

DEPARTMENT OF HOMELAND SECURITY
Office of Inspector General

**Evaluation of TSA's Contract for the Installation
and Maintenance of Explosive Detection
Equipment at United States Airports**



Office of Audits

OIG-04-44

September 2004



**Homeland
Security**

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, investigative, and special reports prepared by the OIG as part of its DHS oversight responsibility to identify and prevent fraud, waste, abuse, and mismanagement.

This report assesses the strengths and weaknesses of the program or operation under review. It is based on interviews with employees and officials of relevant agencies and institutions, direct observations, and a review of applicable documents.

The recommendations herein have been developed to the best knowledge available to the OIG, and have been discussed in draft with those responsible for implementation. It is my hope that this report will result in more effective, efficient, and economical operations. I express my appreciation to all of those who contributed to the preparation of this report.

A handwritten signature in black ink, appearing to read "Clark Kent Ervin".

Clark Kent Ervin
Inspector General

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Abbreviations

AMS	Acquisition Management System
DHS	Department of Homeland Security
EDS	Explosives Detection Systems
ETD	Explosives Trace Detection
FAA	Federal Aviation Administration
FAR	Federal Acquisition Regulation
OIG	Office of Inspector General
TSA	Transportation Security Administration

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Introduction

As part of its review of the federalization of airport security screeners and the management of major Department of Homeland Security (DHS) procurements, the Office of the Inspector General (OIG) reviewed DHS' contract with the Boeing Service Company (Boeing). The contract was designated as a cost-plus-award-fee type contract, primarily for the installation and maintenance of explosive detection equipment at commercial airports in the United States. Issues arose as to whether the contract was properly administered as a cost-plus-award-fee contract and whether the level of profits paid to Boeing was reasonable.

Our fieldwork began in April 2003 and continued through March 2004 at TSA's Pentagon City and Herndon offices. A more detailed description of our objective, scope, and methodology is provided as Appendix B.

Results in Brief

TSA did not follow sound contracting practices in awarding and administering the Boeing contract for the installation and maintenance of explosive detection equipment. Specifically:

1. Until December 2003, TSA paid contract fees based on a percentage of total invoiced costs, which had the effect of creating a cost-plus-a-percentage-of-cost type contract. This type of contract is prohibited in the federal government.
2. The contract did not contain an award fee determination plan to evaluate Boeing's performance periodically until December 2003, eighteen months after the contract award, and it included cost increases unrelated to approved scope changes in the calculation of the award fee pool.

Through December 2003, TSA had paid more than \$44 million in provisional award fees without any evaluation of Boeing's performance.

3. The profit paid to Boeing was disproportionately high when compared to Boeing's cost and risk and compared to what other agencies allow as profit under such contracts. Based on these factors, we concluded that TSA paid Boeing at least \$49 million in excess profit.

We are recommending that TSA:

1. Modify the contract to avoid even the appearance that it is a cost-plus-a-percentage-of-cost type contract;
2. Amend the award fee plan in the contract to ensure that the award fee pool does not include cost increases unrelated to approved scope changes;
3. Evaluate Boeing's past performance based on the award fee plan and, if warranted, adjust the award fee accordingly; and
4. Recoup any unreasonable fees paid under the contract.

TSA provided written comments on a draft of this report. While TSA recognized the shortfalls that exist in the administration of this contract, they took exception with our finding that the profit paid to Boeing was unreasonable. TSA does not plan to recoup any fees already awarded other than those fees associated with cost growth. As a result of our audit work and TSA's comments, we have added an additional recommendation. We are recommending that TSA:

5. Develop guidance for the determination of reasonable base and award fees on cost-plus-award-fee-contracts.

We incorporated TSA's comments into our report and included a copy of the comments as Appendix C. TSA has not yet had an opportunity to comment on recommendation 5. We ask that TSA submit their comments on this recommendation with their action plan responding to this report.

Background

The Aviation and Transportation Security Act (P.L. 107-71) created TSA and made certain fundamental changes in the way transportation security would be performed and managed in the United States. One significant change was to exempt TSA from the Federal Acquisition Regulations (FAR) and most procurement laws. Instead, TSA was required to use the Federal Aviation Administration's (FAA) Acquisition Management System (AMS), which was designed to provide for more timely and cost effective acquisitions.

In April 2003, we began reviews of the management of major DHS procurements and of the acquisition process used by TSA to award and administer contracts related to the federalization of airport security screeners. As part of this larger effort, we selected for review a contract awarded on June 7, 2002, to Boeing. Notwithstanding the above exemption, TSA developed the Boeing contract using the FAR as its regulatory baseline.

This contract was primarily for the installation and maintenance of approximately 1,100 Explosives Detection Systems (EDS) and up to 6,000 Explosives Trace Detection (ETD) devices at 429 commercial airports in the United States. The contract was identified as a cost-plus-award-fee type contract with a base performance period of seven months, which was to end on December 31, 2002¹. TSA estimated the value of the contract to be about \$508 million during the base performance period, and more than \$1.3 billion if TSA exercised all five of the one year option periods provided for in the contract. The contract was structured to allow Boeing to function as the project manager responsible for overseeing its subcontractors who have performed about 92% of the work requirements.

As of December 2003, TSA had modified this contract 54 times. Among other things, TSA extended the base performance period an additional 18 months to June 2004 and increased the base performance estimated value to \$1.2 billion.

This report and its recommendations are limited to issues related to contract fees and profit.

¹ The Aviation and Transportation Security Act required all United States airports that regularly serviced air carriers to have sufficient EDS to screen all checked baggage no later than December 31, 2002.

Review Results

TSA did not follow sound contracting practices in awarding and administering the Boeing contract. TSA described the contract type as cost-plus-award-fee. Such contracts establish maximum base and award fees expressed as set amounts, which may be based on percentages of an established fee pool, typically the original contract cost estimate. The original contract expressed base fee and award fee as percentages but did not specifically fix either fee pool to a set amount. The original contract included a potential penalty of a 2% reduction to the base fee if TSA determined Boeing failed to substantially meet the established contract performance objectives in the base contract performance period. The base contract performance period has expired with no penalties being assessed. Through December 2003, TSA paid both base and award fees as a percentage of total invoiced costs, which, if not adjusted, has the effect of creating a prohibited cost-plus-a-percentage-of-cost contact.

Because of the rapidity with which the contract was awarded, interim award fee payments were provided for, subject to later increase or repayment based on a yet to be established award fee plan and related evaluations. However, the award fee determination plan for periodically evaluating Boeing's performance was not added to the contract until December 2003, and that award fee plan included cost increases unrelated to approved scope changes in the calculation of the award fee pool. TSA paid Boeing \$44 million in award fees without conducting performance evaluations, thus reducing whatever motivational effects such an award fee might have had. In fact, TSA did not assess contractor performance during calendar year 2002 until January 2004, and TSA did not complete the contractor performance assessment for the bulk of work performed during calendar year 2003 until August 2004².

Further, based on an analysis of the rates set by other federal agencies as acceptable for cost-plus-award-fee type contracts, the amount of risk assumed by Boeing, and the reasonableness of Boeing's cost to fee ratio, we concluded that the amount of profit TSA paid Boeing was disproportionately high. For example, TSA paid at least \$49 million more than would have been allowed under guidelines followed by other agencies we contacted.

² A residual amount of work performed during calendar year 2003 was not yet evaluated as of September 8, 2004.

Contract Administered as a Cost-Plus-A-Percentage-Of-Cost Contract

Until August 2003, TSA administered the Boeing contract as if it were a cost-plus-a-percentage-of-cost contract. Boeing generally invoiced TSA bimonthly, with each invoice showing reimbursable cost, a base fee, and an award fee. Using the pre-determined rates included in the contract for the base and award fees of 8% and 5.6%,³ respectively, TSA calculated and paid the fees in direct proportion to the increased costs. Boeing invoiced and TSA approved payment of \$889 million since the contract's inception, which included base and award fees of an estimated \$106 million.

A contract is considered a cost-plus-a-percentage-of-cost type contract when: (1) a pre-determined percentage rate is applied to actual performance cost; (2) payment is on a pre-determined percentage rate; (3) Boeing's entitlement increases commensurately with increased performance costs; and, (4) Boeing's fee entitlement is uncertain at the time of contracting. Cost-plus-a-percentage-of-cost contracts are prohibited by 41 U.S.C. 254(b). This prohibition is reinforced in both the FAR and the FAA's AMS.

Additionally, the contract value was not certain at the time of the contract's inception. The contract base period ceiling grew from \$508 million to more than \$1.2 billion over an eighteen-month period. While TSA extended the base period of performance from seven months to eighteen months, it made no significant changes to the contract scope of work. Because of the uncertainty surrounding the contract requirements, the contract contained a clause that allowed Boeing to make adjustments to the pricing baseline. Boeing made several changes using this clause, and TSA attributes approximately \$100 million of the contract's cost increase to these uncertainties. TSA said that they are reconciling the difference between the \$508 million contract award value to the current value to identify scope growth versus cost overruns.

The contracting officer's representative said that TSA paid provisional fees subject to the results of the evaluations and the reconciliation discussed above. Should the reconciliation indicate cost overruns due to poor contract management, TSA intends to adjust the award and base fee amounts accordingly.

³ Contract clause H-23 limited TSA's interim payment of the award fee to the lesser of 80% or the prior period's evaluation score. Since TSA did not periodically evaluate Boeing's performance, interim payments were limited to 80% of the award fee rate, i.e., 7% award fee times 80% = 5.6% billing rate.

Untimely and Improper Award Fee Plan

The contract did not contain an award fee determination plan to evaluate Boeing's performance periodically until December 2003, eighteen months after the contract award, and it included cost increases unrelated to approved scope changes in the calculation of the award fee pool. Through December 2003, TSA had paid more than \$44 million in provisional award fees without any evaluation of Boeing's performance.

A cost-plus-award-fee contract is a cost-reimbursement contract⁴ that provides for a fee consisting of: (1) a base amount fixed at inception of the contract; and, (2) an award amount that the contractor may earn in whole or in part during performance. The award fee should be sufficient to motivate the contractor to excel in such areas as quality, timeliness, technical ingenuity, and cost effectiveness. Contractor performance under cost-plus-award-fee contracts is evaluated at pre-determined intervals during performance so that the contractor can be made aware of the quality of its performance and the areas in which improvement is expected. Partial fee payments generally correspond to the evaluation periods. These periodic payments are intended to motivate the contractor to improve poor performance or to continue good performance.

The amount of the award fee to be paid is determined by the government's judgmental evaluation of the contractor's performance in terms of the criteria included in the contract. This determination and the methodology for determining the award fee are unilateral decisions made solely at the discretion of the government.

Clause H.23 of the contract, "Interim Award Fee Payment," provided for bimonthly interim payments. The clause also allowed TSA to discontinue or reduce future interim award fee payments to Boeing if TSA determined, based on an award fee evaluation, that payments exceeded the amount that Boeing had earned during the evaluation period. The original contract did not contain an award fee plan to provide for periodic award fee evaluations or criteria for judging Boeing's performance. The contract contained only a statement that it was anticipated that an award fee plan would be in place prior to initiation of work in order for Boeing to know the applicable criteria and weightings.

⁴ Cost-reimbursement contract types provide for payment of allowable incurred costs, to the extent prescribed in the contract.

TSA did not develop an award fee plan until December 2003, eighteen months after contract award, and it included cost increases unrelated to approved scope changes in the calculation of the award fee pool. As of December 2003, TSA had paid provisional award fees to Boeing, totaling \$44 million. In January 2004, TSA evaluated Boeing's performance for calendar year 2002 against the criteria established in the award fee plan and based on Boeing's self-assessment. That evaluation resulted in Boeing receiving a total fee of 13.6% on total costs incurred, which included the 8% base fee and 80% of the potential 7% award fee.

TSA's failure to negotiate or impose an award fee plan timely, while paying Boeing the interim award fee, reduced whatever motivational effect the award fee might have created.

Excessive Profit

The profit paid to Boeing was disproportionately high when compared to Boeing's cost and risk and compared to what other agencies allow as profit under such contracts. Based on these factors, we concluded that TSA paid Boeing at least \$49 million in excess profit.

Neither the United States Code, the FAR, nor the FAA's AMS set limits on the fee or profit rates for cost-plus-award-fee contracts. However, several factors are instructive in making such a determination. These factors include, but are not limited to, the rates other federal agencies set as acceptable for cost-plus-award-fee type contracts, the amount of risk assumed by the contractor, and the reasonableness of the contractor's cost to fee.

Other Agency Guidelines. A review of six other federal agencies's guidance and FAR supplements showed that they used one of two methods to set acceptable limits on the amount of fee or profit for cost-plus-award-fee contracts. One method, followed by all six agencies, was to limit the base fee to 3% of cost, excluding award fees. The other method was to limit the base plus award fee to a maximum of 10%.

We calculated what would have been the allowable profit using the above two methods. Our calculations showed that TSA paid Boeing at least \$49 million

⁵ The Department of Health and Human Services, the Environmental Protection Agency, the National Aeronautics and Space Administration, the Army, the Air Force, and the Navy.

more in profit than would have been allowed by those agencies. Details are as follows:

- Method 1 - TSA set the base rate for this contract at 8%, more than double the maximum rate allowed by the six agencies surveyed. If TSA had limited Boeing's base rate to 3%, Boeing would have been limited to \$13 million.⁶ However, TSA did not fix the base fee amount at the inception of the contract. Consequently, as Boeing's costs more than doubled, the base fee continued to increase at the pre-determined rate. As of December 2003, TSA had approved \$62 million in base fees, approximately \$49 million more than it would have paid had it fixed the base fee at 3% at the contract's inception.
- Method 2 - TSA set the combined base and award fee rate for this contract at 15%, 5% more than allowed by those agencies that limit base and award fees to a total of 10%. If TSA had limited Boeing's base and award fees to the maximum 10% allowed by those agencies, Boeing would have been limited to \$44 million for the period expected to end December 31, 2002. The difference between the \$44 million and the \$106 million base and award fees paid to Boeing as of December 2003, would equate to excess fees of about \$62 million.

Contractor's Risk. Contracts are grouped into two broad categories: fixed-price and cost-reimbursement. Fixed-price type contracts place maximum risk and responsibility for performance, cost, and resulting profit or loss upon the contractor. Conversely, cost-reimbursement type contracts minimize the contractor's risk and responsibility in the areas of performance and cost control. Cost-plus type contracts further reduce the contractor's risk because the contractor's profit is generally assured.

TSA believes that Boeing's risk was high, given the short performance period and unstable environment in the early stages of TSA's operations. However, based on an analysis of key cost related factors, we concluded that Boeing's risk was minimal and the amount of profit paid to Boeing was disproportionately high for the risk assumed. First, this was a cost-reimbursement contract where Boeing agreed to deliver only its "best efforts" to perform the requirements in return for costs incurred, rather than guaranteeing to perform all contract terms and

⁶ The base fee or profit on cost-plus-award-fee contracts is to be fixed at inception. Since the estimated cost for the base performance period was about \$442 million, the base amount should have been fixed at \$13.2 million, using a maximum base fee amount of 3%.

conditions at a specified price and within a specified time period. Regardless of performance results, Boeing would receive payment of all costs and a base fee of at least 6%⁷, twice the maximum base fee allowed by the agencies we surveyed. Additional factors affecting Boeing's risk included: (1) TSA, not Boeing, was responsible for procuring the explosive detection equipment that was to be installed at the airports; (2) Boeing's facility costs were nominal because the bulk of the contracted services were to be performed at the 429 airports; (3) TSA reimbursed Boeing for cost incurred under the contract and a pre-determined amount of profit bimonthly; and, (4) TSA indemnified Boeing against losses resulting from terrorist acts.

Reasonable Profit. Boeing was responsible for carrying out the project management requirements outlined in the contract; subcontractors were responsible for all other work requirements. Boeing invoiced TSA for profit on all contract related costs, including the subcontractors' cost. As the project manager, Boeing incurred costs of about \$39 million, or 5.9% of the total invoiced costs, through August 2003. Yet, Boeing received about \$82 million in profit for a rate of return of about 210%. In addition, since TSA paid Boeing profit on all the subcontractors' cost, it ultimately paid Boeing profit on the subcontractors' profit.

TSA's Comments on Excessive Profit. TSA believes the fee structure for this contract is reasonable, given the competitive environment under which the contract was let. Four contractors submitted proposals in competition for contract award. TSA's evaluation of the proposals determined that the Boeing offer was the best value to the Government, technical and price factors considered. A full evaluation of TSA's selection process is beyond the scope of this review. However, TSA's cost/price analysis for this solicitation shows that both Boeing's proposed total cost and total fee as compared to total cost were substantially higher than their competitors. Regardless of the competitive environment, TSA should have negotiated a reasonable profit with the winning bidder.

TSA also commented that procurement policies and regulations allow primary contractor to earn fees on subcontractor costs. We do not disagree with TSA on this point. However, the government has an obligation to enter into equitable business deals, including the payment of a reasonable profit for the goods or services to be provided. In this case, TSA failed to meet that obligation.

⁷ The 8% base fee provided for in the contract less a potential penalty of 2%, should Boeing fail to substantially meet the performance objectives.

Recommendations

We recommend that TSA:

1. Modify the fee terms of the contract to avoid even the appearance that it is a cost-plus-a-percentage-of-cost contract;
2. Amend the award fee pool in the contract to ensure that it does not include cost increases unrelated to approved scope changes;
3. Evaluate Boeing's past performance on this contract to determine a reasonable award fee; and
4. Recoup any unreasonable fees paid under the contract.
5. Develop guidance for the determination of reasonable base and award fees on cost-plus-award-fee-contracts.

Management Comments and OIG Evaluation

We obtained written comments (Appendix C) on a draft of this report from TSA. TSA commented that their position as a new agency with limited staff, demanding operational requirements, and an extremely tight performance schedule greatly contributed to the circumstances surrounding this contract. However, TSA recognized the shortfalls that exist in the administration of this contract and provided us additional information regarding the steps they have taken to remedy those shortfalls. TSA comments included some technical corrections and recommended changes that we have incorporated into the final report. TSA also responded directly to each of the recommendations. Generally, TSA agreed with the report's findings and recommendations, with the exception of the finding that the profit paid to Boeing was unreasonable. Below is a summary of TSA's responses to each recommendation and our assessment of the response.

Recommendation 1: Reform the fee terms of the contract to avoid even the appearance that it is a cost-plus-a-percentage-of-cost contract.

TSA agreed that the contract had the appearance of a cost-plus-a-percentage-of-cost type contract. TSA is currently pursuing a reconciliation of the contract that

will document the increased value of the contract due to changed requirements. Upon completion of the reconciliation, the contract will be modified to reflect consistent pricing. We agree with this course of action and recommend that TSA expedite its effort. A description of the reconciliation process and milestones for its completion should be included with TSA's action plan to address the recommendations in this report.

Recommendation 2: Amend the award fee pool in the contract to ensure that it does not include cost increases unrelated to approved scope changes.

TSA noted that the contract reconciliation, currently underway, would determine if cost growth contributed to the contract's increased value. If so, TSA will recover any corresponding award fee through subsequent payment deductions. We agree with this course of action. TSA should include its plan for recovering excessive award fee with the action plan to address the recommendations in this report.

Recommendation 3: Evaluate Boeing's past performance on this contract to determine a reasonable award fee, and Recommendation 4: Recoup any unreasonable fees paid under the contract.

TSA did not agree with Recommendations 3 and 4. TSA maintains that Boeing's risk was high for a cost-type contract and, therefore, the award fee structure was reasonable, given the competitive market⁸ conditions and the challenging environment associated with the rollout of explosive detection equipment. TSA also stated that it had conducted an award fee evaluation for calendar year 2002, and made a final determination to pay Boeing 80% of the 7% award fee, bringing the total fee paid for this evaluation period to 13.6% of total costs incurred. Therefore, TSA does not plan to recoup any fees already awarded other than those fees associated with cost growth.

TSA also took exception to statements in the report that compared Boeing's total project management costs with profit, noting that allowance of fees on subcontractor costs is permissible by procurement policies and regulations. TSA further stated that the role of a general contractor was critical to meet the Congressional mandate of ensuring 100% electronic screening by December 31, 2002. For the future, however, TSA developed a new procurement strategy that eliminated the need for a general contractor.

⁸ More than one competitor submitted independent proposals in response to the solicitation. The assumption is that the market determined the contract's price reasonableness.

We continue to disagree with TSA's conclusion that Boeing's risk was high and that the fee structure was reasonable. While fees on subcontractor costs are permissible, the practice is not always justified, especially when the general contractor does not bear the risk of subcontractor nonperformance. Further, we do not agree that the competitive environment was an adequate mechanism for determining a reasonable profit percentage. TSA's cost/price analysis for the solicitation showed that both Boeing's proposed total cost and total fee as compared to total cost was substantially higher than their competitors. As the federal purchasing agency, TSA is responsible for ensuring that profit is reasonable. We still maintain that TSA has not met its obligation to negotiate a reasonable profit and recommend that TSA carefully evaluate the performance of Boeing when determining future award fees and consider the reasonableness of the fee awarded when compared to contractor performance. In response to this recommendation, TSA should provide us with copies of all future fee award assessments for this contract.

Recommendation 5: Develop guidance for the determination of reasonable base and award fees on cost-plus-award-fee-contracts.

TSA has not yet had an opportunity to comment on this recommendation. We ask that TSA include its comments on this recommendation with its action plan addressing this report. Based on audit work and TSA initial response to our draft, we believe TSA needs to define reasonable profit levels for cost-plus-award-fee contracts. TSA's guidelines should set standard risk assessment requirements and firm limits for both base and award fee profit. We suggest that TSA look to the federal procurement community, such as the six agencies that we surveyed, for best practices in setting these guidelines.

Invoice	Date Submitted	Boeing Invoices (\$ in Thousands)				TSA Approved Payments (\$ in Thousands)			
		Cost	Base Fee 8% of Cost	Award Fee 5.6% of Cost	Cumulative Total	Cost	Base Fee	Award Fee	Cumulative Total
1	07/03/02	\$114	\$9	\$6	\$129	\$114	\$9	\$6	\$129
2	07/18/02	\$144	\$12	\$8	\$164	\$144	\$12	\$8	\$164
3	07/31/02	\$570	\$648	\$941	\$941	\$570	\$46	\$32	\$648
4	08/15/02	\$517	\$41	\$29	\$587	\$517	\$41	\$29	\$587
5	08/26/02	\$6,617	\$529	\$371	\$7,517	\$6,617	\$529	\$371	\$7,517
6	09/12/02	\$9,418	\$753	\$527	\$10,698	\$9,418	\$753	\$527	\$10,698
7	09/26/02	\$11,563	\$925	\$648	\$13,136	\$11,563	\$925	\$648	\$13,136
8	10/09/02	\$12,484	\$999	\$699	\$14,182	\$12,484	\$999	\$699	\$14,182
9	10/24/02	\$20,119	\$1,610	\$1,127	\$22,856	\$20,119	\$1,610	\$1,127	\$22,856
10	11/07/02	\$19,801	\$1,584	\$1,109	\$22,494	\$19,801	\$1,584	\$1,109	\$22,494
11	11/21/02	\$20,788	\$1,663	\$1,164	\$23,615	\$20,788	\$1,663	\$1,164	\$23,615
12	12/05/02	\$41,118	\$3,289	\$2,303	\$46,710	\$41,118	\$3,289	\$2,303	\$46,710
13	12/19/02	\$46,533	\$3,723	\$2,606	\$52,862	\$46,533	\$3,723	\$2,606	\$52,862
14	01/03/03	\$64,605	\$5,168	\$3,618	\$73,391	\$64,605	\$5,168	\$3,618	\$73,391
15	01/25/03	\$59,460	\$4,757	\$3,330	\$67,547	\$59,460	\$4,757	\$3,330	\$67,547
16	01/30/03	\$9,372	\$750	\$525	\$10,647	\$9,372	\$750	\$525	\$10,647
17	02/13/03	\$87,158	\$6,973	\$4,881	\$99,012	\$87,158	\$6,973	\$4,881	\$99,012
18	03/03/03	\$12,379	\$990	\$693	\$14,062	\$12,379	\$990	\$693	\$14,062
19	03/13/03	\$18,083	\$1,447	\$1,013	\$20,543	\$18,083	\$1,447	\$1,013	\$20,543
20	03/26/03	\$35,994	\$2,879	\$2,016	\$40,889	\$35,994	\$2,879	\$2,016	\$40,889
21	04/14/03	\$12,890	\$1,031	\$722	\$14,643	\$12,890	\$1,031	\$722	\$14,643
22	04/25/03	\$42,200	\$3,376	\$2,363	\$47,939	\$42,200	\$3,376	\$0	\$45,576
23	05/08/03	\$44,046	\$3,524	\$2,467	\$50,037	\$44,046	\$3,524	\$0	\$47,570
24	05/23/03	\$24,407	\$1,953	\$1,367	\$27,727	\$24,407	\$1,953	\$0	\$24,660
25	06/18/03	\$27,058	\$2,165	\$1,515	\$30,738	\$27,058	\$2,165	\$0	\$29,223
26	07/07/03	\$18,277	\$1,462	\$1,024	\$20,763	\$18,277	\$1,462	\$0	\$19,739
27	07/16/03	\$12,241	\$979	\$685	\$13,905	\$12,241	\$979	\$0	\$13,220
28	08/08/03	\$46,960	\$3,757	\$2,630	\$53,347	\$46,952	\$3,757	\$0	\$50,709
29	08/21/03	\$15,893	\$1,271	\$890	\$18,054	\$15,893	\$1,271	\$0	\$17,164
30	09/04/03	\$9,420	\$754	\$527	\$10,701	\$9,420	\$754	\$0	\$10,174
31	09/17/03	\$20,008	\$1,601	\$1,120	\$22,729	\$19,640	\$1,601	\$0	\$21,241
32	08/21/03	\$15,123	\$1,210	\$847	\$17,180	\$15,123	\$1,210	\$0	\$16,333
33 ¹	08/21/03	\$6,112	\$489	\$342	\$6,943	\$6,112	\$489	\$647	\$6,601
34	11/26/03	\$11,552	\$924	\$647	\$13,123	\$11,552	\$924	\$0	\$13,123
35	12/12/03				\$889,518	\$0	\$0	\$15,777	\$887,442
36	12/12/03				\$889,518	\$1,700	\$0	\$0	\$1,700
37	12/12/03				\$889,518	\$8	\$0	\$0	\$889,150
Grand Total		\$783,024	\$62,643	\$43,851	\$889,518	\$782,656	\$62,643	\$43,851	\$889,150

⁸Does Not include \$591,000 of cost and fixed fees billed by Boeing for Book 3.

Purpose, Scope, and Methodology

Our objectives in reviewing the Boeing contract were to determine whether TSA properly administered the contract as a cost-plus-award-fee contract, and whether TSA paid disproportionately high profits to Boeing.

Our fieldwork began April 7, 2003, and continued through March 2004. We interviewed TSA management and contract personnel, including the contracting officer's representative. We reviewed the contract and all its modifications through August 2003. We analyzed contract file documents maintained at TSA's Pentagon City and Herndon, Virginia offices. In addition, we reviewed relevant sections of the United States Code, Aviation and Transportation Security Act, Federal Acquisition Regulations, Federal Aviation Administration's Acquisition Management System, and TSA's acquisition requirements. We conducted the audit pursuant to the Inspector General Act of 1978, as amended, and according to generally accepted government auditing standards.

TSA040723-031

U.S. Department of Homeland Security
Office of the Administrator
601 South 17th Street
Arlington, VA 22202-4120

JUL 23 2011



Transportation
Security
Administration

MEMORANDUM FOR: Clark Kent Ervin, Inspector General
Department of Homeland Security

THROUGH: David M. Stone, Acting Administrator
Transportation Security Administration *David M. Stone*

FROM: Elaine C. Duke, Deputy Assistant Administrator for Acquisition
Transportation Security Administration *Elaine C. Duke*

SUBJECT: Transportation Security Administration Response To
The "Evaluation of TSA's Contract for the Installation and
Maintenance of Explosive Detection Equipment at United
States Airports"

This memorandum constitutes the Transportation Security Administration's (TSA) response to your Draft Report on the "Evaluation of TSA's Contract for the Installation and Maintenance of Explosive Detection Equipment at United States Airports." I would like to take this opportunity to thank your office for the efforts undertaken to provide TSA with increased capabilities to identify certain budget issues that may be appropriate for revision based on the results of your evaluation.

The accompanying attachment is TSA's official Agency Comment to the Department of Homeland Security's (DHS) Office of Inspector General (OIG) review of the measures taken by TSA's Office of Acquisition to address weaknesses in the Boeing contract identified by OIG during the course of fieldwork. Our comments consist primarily of input from the Office of Acquisition.

TSA responses to each of the recommendations raised in the Draft Report are enclosed, as well as additional comments on the overall Report. We look forward to an ongoing relationship with your office as we work towards identifying and correcting any vulnerabilities in our transportation security infrastructure.

Attachment

**TSA Responses to DHS OIG Recommendations:
"Evaluation of TSA's Contract for the Installation and Maintenance of Explosive
Detection Equipment at United States Airports"**

The subject memorandum forwarded the Department of Homeland Security Office of Inspector General's (OIG) draft report on contract DTSA20-02-C-00002. The draft report states that the TSA did not follow sound contracting practices in awarding and administering the subject contract and provides four recommendations.

Recommendation 1: Reform the fee terms of the contract to avoid even the appearance that it is a cost-plus-a-percentage-of-cost contract.

While TSA's Office of Acquisition (OA) recognizes the appearance of a cost-plus-a-percentage-of-cost type contract, the provisional fee payments were made to appropriately compensate Boeing for work accomplished, while definitizing the changes to contract requirements. OA is currently pursuing a reconciliation of the contract that will formally document the increased value of the contract due to the changed requirements. The reconciliation will address all types of increases, including scope growth, engineering changes and cost growth. To date, Boeing has submitted documentation to support the increases and OA is conducting a review of the information in concert with the Chief Technology Office's Security Technology Deployment Office (STDO). Upon completion of the reconciliation, the contract will be modified to reflect consistent Section B pricing and the Statement of Work (SOW).

Recommendation 2: Amend the award fee pool in the contract to ensure that it does not include cost increases unrelated to approved scope changes.

Modification P00050 incorporated the award fee clause (plan) into the contract, including established award fee periods and cost pools. A subsequent modification recognized the evaluation of Period I, but stated that the final amount would not be determined until the reconciliation of contract value (see above response) was completed. This preserved the Government's right to ensure fee payments to Boeing are appropriate and in full compliance with the contract. If the reconciliation determines cost growth contributed to the contract's increased value, the contracting officer through deductions in subsequent payments will recover any corresponding award fee.

Recommendation 3: Evaluate Boeing's past performance on this contract to determine a reasonable award fee, and if warranted, adjust the award fee accordingly.

The award fee evaluation for Period I was conducted in accordance with the approved and contractually incorporated award fee plan. Boeing submitted a self assessment of its performance for efforts during calendar year 2002. A technical evaluation team assessed contractor performance in the following four criteria: (1) cost, (2) management, (3) technical and (4) schedule. Further, the contracting officer conducted a business evaluation. These two evaluations were forwarded to the Fee Determining Official (FDO) for final consideration. Based on the evaluation findings and his independent knowledge and analysis of the contractor's

performance, the FDO made a final determination of 80% ("Good") of the 7% award fee. If added to the base fee of 8%, the contractor earned a total fee of 13.6%. Given the award fee structure was established under competitive market conditions and the challenging environment associated with "rollout", 13.6% is considered reasonable. The award fee evaluation for Period 2 is anticipated to be finalized in early July.

Recommendation 4: Recoup any unreasonable fees paid under the contract.

As mentioned earlier, OA and SIDO are currently in the process of reconciling the contract value. If this process results in the determination that the increased value includes non-scope related growth, the contracting officer shall recoup fee. However, based on the competitive source selection process that resulted in the award of the subject contract, OA does not intend to seek any further reduction to the awarded fees.

In addition to the responses to the above recommendations, TSA OA provides the following comments to the draft report:

The impetus of this report results from TSA's position as a new agency with demanding operational requirements and an extremely tight schedule for performance mandated by Congress. At the time this contract was awarded, there were only five permanent employees in OA, with other TSA offices supporting this acquisition facing similar circumstances. While we address the specific findings of this report, since they are valid, one should recognize that these are unique circumstances that have not and will not be repeated. All four of the recommendations are directly related to the criticality of schedule in awarding this contract to accomplish rollout (Federalization of the airports within the Congressionally mandated schedule). The lack of a clear award fee plan and requirements before award drove these findings. TSA has since implemented policies and procedures that prevent a similar recurrence in the future. For example, TSA has developed and Award Fee Policy that states, in part:

"5. STANDARDS:

The initial award fee plan, with stated evaluation criteria, must be established before award and incorporated into the solicitation and the resultant contract. Changes to the award fee plan must be communicated in accordance with the award fee plan and must take place before the start of the period of performance."

On pages 4 and 10, the report expresses concern that Boeing's cost represented less than 10% of the total cost of the contract, yet the fee structure was based on total cost, including subcontractor costs. As stated above, the contract was awarded under competitive market conditions. The allowance of fees on subcontractor costs is permissible by procurement policies and regulations and is in accordance with the contractor's accounting system. At the time the contract was awarded (June 2002), the role of a "general contractor" was critical to supporting TSA's mission to meet the congressional mandate of 100% electronic screening by December 31, 2002. This role required Boeing to manage numerous subcontractors, including designers, manufacturers, engineers, construction and maintenance. The requirements evolved during the entire period of performance and Boeing worked with all of the subcontractors to ensure the TSA met its

mandate. As an additional note, TSA has developed a new procurement strategy for FY05 and beyond which eliminates the requirement for a general contractor.

On page 6, the last paragraph addresses a clause in the contract that "allowed the contractor to make adjustments to the pricing baseline". In support of the reconciliation effort, the contractor has submitted supporting documentation, including increased associate with this clause. The contracting officer and technical team will review these changes and determine if they should be treated as cost or scope growth.

On page 8, the first paragraph states that TSA "did not develop an award fee plan until December 2003". While that is accurate, after early efforts failed to result in an acceptable award fee plan, OA and Boeing tentatively agreed to restructure the contract to a cost-plus-fixed-fee contract. In October 2002, a draft modification was sent to Boeing for signature, but it was never returned. Without resolution, an award fee plan was finally incorporated in December 2003.

On pages 8 and 9 (also on page 5), the report addresses "Allowable Profit" and uses other agencies' guidance in determining the Boeing fee was unreasonable and invalid. As discussed in this response, the contract was competitively awarded, and the marketplace, not non-applicable guidelines, is a better measure of reasonableness. In this competitive award, the base fees ranged from 7% to 10%. These results were driven by the relatively high risk of this contract, as discussed in the paragraph below. Further, the established fee structure (8% base and 7% award) is not prohibited by statute or regulation, and was competitive with the other offers submitted under this contract. TSA's evaluation of the proposals, with the cost analysis supported by Defense Contract Audit Agency personnel, determined that the Boeing offer was the best value to the Government, technical and price factors considered. TSA recognizes that the award fee terms could be better and that the delay of the award fee incorporation diminished the effectiveness of the award fee concept, but believes that the contract's fee structure is reasonable for the subject effort.

On Page 9, the last paragraph states "Boeing's risk was minimal". Given the environment and varied requirements, TSA believes that Boeing's risk was high for a cost-type contract. As the "general contractor" responsible for meeting the congressional mandate, Boeing had about six months to "deliver" 440+ compliant airports. The short performance period cited in the report served to increase performance risk, not diminish it. Also, there was substantial other performance risk related to the early state of TSA's operational requirements. While the proposal and award was based on a "model layout", stakeholder interest (airport authorities, airlines, contractors, local government, Federal Security Directors) drove unique requirements at most airports. This instability greatly increased contractor risk.

In summary, OA recognizes that shortfalls exist in the administration of the contract, but it has taken steps or is in the process of modifying the contract to remedy those shortfalls. Upon completion of those efforts, the contract value and fee structure will be consistent with the scope of work performed and the contractor's performance will be adequately assessed.

**Technical Corrections and Recommended Changes to the DHS OIG Draft Report:
"Evaluation of TSA's Contract for the Installation and Maintenance of Explosive
Detection Equipment at United States Airports"**

The Transportation Security Administration's (TSA) Office of Acquisition (OA) provides the following comments to OIG in an effort to improve the accuracy of the Final Report. The facts and background information presented below may be incorporated into the Final Report as you see fit, but will not appear as is in the published version:

On pages 5 and 8, the report states that TSA paid the "maximum amount" of award fee. TSA has completed one evaluation period, and it paid 80% of award fee for that period. The "maximum amount" of award fee was never paid, either in the earlier provisional payments or in the final determination of award fee.

On page 5, the last paragraph states that the TSA "planned to restructure the cost-plus-award-fee contract a firm-fixed-price contract". While this idea was considered by the TSA, no formal action was undertaken to make such a change.

On page 6, the top paragraph states that OA had "assigned a new contracting officer" to the program. Recommend the report recognize that the OA established a "contracting team" to support the program.

On page 6, the last paragraph states that the contract ceiling grew from \$508 million to more than \$1.2 billion over an eighteen-month period. This is an invalid comparison, since the original \$508 million was for a twelve month, not eighteen month, performance period.

Appendix D
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