



United States Government Accountability Office
Washington, DC 20548

January 9, 2009

The Honorable Daniel E. Lungren
Ranking Republican Member
Subcommittee on Transportation
and Infrastructure Protection
Committee on Homeland Security
House of Representatives

The Honorable John L. Mica
Ranking Republican Member
Committee on Transportation and Infrastructure
House of Representatives

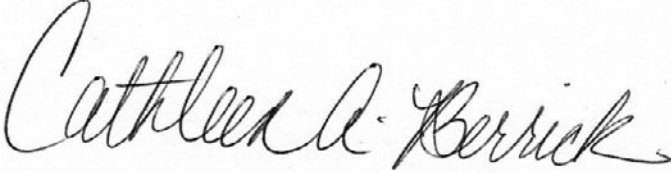
Subject: *Aviation Security: TSA's Cost and Performance Study of Private-Sector Airport Screening*

This report formally transmits the enclosed briefing in response to your request that we review the Transportation Security Administration's (TSA) Screening Partnership Program (SPP). In accordance with the Aviation and Transportation Security Act, TSA created the SPP to allow commercial airports an opportunity to apply to TSA to use private sector screeners through qualified private-screening contractors approved by TSA. In February 2008, TSA issued a report on its study comparing the cost and performance of screening services at SPP and non-SPP airports. Our briefing addresses the following questions: (1) To what extent did the design of TSA's study of the cost and performance of passenger and checked baggage screening services at selected SPP and non-SPP airports affect the usefulness of the study? (2) To what extent has TSA taken actions to identify and eliminate any unnecessary overhead/supervisory redundancies at SPP airports between TSA and contractor personnel? (3) What factors do airport operators cite as having contributed to airports' decisions about whether to participate in the SPP? We are recommending that if TSA plans to rely on its comparison of costs and performance of SPP and non-SPP airports for future decision making, the agency update its study to address the limitations we identified, for example, by including various cost elements that were excluded and conducting statistical tests to determine the level of confidence in any observed differences in screening performance. TSA generally agreed with our findings and recommendation.

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As agreed with your offices, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of this report. At that time, we will send copies of this report to the Secretary of Homeland Security and other interested parties. This report will also be available at no charge on our Web site at <http://www.gao.gov>.

Should you or your staff have any questions concerning this report, please contact me at (202) 512-3404 or berrickc@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Key contributors to this report were Glenn Davis, Assistant Director; Chuck Bausell, Jr.; Katherine Davis; Stanley Kostyla; Thomas Lombardi; Frederick Lyles, Jr.; Deborah Ortega; and John Warner.

A handwritten signature in black ink that reads "Cathleen A. Berrick". The signature is written in a cursive style with a large initial 'C' and a long, sweeping tail on the 'k'.

Cathleen A. Berrick
Managing Director, Homeland Security and Justice Issues

Enclosures - 2

Enclosure I: Briefing Slides



Aviation Security: TSA's Cost and Performance Study of Private-Sector Airport Screening

Briefing for Congressional Requesters

November 12, 2008

Contents

- Introduction
- Objectives
- Scope and Methodology
- Results in Brief
- Background
- Findings
- Conclusions
- Recommendation for Executive Action
- GAO Contacts
- Appendixes
- Related GAO Products



Introduction

- Passenger screening is a critical component of the security of our nation's commercial aviation system. Passenger screeners,¹ both federal and private, use metal detectors, X-ray and other detection machines and systems, and physical searches to examine passengers and their baggage to identify threat objects.
- On November 19, 2002, in accordance with the Aviation and Transportation Security Act (ATSA), the Transportation Security Administration (TSA) began a 2-year pilot program at five airports using private screening companies to screen passengers and checked baggage.² ATSA further mandates that TSA allow airports to request that the screening of airline passengers and baggage be conducted by private screeners in lieu of federal screeners.³
- In November 2004 and in accordance with ATSA, TSA created the Screening Partnership Program (SPP) to allow all commercial airports an opportunity to apply to TSA to use private-sector screeners through private screening contractors approved by TSA. TSA remains responsible for funding all passenger and baggage screening activities at SPP airports as well as airports with federal screeners.

¹Federal screeners are employed by the Transportation Security Administration (TSA) and are referred to as transportation security officers; private screeners are employed by qualified private screening companies under contract to TSA.

²See Pub. L. No. 107-71, § 108, 115 Stat. 597, 611-13 (2001) (codified at 49 U.S.C. § 44919).

³See Pub. L. No. 107-71, § 108, 115 Stat. at 611-13 (codified as amended at 49 U.S.C. § 44920).

Introduction (cont'd)

- In May 2007, TSA awarded a contract to Catapult Consultants, in the amount of \$442,521, to conduct a cost and performance analysis of airports with private screeners versus airports with federal screeners. This analysis would be used to assist senior TSA leadership with strategic decisions regarding the degree to which TSA should leverage public/private partnerships in the area of screening services. The contractor issued a report on its analysis to TSA in December 2007.¹
- In February 2008, TSA issued a report on a study TSA conducted comparing the cost and performance of screening at SPP and non-SPP airports.² The agency initiated this work in anticipation that more airports would apply to participate in the SPP, and, because of this, it wanted to obtain information regarding how such participation would impact the agency's budget. In addition, TSA also wanted to obtain information about how the existing SPP airports compared to non-SPP airports.
- TSA officials stated that although they used the study prepared by Catapult Consultants to conduct their comparison of screening at SPP and non-SPP airports, they consider the TSA study to be the official agency study. In conducting the study, TSA compared the cost of operating screening at SPP airports with the cost that would be incurred in the agency's budget if these airports were run as fully federal or non-SPP airports. TSA used 2007 invoice data submitted by the following six SPP airports and determined what the cost would be if these airports were instead staffed with federal transportation security officers (TSO) (see app. I for additional details about TSA's approach and methodology).
 1. Greater Rochester International Airport, Rochester, New York
 2. Jackson Hole Airport, Jackson, Wyoming
 3. Joe Foss Field, Sioux Falls, South Dakota
 4. Kansas City International Airport, Kansas City, Missouri
 5. San Francisco International Airport, San Francisco, California
 6. Tupelo Regional Airport, Tupelo, Mississippi

¹Catapult Consultants, *Private Screening Operations: Business Case Analysis*, Transportation Security Administration, Screening Partnership Program, December 14, 2007.

²Transportation Security Administration, *A Report on SPP Airport Cost and Performance Analysis and Comparison to Business Case Analysis Finding*, February 1, 2008.

Introduction (cont'd)

- TSA compared the performance measures of SPP airports to non-SPP airports in the same airport category (category X, I, II, III, and IV).¹ Specifically, TSA analyzed 2007 performance data for five performance measures: threat image projection detection rates,² recertification,³ passenger waiting, peak wait times, and checkpoint capacity utilization. An airport was considered an average performer if the results for these measures fell within one standard deviation from the airport category average (the middle 68.2 percent of the category).
- TSA found that screening at SPP airports currently costs approximately 17.4 percent more to operate than at airports with federal screeners, and that SPP airports fell within the “average performer” category for the performance measures included in its analysis. Although the TSA contractor used a different methodological approach for comparing the cost and performance of SPP and non-SPP airports, the contractor concluded that passenger screening at the SPP airports has historically cost from 9 to 17 percent more than at non-SPP airports, and private screeners performed at a level that was equal to or greater than that of federal TSOs. (Additional information about the methodology and findings of the TSA contractor’s study is contained in app. II and app. III, respectively.)

¹TSA classifies the commercial airports in the United States into one of five security risk categories (X, I, II, III, and IV) based on various factors, such as the total number of takeoffs and landings annually, and other special security considerations. In general, category X airports have the largest number of passenger boardings, and category IV airports have the smallest.

²The Threat Image Projection system is designed to test TSOs’ and private screeners’ detection capabilities by projecting threat images, including images of guns and explosives, into bags as they are screened. TSOs and private screeners are responsible for positively identifying the threat image and calling for the bag to be searched.

³TSOs and private screeners must pass an annual standardized recertification test composed of image, job knowledge, and Standard Operating Procedures tests.



Introduction (cont'd)

- In presenting its findings, TSA also stated in its report that the current SPP model is constrained by the law¹ and TSA policy and allows for little variance in the inputs for staffing, compensation, and operations at SPP airports. Therefore, the outputs of such a constrained model produce similar performance results with an anticipated costs premium due to an additional layer of contractor management.
- The Ranking Republican Member of the House Committee on Transportation and Infrastructure and the Ranking Republican Member of the Subcommittee on Transportation and Infrastructure Protection, House Committee on Homeland Security, requested that we provide information on TSA's cost and performance study of SPP airports, any actions that TSA has taken to identify and prevent redundancies between TSA and contractor personnel, and factors that have contributed to an airport operator's decision about whether to participate in the SPP.

¹See, e.g., § 44920(c) (providing that private screening companies selected by TSA must provide its screening personnel compensation and other benefits at a level not less than the compensation and other benefits provided to federal government personnel).

Objectives

Our objectives were to determine:

- To what extent did the design of TSA's study of the cost and performance of passenger and checked-baggage screening services at selected SPP and non-SPP airports affect the usefulness of the study's results?
- To what extent has TSA taken actions to identify and eliminate any unnecessary redundancies at SPP airports between TSA administrative staff, including supervisory positions, and contractor personnel?
- What factors did airport operators cite as having contributed to their decisions about whether to participate in the SPP?



Scope and Methodology

To determine the extent to which the design of TSA's study of the cost and performance of passenger and checked-baggage screening services at selected SPP and non-SPP airports affected the usefulness of the study's results, we

- analyzed TSA's study and available documentation, such as calculations used in developing the cost estimates, to determine what costs were included in the comparisons, whether the comparisons accounted for possible performance differences among screeners at selected SPP and comparable non-SPP airports, whether the comparisons were supported by a workforce analysis to identify any unnecessary redundancies at SPP airports, and whether the study accounted explicitly for uncertainty;
- compared TSA's study methodology as described by TSA officials to criteria in GAO's *Standards for Internal Control in the Federal Government*,¹ federal accounting standards for managerial cost accounting,² GAO³ and Office of Management and Budget (OMB)⁴ guidance for estimating and managing program costs, and OMB's guidance for statistical surveys, data quality, and performance assessments,⁵ and assessed whether TSA and contractor officials took actions to ensure that the data used in the studies were reliable;

¹GAO, *Standards for Internal Control in the Federal Government*, GAO-AIMD-00-21.3-1 (Washington, D.C.: November 1999).

²Federal Financial Accounting Standards No. 4, *Managerial Cost Accounting Concepts and Standards for the Federal Government*.

³GAO, *Cost Assessment Guide: Best Practices for Estimating and Managing Program Costs*, GAO-07-1134SP (Washington, D.C.: July 2007).

⁴OMB Circular A-76, *Performance of Commercial Activities*, and OMB Circular A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*.

⁵OMB, *Standards and Guidelines for Statistical Surveys*, September 2006; *Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies*, October 1, 2001; and *Program Assessment Rating Tool Guidance*, No. 2008-01, January 29, 2008.



Scope and Methodology (cont'd)

- assessed the type of performance measures that were included in the TSA and contractor studies, the methodology used to identify differences in private screener/TSO performance, and whether analyses were conducted to determine if observed differences in performance were statistically significant; and
- interviewed TSA and contractor officials to obtain information on the models that TSA and its contractor used to assess the cost of screening operations, and to assess the performance of private and federal screeners at the selected SPP and comparable non-SPP airports.



Scope and Methodology (cont'd)

To determine the extent to which TSA has taken actions to identify and eliminate any unnecessary redundancies at SPP airports between TSA administrative staff, including supervisory positions, and contractor personnel:

- We analyzed organizational charts, as well as information on supervisory roles and responsibilities, for TSA personnel at six SPP airports we visited and six non-SPP airports to identify possible redundancies between TSA and contractor personnel. While information we obtained at these locations is not generalizable across all airports, we selected these airports because they represent a mixture of different geographic locations, passenger and baggage throughput,¹ and checkpoint configurations. In addition, two of the SPP airports—Kansas City International Airport and San Francisco International Airport—also participated in TSA’s 2-year pilot program and, therefore, had several years of experience using private screeners.

Table 1: Airports Included in GAO’s Review

| SPP airports | Non-SPP airports |
|--|---|
| 1. Joe Foss Field, Sioux Falls, South Dakota | 1. Barkley Regional Airport, Paducah, Kentucky |
| 2. Kansas City International Airport, Kansas City, Missouri | 2. Central Illinois Regional, Bloomington, Illinois |
| 3. Key West International Airport, Key West, Florida | 3. Logan International Airport, Boston, Massachusetts |
| 4. Roswell Industrial Air Center, Roswell, New Mexico | 4. Missoula International Airport, Missoula, Montana |
| 5. San Francisco International Airport, San Francisco, California | 5. Salt Lake City International Airport, Salt Lake City, Utah |
| 6. Charles M. Schulz-Sonoma County Airport, Santa Rosa, California | 6. Syracuse-Hancock International Airport, Syracuse, New York |

Source: GAO

¹Throughput refers to the number of passengers and bags that are processed by TSA.



Scope and Methodology (cont'd)

- We assessed TSA's actions to identify unnecessary redundancies between TSA and contractor personnel based on GAO¹ and Office of Personnel Management (OPM)² guidance on workforce planning.
- We interviewed TSA headquarters personnel and airport officials at the six SPP airports we visited to obtain their views on the extent to which redundancies were occurring between TSA and contractor personnel.
- We interviewed TSA headquarters officials to discuss the agency's approach for allocating screening and supervisory personnel at SPP and non-SPP airports, including the extent to which TSA had conducted a workforce analysis.

¹GAO, *Human Capital: Key Principles for Effective Strategic Workforce Planning*, GAO-04-39 (Washington, D.C.: Dec. 11, 2003).

²OPM, *Workforce Planning Model*, September 2005.

Scope and Methodology (cont'd)

To determine what factors airport operators cite as having contributed to airports' decisions about whether to participate in the SPP, we

- reviewed the results of a survey conducted by the Airports Council International—North America, which represents local, regional, and state governing bodies that own and operate commercial airports in the United States, to determine how to make the SPP more attractive to airports, and interviewed officials from three aviation associations¹ to obtain their views on the SPP;
- interviewed airport managers or airport security directors at the SPP airports we visited to determine what factors led to their participation in the SPP;
- interviewed airport managers or security directors at six non-SPP airports we contacted to determine why they were not participating in the SPP; and
- interviewed TSA officials to identify their efforts to promote the SPP.

¹Air Transport Association, Airports Council International—North America, and the American Association of Airport Executives. Because we selected a nongeneralizable sample of aviation organizations, the information we gathered from our interviews with these organizations cannot be used to make inferences about all aviation organizations. However, we believe that the information we obtained was useful in learning about how such organizations view the SPP.



Scope and Methodology (cont'd)

We conducted this performance audit from August 2007 to November 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.



Results in Brief

TSA's study comparing the cost and performance of screening services at SPP and non-SPP airports had some design strengths, such as recognizing that cost savings would be limited given the mandated structure of the SPP and assessing whether performance data were collected in a uniform manner. However, based on the criteria that we used, the design was limited because TSA did not:

- Include the impact of potential overlapping administrative staff¹ on the costs of SPP airports. TSA is currently conducting a workforce analysis to identify unnecessary redundancies in its staffing, including overlapping administrative personnel; TSA officials stated that this effort is ongoing and has no completion date.
- Account for workers compensation, general liability insurance, and some retirement costs paid by the federal government, as well as the lost corporate income tax revenue from private screening contractors, when replacing private with federal screening.
- Call for an assessment of the reliability of the costs and performance data, as called for in federal accounting standards.²
- Document the rationale for including the five performance measures reviewed in the study while excluding others.
- Call for statistical analyses to determine the level of confidence in observed differences in performance between SPP and non-SPP airports.

¹TSA administrative staff include federal security directors, deputy federal security directors, assistant federal security directors, scheduling operations officers, stakeholder liaisons, training coordinators/specialists, customer service managers, industrial engineers/metric specialists, administrative officers, human resources specialists, financial specialists, executive secretaries, security (Office Automation), and screening managers.

²Federal Financial Accounting Standards No. 4, *Managerial Cost Accounting Concepts and Standards for the Federal Government*.



Results in Brief (cont'd)

The limitations in the design of TSA's study comparing the cost and performance of SPP and non-SPP airports were due to several key factors related to the study's purpose and data availability. For example, TSA officials stated that they did not include some cost elements in the study because they wanted to determine the impact of the SPP on TSA's budget, rather than to determine the impact to the federal government as a whole. In addition, for its comparison of performance, TSA analyzed measures for which information was most complete, among other things.

Because of these limitations, we believe that TSA should not use the study as sole support for major policy decisions regarding the SPP.



Results in Brief (cont'd)

TSA has taken actions to identify unnecessary redundancies in the duties of administrative staff assigned to SPP and non-SPP airports, but the agency has not completed these efforts.

- According to identified effective practices,¹ strategic workforce planning requires, among other things, that agencies develop strategies that are tailored to address gaps in the number, deployment, and alignment of human capital approaches for enabling and sustaining the contributions of all critical skills and competencies.
- TSA is conducting a workforce analysis that is intended to identify any redundancies. TSA has collected and analyzed information, such as data on core functions, staffing levels, hub-spoke responsibilities, skill sets, and collateral duties. However, steps that have not yet been completed include implementing revised job analysis tools to provide federal security directors (FSD)² with greater flexibility in staffing, and implementing organizational models to ensure that there is consistency in reporting relationships and utilization of positions. TSA officials said that the agency will be continuously updating its analysis.
- TSA and SPP contractors at the airports we visited had mixed views about whether unnecessary redundancies at SPP airports exist.

¹GAO-04-39.

²FSDs are the ranking TSA authorities responsible for leading and coordinating TSA security activities at the nation's commercial airports.

Results in Brief (cont'd)

Various factors have contributed to airports' decisions about whether to participate in the SPP.

- Selected officials at the six SPP airports we visited cited various reasons for participation. Managers at three of the airports stated that TSA had suggested that they apply to the SPP program due to TSA staffing constraints, two stated that they decided to participate because they were part of the pilot program, and another stated that he believed that private screening contractors would provide better service than the federal government.
- Officials at the six airports we contacted that have decided not to join the SPP stated that their decision was based largely on their satisfaction with TSA's passenger and baggage screening services.



Results in Brief (cont'd)

We are recommending that if TSA plans to use its cost and performance study in future decision making regarding the SPP, it revise its study to address the methodological limitations that we have identified. TSA generally agreed with our findings and recommendation.



Background

-
- ATSA was enacted on November 19, 2001, in response to the September 11, 2001, terrorist attacks. ATSA established TSA and charged it with responsibility for security in all modes of transportation, including aviation.
 - Prior to ATSA and the establishment of TSA, passenger and baggage screening had been performed by private screening companies under contract to airlines. ATSA required TSA to create a federal workforce to assume the job of conducting passenger and checked-baggage screening at commercial airports. The federal workforce was to be in place by November 2002.
 - As required by ATSA, TSA began a 2-year pilot program using private screening companies to screen passengers and checked baggage on November 19, 2002, and selected five airports, one in each airport category, to participate in the program.¹
 - Although an FSD is responsible for security at every commercial airport, not every airport has an FSD dedicated solely to that airport. Most category X airports have an FSD responsible for that airport alone. Other airports are arranged in a “hub and spoke” configuration, in which an FSD is located at or near a hub airport but also has responsibility over one or more spoke airports of the same or smaller size that are generally located in geographic proximity.

¹ See 49 U.S.C. § 44919.



Background (cont'd)

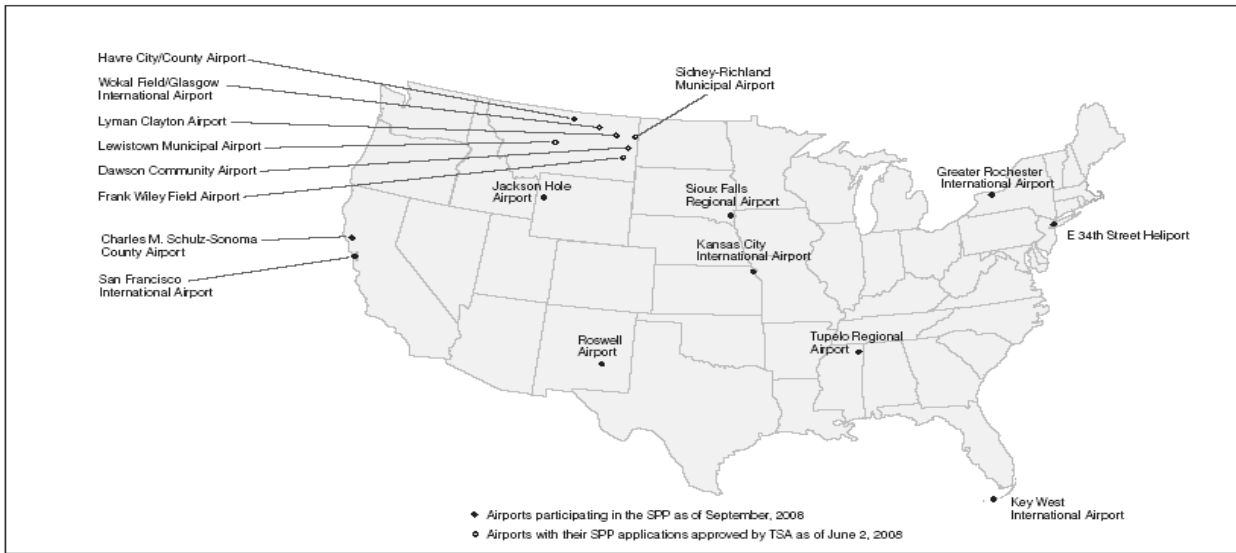
- Beginning in November 2004, in accordance with ATSA, all commercial airports with federal security screening became eligible to apply to the newly established SPP.¹ An airport operator may submit to TSA an application to have the screening of passengers and checked baggage at an airport carried out by screening personnel of a private screening company, under a contract entered into between the private screening contractor and TSA.
- TSA acknowledged that TSA and SPP contractors are constrained by both law and TSA policy, which limits opportunities to make programmatic changes to improve contractor performance and achieve cost savings. Furthermore, although TSA staffs are smaller at airports that have SPP contractors, TSA continues to be responsible for overseeing screening operations at SPP airports and for ensuring that contract screening companies provide effective and efficient security operations.
- TSA's SPP fiscal year 2009 budget is about \$151.3 million.²
- As of September 2008, 10 commercial airports were participating in the SPP, and TSA has approved the applications of 7 additional airports.

¹See 49 U.S.C. § 44920.

²See 152 Cong. Rec. H9792, 9797-98 (daily ed. Sept. 24, 2008) (explanatory statement accompanying Pub. L. No. 110-329, Div. D, 122 Stat. 3574 (2008), the Department of Homeland Security Appropriations Act, 2009).

Background (cont'd)

Figure 1: Airports That Are Currently Participating in or Have Received Approval from TSA to Participate in the SPP





Objective 1

Methodological Limitations Could Affect the Usefulness of TSA's Comparison of SPP and Non-SPP Airports

While TSA's study comparing the cost of screening services at SPP and non-SPP airports had some design strengths, such as recognizing that cost savings would be limited given the mandated structure of the SPP and using 2007 invoice data to determine the costs for the SPP airports, its usefulness could be affected by the following methodological limitations:

1. TSA's study design did not consider the impact of overlapping administrative personnel on the costs of SPP airports. TSA is currently conducting a workforce analysis to identify unnecessary redundancies in its staffing, including overlapping administrative personnel, in response to a Department of Homeland Security (DHS), Office of Inspector General (OIG) recommendation. According to TSA officials, this analysis is an ongoing effort and has no completion date.
2. TSA underestimated costs to the government for non-SPP airports because the agency did not include all of the costs associated with passenger and baggage screening services at non-SPP airports, such as workers compensation and general liability insurance, and did not reflect the income received by the government from corporate income taxes paid by SPP contractors. Furthermore, the estimate for non-SPP airports does not take into account the costs of certain retirement benefits to be paid by OPM to TSA retirees. These costs elements can impact the reliability of the cost estimate. According to Statement of Federal Financial Accounting Standards No.4, *Managerial Cost Accounting Concepts and Standards for the Federal Government*, the full cost of programs is reported to assist Congress and executives in making informed decisions on program resources and to ensure that programs get expected and efficient results.¹

¹Statement of Federal Financial Accounting Standards No.4, *Managerial Cost Accounting Concepts and Standards for the Federal Government*, establishes standards for managerial cost accounting information at federal agencies.



Objective 1

Methodological Limitations Could Affect the Usefulness of TSA's Comparison of SPP and Non-SPP Airports (cont'd)

TSA acknowledged that its study was narrow in scope and stated that its purpose was to determine the impact of the SPP on TSA's budget, rather than to determine the full cost of the program to the federal government or to assist Congress or executives in decision making. However, TSA stated that it had prepared several different versions of its cost comparison of SPP and non-SPP airports that were excluded from its final study report. At our request, TSA provided additional calculations to include some of the costs that would be incurred if SPP airports were federalized, as well as the income that private screening contractors pay in corporate taxes to the federal government when those same airports are operated by the contractors. These calculations showed that the cost gap between the SPP and non-SPP airports decreased from approximately 17.4 to 14.5 percent when the agency included some of these costs, such as workers compensation and general liability insurance, and offset tax revenues. If TSA had included the full cost of federal retirement in its cost comparison, the gap would decrease further.

3. TSA's study design based SPP costs primarily on actual invoice data and non-SPP costs on estimates of TSA's cost in the first year of transition if the SPP airports became federal airports in 2007. Thus, there was more uncertainty embedded in the cost estimates for non-SPP airports than those for SPP airports.



Objective 1

Methodological Limitations Could Affect the Usefulness of TSA's Comparison of SPP and Non-SPP Airports (cont'd)

4. TSA's design did not include an analysis to determine how changes in underlying assumptions would affect the size of the estimate, and its cost comparison did not account for differences in screening performance. Specifically, the TSA comparison did not analyze the amount of costs associated with a particular level of performance. According to OMB guidance, analyzing uncertainty is consistent with best practices for preparing benefit-cost analysis of government programs or projects.¹ TSA stated that analyzing the amount of costs associated with a particular level of performance would be difficult and was not the purpose of the study. However, if quantifiable performance measures are in place, TSA should be in a position to compare the costs per performance measure across different airports to determine how the costs per each performance measure vary across airports. For example, performance measures, such as wait times and threat image projection detection rates, are quantifiable.

¹OMB Circular A-94 (Revised) provides guidelines and discount rates for benefit cost analysis of federal programs. Among other things, OMB Circular A-76 instructs agencies to base decisions on competitions among public and private-sector entities in accordance with the *Federal Acquisition Regulation*, which allows for considering the relative importance of both price and technical factors, commonly known as the "best value" trade-off process. The use of best value permits trade-offs between price and nonprice factors, allowing acceptance of other than the lowest-priced proposal.



Objective 1

Methodological Limitations Could Affect the Usefulness of TSA's Comparison of SPP and Non-SPP Airports (cont'd)

5. TSA's comparison of SPP and non-SPP airports' costs was based on fiscal year 2007 data. However, it is unclear how representative the costs for 1 year may be. For example, in future years, TSA would likely incur workers compensation costs that TSA assumed would not be incurred the first year it took over responsibility for operating the SPP airports. According to GAO criteria for estimating and managing program costs,¹ estimates are time phased because program costs usually span many years. Depending on the activities in the schedule, some years may have more costs than others. Furthermore, anomalies can be more easily discovered when the estimate is time phased. The Catapult study evaluated cost data for multiple years.² However, in conducting its own study, the officials stated that TSA analyzed fiscal year 2007 data because they were the most complete information available for the SPP airports and that data from previous years were not consistent with current TSA policy or business practices. For example, according to the officials, the TSO workforce was structured differently in prior years, and a recent expansion in its part-time workforce has affected its operational costs.

¹GAO, *Cost Assessment Guide: Best Practices for Estimating and Managing Program Costs*, GAO-07-1134SP (Washington, D.C.: July 2007).

²The study showed that the cost of operating screening was generally higher at the six SPP airports for each of the years that it studied.



Objective 1

Methodological Limitations Could Affect the Usefulness of TSA's Comparison of SPP and Non-SPP Airports (cont'd)

6. TSA's study design did not call for conducting procedures needed to ensure that cost data collected were reliable and did not prepare documentation of its costing methodology called for in federal accounting standards.¹ Specific procedures and information used in the cost study were not described in sufficient detail to allow a knowledgeable person to carry out the procedures and to replicate the results in their entirety.

7. Key assumptions and methods used were also not documented in sufficient detail to justify the reasonableness of costs. According to GAO's *Standards for Internal Control in the Federal Government*, significant events, which can include key decisions about assumptions and methods underlying the assignment of costs, are to be clearly documented.² TSA officials stated that the assumptions in their study were reviewed by multiple parties within the agency and that they could verbally "walk someone through" the details of their analysis. However, without sufficient documentation, it will be difficult for TSA to justify its decisions about assumptions and methods used in its costing methodology.

¹Statement of Federal Financial Accounting Standards No.4, *Managerial Cost Accounting Concepts and Standards for the Federal Government*.

²GAO-AIMD-00-21.3-1.



Objective 1

Methodological Limitations Could Affect the Usefulness of TSA's Comparison of SPP and Non-SPP Airports (cont'd)

TSA's comparison of screening performance at SPP and non-SPP airports had some strengths, such as excluding performance data relating to customer service because it had no assurance that the data were collected in a uniform manner, but its usefulness could be affected by several methodological limitations.

1. TSA's study design did not document the rationale for including the five performance measures reviewed, while excluding other performance measures. TSA officials stated that, for analysis purposes, they included the five measures that they believed were the most meaningful and for which they had complete data. While this is understandable, TSA's study provided no evidence showing that the five performance measures are the most meaningful indicators of performance or that they provide a comprehensive basis for comparing the performance of SPP and non-SPP airports.
2. In comparing the performance of SPP and non-SPP airports, TSA's design did not control or otherwise account for other possible factors, such as airport configuration or size, that could contribute to performance differences but may not be associated with the SPP. However, we recognize that controlling for such factors may be difficult.



Objective 1

Methodological Limitations Could Affect the Usefulness of TSA's Comparison of SPP and Non-SPP Airports (cont'd)

3. TSA's study design did not provide any statistical analyses to indicate the level of confidence in the observed differences in screening performance, consistent with generally accepted statistical practices. The study also did not address the procedures needed to ensure that performance data collected were reliable, and that there was an appropriate, standardized, and generally accepted methodology used for the analysis of the data. TSA officials stated that they did not believe that statistical analyses were necessary because they included only five performance measures in the study. However, according to OMB guidance, federal agencies should conduct a statistical and methodological review of all information products. Among other things, they should review assumptions and limitations for accuracy and appropriateness; base statements of comparisons and other statistical conclusions on acceptable statistical practice, and when performing comparison tests, test and report only the differences that are substantively meaningful; and ensure that data sources and technical documentation, including data limitations, are included or referenced.¹

Without addressing the methodological limitations of TSA's study comparing the cost and performance of SPP and non-SPP airports, we could not determine the reliability of the study results. Reliable information on both the costs and performance of federal programs, such as the SPP, is essential for the effective management of government operations and decision making. Therefore, the TSA study should not be the sole support for major policy decisions.

¹OMB, *Standards and Guidelines for Statistical Surveys*.



Objective 2

Efforts Are Under Way to Identify and Eliminate Any Unnecessary Redundancies at SPP Airports

- TSA has initiated actions to identify and eliminate any unnecessary redundancies at SPP airports between TSA administrative staff and contractor personnel; however, these efforts are not yet complete.
- In September 2006, the DHS/OIG recommended that TSA conduct a workforce analysis of administrative staff and develop a staffing model to identify the number of employees actually needed at airports.¹
- In December 2007, the TSA contractor recommended that TSA explore reducing the redundant general and administrative and overhead costs at the SPP airports (see app. IV for a complete listing of the recommendations that the TSA contractor made regarding the SPP).
 - As an example of the importance of overhead costs and how they are allocated, at one of the SPP airports we visited, general and administrative and overhead costs accounted for half of the difference in TSA's estimated \$14 million cost difference between SPP and non-SPP operations.
- According to identified effective practices, strategic workforce planning requires, among other things, that agencies develop strategies that are tailored to address gaps in the number, deployment, and alignment of human capital approaches for enabling and sustaining the contributions of all critical skills and competencies.²

¹Department of Homeland Security, Office of Inspector General, *Review of TSA Non-Screener Administrative Positions*, OIG-06-65, September 2006.

²GAO-04-39.

Objective 2

Efforts Are Under Way to Identify and Eliminate Any Unnecessary Redundancies at SPP Airports (cont'd)

- SPP contractors and TSA have different views regarding whether unnecessary redundancies exist at SPP airports.
 - Private screening contractors at four of the six SPP airports we visited stated that they believed that unnecessary redundancies exist between supervisory TSA and contract screening personnel. For example, contractor officials at one airport said that TSA's screening managers perform the same responsibilities as the contractor's supervisors. No TSA personnel were assigned at the remaining two SPP airports that we visited.
 - TSA officials at three of the SPP airports we visited stated that they believed that there were no unnecessary redundancies in the supervisory area between TSA and contract screening personnel. However, a TSA official at another airport we visited suggested that duplication between TSA and the contractor's staff could be reduced and resources could be used more efficiently if the SPP concept were implemented on a regional basis. Under the present system, a hub airport may participate in the SPP although none of its spoke airports do so. Therefore, TSA may use hub airport staff to perform various tasks, such as training, for federal screening personnel working at the spoke airports, while the private screening contractor may hire staff to perform similar functions for private screening personnel working at the hub airport.
 - Our review of the organization charts and roles and responsibilities of TSA and screening personnel at the selected SPP and non-SPP airports revealed various staffing arrangements, but did not identify any obvious unnecessary redundancies.
-



Objective 2

Efforts Are Under Way to Identify and Eliminate Any Unnecessary Redundancies at SPP Airports (cont'd)

- TSA officials stated that the agency is in the process of conducting a workforce analysis to better understand the unnecessary redundancy concerns regarding the duties of administrative staff, including supervisory positions, at SPP and non-SPP airports, and develop a staffing model to more effectively utilize administrative staff at its airports. From November 2006 through January 2007, TSA visited a sample of 37 airports and held focus groups with an additional 27 FSDs and their staff to collect data and has conducted an analysis associated with core functions, staffing levels, hub-spoke responsibilities, skill sets, and collateral duties.¹ TSA analyzed the data from January 2007 through March 2007. Steps that have not yet been completed include providing FSDs with greater flexibility in staffing and implementing organizational models to ensure that there is consistency in reporting relationships and utilization of positions. TSA officials said that these efforts will be ongoing and collateral with its effort to finalize and budget for the new staffing model.
- In developing the workforce analysis and staffing model recommended by DHS/OIG, TSA is taking important steps to ensure that its resources are being allocated appropriately at both SPP and non-SPP airports. It is important that TSA continue these efforts and use the results of the analysis to eliminate any unnecessary redundancies and ensure that TSA staff are used efficiently. The issue of possible redundancies has potentially important implications for costs comparisons of SPP and non-SPP airports. If there are administrative staffing redundancies at individual airports and at TSA headquarters, the cost of the SPP program would be higher than necessary.

¹This sample represented 52 percent of administrative personnel nationwide; included hub, spoke, stand-alone, and privatized airports; and was based on characteristics that were most likely to impact staffing needs, such as airport category, hub-spoke composition, privatized versus federalized, and geographic area.

Objective 3

Various Factors Contribute to Airports' Decisions regarding SPP Participation

- Various factors have contributed to airports' decisions about whether to participate in the SPP.
 - Managers at two of the SPP airports we visited stated that TSA had strongly suggested that they apply to the SPP because of constraints on the number of TSOs that TSA had at that time. Another airport manager said that he applied to participate in the SPP so that he could gain screeners at another airport, which he also managed. He was reportedly told by TSA that the other airport would not be staffed with additional TSA screeners due to TSA resource constraints, so he applied to participate in the SPP at both airports.
 - Another airport manager stated that he decided to participate in the SPP because he believed that private screeners would provide better customer service.
 - Managers at the remaining two airports we visited stated that they had decided to continue using private screeners because of their satisfactory experience with participating in TSA's 2-year pilot program that preceded the SPP.
 - Officials at the six airports that we contacted that decided not to join the SPP stated that they were pleased with the federal screener workforce. In addition, officials at three of these airports said that they had no interest in the SPP.



Objective 3

An Association Survey Provided Views on SPP Participation

- In March 2007, the Airports Council International-North America (ACI-NA) reported on the results of a survey it conducted to determine how to make the SPP more attractive to airports.¹ The survey was sent to ACI-NA airport official representatives and Public Safety and Security Committee airport members. ACI-NA received a total of 31 survey responses.² Twenty-two, or 71 percent, of the respondents said they were not interested in participating in the SPP. The most frequent reasons given for this lack of interest included
 - the airport was satisfied with TSA screening services,
 - screening is a federal government responsibility, and
 - the SPP does not allow airports to have managerial control.
- The survey respondents reported that liability and contract control and oversight were also important issues with respect to SPP participation.
- The most frequently cited advantages of the SPP were staffing flexibility and customer service.

¹Airports Council International-North America, *Screening Partnership Program: Interest and Considerations*, March 12, 2007.

²Due to the low response rate to the survey, the views reported in the survey reflect the views of the 31 who responded to the survey and not necessarily the views of the membership as a whole.



Objective 3

Officials at Selected Aviation Associations and Organizations Provided Views about SPP Participation

- Officials at all three of the aviation associations we interviewed stated that airports are concerned about liability associated with participating in the SPP. They said that the SAFETY Act,¹ which offers liability and other protection to sellers of qualified antiterrorism technologies, including private screening contractors, has not yet been tested and that some airport managers may worry that the public will hold them liable if a security incident occurs and they have chosen to participate in the SPP.
- However, 49 U.S.C. § 44920(g) provides that, notwithstanding any other provision of law, an operator of an airport shall not be liable for any claims for damages relating to an airport operator's decision to submit or not submit an application to opt out of federal screening, or any acts of negligence, gross negligence, or intentional wrongdoing by a qualified private screening company or any of its employees while performing its duties under contract with TSA or by employees of the federal government providing passenger and property security screening services at an airport.
- The aviation associations suggested that airports would be more interested in the SPP if they could
 - select the private screening contractor that would be awarded the passenger and baggage screening contract at their respective airports and
 - share in any cost savings resulting from their participation in the program.

¹Support Anti-terrorism by Fostering Effective Technologies Act of 2002, Pub. L. No. 107-296, §§ 861-65, 116 Stat. 2135, 2238-42. See 71 Fed. Reg. 33,147 (June 8, 2006) (implementing SAFETY Act regulations codified at 6 C.F.R. pt. 25).

Conclusions

- With regard to the SPP, as TSA acknowledged, TSA and its private screening contractors are constrained by both law and TSA policy, which limits opportunities to make programmatic changes to improve contractor performance and achieve cost savings. Therefore, it is understandable that differences in performance and costs of SPP and non-SPP airports may not vary considerably.
 - While it is commendable that TSA took the initiative to conduct a study comparing the cost and performance of SPP and non-SPP airports, the study contained several methodological limitations that we identified, such as the exclusion of certain cost elements and the rationale for why certain performance measures were included in the study. These limitations could affect the accuracy and reliability of the results, and its usefulness in informing future management decisions regarding the SPP. In addition, since TSA's workforce analysis efforts are still ongoing, it is unclear to what extent a reduction of any potential unnecessary redundancies could lead to additional costs savings in the SPP.
 - As additional airports apply to participate in the SPP, it is important that TSA have accurate and reliable information about screening cost and performance at both SPP and non-SPP airports so that the agency can make informed decisions when considering whether to approve airport participation in the SPP. It is also important that TSA have a well-developed and well-documented approach for analyzing the cost and performance of SPP airports if such comparisons are made in the future. Because of the limitations that we have identified, the TSA study should not be used as the sole support for making major policy decisions.
-



Recommendation for Executive Action

- If TSA plans to rely on its study's comparisons of cost and performance of SPP and non-SPP airports for making future management decisions regarding the SPP, we recommend that the Assistant Secretary, TSA, update the study to address the methodological limitations that we have identified.



Agency Comments

- We provided a draft copy of this briefing to TSA for its review. TSA, in its written comments, generally concurred with our findings and recommendation and stated that its cost and performance analysis of private-sector airport screening will be updated as data become available. TSA also provided technical comments, which we have incorporated into the briefing as appropriate. The full text of TSA's comments is reprinted in enclosure II of our report.



GAO Contacts

- Should you or your staff have any questions on the matters discussed in this briefing, please contact Cathleen A. Berrick at (202) 512-3404 or berrickc@gao.gov or Glenn Davis at (202) 512-4301 or davisg@gao.gov.



Appendixes

- Appendix I: TSA's Approach and Methodology for Estimating Costs of SPP and Non-SPP Airports
- Appendix II: Methodology and Findings for the TSA Contractor's Cost Analysis
- Appendix III: Methodology and Findings for the TSA Contractor's Performance Analysis
- Appendix IV: Recommendations Provided by the TSA Contractor to Improve the SPP

Appendix I

TSA’s Approach and Methodology for Estimating Costs of SPP and Non-SPP Airports

| Topic | SPP airport cost estimate | Non-SPP airport cost estimate |
|---|---|---|
| Data source | <ul style="list-style-type: none"> Invoice data from fiscal year 2007 for six SPP airports | <ul style="list-style-type: none"> Cost estimates were based on what TSA would have incurred if the six airports were run as fully federal or non-SPP airports in fiscal year 2007 |
| Direct labor | <ul style="list-style-type: none"> Screener productive labor hours <ul style="list-style-type: none"> Wage rates from invoice data and cost proposals Includes on-site labor hours for management Overtime pay | <ul style="list-style-type: none"> Screener productive and nonproductive labor hours <ul style="list-style-type: none"> Same as SPP wage data Includes increased FSD staff that would be needed if SPP was not present Premium pay |
| Fringe | <ul style="list-style-type: none"> Includes FICA, 401K, health, dental, and life insurance, workers compensation, flex spending account, paid holidays, personal time office, military leave, jury duty pay, and bonuses | <ul style="list-style-type: none"> Includes FICA, Medicare, thrift savings plan, health and life insurance, retirement, and awards |
| General and administrative and overhead | <ul style="list-style-type: none"> Overhead: management support staff General and administrative: home office expenses, including corporate management, accounting, human resources, information technology, and contract administration | <ul style="list-style-type: none"> Federal Security Staff Non-Personnel Compensation and Benefits, Non-Personnel Compensation and Benefits, entire Headquarters Administration Program, Project and Activity in the Support Appropriation, hazardous materials, Representation Fund, Model Workplace Non-Personnel Compensation and Benefits, Tort Claims, Safety Hazard Mitigation, TSO Scheduling Tool, and the Department of Homeland Security Working Capital Fund |
| Other direct costs | <ul style="list-style-type: none"> Includes consumables, recruiting, assessments, credentials, facilities, travel, uniforms, general liability insurance, and office equipment costs | <ul style="list-style-type: none"> Includes consumables, recruiting assessments, credentialing, facilities, travel, uniforms, and airport parking |
| Fees | <ul style="list-style-type: none"> Includes contract fees, such as award fee, base fee, and fixed fee | <ul style="list-style-type: none"> Fees not incurred for non-SPP airports |

Source: TSA.

Methodology and Findings for the TSA Contractor's Cost Analysis

TSA's contractor used two separate models to develop its cost analysis of SPP and non-SPP airports.

- Under the first model, the contractor compared the costs of six SPP airports with the costs of six comparable non-SPP airports with normalizing¹ adjustments.

Figure 2: Airports Included in the Contractor's Cost Analysis

| SPP airport | Comparable airport |
|---|--|
| San Francisco International Airport | Logan International Airport |
| Kansas City International Airport | Salt Lake City International Airport |
| Greater Rochester International Airport | Syracuse-Hancock International Airport |
| Joe Foss Field | Missoula International Airport |
| Jackson Hole Airport | Central Illinois Regional Airport |
| Tupelo Regional Airport | Barkley Regional Airport |

Source: Catapult Consultants.

¹The purpose of data normalization (or cleansing) is to make a data set consistent with and comparable to other data used in an estimate.

Methodology and Findings for the TSA Contractor's Cost Analysis (cont'd)

- Under the second model, the contractor used data from approximately 450 airports to compare the costs for each of the 6 SPP airports to a regression-based model¹ for a fully federal operation at the same SPP airport. That is, the model was used to determine what the SPP airport would cost if it used federal screeners.
- The contractor concluded that SPP airports have historically cost more to operate than airports with federal screeners. According to the regression-based model, the average SPP cost premium is 9 percent, while the adjusted comparable model showed an average SPP cost premium of 17 percent.

¹A regression-based model is used to predict one variable from one or more other variables. Regression models provide the scientist with a powerful tool, allowing predictions about past, present, or future events to be made with information about past or present events.

Methodology and Findings for the TSA Contractor's Performance Analysis

- The TSA contractor analyzed four performance measures:¹
 1. Threat image projection detection rates
 2. Recertification pass rate
 3. Wait times
 4. Customer satisfaction
- The TSA contractor:
 - Compared the performance of six SPP airports to six “comparable” non-SPP airports and to the national average for the appropriate airport category.
 - Determined that an airport was a better or worse performer by comparing SPP performance to its airport category average.
 - Examined 4 years of performance data (fiscal years 2004 through 2007).
- The contractor's analysis found that SPP airports' overall performance results are equal to or better than those delivered by non-SPP airports.

¹According to the contractor's study, these four performance measures were nationally standardized and had large enough sample sizes to conduct meaningful analysis. While some of these measures were similar to those included in TSA's study, only one identical performance measure was included in both analyses.

Appendix IV

Recommendations Provided by the TSA Contractor to Improve the SPP

The contractor's December 2007 report, which summarized the results of its SPP analysis, included the following recommendations to TSA to improve the operational effectiveness and cost efficiency of the SPP:

1. Explore reducing the redundant general and administrative and overhead costs at SPP airports.
2. Explore the use of the SPP model as a tool to improve performance at low-performing fully federal airports.
3. Explore the use of the SPP model at "hard-to-hire" airports and for airports with significant seasonal requirements.
4. Explore providing additional "degrees of freedom" to SPP contractors to foster innovation, superior performance, and cost controls.

Appendix IV



Recommendations Provided by the TSA Contractor to Improve the SPP (cont'd)

- TSA officials stated that they have not committed to implementing the recommendations made by the contractor.
- TSA officials informed us that the agency maintains a neutral position on the SPP and neither encourages or discourages airports from applying to participate in the program.



Related GAO Products

- *Aviation Security: TSA's Staffing Allocation Model Is Useful for Allocating Staff among Airports, but Its Assumptions Should Be Systematically Reassessed.* GAO-07-299. Washington, D.C.: February 28, 2007.
 - *Aviation Security: Progress Made to Set Up Program Using Private-Sector Airport Screeners, but More Work Remains.* GAO-06-166. Washington, D.C.: March 31, 2006.
 - *Aviation Security: Preliminary Observations on TSA's Progress to Allow Airports to Use Private Passenger and Baggage Screening Services.* GAO-05-126. Washington, D.C.: November 19, 2004.
 - *Aviation Security: Private Screening Contractors Have Little Flexibility to Implement Innovative Approaches.* GAO-04-505T. Washington, D.C.: April 22, 2004.
 - *Aviation Security: Transportation Security Administration Faces Immediate and Long-Term Challenges.* GAO-02-971T. Washington, D.C.: July 25, 2002.
-

Enclosure II: Comments from the Department of Homeland Security

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



Homeland
Security

December 30, 2008

Ms. Cathleen A. Berrick
Director, Homeland Security and Justice Issues
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Berrick:

RE: Draft Report GAO-09-27R, Aviation Security: TSA's Cost and Performance Study of Private-Sector Airport Screening (GAO Job Code 440647)

The Department of Homeland Security appreciates the opportunity to review and comment on the draft report referenced above. The report documents the Government Accountability Office's (GAO) analysis of the Transportation Security Administration's (TSA) cost and performance study of Screening Partnership Program (SPP) airports, actions TSA has taken to identify and reduce personnel redundancies, and factors that contribute to an airport operator's decision about whether to participate in the SPP.

TSA appreciates that GAO recognized the underlying constraints when analyzing cost and performance of SPP and non-SPP airports. GAO did not identify any redundancies between administrative staff assigned to SPP and non-SPP airports, and noted TSA's efforts to identify any such redundancies. Finally, GAO found that various factors contribute to airports' decisions to participate in SPP.

GAO noted some limitations of the cost and performance study of SPP due to study purpose and data availability, and recommends that the study be revised to account for those limitations if TSA plans to use the study for SPP decision making. TSA officials concur with this recommendation, and as the report notes, update the analysis as data becomes available.

Sincerely,

A handwritten signature in black ink that reads "Jerald E. Levine".

Jerald E. Levine
Director
Departmental GAO/OIG Liaison Office

www.dhs.gov

(440647)

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