



# Department of Homeland Security Office of Inspector General

## Review of Transportation Security Administration's Expenditure Plan: Explosives Detection Systems and Equipment



*American Recovery and Reinvestment Act of 2009*



Homeland  
Security

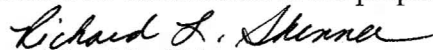
DEC - 8 2009

### Preface

The Department of Homeland Security (DHS) Office of Inspector General (OIG) was established by the *Homeland Security Act of 2002* (Public Law 107-296) by amendment to the *Inspector General Act of 1978*. This is one of a series of audit, inspection, and special reports prepared as part of our oversight responsibilities for programs, grants, and projects awarded by the department under the *American Recovery and Reinvestment Act of 2009* to promote economy, efficiency, and effectiveness within the department.

This report includes observations on the department's efforts to manage funds appropriated by the *American Recovery and Reinvestment Act of 2009*, and includes issues that should be considered by the department and its components to improve the management of those funds.

We trust this report will result in more effective, efficient, and economical operations. We express our appreciation to all those who contributed to the preparation of this report.

  
Richard L. Skinner  
Inspector General

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## Abbreviations

DHS	Department of Homeland Security
OIG	Office of Inspector General
OTA	Other transactional agreements
TSA	Transportation Security Administration

# OIG

*Department of Homeland Security  
Office of Inspector General*

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## **Executive Summary**

We reviewed Transportation Security Administration's expenditure plan for explosives detection systems and equipment as part of our oversight responsibilities to monitor the department's use of *American Recovery and Reinvestment Act of 2009* (Recovery Act) funds. The Recovery Act provided \$1 billion to TSA for the procurement and installation of explosives detection systems and equipment. Our objective was to determine whether the expenditure plan was practical, thorough, comprehensive, and designed to meet the Recovery Act's goals. Further, we evaluated the plan according to prudent management principles, such as whether it contained risk mitigation and management control strategies.

Transportation Security Administration's expenditure plan to procure and install explosives detection systems and equipment is generally practical, thorough, and comprehensive, except that it does not have contingency plans for equipment that the Transportation Security Laboratory has not yet qualified or operationally tested. Transportation Security Administration did not develop a contingency plan to reallocate the Recovery Act funds if the passenger screening technology it plans to purchase does not pass qualification and operational testing. The unavailability of qualified technology may delay projected contract award dates and the expenditure of the Recovery Act funds. Although Transportation Security Administration's expenditure plan did not meet the Recovery Act goal of using 50% of the Recovery Act funds for activities that could be initiated by June 17, 2009, Transportation Security Administration expects to fulfill the special contracting provision by using competitive procedures to award fixed-price contracts.

We are not making any recommendations in this report. The Acting Assistant Secretary disagreed with our conclusion that the expenditure plan did not include contingency plans for equipment that had not been qualified or operationally tested. The response also included an update to the agency's obligation of funds. We incorporated the agency's comments in Appendix B.

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## Background

The *American Recovery and Reinvestment Act of 2009* (Recovery Act), Public Law 111-5, was enacted on February 17, 2009, injecting \$787 billion in federal funds into the economy to preserve and stimulate economic growth in the United States. The Recovery Act made supplemental appropriations to federal departments and agencies for infrastructure investment, energy efficiency and science, assistance to the unemployed and disabled veterans, and state and local stabilization.

The Recovery Act provided DHS with approximately \$2.8 billion for equipment, construction, infrastructure improvement, and emergency management grants. Congress designated \$1 billion of this amount to the Transportation Security Administration (TSA) to procure and install explosives detection systems and equipment. TSA plans to divide these funds between its Electronic Baggage Screening Program (\$700 million) and Passenger Screening Program (\$300 million).

The Electronic Baggage Screening Program tests, procures, deploys, integrates, and provides life cycle support for approximately 7,700 pieces of checked baggage screening equipment at approximately 450 airports. The Recovery Act funds will allow TSA to implement optimal screening solutions at checked baggage screening areas about 2 years sooner than originally planned.

The Passenger Screening Program tests, procures, deploys, integrates, and provides life cycle support for security equipment used to screen more than 700 million passengers and their carry-on baggage per year at the Nation's airports. The Recovery Act funds may allow TSA to deploy second-generation advanced technology x-ray, universal conveyor systems, and bottled liquid scanners to targeted locations 3 years sooner than originally planned. TSA also plans to accelerate whole body imager deployment to detect weapons and explosives on passengers.

We reviewed TSA's expenditure plan to determine whether it is practical, thorough, comprehensive, and designed to meet the Recovery Act's goals. Specifically, we reviewed the plan for evidence that TSA met the goals of the "preference for quick-start activities" and "special contracting" provisions. The goal of the quick-start activities general provision (Section 1602 of the

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Recovery Act) was to use at least 50% of the funds for activities that fund recipients could initiate within 120 days of the date that the Act was signed, or by June 17, 2009. The special contracting provision (Section 1554) recommended that, to the maximum extent possible, recipients use competitive procedures to award fixed-price contracts. Further, we evaluated the plan according to prudent management principles, such as whether it contains risk mitigation and management control strategies. We did not evaluate the original process or any of the related underlying assumptions TSA used to establish its project selection criteria or budget projections.

## **Results of Review**

TSA's expenditure plan to procure and install explosives detection systems and equipment is generally practical, thorough, and comprehensive, except that it does not have a contingency plan for equipment that has not yet been qualified or operationally tested. TSA did not develop a contingency plan to reallocate the Recovery Act funds if the passenger screening technology it plans to purchase does not pass qualification and operational testing. The unavailability of qualified technology may delay projected contract award dates and the expenditure of the Recovery Act funds. Although TSA's expenditure plan did not meet the Recovery Act goal of using 50% of the Recovery Act funds for activities that it could initiate by June 17, 2009, TSA expects to fulfill the special contracting provision by using competitive procedures to award fixed-price contracts.

### **Plan Generally Practical, Thorough, and Comprehensive**

TSA's expenditure plan to procure and install explosives detection systems and equipment is generally practical, thorough, and comprehensive. TSA used existing FY 2009 plans and prioritization models to allocate its Recovery Act funds. TSA plans to spend 70% (\$700 million) of its Recovery Act funds through its Electronic Baggage Screening Program, as shown in table 1 below:

<b>Table 1. Electronic Baggage Screening Program (in Millions)</b>	
Technology/Engineering Initiatives/Advanced Surveillance Program	\$5.7
Program Operations and Management	\$32.0
Reduced Size Explosives Detection Systems	\$64.2
Checked Baggage Inspection Systems	\$598.1
<b>Total</b>	<b>\$700.0</b>

TSA plans to install the checked baggage inspection systems in the following 16 airports: Atlanta, Columbus, Dayton, Honolulu, Huntsville, Jackson Hole, Maui, New Orleans, Orange County, Orlando, Philadelphia, Portland, Sacramento, San Francisco, San Jose, and Tallahassee. TSA selected these airports through a risk-based project prioritization model, the quality and completeness of each airport's initial application, TSA's cost validation process, and the airports' readiness.

TSA plans to spend the remaining 30% (\$300 million) of its Recovery Act funds through its Passenger Screening Program, as shown in Table 2 below:

<b>Table 2. Passenger Screening Program (in Millions)</b>	
Advanced Surveillance Program	\$ 5.7
Program Operations and Management	\$ 96.6
Screening Technology	\$197.7
<b>Total</b>	<b>\$300.0</b>

### **Contingency Plans Needed**

TSA did not develop a contingency plan for the funding it designated for the purchase of new passenger screening technology. At the time of our review, TSA had used only \$3 million of its \$197.7 million passenger screening technology budget to purchase first-generation advanced technology x-ray machines. TSA planned to award the remaining \$194.7 million by the fourth quarter of FY 2009 for the following screening technology:

<b>Table 3. Proposed Passenger Screening Program Acquisitions</b>	
Advanced Technology X-ray	755 Units
Universal Conveyor Systems	275 Units
Bottled Liquid Scanners	500 Units
Whole Body Imagers	200 Units
Explosive Trace Detection	300 Units

All of these technologies, except for explosives trace detection, are still undergoing qualification and operational testing. As a result, TSA does not yet know whether or when these technologies will be available for deployment.

Transportation security equipment must pass a series of tests before TSA uses it to screen passengers and baggage. TSA refers to equipment that has passed these tests as “qualified” or “certified.” To ensure optimal performance of the equipment, TSA does not inform the vendor of the specific tests that the equipment must pass or provide details on test failures. Thus, the time needed to qualify equipment and subsequently award contracts for its production may be unpredictable and vary widely.

In spite of this potential barrier to the timely expenditure of the Recovery Act funds, TSA did not develop a contingency plan for the use of the passenger screening technology funding, or identify a deadline to reallocate the Recovery Act funds in the event that the Transportation Security Laboratory does not approve the proposed technology. The unavailability of qualified technology may delay projected contract award dates; as a result, the Recovery Act funds may not enter the economy as quickly as Congress intended.

**Recovery Act Goals**

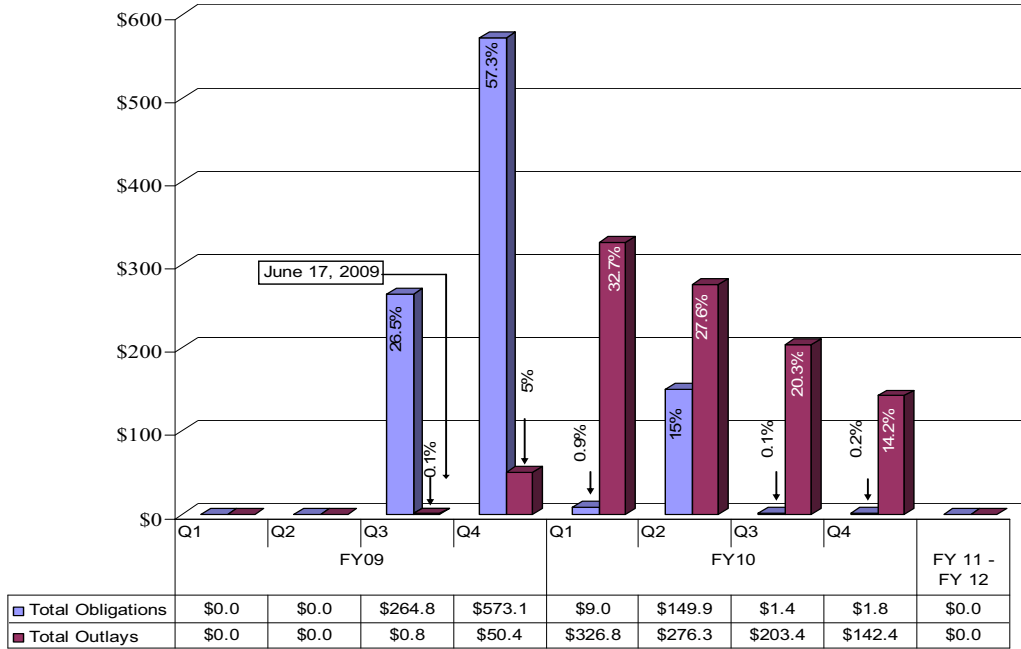
TSA’s expenditure plan missed the Recovery Act’s “preference for quick-start activities” goal by 3 months; however, TSA expects to meet the goal of the “special contracting” provision. To meet the quick-start activities goal, TSA needed to obligate at least half of the Recovery Act funds by June 17, 2009. The term “obligate” refers to a commitment to pay for something. Funds that have been obligated cannot be used for anything else and are considered spent. Obligated funds may stimulate the economy by increasing business operations, even though there may be a delay of months



or years before the funds enter the economy as outlays, or actual payments.

As shown in the following graph, TSA planned to obligate only about one-fourth (\$264.8 million) of its \$1 billion in Recovery Act funds by June 17, 2009, which fell in the third quarter of FY 2009.

**Chart 1. TSA’S Obligation and Outlay Schedule (in Millions of Dollars)**



However, TSA planned to have more than three-fourths of its Recovery Act funds obligated within the next 3 months, or by the end of the fourth quarter of FY 2009. As of August 7, 2009, TSA had obligated a total of \$161.7 million, as follows:

- \$47 million to Reveal Imaging Technologies, a small business, for reduced-size explosives detection systems for baggage screening;
- \$7.7 million for the installation of new closed circuit television systems at four airports;
- \$3 million to Rapiscan Systems for first-generation advanced technology x-ray machines for passenger screening; and
- \$104 million to airport authorities for checked baggage inspection systems in Honolulu (\$24 million), Jackson Hole (\$6 million), Kahului (\$7 million), Orlando (\$15 million),

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Philadelphia (\$26 million), Sacramento (\$11 million), and San Francisco (\$15 million).

TSA anticipated meeting the “special contracting” provision goal, which recommends that recipients award fixed-price contracts using competitive procedures by using a combination of competitive contract awards and “other transactional agreements” (OTA). An OTA is a transaction other than a procurement contract, grant, or cooperative agreement used to fund projects with nontraditional government contractors. These OTAs are cost-sharing agreements between TSA and the airport authority, under which TSA agrees to provide funding to support airport facility modifications and provide explosives detection equipment.

TSA obligated funds for the two technology awards listed above (\$47 million for reduced-size explosives detection systems and \$3 million for first-generation advanced technology x-ray machines) through pre-existing competitively awarded contracts. TSA obligated \$104 million for the construction of new checked baggage inspection systems through other transactional agreements with seven airport authorities. The airports use established contracting processes to award contracts related to the installation of the baggage screening equipment.

### **Other Potential Barriers to the Effective Implementation of the Expenditure Plan**

TSA’s Program-Specific Recovery Plans identified several potential barriers to the effective implementation of its overall expenditure plan to procure and install explosives detection systems and equipment. Although TSA prepared mitigation strategies, these barriers may still delay the expenditure of the Recovery Act funds largely due to factors beyond TSA’s control. For example:

TSA may not be able to negotiate, execute, and support the remaining airport agreements for new checked baggage inspection systems within the planned timeframe. At the time of our review, TSA was still negotiating agreements with 9 of the 16 airport authorities selected to receive the inspection systems. Current economic conditions and a slowdown in air travel may prevent the airport authorities from providing their portion of project costs for medium or large hub airports (10%) and for small airports (5%). In addition, the Recovery Act’s

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requirement to use American steel, iron, and manufactured equipment<sup>1</sup> may raise costs and delay the schedules of all airport agreements.

- According to TSA, “a large quantity” of the passenger screening equipment deployed with the Recovery Act funding will reach the end of its estimated useful life at similar times without sufficient budget to replace this equipment at the same time. In addition, maintenance costs for passenger screening equipment will increase significantly beyond the current budget forecasts once the original equipment manufacturer warranties expire.

## **Management Comments and OIG Analysis**

The TSA Acting Assistant Secretary provided written comments on a draft of this report. We incorporated the formal comments in Appendix B.

TSA did not agree with our conclusion that the agency’s expenditure plan did not include contingency plans for the equipment that the Transportation Security Laboratory has not yet qualified or operationally tested. TSA believes the approach of the Electronic Baggage Screening Program and Passenger Screening Program is functionally equivalent to a formal contingency plan. The Electronic Baggage Screening Program purchases only certified or qualified products and the Passenger Screening Program makes modifications to the expenditure plan when delays or deficiencies result in the unavailability of qualified products.

TSA responded that the agency expends funds solely on devices, which have met rigorous TSA certification standards in accordance with all laws and regulations, such as the explosives detection screening equipment and the explosives trace detectors. The equipment used is fully qualified to TSA standards, which TSA includes on its Qualified Products List prior to procurement and deployment for Electronic Baggage Screening Program purposes.

Similarly, TSA indicated that the Passenger Screening Program periodically reassesses the progress of all technologies undergoing testing and makes modifications to the expenditure plan when delays or deficiencies result in the unavailability of qualified products. The Passenger Screening Program has a number of checkpoint

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<sup>1</sup> Section 1605 of the Recovery Act requires that, with certain exceptions, only iron, steel, and manufactured goods produced in the United States be used for the construction or alteration of a public work.

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technologies currently undergoing different stages of testing. These tests encompass both laboratory and operational assessments. Products that meet the product specification requirements contained in the Functional Requirements Document for each technology are placed on a Qualified Products List.

TSA's response also included an update to the agency's obligation of funds as of September 30, 2009. At the end of fiscal year 2009, TSA obligated an additional \$413.9 million, for a total Recovery Act funds obligation in FY09 of approximately \$575.7 million, or approximately 58% of TSA's allocated Recovery Act funds. TSA believes that the obligation of approximately 58% of Recovery Act funds within seven months demonstrates the success of enhancing security capabilities at airports while stimulating economic growth.

TSA's response indicated that the agency expends funds solely on devices that have met rigorous TSA certification standards in accordance with all laws and regulations. However, based on our review, some of the equipment continued to demonstrate problems meeting qualifications. TSA indicated that the Passenger Screening Program periodically reassesses the progress of all technologies undergoing testing and makes modifications to the expenditure plan when delays or deficiencies result in the unavailability of qualified products. However, the Recovery Act does not provide allowances for continued modifications and required thorough and comprehensive plans.

We appreciate TSA's updated obligation figures; however, the agency still missed the Recovery Act's "preference for quick-start activities" goal by 3 months. Although TSA's expenditure plan did not meet the Recovery Act goal of using 50% of the Recovery Act funds for activities that it could initiate by June 17, 2009, TSA fulfilled the special contracting provision by using competitive procedures to award fixed-price contracts.

## Appendix A

### Purpose, Scope, and Methodology

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The objective of our review was to determine whether the Transportation Security Administration (TSA) developed a practical, thorough, and comprehensive plan to procure and install explosives detection systems and equipment with Recovery Act funds. We:

- Reviewed laws, regulations, and guidance related to the *American Recovery and Reinvestment Act of 2009*;
- Obtained information on the processes and controls in place for budgetary resources management and financial and contract management;
- Examined prior audit reports that provided suggested improvements in the program-specific areas and DHS acquisition management and acquisition workforce planning;
- Reviewed the department's Recovery Act expenditure plan for explosives detection systems and checkpoint support to determine if the plan is practical and comprehensive;
- Reviewed documentation in support of the Recovery Act project expenditure plan, including program-specific draft Recovery Act plan(s), and methodologies used to select projects targeted for Recovery Act expenditures;
- Reviewed TSA's choice of participating airports for compliance with selection criteria. We did not, however, evaluate the process or any of the related underlying assumptions used by TSA to prepare its project selection criteria and budget projections;
- Interviewed key personnel involved with the programs receiving Recovery Act funds, including TSA's Recovery Act Guidance Team, Passenger Screening Program, Electronic Baggage Screening Program, Advanced Surveillance Program, the Office of Security Technology, and the Budget Office. We conducted these interviews at TSA headquarters in Arlington, VA.

We conducted our review between April and June 2009 under the authority of the *Inspector General Act of 1978*, as amended, and according to the *Quality Standards for Inspections*, issued by the Council of Inspectors General on Integrity and Efficiency.

We would like to thank TSA for the cooperation and courtesies extended to our staff during this review.

**Appendix B**  
**Management Comments to the Draft Report**

Office of the Assistant Secretary

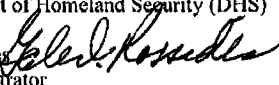
U.S. Department of Homeland Security  
Arlington, VA 20598



**Transportation  
Security  
Administration**

INFORMATION

MEMORANDUM FOR: Richard Skinner  
Inspector General  
U.S. Department of Homeland Security (DHS)

FROM: Gale D. Rossides   
Acting Administrator

SUBJECT: Transportation Security Administration's (TSA) Response to the  
DHS Office of the Inspector General (OIG) Draft Letter Report,  
*Review of Transportation Security Administration's (TSA)  
Expenditure Plan: Explosives Detection Systems and Equipment –  
For Official Use Only*

Purpose

This memorandum constitutes the Transportation Security Administration's (TSA) formal Agency response to the U.S. Department of Homeland Security (DHSO, Office of Inspector General (OIG) draft letter report, *Review of Transportation Security Administration's (TSA) Expenditure Plan: Explosives Detection Systems and Equipment – For Official Use Only*, dated September 29, 2009 (Draft Report). We appreciate the opportunity to review and provide Comments to your Draft Report.

Background

The Electronic Baggage Screening Program's (EBSP) mission is to prevent catastrophic loss from terrorist or criminal activity through screening passenger checked baggage for concealed explosives. EBSP oversees the life-cycle procurement, deployment, integration, and maintenance of about 2,700 end items of Security Technology Equipment at 455 U.S. federalized airports. The program is working towards implementing the deployment of optimal screening solutions at all of the nation's airports.

The Passenger Screening Program (PSP) supports prevention and protection from terrorist and criminal actions in the aviation transportation environment. PSP specifically focuses on technology and processes utilized in and near the passenger screening checkpoint in order to

**Review of the Transportation Security Administration's Expenditure Plan:  
Explosives Detection Systems and Equipment**

## Appendix B

### Management Comments to the Draft Report

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focus on the air travel passenger security mission, which includes responsibility for the acquisition of technology that identifies threats concealed on people and their carry-on items entering the sterile area of the airport terminal through the passenger screening checkpoint. The checkpoint is defined as the screening equipment, processes, and operating personnel collectively required to perform the security mission.

#### Discussion

TSA wishes to address two points identified in the Draft Report. First, the Draft Report states that TSA's expenditure plan does not include contingency plans for equipment that the Transportation Security Laboratory has not yet qualified or operationally tested. In regards to the EBSP and the explosives detection screening equipment (EDS) used to conduct operational screening and exclusive of operational testing and evaluation efforts, TSA expends funds solely on devices which have met rigorous TSA certification standards in accordance with all laws and regulations. Explosives trace detectors (ETD) are also used to resolve positive EDS alarms by EDS. All ETDs used in that instance are fully qualified to TSA standards and are listed on TSA's Qualified Products List (QPL) prior to procurement and deployment for EBSP purposes.

Although the expenditure plan did not include specific contingency plans, the PSP fulfills this function by periodically reassessing the progress of all technologies undergoing testing and makes modifications to the expenditure plan when delays or deficiencies result in the unavailability of qualified products. The PSP has a number of checkpoint technologies currently undergoing different stages of testing. These tests encompass both laboratory and operational assessments. Products that meet the product specification requirements contained in the Functional Requirements Document (FRD) for each technology are placed on a QPL. The TSA then has the capability to compete delivery orders among those vendors whose products have been placed on the QPL for a specific technology. Since the QPL process is a rolling process, vendors may submit their products for testing at any time. They may also resubmit their products for testing after deficiencies have been identified and corrected. However, only those vendors who have a product that is currently qualified (i.e. on the QPL) are eligible to be awarded a contract and delivery order to provide equipment. The variety of technologies in the PSP portfolio and the rolling acquisition process employed by the PSP enable the program to dynamically realign funds to those technologies that have qualified products on a QPL or that have met the requirements listed in the FRD for a specific technology if a QPL is not employed. The expenditure plan is reviewed by the Office of Management and Budget before being forwarded by DHS to the Congress on a quarterly basis, ensuring that funding needs are addressed and technologies within the PSP portfolio are procured.

TSA has invested in baseline screening technology such as Advanced Technology and Advanced Imaging Technology to support near term capability to screen passengers and baggage for explosive and prohibited threats. The focus of the American Recovery and Reinvestment Act (ARRA) expenditure plan is to continue the procurement and deployment of emerging technology with enhanced functionality to build upon the baseline deployments. Existing systems will be upgraded to provide consistent operation across the nation's airports.

## Appendix B

### Management Comments to the Draft Report

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Second, the Draft Report notes that as of August 7, 2009, TSA had obligated a total of \$161.7 million in ARRA funds, or approximately 16% of the \$1 billion allocated to TSA. Between that date and September 30, 2009, the end of fiscal year 2009 (FY09), TSA obligated an additional \$413.9 million, for a total ARRA funds obligation in FY09 of approximately \$575.7 million, or approximately 58% of TSA's allocated ARRA funds.

#### Conclusion

TSA appreciates the work of the OIG and is pleased OIG concluded that TSA's ARRA expenditure plan is generally practical, thorough, and comprehensive. TSA believes the approach of the EBSP and PSP is functionally equivalent to a formal contingency plan because the EBSP purchases only certified or qualified products and the PSP makes modifications to the expenditure plan when delays or deficiencies result in the unavailability of qualified products. TSA also believes that the obligation of approximately 58% of ARRA funds within seven months demonstrates the success of enhancing our security capabilities at airports while stimulating economic growth.



**Appendix C**  
**Major Contributors to This Report**

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**Appendix D**  
**Report Distribution**

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- Write to us at:  
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