in this case, the number of successful attacks.

Table 7: Overview of the Federal Air Marshal Service's Key Performance Measures (as of Fiscal Year 2008)

Performance measure	Type of measure[a]	Term	Description
Number of successful terrorist and other criminal attacks initiated from commercial passenger aircraft cabins in identified risk categories	Outcome	Long-term	FAMS expects that, on 100 percent of covered flights, air marshals will detect and defeat terrorist or criminal attackers to prevent hostile control of the aircraft. By virtue of meeting this measure's targets, air marshals deter onboard attacks. The annual target for this measure is zero successful attacks. Since September 11, 2001, to date, no attacks have occurred on board covered flights.
Percentage level in meeting coverage targets for each individual category of identified risk	Outcome	Annual	This measure reflects the performance levels of FAMS coverage of targeted critical flights based upon a risk-based management approach involving impact (geographical location), vulnerability (aircraft destructive potential), threats, and intelligence relative to the availability of resources. FAMS deploys air marshals to targeted critical flights under 10 individual risk categories that are specified in FAMS's concept of operations. According to OMB, this outcome measure is a proxy indicator regarding the number of successful attacks performance measure, given that deployment of air marshals on higher risk flights reduces the likelihood of a catastrophic attack. For this measure, FAMS has established its target to be 100 percent coverage of identified high-risk flights in each risk category. FAMS exceeded this goal in fiscal year 2006 (101.7 percent) and fell short of the target in fiscal year 2007 (96.2 percent) because of an increased emphasis on international flights resulting from the August 2006 terrorist plot to attack flights from the United Kingdom to the United States.
Average annual rate of accuracy in federal air marshals' firearms requalification	Outcome	Annual	As a requirement for the job, each individual air marshal must score at least 85 percent on quarterly firearms requalification testing. However, as a stretch or ambitious goal, FAMS established a baseline precision rate of 95 percent in 2007, and FAMS is retaining this rate as an annual goal through 2011. According to OMB, the firearms precision requirement is reflective of FAMS's ultimate ability to defeat an attempted attack. Thus, as a second proxy outcome measure, FAMS calculates an average, annualized precision rate that encompasses the firearms requalification scores of all air marshals.[b]
Level of public confidence in federal air marshals' ability to promote aviation security	Outcome	Long-term/annual	Beginning in fiscal year 2008, the U.S. Department of Transportation's Bureau of Transportation Statistics included in its National Household Transportation Survey a question regarding respondents' confidence in federal air marshals' ability to defend an aircraft and passengers from individuals with hostile intentions.

Performance measure	Type of measure[a]	Term	Description
Percentage of air marshals meeting the targeted number of flying days per year	Efficiency	Annual	In the spring of 2007, FAMS implemented a policy to target the number of flying days per air marshal to 18 days per 28-day roster period and 200 days per year. As a measure of efficiency for fiscal year 2007, FAMS established a target of 75 percent of all air marshals meeting the expected number of annual flying days; the target is to increase to 77.5 percent by fiscal year 2011. According to OMB, the actual rate achieved in fiscal year 2007 was 74 percent.
Cost per flight per air marshal	Efficiency	Long-term/annual	This measure reflects FAMS's total annual costs (full-time equivalent personnel costs, per diem costs, and program management costs) divided by the number of flights with an on-board air marshal presence during the year and further divided by the number of air marshals per flight. The result is the cost to the government per flight per air marshal.[c]

Source: Office of Management and Budget.

[a]OMB defines an "efficiency" measure as one that captures a program's ability to carry out its activities and achieve results (an outcome or output) relative to resources (an input such as cost).

[b]The firearms requalification proxy measure is reflective of the ability of air marshals to defeat an attack on board an aircraft, which is the parent outcome measure.

[c]OMB did not publish the targeted and actual costs making up this efficiency measure because the data are considered sensitive security information.

Appendix V: Working Groups Formed by the Federal Air Marshal Service to Address Various Issues

In March 2006, the Director of the Federal Air Marshal Service (FAMS) communicated to employees his intention to establish working groups to examine a variety of issues ranging from mission, organizational, and operational topics to workforce satisfaction and quality-of-life concerns. Two months later, in May 2006, the director communicated to FAMS employees that 12 working groups had been established, with each chaired by a field office special agent-in-charge (SAC) and that subject matter experts from the field and headquarters were available to assist in an advisory role.

Subsequently, the number of working groups increased to a total of 36. Table 8 categorizes the 36 working groups and briefly summarizes the purposes of each.

Also, regarding the status of the 36 working groups as of October 1, 2008, FAMS officials reported the following (see notes to table 8):

- 18 working groups (table note a): Each of these working groups had completed its work and given a final report to FAMS management. Each report had been reviewed by FAMS executives and then distributed to agency employees via a broadcast message from the FAMS Director. If applicable, the broadcast message also presented management's responses to any recommendations made by the respective report.
- 9 working groups (table note b): Each of these working groups had completed its work and given a final report to FAMS management. The reports were undergoing review by FAMS executives.
- 5 working groups (table note c): Each of these working groups had yet to complete its work and give a final report to FAMS management.
- 4 working groups (note d): Each of these working groups is to remain ongoing. As such, final reports are not expected to be issued; rather, each group will present its findings when applicable and by appropriate means.

Table 8: Overview of Federal Air Marshal Service Working Groups and Their Purposes

Issue categories	Working groups and their purposes (first meeting date)
Mission, organizational, and operational issues	Corporate Analysis Working Group[a] (April 4, 2006) • Review and evaluate the current processes and structure of FAMS. • Develop a recommended organizational structure to address a broader range of responsibilities transferred to FAMS based on the recent Transportation Security Administration functional integration effort. • Position the organization to achieve its strategic objectives over a 5-year period. Building a Law Enforcement Culture Working Group[b] (May 3, 2006) • Assess FAMS's organizational culture. • Determine if existing culture meets expectations of employees and stakeholders. • Develop recommendations to promote and sustain a culture that represents the values, customs, and traditions that best reflect organizational expectations. • Provide recommendations to best position FAMS for sustained growth and operations during the next 5-year period. Process Management Working Group[a] (May 16, 2006) • Review and analyze the current process management components of FAMS to include strategic planning efforts, investment management, financial management, and administrative practices. Operational Management Issues Working Group[b] (May 17, 2006) • Evaluate operational options in acknowledgment of the expanded role of FAMS within the Department of Homeland Security and the Transportation Security Administration, in the context of risk-based management and in coordination with federal, state, and local law enforcement counterparts. Project Management Working Group[b] (May 24, 2006) • Examine the project management process and the tools and technology available to improve or enhance the process. • Examine how goals, objectives, and strategies are identified and how milestones are established and monitored. Tactical Policy Working Group[a] (June 21, 2006) • Examine and review FAMS's tactical policies and procedures to include boarding procedures, dress code policies, transit within the airport environment, and hotel-choice policies for overnight stays. • Develop enhancements or revisions that are needed to FAMS's current policies or operational procedures. Federal Flight Deck Officer Working Group[b] (August 1, 2006) • Review and analyze the existing focus committee recommendations for credentials/badges, checkpoint requirements, weapon issues (including transport, storage, and qualification), communication protocols, training, liaison issues with the airline associations and carriers, and develop associated implementation strategies. Firearms Working Group[a] (September 6, 2006) • Conduct research and analysis to define the requirements for a future firearm acquisition to include the possibility of recommending an alternative firearm or a firearm to accommodate the range of federal air marshal physical sizes. • Review the ammunition that is currently used for the duty firearm. • Examine the off-duty firearm requirements and policy. • Review the current firearm policies and procedures and determine if any revisions are required. Training Manual Working Group[c] (October 24, 2006) • Examine various training instruction documentation and, if appropriate, recurrent instruction practices at select field offices.

Issue categories	Working groups and their purposes (first meeting date)
	Explosives Security Specialist Working Group[a] (October 31, 2006)
	• Discuss the explosives security specialists' current duties, responsibilities, and training requirements and any other associated issues within the Explosives Division and the field offices.
	• Determine if any of the recently acquired programs within FAMS would benefit from involvement from the explosives specialists and, in turn, benefit the explosives specialists with enhanced experience.
	• Develop a series of recommended proposals to further define the explosives security specialists' duties and responsibilities.
	Canine Program Working Group[b] (December 5, 2006)
	• Review and discuss canine program operations, including the following elements: (1) canine team composition and operations for deployment at applicable airports; (2) cooperative agreement content; (3) roles of the Federal Security Directors,[e] the Assistant Federal Security Director for Law Enforcement, and SACs regarding canine team operations and coordination; and (4) additional issues as determined by working group members.
	SAC Advisory Council Working Group[d] (December 6, 2006)
	• Examine and discuss a wide range of issues that impact FAMS's operations and provide recommended actions to the FAMS executive staff. [Note: Agency documentation explained that members of the SAC Advisory Council are uniquely positioned to provide extensive knowledge of operational issues that are critically important to executing the mission of FAMS.]
	Explosives Security Specialist Sub-Working Group[a] (August 28, 2008)
	• Review recommendations previously made by the Explosives Security Specialist Working Group.
	International Mission Working Group[a] (February 6, 2008)
	• Examine and discuss FAMS's international deployment procedures and concepts currently in use.
	Joint Terrorism Task Force Working Group[c] (March 6, 2008)
	• Examine and discuss the various procedures and issues pertaining to FAMS personnel serving on Joint Terrorism Task Force assignments.
	Scheduling Practices and Operations Working Group[c] (8/5/08)
	• Review and examine various scheduling practices and protocols.
Technology issues	Technology Working Group[b] (May 24, 2006)
	• Examine FAMS's technological initiatives and requirements to ensure that the organization's needs are met now and in the future.
	Operational Communications Group[d] (November 9, 2007)
	• Examine FAMS's operational and technical requirements for land mobile radio communications to support a number of initiatives, including Visible Intermodal Prevention and Response teams and other operations.
Human capital issues	Workforce Satisfaction, Recruitment, and Retention Working Group[a] (April 12, 2006)
	• Examine FAMS's recruitment and retention practices and develop strategies and recommendations to enhance those efforts.
	• Identify key issues that affect FAMS's employee workforce satisfaction and morale issues as the organization continues to mature over a 5-year period.
	Quality of Life, Scheduling, and Transfers Working Group[a] (April 25, 2006)
	• Examine the quality-of-life and associated issues involving mission scheduling and manpower issues.
	• Examine the current transfer/change-of-station program.
	Career Path and Promotional Opportunities Working Group[a] (May 2, 2006)
	• Examine and assess the career path/promotional opportunity process for the federal air marshal and civilian

Issue categories	Working groups and their purposes (first meeting date)
	population of FAMS.
	• Identify recommendations to further develop/enhance career development and promotional opportunities within the organization.
	• Examine managerial succession planning efforts and develop recommendations to best position FAMS for sustained growth and operations during the next 5-year period.
	Recruitment and Retention of Women & Family-Friendly Initiatives Working Group[a] (Aug. 9, 2006)
	• Identify and analyze those issues that impact the recruitment and retention of women.
	• Identify creative family-friendly initiatives that will positively impact quality of life and retention of employees.
	Mission Support Employee Working Group[b] (October 24, 2006)
	• Examine various issues and policies that specifically pertain to civilians and range from the current structure of mission support employee positions to professional development training to enhance recruitment and retention.
	Hardship Transfer Policy Working Group[d] (October 25, 2006)
	• Develop a hardship transfer policy that is (1) consistent, fair, and non-discriminatory and (2) tailored for the needs of a law enforcement organization and its officers.
	Awards and Recognition Working Group[a] (November 7, 2006)
	• Review the current awards and recognition programs and policies of the Transportation Security Administration and FAMS.
	• Develop recommended actions, as appropriate, to modify the current policies and practices.
	Diversity Working Group[a] (January 17, 2007)
	• Discuss and examine the range of diversity-related concepts and issues that impact FAMS's personnel and operations.
	• Focus on the continued development of a culture within FAMS that leverages the diversity of the workforce and identifies and utilizes the range of employee talent to carry out FAMS' mission/operations.
	Employee Outreach Working Group[c] (February 2, 2007)
	• Examine critical incident stress management models for law enforcement to explore their potential benefit for implementation within FAMS.
	• Analyze traumatic incidents (specifically suicides) that have occurred to date within FAMS to identify commonalities and lessons learned across the cases, if any.
	• Develop specific goals, objectives, and parameters associated with an organization-wide resource.
	• Consult relevant scientific literature and professional expertise.
Communications and relationships issues	Communications Working Group[a] (June 13, 2006)
	• Review and evaluate the current communication and media relationships practices (from headquarters to the field offices, within and among headquarters directorates, and within and among field offices).
	• Gather input from the other working groups that have addressed communication issues and prepare recommendations to design communication and media practices and strategies for FAMS.
	Stakeholder Relationships Working Group[b] (June 14, 2006)
	• Review and analyze the current stakeholder relationships with entities such as Transportation Security Administration, Department of Homeland Security, Office of Management and Budget, Congress, and various law enforcement entities.
	• Determine how FAMS can best leverage those engagements to ensure a viable, sustainable organization.
	Assistant Federal Security Director for Law Enforcement Working Group[a] (June 27, 2006)
	• Evaluate the current work activities of the position's workforce and then identify the core roles and responsibilities of that position.
	• Codify the Assistant Federal Security Director for Law Enforcement's reporting procedures and the

Issue categories	Working groups and their purposes (first meeting date)
	relationships between that position, the Federal Security Directors, and the field office SACs.
	<u>Federal Air Marshal Issue Working Group</u>[a] (October 3, 2006)
	• Review current federal air marshal issue groups within FAMS and benchmark against similar types that are operational in other law enforcement organizations.
	• Prepare a federal air marshal issue group charter that details objectives, membership, and standard operating practices and procedures to initiate and sustain a group within each field office.
	<u>Policy Issues Working Group</u>[d] (January 16, 2007)
	• Identify and resolve conflicts between FAMS's policies (including legacy policies) and Transportation Security Administration management directives. [Note: This working group has transitioned to having periodic meetings between FAMS and TSA officials. No final report will be issued.]
	<u>Integrated Conflict Management System Working Group</u>[b] (August 14, 2007)
	• Develop a proposal for implementing (including training) an integrated conflict management system within FAMS.
	• Ensure that the proposal considers practical, operational, and organizational culture factors and also recognizes practices that are already in place.
	• Propose recommendations concerning the roles and responsibilities associated with system coordinators' functions at the field offices and headquarters' divisions.
Medical issues	<u>Medical Issues Working Group</u>[a] (October 11, 2006)
	• Examine and review medical studies pertaining to the effects of flying in the aviation environment.
	• Examine the number and types of claims for injuries and illnesses as documented in FAMS' Office of Workers' Compensation Program.
	• Identify and recommend best practices from the military and aviation industry.
Administrative issues	<u>Administrative Manual Working Group</u>[c] (November 7, 2006)
	• Develop an administrative manual to provide a resource for FAMS standard operating procedures and policies.
	<u>Time and Attendance Forms Working Group</u>[a] (April 19, 2007)
	• Discuss and examine time and attendance sheets currently in use by all FAMS field offices.
	• Make recommendations concerning which form(s) the group identified as a best practice to be replicated service wide—or, if no such form exits, make recommendations concerning a new form or modification to an existing one.
	• Discuss and make recommendations concerning methods by which the time and attendance reporting process could become more streamlined and ensure consistency regarding reporting and pay.

Source: Federal Air Marshal Service.

[a]According to FAMS officials, as of October 1, 2008, (1) the working group had completed its work and given a final report to FAMS management, (2) the report had been reviewed by FAMS executives and then distributed to agency employees via a broadcast message from the FAMS Director, and (3) if applicable, the broadcast message also presented management's responses to any recommendations made by the report.

[b]According to FAMS officials, as of October 1, 2008, the working group had completed its work and given a final report to FAMS management, and the report was undergoing review by FAMS executives.

[c]According to FAMS officials, as of October 1, 2008, the working group had yet to complete its work and give a final report to FAMS management.

[d]According to FAMS officials, the working group is to remain ongoing, and a final report is not expected to be issued. Rather, the group will present its findings when applicable and by appropriate means.

[e]A Federal Security Director is the top-ranking TSA official responsible for security at each of the nation's commercial airports.

FAMS Workforce Satisfaction Survey

On behalf of the Director and the Office of Law Enforcement [OLE]/FAMS Office of Workforce Planning and Management, thank you for taking the time to complete this survey. The purpose of this survey is to capture information regarding workforce satisfaction at OLE/FAMS. The information obtained by this survey will be used by OLE/FAMS leadership to assess the current levels of workforce satisfaction for the purposes of planning, policy development, and program enhancement. In addition, the data obtained by this survey will be used to evaluate current OLE/FAMS workforce satisfaction initiatives and strategies. Please take the time to carefully complete this survey. Your input will remain confidential and is vital to making OLE/FAMS a premier law enforcement organization. Thank you for your help.

For each item, choose the response that best reflects your experience at OLE/FAMS.

	SA Strongly Agree	A Agree	N Neutral	D Disagree	SD Strongly Disagree
Senior Leadership					
1. I have trust in the abilities of OLE/FAMS senior leaders and executives (e.g., Director, Deputy Director, Assistant Directors, Deputy Assistant Directors) to lead the organization.	☑	☐	☐	☐	☐
2. OLE/FAMS executive leaders are receptive to organizational change.	☐	☐	☐	☐	☐
3. I believe that the Director's visions and initiatives are consistently shared and supported by my field management.	☐	☐	☐	☐	☐
Supervisor/Management					
4. My first-line supervisor is competent in doing his/her job.	☐	☐	☐	☐	☐
5. My supervisor is receptive to change.	☐	☐	☐	☐	☐
6. My discussions with my supervisor about my performance are worthwhile.	☐	☐	☐	☐	☐
7. I have discussed a career development plan with my supervisor.	☐	☐	☐	☐	☐
8. My supervisor shows concern for my career progress.	☐	☐	☐	☐	☐
Resources & Technology	SA	A	N	D	SD
9. I have adequate equipment, supplies, and materials to accomplish my duties.	☐	☐	☐	☐	☐
10. Generally, the equipment I use (e.g., firearm, computer, cell phone, PDA [Personal Digital Assistant], etc.) to perform my job works properly.	☐	☐	☐	☐	☐
11. The equipment I use is sufficiently easy to operate.	☐	☐	☐	☐	☐
12. I am generally satisfied with the quality of OLE/FAMS physical facilities (e.g., workspaces, training facilities,	☐	☐	☐	☐	☐

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physical fitness areas, firearms ranges, etc.)					
13. I am generally satisfied with the availability of OLE/FAMS physical facilities (e.g., workspaces, training facilities, physical fitness areas, firearms ranges, etc.)	☐	☐	☐	☐	☐
Training & Education	**SA**	**A**	**N**	**D**	**SD**
14. I receive the training I need to do my job.	☐	☐	☐	☐	☐
15. I am satisfied with the frequency/amount of training I receive in my office.	☐	☐	☐	☐	☐
16. Generally, I am satisfied with the content and variety of job-related training I receive in my office.	☐	☐	☐	☐	☐
17. I am satisfied with the continuing education opportunities offered by my job.	☐	☐	☐	☐	☐
18. OLE/FAMS supports continuing education opportunities relevant to my job.	☐	☐	☐	☐	☐
19. My work schedule affords me the opportunity to pursue continuing education.	☐	☐	☐	☐	☐
20. I am encouraged by my supervisors and managers to seek training and educational opportunities.	☐	☐	☐	☐	☐
Career Development	**SA**	**A**	**N**	**D**	**SD**
21. Overall, I am satisfied with the progress I have made toward my career goals.	☐	☐	☐	☐	☐
22. There are sufficient opportunities for career advancement at OLE/FAMS.	☐	☐	☐	☐	☐
23. In my present position, I have a clearly understood career path.	☐	☐	☐	☐	☐
24. Promotions to supervisory levels in OLE/FAMS are based on merit.	☐	☐	☐	☐	☐
25. In OLE/FAMS, the selection criteria for promotion are clear.	☐	☐	☐	☐	☐
Policies & Procedures	**SA**	**A**	**N**	**D**	**SD**
26. OLE/FAMS' written policies support (and do not hinder) mission accomplishment.	☐	☐	☐	☐	☐
27. The local policies and procedures of my office support mission accomplishment.	☐	☐	☐	☐	☐
28. I am able to stay updated and am informed about the latest policies and procedures.	☐	☐	☐	☐	☐

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Employee Involvement & Autonomy	SA	A	N	D	SD
29. I have effective channels to voice my opinion regarding work-related issues (e.g., working groups, listening sessions, e-mail suggestion box, etc.).	☐	☐	☐	☐	☐
30. I am empowered to use my professional discretion in daily execution of my duties.	☐	☐	☐	☐	☐
31. I am provided sufficient opportunities to participate in important decisions affecting my work.	☐	☐	☐	☐	☐
Rewards & Recognition	SA	A	N	D	SD
32. Outstanding performance is recognized in my office.	☐	☐	☐	☐	☐
33. I am satisfied with the promotion practices of OLE/FAMS.	☐	☐	☐	☐	☐
34. In my office, monetary rewards (i.e., cash awards, in-position increases, etc.) are tied to performance.	☐	☐	☐	☐	☐
35. I am generally satisfied with my pay.	☐	☐	☐	☐	☐
Communication	SA	A	N	D	SD
36. OLE/FAMS' policies and procedures are clearly communicated and easy to understand.	☐	☐	☐	☐	☐
37. I am satisfied with communication within my office (e.g., FO [Field Office], branch, division, directorate).	☐	☐	☐	☐	☐
38. There are mechanisms in place which allow me to freely express my comments, concerns, and suggestions without fear of retaliation.	☐	☐	☐	☐	☐
39. I am satisfied that the work-related concerns I address with management are addressed appropriately.	☐	☐	☐	☐	☐
40. I have enough information to do my job well.	☐	☐	☐	☐	☐
Safety, Health & Medical Issues	SA	A	N	D	SD
41. I feel that my job-related stress is manageable.	☐	☐	☐	☐	☐
42. I am generally satisfied with OLE/FAMS programs related to employee safety, health, and wellness.	☐	☐	☐	☐	☐
43. I am satisfied that OLE/FAMS management is concerned for the health and safety of employees and is working continuously to offer improved services.	☐	☐	☐	☐	☐
44. I have been provided information and resources to take personal responsibility for my health and wellness as it relates to my job (e.g., proper diet, fitness, sufficient rest).	☐	☐	☐	☐	☐
45. I feel that medical information relevant to my job is communicated to me.	☐	☐	☐	☐	☐
Work & Family Life	SA	A	N	D	SD
46. I am able to effectively balance my work with my personal/family life.	☐	☐	☐	☐	☐
47. My family is supportive of my career with OLE/FAMS.	☐	☐	☐	☐	☐
48. Current initiatives (e.g., Voluntary Lateral Transfer Program, new office openings, etc.) have a positive effect on quality of work life/family life.	☐	☐	☐	☐	☐

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49. OLE/FAMS leadership has implemented positive changes affecting scheduling.	☐	☐	☐	☐	☐
50. I am satisfied that OLE/FAMS is exploring initiatives to improve quality of life/family life.	☐	☐	☐	☐	☐
51. I have seen improvement in quality of work life and family life as a result of the recommendations from the Director's Working Groups.	☐	☐	☐	☐	☐
52. I have seen positive changes made in OLE/FAMS in the last year.	☐	☐	☐	☐	☐
Organizational Commitment	**SA**	**A**	**N**	**D**	**SD**
53. I am proud to work for OLE/FAMS.	☐	☐	☐	☐	☐
54. I find my values are similar to OLE/FAMS values.	☐	☐	☐	☐	☐
55. I feel a sense of loyalty to OLE/FAMS.	☐	☐	☐	☐	☐
56. I am likely to stay at OLE/FAMS for the next 12 months.	☐	☐	☐	☐	☐
Job Satisfaction	**SA**	**A**	**N**	**D**	**SD**
57. The work I do is important.	☐	☐	☐	☐	☐
58. I find my work challenging and interesting.	☐	☐	☐	☐	☐
59. Generally speaking, I am very satisfied with my job.	☐	☐	☐	☐	☐
60. I like the kind of work I do (e.g., my current duties and assignment).	☐	☐	☐	☐	☐

Comments Section

Please use this section to provide more specific information for any of the above questions.

Reasons for Staying with OLE/FAMS

Indicate the importance of each of the following factors in your reasons for staying with OLE/FAMS.

Money (e.g., salary and benefits)
Schedule (e.g., number of hours, flexibility)
Duty location (e.g., FO, HQ [headquarters], SOCD [Systems Operation Control Division], etc.)
OLE/FAMS mission (e.g., belief in importance of mission)
Career Opportunities (e.g., promotion potential, career growth)
Other: _____

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U.S. Department of Homeland Security
Washington, DC 20528

Homeland Security

November 26, 2008

Stephen M. Lord
Acting Director, Homeland Security and Justice Issues
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Mr. Lord:

Thank you for the opportunity to review and provide comments on the Government Accountability Office's (GAO) draft report GAO-09-53SU titled, *Federal Air Marshal Service Has Taken Actions to Fulfill Its Core Mission and Address Workforce Issues, but Additional Actions Are Needed to Improve Workforce Survey* (440601). The Department of Homeland Security (DHS) appreciates GAO's effort in conducting this study and we believe that the findings and recommendation will facilitate continued progress in identifying and addressing issues that affect the ability of Federal Air Marshal Service (FAMS) personnel to perform the Agency's aviation security mission.

In April 2007, GAO initiated its assessment of the FAMS. The inquiry lasted approximately 17 months, concluding in October 2008. During this time, FAMS provided GAO with full access to FAMS' Executive Management, as well as access to the subject-matter experts involved in the coordination of programs that affect the entire organization. FAMS briefed GAO on numerous occasions regarding the 36 working groups and other initiatives that were implemented to address workforce issues. During this period, GAO also conducted site visits and interviews at 11 of the FAMS' 21 field offices. During these visits, GAO had full access to the managers and was given access to interview air marshals of their choosing. This was the most in-depth inquiry conducted by an outside entity.

DHS concurs with GAO's finding that the FAMS has successfully taken actions to fulfill core mission and accepts the finding as validation of the efforts undertaken to improve FAMS morale and performance.

Additionally, DHS/TSA is pleased to note GAO's endorsements of:

- FAMS' Concept of Operation (consideration of risk-related factors deployed based on coverage goals and flexibility for responding to changing threats);
- Management's efforts to address employee concerns and improve workforce satisfaction (Working Group Initiative, Field Office Focus Groups, Field Office Visits by the Director, Listening Sessions, Dinner/Breakfast with the Director, Director's and

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Anonymous Suggestion In-Boxes, assignment of an agency Ombudsman, and establishment of the Voluntary Lateral Transfer Program);
- Steps taken to preserve anonymity of air marshals (revision of hotel and dress code policies); and
- Accomplishments in improving the quality of life for agency employees (Mission Exchange Program, 6 p.m. and 60-hour rule, limit on number of flights per days, more rest time following international missions, and more consistent start times).

GAO made one recommendation that "the FAMS Director take appropriate actions to increase the usefulness of the workforce satisfaction surveys that the FAMS plans to conduct biennially. Such actions could include, for example, ensuring that the survey questions and the answer options are clearly structured and unambiguous and that additional efforts are considered for obtaining the highest possible response rates."

We generally concur with the aforementioned recommendation. At present, FAMS is in the initial stages of formulating the next workforce satisfaction survey and plans to implement the suggestions.

Once again, DHS appreciates the opportunity to review and provide comments and we look forward to working with you on future homeland security issues.

Sincerely,
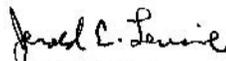
Jerald E. Levine
Director
Departmental GAO/OIG Liaison Office

Appendix VIII: GAO Contact and Staff Acknowledgments

GAO Contact

Stephen M. Lord, Acting Director, Homeland Security and Justice Issues, (202) 512-4379 or lords@gao.gov

Staff Acknowledgments

In addition to the contacts named above, Danny Burton and John Hansen (Assistant Directors) and Michael Harmond (Analyst-in-Charge) managed this assignment.

David Alexander, Chuck Bausell, Arturo Cornejo, Wendy Dye, Stuart Kaufman, and Courtney Reid made significant contributions to the work.

Tom Lombardi provided legal support.

Katherine Davis provided assistance in report preparation.

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