Department of Homeland Security
Office of Inspector General

**Controls Over SBInet Program Cost and
Schedule Could Be Improved**

**Homeland
Security**

JUN 1 6 2010

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 to promote economy, efficiency, and effectiveness within the department.

This report addresses the effectiveness of controls to monitor the cost and schedule of Customs and Border Protection's Secure Border Initiative technology program. 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 our office, and have been discussed in draft with those responsible for implementation. We trust this report will result in more effective, efficient, and economical operations. We express our appreciation to all of those who contributed to the preparation of this report.

Richard L. Skinner
Inspector General

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Abbreviations

ANSI/EIA	American National Standards Institute/Electronics Industries Alliance
CBP	Customs and Border Protection
DHS	Department of Homeland Security
EVM	Earned Value Management
EVMS	Earned Value Management System
OIG	Office of Inspector General
SBI	Secure Border Initiative
SBI*net*	Secure Border Initiative (Technology Solution)
STO	Systems Task Order

OIG

Department of Homeland Security
Office of Inspector General

Executive Summary

We conducted an audit of U.S. Customs and Border Protection's control of its Secure Border Initiative technology program. Our objective was to determine whether the program office has implemented adequate controls to ensure that cost overruns are avoided and established milestones are met. To accomplish this objective, we reviewed four task orders for the program in fiscal year 2008, totaling approximately $267 million.

Customs and Border Protection needs to improve its control of contractor activities on the Secure Border Initiative technology program. Specifically, program officials did not ensure that contractors maintain up-to-date information in the primary management tool designed to provide managers with advance information regarding potential cost overruns and program progress. In addition, SBInet program officials did not ensure that a program event was properly completed before progressing to the next event and did not adequately document their review and acceptance of accomplishments and criteria at program events. Finally, the low number of government personnel to oversee contractor activities increased the SBInet program office's risk that program cost and schedule could not be adequately managed. Consequently, the SBI program office's ability to ensure that both current and future program goals are accomplished is reduced.

U.S. Customs and Border Protection has taken steps to improve Secure Border Initiative technology program oversight by using the Defense Contracting Management Agency personnel to assist with contract administration and reissuing important program documentation. During January of 2010 the Secretary directed the Department of Homeland Security to conduct a thorough evaluation of the SBInet program to consider options that may better meet border security needs. We are making four recommendations to Customs and Border Protection that will enhance the program office's ability to ensure that costs are contained, schedules are met, and performance requirements are accomplished. CBP concurred with the four recommendations and are in the process of implementing corrective actions.

Background

In November 2005, the Department of Homeland Security (DHS) established the Secure Border Initiative (SBI). The SBI program is a comprehensive, department-wide effort to secure the Nation's borders. The U.S. Customs and Border Protection (CBP) was tasked with serving as agent for the execution of the SBI program.

Since fiscal year 2005, Congress has appropriated more than $3.6 billion for SBI. DHS estimates that the total cost to complete the acquisition phase of the program on the southwest border will be $7.6 billion for fiscal years 2007 through 2011. Approximately $5.1 billion of the $7.6 billion is for the design, development, integration, and deployment of fences, roads, vehicle barriers, sensors, radar units, and command, control, and communications equipment. The remaining $2.5 billion is for integrated logistics and operations support.

A component of the overall SBI effort is the Secure Border Initiative Net (SBI*net*), a major acquisition program initiated to gain operational control of the borders by designing a new integrated system of technology, infrastructure, and personnel. In September 2006, the department awarded a three-year, indefinite delivery/indefinite quantity contract to the Boeing Company to integrate and implement a technology solution to monitor the southwest border. As of February 2010, CBP had awarded 13 task orders to Boeing, for approximately $1.2 billion for the SBI program.

The SBI*net* program office is responsible for planning, acquiring, and deploying the appropriate combination of technology and tactical infrastructure for border security. The program office is also responsible for ensuring effective oversight of the SBI*net* program, including cost and schedule control, which entails analysis and reporting on program status information. Relevant and timely program cost and schedule data must be provided to and reviewed by program officials to detect early warning indicators of potential problems and to facilitate preventive or corrective actions.

The department's ability to monitor SBI*net* has been a continuing concern. In November 2006, we reported that the department needed to build the organizational capacity to manage the SBI*net*

program and implement processes to mitigate workforce turnover. [1]
At program initiation, the department did not have the acquisition
workforce required to plan, oversee, and execute SBI*net*. More
recently, in June 2009 we reported that CBP had not established
adequate controls and effective oversight of contract workers
responsible for providing SBI program support services.[2]

In addition, in September 2008 the Government Accountability
Office found significant risk of the SBI*net* program not meeting
mission needs and performing as intended, as well as the risk of
increased program cost and time-consuming system rework.[3]   The
Government Accountability Office attributed these risks to the
continually changing scope and timing of SBI*net* capabilities, the
absence of properly defined and managed requirements, the
absence of a program schedule to guide the execution of the
program and schedules that continually change, and ineffectively
managed testing. During January of 2010 because of growing
concerns regarding the efficacy of the implementation of SBInet
planning and technologies, the Secretary of DHS requested a
department-wide reassessment of the program. The objective was
to identify alternatives that may more efficiently, effectively and
economically meet border security needs. Subsequent to this
reassessment the Secretary froze all SBInet funding beyond
SBInet's initial deployment to the Tuscson and Ajo regions until
the rassessment is complete.

Results of Audit

CBP needs to improve its control of contractor activities on the
SBI technology program. Specifically, program officials did not
ensure that contractors maintain up-to-date information in the
primary project management tool designed to provide managers
with advance information regarding potential cost overruns and
program progress. In addition, SBInet program officials did not
ensure that a program event was properly completed before
progressing to the next event and did not adequately document
their review and acceptance of accomplishments and criteria at
program events. Finally, the low number of government personnel

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[1] *Risk Management Advisory for the SBInet Program Initiation*, DHS OIG-07-07, November 2006.
[2] *Better Oversight Needed of Support Services Contractors in Secure Border Initiative Program,*,
DHS OIG-09-80, June 2009.
[3] *Secure Border Initiative: DHS Needs to Address Significant Risks in Delivering Key Technology
Investment,* Government Accountability Office (GAO-08-1086, September 10, 2008).

to oversee contractor activities increased the SBI*net* program office's risk that program cost and schedule could not be adequately managed. Consequently, the SBI program office's ability to ensure that both current and future program goals are accomplished is reduced.

Contractor Oversight Activities Need Improvement

Project Management Tool Not Kept Up-to-Date

CBP personnel did not ensure that current baseline information was entered into the Earned Value Management System (EVMS), the primary oversight system designed to provide management with advance information of potential cost overruns and schedule slippages. A baseline is time-phased information used to measure work performance. It provides the basis for all program-planning activities; cost estimates; and project and program status determination, analysis, and reporting.

Office of Management and Budget Circular A-11,[4] the Federal Acquisition Regulation, and DHS guidance require the use of an EVMS to monitor performance on major investments and systems under development, such as SBI*net*. Also, the contract requires the contractor to provide the system that meets the criteria as defined in the current American National Standards Institute/Electronic Industries Alliance (ANSI/EIA) Standard 748-1998, Earned Value Management Systems, approved May 19, 1998. Together, these criteria require that task orders in support of programs that have assets in the development, modernization, or enhancement phase to use EVMS to measure the cost, schedule, and performance of those assets against the established baseline. Similarly, Guideline 8 of the ANSI/EIA Standard, as well as references within the contractor's Cost Management Plan and the Integrated Master Plan Manual, stipulate that work be baselined as soon as possible after the contractor receives the authority to proceed, regardless of whether an integrated baseline review has been conducted and unless contractual authorization says otherwise. An integrated baseline review is the process to establish and maintain an understanding between the contractor and the government of the baseline as a means of mitigating risk.

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[4] Office of Management and Budget Circular A-11, *Preparing and Submitting Budget Estimates*, August 2009.

When implemented correctly, Earned Value Management (EVM) provides managers with the necessary information to ensure that day-to-day decisions keep program performance consistent with established objectives. Without accurate baseline information to reflect cost and schedule variances, management is hampered in its ability to make viable operational decisions. EVM assists with work planning, performing work activities according to the plan, and measuring accomplishments against the plan. EVM mitigates the risk of cost and schedule overruns, bringing visibility and advance warning of problems before tasks are completed, and providing opportunities for proactive corrective actions. EVM also provides a forecast of final program cost and schedule outcomes. Essential to EVM is a cost baseline—the time-phased budget information used to measure work performance. This cost baseline provides the reference point for all program-planning activities, cost estimates, and project and program status determinations, analysis, and reporting.

We reviewed four fiscal year 2008 task orders each valued at over $20 million. For one of the task orders, the Integrated Logistics Support task order, the contractor was not required to use EVM because it was classified as a level-of-effort task order. The other three task orders showed that the EVM process had not been working as an effective management cost control tool for the SBI*net* program. Outdated or incomplete baseline information for these task orders hampered accurate EVM tracking and subsequent cost control. Baseline information for the Arizona Deployment Task Order and incremental work in the System task order and Command, Control, Communications, and Intelligence Common Operating Picture task order were not updated in EVMS. The contractor and program office chose to wait until the integrated baseline review was conducted or incremental work was definitized before entering such data. Accordingly, managers were only able to review actual costs incurred with no basis for comparing actual money spent to projections, greatly increasing the risk that program managers could not identify cost overruns, measure progress, and track and schedule performance.

Since June 2008, CBP has contracted with the Defense Contract Management Agency to provide surveillance of the contractor's EVMS. This surveillance was not in place for the FY 2008 information on the task orders included in this review. Defense Contract Management Agency representatives are included in program meetings with the contractor and have served to promote

contractor cooperation regarding inclusion of baseline information in the EVMS by issuing Corrective Action Reports.

Review and Acceptance Of Program Events Not Adequately Documented and Properly Completed

SBI*net* program officials did not adequately document their review and acceptance of accomplishments and criteria at program events due to the absence of an established process for doing so. As a result, documentation does not exist to demonstrate that contractors produced deliverables, such as radar and camera units, that met project objectives and schedules. Also, SBInet officials did not ensure that a program event was properly completed before progressing to the next event increasing the risk of significant rework and associated project delays.

Inadequate Documentation of Program Events

Major system acquisitions like SBI*net* typically are divided into program events. These program events are identified in the Integrated Master Schedule and Integrated Master Plan and include target dates, milestones and tasks to be accomplished by all major System Program Office, System Prime Contractor, and other SBI*net* stakeholders.

According to the SBI*net* Program Management Plan, management review of key milestones provides an effective mechanism for reporting, tracking, and managing project progress and ensuring that delivered products and services meet established project objectives and schedules.

The SBI*net* program office does not have an established process for documenting and archiving historical information on government decisions and acceptance of program events. This reduces the program office's ability to ensure that a program event actually occurred, produced the intended results, and transpired within established timeframes, as well as whether deliverables met program objectives before the program progresses further.

For example, the Preliminary Design Review milestone was closed as part of the entrance criteria to continue with the subsequent program event. There was no documented evidence of government acceptance and closure of this milestone prior to entering the next program event. (See Appendix C for a list of major program events.)

In another example, the program office was unable to provide documentation supporting the closeout of two of the five program events we requested for the Command, Control, Communication and Intelligence Common Operating Picture task order, and was not able to provide documentation reflecting the government's review and resulting decisions for all five program events. The program office only maintained PowerPoint documents of the contractor's briefings on program events. These documents do not provide adequate detail to facilitate proper contract management and oversight.

Program Events not Properly Completed

Program events have associated accomplishments and criteria that must be met to begin (entrance criteria) or successfully completed (exit criteria) before progressing to the next event in the program. Events are normally considered complete after all entry and exit criteria have been satisfied; all issues have been addressed and assessed, the status agreed upon; and an updated risk assessment has been completed. When program events are not successfully accomplished before progressing to the next event there is increased risk that significant resources may be wasted because identified deficiencies or other problems have not been properly resolved. Proceeding with events without being ready or without successful completion of previous events simply because the "scheduled date" occurs, is considered a "scheduled-driven" approach to project management. The Integrated Master Plan is event driven and not schedule driven and each program event should occur based on the completion of its supporting accomplishments and criteria supporting those accomplishments.

SBInet program event criteria has not been properly satisfied before the program continued to move forward. For example, in early 2007, CBP accepted and closed out the Systems Requirement Review even though the event deliverables did not meet project objectives. This occurred because of the program office's desire to keep moving forward to meet established schedules, i.e. scheduled-driven. The Systems Requirement Review was one of the early major program events requiring the government and the contractor to develop, define, and agree on program requirements. In a December 2009 letter from the contractor to the SBI*net* Program Office, the contractor stated that premature acceptance and closure of the Systems Requirement Review event without successfully

completing its criteria, resulted in significant rework during both the detail design and test planning phases of SBI*net* program. More recently the Department's Acquisition Review Board took steps to ensure that the System Qualification Test program event was completed and all issues addressed before moving forward with subsequent program events. For instance, the SBInet Test and Evaluation Master Plan identified specific exit criteria to move from developmental testing to system deployment and testing under operational conditions. System Qualification Test is one of two key events in the exit criteria. System Qualification Testing disclosed five major deficiencies:

1. Tower sway in windy conditions;
2. Radar generated clutter;
3. Radar circuit breakers frequently tripped;
4. Camera image blurry in windy condition; and
5. Frequent computer crashes.

In September 2008, the DHS Acquisition Review Board issued a SBI*net* Acquisition Decision Memorandum mandating the completion of more system testing before proceeding to deployment. In February 2009, the Acquisition Review Board issued another Acquisition Decision Memorandum stating that full deployment at the first site in Tucson 1, and deployment at the second site Ajo-1, both in Arizona, were not authorized until the System Qualification Testing issues were resolved. Later, in May 2009 the Acquisition Review Board approved deployment in the first and second sites after being briefed on the resolution or mitigation of the System Qualification Testing issues. However, as of February 2010 the SBInet Program Office has not yet considered the System Qualification Testing program event as closed and with all issues assessed although deployment of the technology solution to the first site in Tucson 1 commenced in May 2009.

Moving forward with the SBInet program without adequate satisfaction of program events criteria and resolution of its significant issues could result in a deployed system that does not fully meet program objectives and the waste of significant resources. The absence of updated baselines and documented events review and acceptance dates makes it difficult for the government to hold contractors accountable for not meeting timeframes or not making progress towards accomplishing acquisition expectations. Also, improper closeout of program events increases the risk of project delays and wasted resources.

Assurance of due diligence for closure and documentation of government review decisions should be made for all SBI*net* program events to ensure significant resources are not wasted, and project objectives are met and accomplished within intended timeframes.

Additional Staff Are Needed to Manage the SBI*net* Program

Being fully staffed with qualified personnel is important for implementing effective controls over program costs and schedules. The low number of government personnel to oversee contractor activities increased the SBI*net* program office's risk that program cost and schedule could not be adequately managed.

At the time of our review, the SBI*net* Program Office had only two schedule analysts and one earned value analyst on board performing Earned Value and Schedule Management activities for the entire program. These three employees were all Support Services Contractors responsible for important cost and schedule oversight activities, such as ensuring that the reported schedule and earned value information were accurate.

For example, according to the SBI*net* Program Management Plan, the schedule management staff must develop and maintain a cohesive Integrated Master Schedule and Integrated Master Plan. Along with this, the earned value management staff is responsible for maintaining the Work Breakdown Structure, and for assisting with assessing compliance with the ANSI standards for EVM and performing earned value surveillance activities, which include developing, implementing, and maintaining program baselines. (See Appendix D for a list of key program documents and their purpose.)

Since early stages of the SBI*net* acquisition, the SBI*net* Program Office has faced challenges in maintaining adequate staffing, as we highlighted in several prior audit reports.[5] In addition to these challenges, the SBI Program Officials stated that the initial assumption that commercial off the shelf technology would be available to cover SBI*net* needs, serving as a basis for determining staffing requirements, ultimately proved to be wrong. Consequently, staffing needs should be reassessed.

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[5] *OIG-09-80* and *OIG-07-07.*

The low number of staff performing Earned Value and Schedule Management activities highly increases the risk of the program office not being able to properly control SBI*net* cost and schedule and timely react to operating issues encountered, such as the result of not using commercial off the shelf technology. During the time of our review, the SBInet acquisition was undergoing significant changes requiring updates to important program cost and schedule documents. The SBInet program office was operating without an approved Integrated Master Schedule, and the contractor was using a Work Breakdown Structure that had not been vetted by the government and was in non-compliance with ANSI Guideline 8 requiring the use of baseline information as soon as possible.

According to program office staff responsible for earned value and schedule management activities, the low number of personnel with adequate authority to perform earned value and schedule management activities in the program office reduced their ability to respond to such issues when they arose and affected their ability to complete all assigned tasks.

To improve overall management and oversight of SBI*net* contractor activities, the SBI*net* Program Office was in the process of re-structuring in 2009. During the time of our review a government employee was added to serve as direct supervisor of the schedule and earned value analysts. Having a government employee as focal point for the analysts should improve the Program Office's authority to ensure contractor compliance with contract requirements, such as reporting accurate schedule and earned value information. In addition, the SBI Program Office was in the process of developing a long-range Human Capital Plan to describe the necessary competencies of the acquisition workforce, along with the individual skill sets and levels needed to execute and sustain current and future acquisition efforts.

Recommendations

We recommend that the Commissioner of Customs and Border Protection require the SBI*net* Program Office to:

Recommendation #1: Ensure that no work effort, subject to earned value management system requirements, is performed without adequate corresponding performance measurement baselines in the Earned Value Management System, as required by prescribed guidelines.

Recommendation #2: Develop and implement a process to document government review and acceptance of program events' accomplishments and criteria. Documentation should clearly show program office evaluation and justification for approval and acceptance of all accomplishments and criteria for a program event to certify deliverables met project objectives and events were adequately completed before the program progresses.

Recommendation #3: Ensure that program events have been properly completed to include satisfaction of all entry and exit criteria; all issues have been addressed and assessed, the status agreed upon; and an updated risk assessment before proceeding with subsequent program events.

Recommendation #4: Reevaluate the SBI*net* program staffing plan and have an adequate number of earned value and schedule management analysts to support the current workload for the SBI*net* acquisition and to implement all control duties assigned, as prescribed in the Program Management Plan.

Management Comments and OIG Analysis

CBP concurred with the four recommendations and the recommendations are considered resolved. The recommendations will remain open until CBP provides documentation of the measures taken to address them. CBP's response to the recommendations and our analysis is presented below. A copy of CBP's written response is included in Appendix B.

CBP's Comment to Recommendation #1: CBP concurred with this recommendation but suggested revising the recommendation language to make it less broad.

OIG Analysis: To further clarify the recommendation language we reworded it to "Ensure that no work effort, subject to earned value management system requirements, is performed without adequate corresponding performance measurement baselines in the Earned Value Management System, as required by prescribed guidelines."

This recommendation is resolved but will remain open until CBP provides documentation of the measures taken to address this recommendation.

CBP's Comment to Recommendation #2: CBP concurred with this recommendation and reported measures that it is undertaking to address it. CBP set December 2010 as the due date for completion of reported measures.

OIG Analysis: This recommendation is resolved but will remain open until CBP establishes that it has implemented the process and tools to manage program information requirements for program events.

CBP's Comment to Recommendation #3: CBP concurred with this recommendation but stated that the report inaccurately concludes CBP did not assess all issues prior to commencing TUS-1 deployment. CBP also stated that not every single criterion needs to be fully resolved prior to advancing in the program and the Program Manager is to make a risk-based determination on whether, and how to advance based on the nature of open work (unfulfilled criteria) and the scope of the ensuing tasks. CBP stated a risk assessment was performed for the program resulting in the February 2009 Acquisition Decision Memorandum (ADM) mandating to commence only limited deployment at the TUS-1 site.

OIG Analysis: This recommendation is resolved but will remain open until CBP demonstrates that steps have been taken to preclude the recurrence of this issue. See OIG analysis to CBP's Comment #1 below, for additional OIG comments.

CBP's Comment to Recommendation #4: CBP concurred the recommendation. CBP also commented that it expressed concerns regarding our assessment of the number of staff performing earned value and schedule management activities during the time of our review. They asserted that, at the time, they had an adequate number of analysts to perform all assigned control responsibilities.

OIG Analysis: This recommendation is resolved but will remain open until CBP provides documentation defining roles and responsibilities of personnel dedicated to perform cost and schedule management activities and this information can be aligned with the organizational charts.

Our report statement that additional staff were needed is supported by CBP's actions in March of 2009, when they reorganized the program office and initiated hiring actions to achieve an appropriate number of government earned value and schedule

management analysts to be deployed throughout the program office.

CBP's General Comments to the Report:

In addition to the comments to the recommendations, CBP made general comments to the report. The following paragraphs summarize CBP's comments and provide OIG comments.

CBP Comment #1: CBP expressed concerns regarding our assessment that CBP proceeded with the deployment of the technology solution without having assessed all major issues identified at the System Qualification Testing program event. CBP also requested the OIG report be revised to (1) reflect the Department's ADM approval for limited TUS-1 construction documented in the February 2009 ADM, which they state the current report reflects as not authorized, and to (2) reflect that the limited deployment outcome was in fact based on an actual risk-based analyses and decision-making process regarding risk and remaining work as part of the formal acquisition review process.

OIG Analysis: The OIG reported that CBP proceeded with the program when significant program events had not been properly completed. Their System Qualification Testing was a key program event that disclosed five major deficiencies. Based on our analysis of the data collected, as of February 2010 CBP had not yet assessed whether corrective actions for all the major issues identified at the System Qualification Testing program event were effective, yet they proceeded with deployment of the technology solution.

Current language in the report was not intended to represent that, based on the February 2009 Acquisition Decision Memorandum, all deployment at the first site was not authorized. To further clarify, we reworded the report to reflect "full deployment at the first site in Tucson-1 and deployment at the second site Ajo-1, both in Arizona, were not authorized until the Systems Qualification Testing issues were resolved."

CBP Comment #2: CBP expressed concerns regarding our assessment of the number of staff performing earned value and schedule management activities. They stated we only talk about three analysts with database responsibility and forgot to acknowledge the "at least five contract analysts assigned to the Boeing task orders providing program control support throughout

2008." CBP also stated that we erroneously conclude a causal relationship between a perceived low number of analysts and increased program risk.

OIG Analysis: Our finding that CBP had three analysts performing cost and schedule management duties and that this low number of personnel increases program risk, was based on documents provided by CBP and information obtained from interviews with program personnel and senior program officials.

During our review senior program officials also stated that they would agree that the low number of program staff increases the risk to promptly respond to issues that arise in the acquisition process.

CBP Comment #3: CBP commented that the report mistakenly states that "commercial-off-the-shelf (COTS) technology would be available to cover SBInet needs was a failed program assumption." CBP stated that the current SBInet solution in Tucson is predominantly COTS equipment. They also stated that the number of cost and schedule analysts needed in the program has no relationship to the COTS aspect of the program.

OIG Analysis: Senior program officials stated during the course of our review that when originally determining the staffing needs, the assumption was made that "commercial-off-the shelf items would work and consequently large staff would not be needed. However, this assumption was later proven to not be valid."

CBP's experience with Project 28 showed challenges using the commercial-off-the-Shelf technology equipment. Although, commercial-off-the-shelf equipment is being used, there have been major challenges with the integration of the commercial-off-the-shelf technology. System integration is part of the SBInet program needs. Consequently, we agree with the senior program official statement that the assumption that commercial-off-the-shelf technology would be available to cover SBInet needs was a failed program assumption.

Our objective was to determine whether the SBI*net* Program Office has proper control over the SBI*net* program to ensure that schedules are met and costs are contained. We initiated this review in response to the FY 2007 Homeland Security Appropriations Conference Report, which directed the Inspector General to review and report on SBI contract actions in excess of $20 million.

For our audit, we selected and reviewed the following four task orders associated with SBI*net* contract actions over $20 million for Fiscal Year 2008:

- Arizona Deployment Task Order,
- Command Control Communications and Intelligence Common Operating Picture Task Order,
- Integrated Logistics Support Task Order and, and
- System Task Order.

Together, the four task orders totaled approximately $267 million. Our office identified control processes and procedures in place and tested whether these controls were working as intended for the four task orders.

We conducted fieldwork at Customs and Border Protection Headquarters in Washington, D.C. We interviewed program officials in the SBI*net* Program Office and the SBI Acquisition Office, as well as government personnel from the Defense Contract Management Agency who currently provide certain contract administration services to DHS. We also reviewed key program documents and pertinent policies and procedures.

We reviewed pertinent EVM criteria, obtained and reviewed fiscal year 2008 EVM Reports, and reviewed corrective action requests developed by the oversight agency, Defense Contract Management Agency. We met with schedule analysts, earned value analysts and project managers to understand how the program office establishes and uses milestones, schedules, and EVMS reports. We reviewed key program documents, such as the Acquisition Program Baseline, the Program Management Plan, the Systems Engineering Plan, the Integrated Master Schedule, and the Integrated Master Plan. Finally, we analyzed data to determine whether and how cost goals and milestones were met.

We conducted our audit from October 2008 through May 2009 under the authority of the *Inspector General Act of 1978*, as amended, and 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.

Appendix B
Management Comments to the Draft Report

U.S. Customs and Border Protection

April 29, 2010

MEMORANDUM FOR RICHARD L. SKINNER
INSPECTOR GENERAL
DEPARTMENT OF HOMELAND SECURITY

FROM: Assistant Commissioner
                   Office of Internal Affairs
                   U.S. Customs and Border Protection

SUBJECT: Response to the Office of Inspector General's Draft Report
                   Entitled, "Controls Over SBI*net* Program Cost and Schedule
                   Could be Improved"

Thank you for providing us with a copy of your draft report entitled, "Controls Over
SBI*net* Program Cost and Schedule Could be Improved," and the opportunity to comment
on the issues in this report. The report identifies measures that the U.S. Customs and
Border Protection (CBP) SBI*net* Program Office can take to enhance the overall
effectiveness of cost and schedule controls.

CBP acknowledges and appreciates the changes that were made by the Office of
Inspector General (OIG) in its draft report based on the discussions that were held at the
exit conference.

The report contains four recommendations for CBP action. CBP concurs with the
recommendations and believes the intent of Recommendations 1, 3 and 4 have been
satisfied by actions taken to improve cost and schedule management at both the
Department and the program level.

As an initial matter, since the OIG's review in 2008, many significant accomplishments
have resulted in substantive program management improvements and results. Chief
among these accomplishments are:

- **Program Baseline**: The Department of Homeland Security (DHS) Acquisition
  Review Board (ARB) baselined the SBI*net* Block 1 program objectives, strategy,
  major supporting plans (e.g., test and evaluation, integrated logistics support), and
  risks. Through a series of Acquisition Decision Memoranda (ADM), the
  Department approved Block 1 engineering, testing, and deployment activities
  based on thorough reviews of program accomplishments, remaining uncertainty
  and program risk, and the ultimate need to deliver effective capabilities to the
  Border Patrol. The primary result of these decisions was to stabilize the program

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plans, and more importantly, the associated Boeing contract task orders where the vast majority of the funds are spent. The lack of stability was the primary impediment to effective earned value management practices cited by the OIG.

- **Program Management**: New leadership at the Secure Border Initiative (SBI) government and the Boeing contractor program management offices have significantly improved SBI*net*'s focus, discipline, rigor, and overall effectiveness in planning and program control. As an example, the program leadership team implemented several comprehensive engineering and testing reviews as part of an "event-based" program plan. These added efforts included, among others, detailed Root Cause-Corrective Action analyses for major deficiencies, and increasing the amount and complexity of field system testing, in order to establish high confidence in system progress before continuing with significant future investments. Moreover, the SBI Program Office reorganized in early 2009 to focus and solidify key system engineering and business management disciplines; SBI continues updating or creating program documentation to reinforce cost and schedule controls.

- **Program Progress**: SBI and Boeing have completed - construction of the first Block 1 production system in Tucson, Arizona; deployment of camera surveillance systems to Buffalo and Detroit under a fixed-price contract and nearly on schedule; establishment of a full-time maintenance and supply system for Mobile Surveillance Systems that has increased operational availability for these systems from an initial 55 percent rate to over 95 percent availability today; and the Block 1 deployment to Tucson, built predominantly with commercially available technologies, is in operation today and the Border Patrol operators have experienced positive results with early operations to date.

These accomplishments are evidence and outcomes of improved management controls established over the past year and a half.

Not withstanding our concurrence with the report recommendations, CBP takes exception to some of the findings and conclusions in the draft report, identified below:

- (page 8, 1st and 2nd whole paragraph) The OIG report inaccurately concludes that the SBI Program Office did not assess risks prior to commencing TUS-1 deployment. In fact, SBI reviewed risks and plans with the DHS ARB, and the Department rendered a risk-based decision to continue with a limited deployment activity while completing ongoing systems engineering and testing efforts. Specifically, SBI presented to the DHS ARB the initial System Qualification Testing (SQT) results, including five major "deficiencies." Additionally, SBI presented clearly the system performance information gained, the information yet needed, and the associated tasks that could be initiated while SBI continued to address the remaining technical concerns and planning updates. The Department largely agreed with SBI's recommendations, and approved in January 2009 (documented in the February 2009 ADM) the initial construction activities for TUS-1 sensor and communications towers and the command center upgrades.

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Also, the Department deferred deployment of sensor payloads to TUS-1 and deferred all construction at AJO-1 until SBI completed and presented additional engineering and testing information. These departmental decisions reflect the actual risk-based analyses and decision-making that the OIG cites as missing. Therefore, the OIG draft report should be corrected to (1) reflect the Department's ADM approval for limited TUS-1 construction (current draft says TUS-1 construction was not authorized), and (2) reflect that the limited deployment outcome was in fact based on an actual risk-based analyses and decision-making process regarding risk and remaining work as part of the formal acquisition review process.

- (page 9, 2nd and 5th paragraphs) The OIG incorrectly cites the full number of cost and schedule analysts deployed in the SBInet program, and erroneously concludes a causal relationship between a perceived low number of analysts and increased program risks. The OIG fails to acknowledge the full number of cost and schedule analysts deployed across the programs and projects. Throughout 2008, SBI had at least five contract analysts assigned to the Boeing task orders providing program control support, as well as three full-time support analysts charged with maintaining databases, analytical tools, and recurring status reporting. In formulating its conclusion regarding "low number of staff performing earned value and schedule management activities....," the OIG only discusses the latter three analysts with database responsibilities. Thus, the finding is not accurate because there were actually up to eight analysts assigned for these responsibilities, and SBI continues to assert that this was an adequate number of analysts to perform all assigned control responsibilities.

- (page 9, 4th paragraph) The OIG asserts that SBI needs more cost and schedule analysts because of a failed program assumption that "commercial-off-the-shelf (COTS) technology would be available to cover SBInet needs." First, and contrary to the OIG's assertion, the current SBInet solution in operation today in Tucson is in fact predominantly COTS equipment. So the SBI acquisition strategy relying on COTS remains valid. Additionally, the COTS aspect of the SBInet program does not relate at all to the number of cost and schedule analysts needed in the program, so CBP recommends this paragraph be removed.

A summary of CBP actions and corrective plans to address the four recommendations is provided below:

Recommendation #1: Ensure that no work is performed without adequate corresponding performance measurement baselines in the Earned Value Management System.

CBP Response: CBP concurs with the recommendation. For this 2008 review, SBI shared two significant issues with the OIG that contributed to this deficiency: program volatility and breakdowns in following program processes. Over the past 18 months, SBI has made considerable progress in stabilizing the program and project plans following the Department baselining of the Block 1 program and associated Boeing contract task orders. This included joint Government-Boeing efforts that established effective performance baselines for authorized contracted work, conducted refresher training

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regarding earned value and baseline management practices, and ultimately reconciled procedures for maintaining performance measurement baselines consistent with program and contractor Earned Value Management System (EVMS) guidelines.

CBP requests that the OIG consider updating the Recommendation 1 to read, "Ensure that all authorized work effort, subject to earned value management system requirements, is incorporated into the performance measurement baseline in accordance with prescribed system guidelines." This change avoids prescribing EVMS policy for work that is not appropriately subject to EVMS (e.g., low dollar value efforts on support contracts, level of effort tasking, firm-fixed price tasks, etc.) - the assertion that no work is to be performed without an EVMS baseline is simply too broad.

Due Date: CBP believes the intent of this recommendation has been satisfied and requests closure of the recommendation.

Recommendation 2: Develop and implement a process to document government review and acceptance of program events' accomplishments and criteria. Documentation should clearly show program office evaluation and justification for approval and acceptance of all accomplishments and criteria for a program event to certify deliverables meet project objectives and events are adequately completed before the program progresses.

CBP Response: CBP concurs with the recommendation. The SBI Program Office has made considerable progress in establishing formal processes and tools to manage program information requirements for key program events. First, SBI redoubled efforts with the Block 1 Program Integrated Management Plan (IMP) to clearly identify major program events, the required significant accomplishments, and the associated success criteria for each of the events. In addition, SBI recently stood up the Systems Engineering Division and is developing a Technical Review Manual (TRM) that documents the artifacts required for review and/or fulfillment of significant technical reviews and program milestones. The review requirements are being integrated into the Program IMP to serve as the success criteria for the major program events, consistent with the OIG recommendation. A current organizational chart with functional responsibilities for each SBI directorate has been provided to the OIG electronically.

Due Date: The estimated completion date is December 2010.

Recommendation 3: Ensure that program events have been properly completed to satisfy all entry and exit criteria, address and assess all issues, agree on the status, and complete an updated risk assessment before proceeding with subsequent program events.

CBP Response: CBP concurs with the recommendation. Notwithstanding our general concurrence with this recommendation, CBP is concerned with the accuracy and context for the findings and analysis supporting this recommendation. In general, exit criteria for key program events are important to ensure thorough task planning and to assess progress and risks with continuing beyond the respective key events. Exit criteria, however, are not absolute, meaning not every single criterion needs to be fully resolved prior to advancing in the program. Rather, the Program Manager will make a risk-based

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determination on whether, and how, to advance based on the nature of open work (unfulfilled criteria) and the scope of the ensuing tasks.

Such was the case when SBI and the DHS ARB reviewed the initial System Qualification Testing (SQT) results and the five major "deficiencies" (refer to page 8 of the draft OIG report). For these specific reviews with the Department, SBI presented clearly the information gained, the information yet needed, and the associated tasks that could be initiated while SBI continued to address the remaining technical concerns and planning updates. The Department largely agreed with SBI's recommendations, approved in January 2009 (documented in the February 2009 ADM) the initial construction activities for TUS-1 sensor and communications towers and the command center upgrades (Note: the OIG draft report does not accurately report this guidance from the February 2009 ADM). Because of open requirements (i.e., higher risk), the Department deferred the deployment of sensor payloads to TUS-1 and deferred all construction at AJO-1 until SBI completed and presented additional engineering and testing information.

The OIG report, therefore, inaccurately concludes (last sentence, first complete paragraph, page 8) that the SBI Program Office did not assess all issues prior to commencing TUS-1 deployment. SBI and DHS senior staff did assess risks, and rendered a risk-based decision to continue with a limited deployment activity as articulated in the Departmental ADMs.

Due Date: CBP believes the intent of this recommendation has been satisfied and requests closure of the recommendation.

Recommendation 4: Reevaluate the SBI*net* program staffing plan and ensure that an adequate number of earned value and schedule management analysts are in place to support the current workload for the SBI*net* acquisition and to implement all control duties assigned, as prescribed in the Program Management Plan.

CBP Response: CBP concurs with the recommendation. In March 2009, the SBI Program Office reorganized, updated staffing plans, and initiated hiring actions for an appropriate number of government earned value and schedule management analysts deployed throughout the program office. In October 2009, the OIG was provided a copy of the then current SBI organization chart and a staffing roster of SBI personnel with position alignments. SBI considered the number of earned value and schedule management analysts sufficient to support the current workload, as prescribed in the Program Management Plan.

Due Date: CBP believes the intent of this recommendation has been satisfied and requests closure of the recommendation.

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With regard to the classification of the draft report, CBP has not identified any information within this report that would warrant a "For Official Use Only" classification. Technical comments to this report were provided to the OIG electronically.

If you have any questions regarding this response, please contact me or have a member of your staff contact Ms. Patty Quintana, CBP Audit Liaison, at (202) 344-1038.

Major Program Events	Scheduled Date of Review	Date Review Took Place	Date of Review Acceptance by Government
System Requirements Review	1/19/07	1/22-23/07	Government close out letter is dated 3/20/07. This milestone was accepted with incomplete information. [6]
System Preliminary Design Review	4/27/2007	4/27/2007	This milestone was supposed to be closed out when B-Specs and comments were closed out but no Preliminary Design Review close out letter exists. This Preliminary Design Review closed as entrance criteria for Critical Design Review
System Critical Design Review (BLOCK 1)	6/25/07	6/3-5/08	Government close out letter is dated 10/31/08
System Qualification Testing			Projected to begin in 9/2009.

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[6] A close out letter is sent by the government to the contractor once the contractor presents documents addressing any deficiencies, comments, or changes that must be made for the government to officially accept the review. This is a not a formal process for documenting when the government accepts successful completion of a review, nor does the letter show what criteria was met to accept the review.

Key Program Document	Document Description	Purpose of Document
Integrated Master Plan	The Integrated Master Plan is an event-driven plan that documents the significant accomplishments necessary to complete project work and ties each accomplishment to a key program event.	The Integrated Master Plan and its supporting detail schedule provides an overarching framework against which all work is accomplished. It documents all the tasks required to deliver a high quality product and facilitate success throughout the product's life cycle.
Integrated Master Schedule A monthly deliverable required by the contractor.	The Integrated Master Schedule is an event-based schedule and will include all major program, System Prime (contractor), and other stakeholders' schedule tasks, milestones, and dependencies. The Integrated Master Schedule will provide for automated import and export of component schedules and enable network and "what if" analysis to provide program management with timely visibility into key dates and milestones to ensure effective program management. The Integrated Master Plan and Integrated Master Schedule are fundamental management tools that are critical to performing effective planning, scheduling, and execution of work efforts.	The key milestones in the Integrated Master Schedule represent significant events in the program and will be identified during the development of project-level or program office schedules. Program management review of key milestones ensures an effective mechanism for reporting, tracking, and managing project progress and ensures that delivered products and services meet established and agreed to project objectives. The Integrated Master Schedule is used by the Government and contractor team as the day-to-day tools for planning, executing, and tracking program technical, schedule, and cost status, including risk mitigation efforts.
Work Breakdown Structure	The Work Breakdown Structure is an exhaustive, product-oriented, hierarchical tree structure of tasks or deliverables that need to be performed in order for an investment program or project to be completed. It is the basis for structuring earned value management. The Work Breakdown Structure is an essential part of earned value management cost, schedule, and technical monitoring because it provides a consistent framework against which to measure progress.	Investment programs, projects, and contracts, will use EVM against established Work Breakdown Structures at sufficient levels to assess performance against milestones and allocated budgets. The Work Breakdown Structure should be used to develop the cost estimate and the program schedule and to set up the earned value management performance measurement baseline. The Work Breakdown Structure can help define high-level milestones and cost driver relationships. The Work Breakdown Structure enables leadership to make better decisions about where to apply contingency reserve and where systemic problems are occurring.

| Performance Measurement Baselines | The performance measurement baseline represents the cumulative value of the planned work over time. The performance measurement baseline is essentially the resource consumption plan for the program and forms the time-phased baseline against which performance is measured. | Baselines are necessary for defining the time-phased budget plan from which actual program performance is measured. Baselines are used to detect deviations from the budget plan and give insight into problems and potential impacts. Deviations from the baseline identify areas where management should focus attention. |

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Congress

Congressional Oversight and Appropriations Committees, as
appropriate