Department of Homeland Security
Office of Inspector General

Cargo Targeting and Examinations

OIG-10-34

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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 U.S. Customs and Border Protection's progress in improving the Automated Targeting System as a tool in the multilayered cargo security strategy. 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

Table of Contents/Abbreviations

Appendixes

Abbreviations

ATS	Automated Targeting System
CBP	U.S. Customs and Border Protection
CERTS	Customs Enforcement Reporting and Tracking System
DHS	Department of Homeland Security
OFO	Office of Field Operations
OIG	Office of Inspector General

Executive Summary

Section 809(g) of the *Coast Guard and Maritime Transportation Act of 2004* (Public Law 108-293) requires the Office of Inspector General to submit an annual report on its evaluation of the current targeting system for international intermodal cargo containers. The Customs and Border Protection is responsible for operation of the targeting system and conducting cargo examinations. This is our fifth audit on selected aspects of the Automated Targeting System. The purpose of this audit was to evaluate selected aspects of the Automated Targeting System, to determine their effectiveness in assisting the agency in detecting potential acts of terrorism, and to identify actions needed to improve the targeting of high-risk containers for inspection.

U.S. Customs and Border Protection could improve its record retention processes to support decisions made to waive or inspect high-risk shipments. Of the 391 shipments identified as high-risk and selected for review, 57 did not have enough documentation to support the decisions that were made. Therefore, there was no means of substantiating that officers properly or consistently followed procedures in waiving or examining shipments to keep dangerous goods from entering U.S. commerce.

Guidance on how to conduct and record physical examinations of high-risk cargo containers for biological, chemical, nuclear, and radiological threats is outdated. Because U.S. Customs and Border Protection officers use their own discretion and inconsistent processes to examine cargo, potentially dangerous goods and substances may go undetected.

We are making four recommendations for U.S. Customs and Border Protection to improve its process for updating targeting rules used to identify high-risk shipments by enhancing the procedures used for defining terms, documenting rule change decisions, and documenting the testing and evaluation of rule changes. U.S. Customs and Border Protection concurred with our recommendations and outlined plans and actions to implement the needed improvements. We made technical revisions to the report as appropriate, based on the agency comments.

Background

The U.S. Customs and Border Protection's (CBP) mission includes preventing terrorists and terrorist weapons from entering the United States while also facilitating the flow of legitimate trade and travel. In 2008, approximately 11 million oceangoing cargo containers arrived at the Nation's seaports. To manage the potential security threats presented by this large volume of maritime cargo, CBP employs a multilayered approach, including analyzing and reviewing shipment information and targeting and inspecting high-risk cargo. The Automated Targeting System (ATS) is a key component of this multilayered security strategy. (See appendix C for a more detailed description of CBP's Layered Security Strategy.)

ATS is an enforcement tool that uses sophisticated automated techniques and algorithms to perform risk-based analysis of anomalies and strategic intelligence to indicate which shipments are high risk and require additional scrutiny and mandatory security inspections. Additionally, CBP officers at ports of entry use their local knowledge and judgment to select unusual or irregular shipments for inspection.

A shipment selected by ATS or local CBP officers is held for a nonintrusive inspection. A nonintrusive inspection device takes x-ray images of the container's contents, which CBP officers use to identify anomalies such as areas that appear unusual or inconsistent with the container contents listed on the shipping documents. If CBP Officers are unable to resolve the anomaly with a nonintrusive inspection, Officers may refer a shipment for physical examination, which may consist of a visual inspection of the container's interior, limited inspection of selected contents, or complete unloading of the cargo. Officers also use physical examinations to determine whether a shipment contains undeclared or inadmissible cargo.

Results of Audit

Documentation Is Needed to Support Mandatory Examinations and Waivers

CBP needs to ensure that documentation, either electronic or hard copy, is maintained to show that examinations of high-risk containers were

conducted or waived. According to CBP policy,[1] at a minimum, all high-risk shipments must be scanned with nonintrusive inspection technology. If an anomaly is detected, the cargo must be examined and all examination activity recorded in ATS. CBP policy also requires that once a shipment is examined, CBP must maintain the nonintrusive inspection images for 30 days, unless the examination resulted in a seizure or other event requiring longer retention. CBP allows CBP port directors to waive the mandatory physical examinations with proper justification if analysis of all information determined there was no security risk.

Using the existing directives at the time of this review, we drew a sample of 391 high-risk shipments to determine whether CBP maintained adequate documentation to show that CBP officers conducted nonintrusive inspection examinations and physically examined or waived containers identified as high risk as specified by CBP's policies. Our sample was selected from information gathered at seven ports of entry that handled 269,813 high-risk shipments, representing nearly three-quarters of all high-risk shipments that entered the United States between October 1, 2006, and March 31, 2008.[2]

Testing Results

CBP was unable to provide documentation to demonstrate that CBP officers conducted nonintrusive inspection examinations, physical examinations, or waived examinations for 17% (57 of 391) of shipments identified as high risk. Specifically, CBP could not provide us with logs, nonintrusive inspection images, or other documentation (including electronic notes) substantiating that examinations were conducted or that waivers were granted based on a review of entry documentation. All but 9 of the 57 test failures occurred prior to CBP's changes in policy in May 2007 to improve review of high risk shipments.

While the results of our testing point to a positive change in CBP procedures to review and examine high risk shipments, further improvements are necessary. These results are not projectable because the samples were not designed to test for these improvements.

[1] The *National Maritime Targeting Policy*, CBP Directive No. 3290-007B, issued December 28, 2007 and. Non-Intrusive Inspection Directive No. 3340-036, issued December 3, 2004.

[2] Our sample was designed to assess the quality of CBP's documentation of its mandatory examinations and waivers, not the quality of the inspections. We made no conclusions about whether the appropriate type of inspection took place.

CBP officials acknowledge they are unable to prove beyond any doubt that all high risk shipments were examined and informed us that, among the possible reasons for missing non-intrusive image documentation, were software corruption, images that could not be retrieved due to proprietary systems and storage limitations, and failure on the part of CBP officers to properly record proof of examinations and waivers per current CBP policy. (See appendix A for more information about the scope of our testing.)

Any high-risk shipment that is not examined or reviewed could cause catastrophic damage to the United States and its citizens if it happens to contain weapons of mass destruction. Without evidence documenting that high-risk containers were inspected and did not pose danger, CBP has no assurance that decisions to release these high-risk containers into U.S. commerce were appropriate.

CBP needs to change its requirements for document retention to support examination decisions. This information should be used in conducting quality assurance efforts, such as validating release decisions, identifying trends or gaps in the conduct of high-risk examinations, or reviewing waiver decisions. Currently, DHS requires the retention of risk assessments for inbound and outbound cargo for up to 15 years. See 72 Fed. Reg. 43650, ATS System of Records Notice (Aug. 6, 2007). Also, with some exceptions, CBP requires importers to maintain their entry documentation for up to 5 years from date of entry. See 19 CFR 163.4. To be consistent with regulatory requirements imposed on CBP for its risk assessments and on importers for their entry documents, CBP should consider requiring that its entry examination records (including those supporting waiver decisions) are maintained for an adequate period of time to allow for quality assurance and system reviews.

Recommendation

We recommend that the Commissioner of CBP:

Recommendation #1: Require port directors to maintain either hard copy or electronic documentation produced when conducting examinations, or waiving examinations of containers determined to pose a high risk of containing weapons of mass destruction for a period long enough to allow for independent review.

Management Comments and OIG Analysis

CBP concurred with our recommendation and stated that CBP's Office of Field Operations (OFO) will create and implement a standard waiver form to be used for all waivers of high risk shipments. Once created, OFO will issue guidance to the field on a standardized method of maintaining hard copy waivers to include the original signature of the authorizing official as well as document retention requirements. The duration of document retention will be determined using established CBP retention mandates as a guideline. CBP plans to have these actions completed by February 26, 2010.

We consider CBP's action plans to be responsive to the recommendation. This recommendation will remain open until all plans are completed and implemented to meet the intent of the recommendation.

Examination Requirements Need to Be Updated and Improved

Prior to 9/11, the emphasis of cargo examinations was to target and identify illicit goods or narcotics. If unexplainable anomalies were detected during a nonintrusive inspection, CBP officers were required to identify the type of threat and perform a physical examination, as required by the *U.S. Customs Narcotics Interdiction Guide* issued in 1999.

After 9/11, the emphasis of CBP examinations shifted from narcotic enforcement examinations to antiterrorism examinations. However, CBP continued to rely on the 1999 guide. Because CBP officers do not have updated national guidance on how to conduct physical examinations related to antiterrorism threats such as those involving biological, chemical, radiological, and nuclear agents, CBP officers must rely on their own judgment, experience, and training to determine the type and extent of physical examinations to perform.

For example, owing to the lack of updated guidance, we observed that CBP officers used their own judgment to estimate and record the amount of cargo that needed to be examined and did not follow the guide's minimum requirements for the percentage of cargo that needed to be examined when conducting physical examinations. Further, as noted in our recently issued draft report, *CBP's Ability to Detect Biological and Chemical Threats in Maritime Cargo Containers*, CBP does not have updated guidance to address biological and chemical threats. Updated guidance to properly examine and document the results of examinations is

critical because CBP uses prior examination results to update and refine ATS' cargo targeting rules.

CBP management advised us that they are aware that the August 1999 narcotics interdiction handbook needs to be updated and that they planned to update the guidance for performing examinations. While the guidance remains out-of-date with the current threat environment, CBP officers will continue to rely on their own judgment and may not be thoroughly or appropriately examining potentially dangerous cargo before it is released into public commerce.

During our review of information recorded in ATS, we noted inconsistencies and potential inaccuracies in the information being recorded by CBP officers. CBP should periodically review its examination processes to ensure that the information is being recorded accurately.

Recommendations

We recommend that the Commissioner of CBP:

Recommendation #2: Update and implement examination guidelines to specifically address terrorism threats and outline minimum procedures for CBP officers to follow when performing antiterrorism examinations, including specific procedures for inspecting for chemical, biological, nuclear, and radiological threats.

Recommendation #3: Periodically assess the examination process to ensure that CBP officers are properly performing and accurately recording examinations in ATS.

Management Comments and OIG Analysis

CBP concurred with both of our recommendations. The Office of Field Operations is updating the *Anti-Terrorism Contraband Enforcement Team National Directive* to specifically address terrorism threats and outline minimum procedures for CBP officers to follow when performing anti-terrorism examinations, including specific procedures for inspecting for chemical, biological, nuclear, and radioactive threats. CBP plans to have this directive finalized by April 30, 2010. CBP will also update the Cargo Examination Reporting and Tracking System (CERTS) port guidance to include issuance of specific requirements to the field for input of examination findings in CERTS to assist the field with their

internal audit processes. CBP plans to have this guidance finalized by July 30, 2010.

We consider the actions taken by CBP to be responsive to our recommendations. Both recommendations will remain open until the *Anti-Terrorism Contraband Enforcement Team (A-TCET) National Directive* and CERTS guidance are finalized and implemented.

Targeting Rule Development and Change Process Can Be Improved

CBP can improve its process for changing or deleting targeting rules used to identify high-risk shipments by better defining terms, documenting rule change decisions, and documenting the testing and evaluation of rule changes. During 2007, CBP made 22 ATS rule changes and inactivated several rules when updating the ATS Security targeting weight set.

As a part of the rule revision process, CBP extracts and analyzes examination results from cargo shipments in ATS. During the analysis of these results, CBP officers and analysts categorize the examined cargo by risk level. The process can be improved by providing more specific definitions for its risk categories. Another component of the rule update process involves the review of the proposed rule changes by subject matter experts. CBP can improve the process by ensuring the rationale for changes implemented or not implemented are documented and recorded for future use.

The testing and evaluation of new rules can also be improved. CBP tests new rules using actual data to determine how well the new rules are working. However, the process for testing and evaluating the rules, and subsequent modifications of the new rules, are not formally documented. To improve this process, CBP could more clearly document the steps used to ensure that rule testing is consistent and test results are thoroughly analyzed.

During our review, CBP began the process of improving rule process procedures to improve the controls over the targeting rules and testing processes. CBP's Office of Intelligence and Operations Coordination, Automation and Targeting Division oversees the management of ATS rules development process and procedures.

Recommendation

We recommend that the Commissioner of CBP:

Recommendation #4: Enhance current documentation efforts to ensure that each stage of the process for analyzing and developing ATS rules, including the rationale for making changes, specific definitions of terms used, and details on tools used to improve application consistency and rule change standardization, is documented.

Management Comments and OIG Analysis

CBP concurred with our recommendation and recognizes the critical need to document each stage of the process utilized for analyzing and developing ATS rules. To this end, CBP developed a documentation process to capture and record information that includes the rationale for rule changes, definitions of terminology, and the utilization of tools. The Office of Intelligence and Operations Coordination has introduced more formality into the rules process by implementing a structure to guide national conferences, rule evaluation, targeting development, and process management. In addition, a structure has been added to the existing processes for rules development and management oversight. We consider the actions taken by CBP to be responsive to the recommendation. This recommendation is now resolved and closed.

The purpose of this audit was to evaluate selected aspects of the Automated Targeting System, to determine their effectiveness in assisting CBP in detecting potential acts of terrorism, and to identify actions needed to improve the targeting of high-risk containers for inspection. We also observed the performance of physical cargo examinations to determine how accurately the examination results were entered into the Cargo Enforcement Reporting and Tracking System. We reviewed internal controls pertinent to our overall objective.

During our audit, we met with CBP's Office of Intelligence and Operations Coordination, Automation and Targeting Division at the National Targeting Center and CBP Headquarters in Washington DC, as well as various seaports nationwide.

Using a statistically valid random sample of 391 targeted high-risk shipments arriving in the United States between October 1, 2006, and March 31, 2008, we tested two key control attributes: (1) whether documentation exists to show that the high-risk shipments were subject to nonintrusive inspections, and (2) whether additional examinations were conducted if the nonintrusive inspection examinations resulted in referrals for further inspection.

At the National Targeting Center, we obtained an understanding of the process for developing and maintaining ATS Rules and Weight-Sets. We also obtained a database of 20,973,589 shipments that entered the United States during FY 2007 and the first two quarters of FY 2008. To systematically analyze the nearly 21 million shipments mentioned above, we used threshold score for identifying high-risk shipments at ports of entry. Based on this information, we identified 362,179 high-risk shipments as a possible sample universe. We selected seven ports for review. This represents a statistical sample of 269,813 targeted high-risk shipments, or 74.5% of all high-risk shipments for the period.

Our sample plan was developed to provide a 95% confidence level with a precision of +/-5 percentage points, or less, on all attributes that apply to the entire population of transactions. A statistical sample of 391 high-risk shipments was selected and used for each test. To allow for the replacement of transactions, we selected a total of 400 transactions for which we requested supporting documentation. We replaced a shipment if that shipment was not in an oceangoing vessel container. We did not replace a shipment if the transaction did not have the necessary support to show that

an exam was performed. Given the results of our work, we are 95% confident that the examination results of between 11% and 18% of high-risk containers are not correctly documented.

We requested supporting documentation for each selected shipment and evaluated the effectiveness of internal controls over two key attributes: (1) documentation exists that the high-risk container received a nonintrusive examination, and (2) documentation exists that a secondary examination was conducted if the nonintrusive exam results in a referral.

Results of our statistical tests of the examinations of high-risk shipments were projected only to the seven ports included in the statistical sample, not to the population as a whole. We designed our sample to assess the quality of CBP's documentation of its mandatory examinations and waivers. Our sample was not designed to test the quality of inspections, and we offered no conclusion as to whether the appropriate type of inspection took place.

A shipment above the ATS examination high-risk threshold score was considered failing an attribute if there was no documentation such as a nonintrusive inspection image, a log showing that a required nonintrusive inspection examination was performed, or notations in the ATS system. If a shipment was referred for further examination, usually because an anomaly was discovered during a nonintrusive inspection examination, the shipment was considered failing an attribute if there was no supporting documentation, such as examination documents or itemized notes in the ATS System. Because CBP policies related to cargo examinations and documentation changed during the time of our audit, we tested our statistical sample items in accordance with the policy in effect at the time the shipments entered the United States.

Freight Remaining Onboard

Of the 391 shipments selected for review, we identified 36 high-risk freight remaining onboard shipments that did not have documents to support that reviews occurred before waivers were granted. CBP policy prior to December 2007 required CBP personnel to review high-risk freight remaining onboard shipments before waiving them from examination. This policy, however, did not specifically instruct CBP personnel to document their review as support for waivers. Even though the support was inadequate, these shipments passed internal control tests if CBP policy did not

specifically require the documentation. CBP informed us that these freight remaining onboard shipments did not enter U.S. commerce, alleviating concerns that potentially dangerous cargo could be released into the country.

Additionally, using data collection sheets, we documented our observations of CBP officers performing physical examinations of cargo. We counted alongside CBP officers who were opening and inspecting boxes and bags of cargo at the Centralized Examination Stations. After the physical counts were complete, we watched CBP officers record their examination results in the Cargo Enforcement Reporting and Tracking System. We interviewed CBP officers regarding their examination procedures and obtained the Cargo Enforcement Reporting and Tracking System screen prints on the examination results.

We conducted this performance audit between April 2008 and May 2009 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.

We would like to thank CBP for its cooperation in the performance of this audit.

Appendix B
Management Comments to the Draft Report

U.S. Department of Homeland Security
Washington, DC 20229

U.S. Customs and Border Protection

November 17, 2009

MEMORANDUM FOR: ANNE L. RICHARDS
ASSISTANT INSPECTOR GENERAL FOR AUDITS

FROM: ASSISTANT COMMISSIONER
OFFICE OF INTERNAL AFFAIRS
U.S. CUSTOMS AND BORDER PROTECTION

11/17/09

SUBJECT: U.S. Customs and Border Protection's Comments on Office of Inspector General Draft Report Entitled "Automated Targeting System Progress Report 2009: Cargo Targeting and Examinations" – For Official Use Only version

Thank you for providing us with a copy of the draft report entitled "Automated Targeting System Progress Report 2009: Cargo Targeting and Examinations" – For Official Use Only version.

Attached are U.S. Customs and Border Protection (CBP) formal responses to the recommendations and technical corrections to the draft report.

With regard to the classification of the draft report, CBP has identified information that requires restricted public access based on a designation of "For Official Use Only." As a result, also attached are recommended redactions. Please consider CBP's concerns prior to finalizing the report.

Thank you for your assistance. Should you have any questions, please have a member of your staff contact Ms. Arlene Lugo, Audit Liaison, Office of Internal Affairs, at (202) 344-1218.

Attachment

DHS Office of Inspector General's (OIG) Draft Report Entitled "Automated Targeting System Progress Report 2009: Cargo Targeting and Examinations"
For Official Use Only

CBP Corrective Action Plans

Recommendation 1: Require port directors to maintain either hard copy or electronic documentation produced when conducting examinations or waiving examinations of containers determined to have a high risk of containing weapons of mass destruction for a period long enough to allow for independent review.

CBP Response: Concur. U.S. Customs and Border Protection's (CBP's) Office of Field Operations (OFO) will create and implement a standard waiver form to be used for documentation of all waivers of high risk shipments. Once created, OFO will issue guidance to the field on a standardized method of maintaining hard copy waivers to include the original signature of the authorizing official as well as document retention requirements. The duration of document retention will be determined using established CBP retention mandates as a guideline. This hard copy will provide justification and recordation of authorized approval.

Additionally, as Cargo Enforcement Reporting and Tracking System (CERTS) is the requisite system of electronic documentation of examination results and waivers, OFO will deploy automated reports in CERTS intended to help CBP personnel, including CBP field managers and headquarters, determine if all high risk shipments have been appropriately held, examined or waived. The "Maritime Cargo Mandatory Exam Report" is designed to identify high risk shipments that require additional enforcement action from CBP. Also within the report "Maritime Cargo Mandatory Exam Report" is a column indicating the number of high risk shipments waived. The data has a hyperlink to a list of corresponding Shipment ID numbers (SID) to facilitate further research. A draft version of this report is currently functional in CERTS.

Due Date: February 26, 2010

Recommendation 2: Update and implement examination guidelines to specifically address terrorism threats and outline minimum procedures for CBP officers to follow when performing anti-terrorism examinations, including specific procedures for inspecting for chemical, biological, nuclear, and radioactive threats.

CBP Response: Concur. CBP's OFO is updating the Anti-Terrorism Contraband Enforcement Team (A-TCET) National Directive to specifically address terrorism threats and outline minimum procedures for CBP officers to follow when performing anti-terrorism examinations, including specific procedures for inspecting for chemical, biological, nuclear, and radioactive threats.

Due Date: April 30, 2010

Recommendation 3: Periodically assess the examination process to ensure CBP Officers are properly performing and accurately recording examinations in Automated Targeting System (ATS).

CBP Response: Concur. CBP's OFO will update CERTS port guidance to include issuance of specific requirements to the field for input of examination findings in CERTS. As CERTS is the requisite system of electronic documentation of examination results, OFO will deploy automated reports in CERTS to assist the field with their internal audit processes. Within the report "Maritime Cargo Mandatory Exam Report" is a column that indicates which high risk shipments were held and released, but have no exam results posted in CERTS. The data has a hyperlink to a list of corresponding shipment ID numbers (SID) to facilitate further research. A draft version of this report is currently functional in CERTS.

Due Date: July 30, 2010

Recommendation 4: CBP can improve its process for changing or deleting targeting rules used to identify high-risk shipments by better defining terms, documenting rule change decisions, and documenting the testing and evaluation of rule changes.

CBP Response: Concur. CBP uses a risk-based approach to cargo targeting. This approach utilizes advance information, emphasizes automated systems, and is enhanced by intelligence and analysis. ATS is used to collect and analyze cargo shipping data, to distinguish and select high-risk shipments for further review and examination. ATS targeting concepts are based on the following risk factors: familiarity indicators, geographic routing and addresses, violation history, intelligence, and high-risk commodities. CBP relies upon ATS to assist in identifying high-risk shipments by providing the targeting officer with critical shipment information as well as historical transaction data on the parties involved, their enforcement history with CBP, and any pertinent intelligence available on the operating entities at the time of reviewing the shipment transaction data.

CBP does recognize the critical need to document each stage of the process utilized for analyzing and developing ATS rules. In pursuing this objective, CBP developed a documentation process to capture and record information that includes rationale for rule changes, definitions of terminology, and identifies the utilization of tools. The Office of Intelligence and Operations Coordination (OIOC) has introduced more formality into rules evolution by implementing a structure to guide national conferences, rule evaluation, targeting development and process management. Additional structure has been added to the existing processes for rules development and management oversight. OIOC has established a consistent approach to targeting evolution and rules development, determining measures of the effectiveness of rules, and ensuring accountability for all activities pertaining to cargo and passenger targeting rules.

OIOC has described its process in the document, "Rule Development Group CONOPS" that was given to OIG. OIOC implementation has been evolving and includes the use of information sharing technology such as SharePoint. This relevant data includes information from rules conference and associated documentation and includes, but is not necessarily limited to:

- Agenda
- Subject Matter Expert (SME) input and presentation material prepared for the conference
- Reference material used at the conference (e.g., glossary of terms, statistical information on mode-specific shipments, rule firing counts and likelihood ratios, ROC analyses, spreadsheets with proxy positive data, etc)

- Presentation material prepared during and presented at the end of the conference
- Conference Summary

Subsequently, additional information relative to the weight set and associated current and new rules, changes, and significant correspondence are added to the SharePoint site. For a given national weight set, the SharePoint site can be viewed as a "binder" – living documentation that contains (or possibly references) material and decisions that have guided the evaluation, targeting development and process management associated with the transition of the weight set and rules. The SharePoint site is updated as ATS operational data becomes available subsequent to deployment of the new or revised weight set and rules. As targeting and rule effectiveness metrics are generated on a continuing basis, record keeping processes and oversight will be performed, and results will be included in the SharePoint site.

Revisions to a weight set are identified as an Evolutionary Improvement as defined in the CONOPS. An evolutionary improvement responds to an operational need that can be done over a time frame longer than a few days. The process takes advantage of the timing requirements for the change and provides the opportunity for assessment and evaluation of the capabilities before implementation occurs. In contrast to a revolutionary improvement, an evolutionary improvement does not include significant new targeting concepts such as extensive algorithmic changes to rules-based targeting nor does the decision process used for an evolutionary improvement necessitate full understanding of the cost, benefit, or full impact of the intended change before and during its consideration and development.

In the CONOPS, the Evolutionary Improvement Process Flow identifies the activities and decisions related to responding to a desired targeting change that is characterized as a relatively small or moderate-size modification to existing operational ATS capabilities. Key activities associated with the transition are documented and the associated documentation is included in the SharePoint site. Such activities include:

- Evolutionary Improvement – Improvement Request
- Evaluate Impact on Targeting Scores (Performance Analysis)
- Define/Update Potential Change
- Evaluate Potential Performance and Impact
- Record Change and Metrics

During analysis and evaluation of the potential performance and impact (for weight set and rules), OIOC tools are used to improve consistency of application and standardization of rule changes. Two such tools that CBP uses are:

- Targeting Assessment Toolkit (TAT) that automates and standardizes the Receiver Operating Characteristic (ROC)-based performance evaluation analysis of the ATS used by CBP to identify shipments requiring closer scrutiny in order to reduce risks to our nation's supply chain.

- Semi-automated methodology for identifying "proxy positive" shipments from the set of all examined shipments, based on a consistent process of data analysis of the examination results that are reported in up to six CBP data repositories.

The TAT provides the capability to generate and display ROC curves and related performance data in a variety of formats to support many different types of analyses. The 156-page document *User Manual for the Targeting Assessment Toolkit* describes the integrated set of software applications that automate and (automatically) document the generation of ATS performance metrics based on user-defined parameters.

The document *Proxy Positive Identification Process* describes the enhanced methodology for identifying "proxy positive" shipments. These "proxy positive" shipments are the basis for all ROC-based performance evaluation analysis of targeting performance and other data analyses supporting CBP operations. The methodology is repeatable and comprehensive, as it includes all modes of transportation and is able to integrate data from a wide variety of highly complex and inconsistent databases.

In addition to electronically capturing information related the analysis and development of ATS rules, CBP has documented the formal methodology for developing the National Security Country Threat Tier Model and monitors daily automated reports on ATS utilization.

Due Date: CBP believes that by initiating the above steps, it has implemented the OIG recommendation for an improved process for changing or deleting targeting rules used to identify high-risk shipments by better defining terms, documenting rule change decisions, and documenting the testing and evaluation of rule changes.

Appendix C
CBP's Layered Cargo Security Strategy

CBP has implemented a layered approach to prevent cargo linked to terrorism from entering the country. The use of a layered approach implementing multiple diverse strategies and initiatives, such as Customs-Trade Partnership Against Terrorism and the Container Security Initiative, is essential to accomplish this goal. The wide range of possible terrorist threat scenarios requires the use of tiered and varied strategies. No single approach to cargo security can sufficiently protect against the terrorist risk. CBP's layered security is initiated by requiring that ocean carriers submit manifest information 24 hours before the cargo containers are loaded and shipped at a foreign seaport and requiring importers to provide entry documentation declaring items within 15 calendar days after arrival.

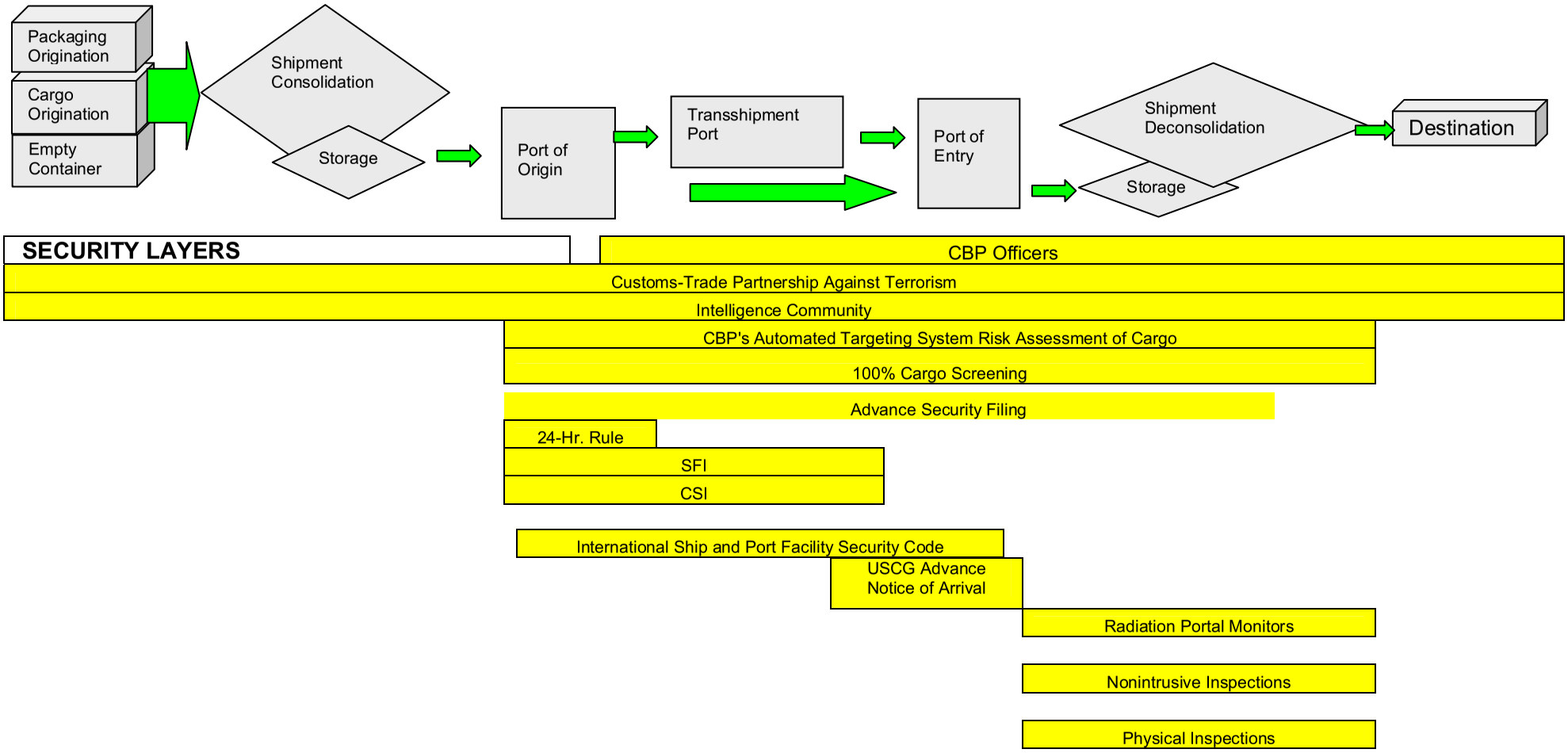
ATS currently has the capability to electronically compare manifest and other available data to detect any significant anomalies and facilitate their resolution. Using ATS, CBP officers review all cargo shipment information (manifest, entry and Importer Security Filing data) to determine the risk posed by shipments. CBP officers use the ATS information along with other information to help determine which shipments are high-risk and the type of examination that should be conducted, if any.

To further improve ATS' ability to target high-risk cargo, CBP recently published an interim final rule on importer security filing and additional carrier requirements. This new rule requires importers to submit additional data, generally no later than 24 hours prior to the container being loaded onto a U.S.-bound vessel. Also, in addition to what was required under the 24 hour rule, carriers must now submit vessel stow plans and container status messages in certain situations. CBP stated that this additional information will help stabilize ATS scoring as shipments move through the supply chain, allowing for more effective targeting and examination of high-risk level shipments.

CBP has also initiated the Secure Freight Initiative pilot as part of the overall layered security approach. This DHS and Department of Energy program is intended to strengthen maritime cargo security and global nuclear nonproliferation efforts by providing real-time radiographic and spectrographic scanning of maritime shipping containers. The pilot is currently underway at five foreign seaports.

Appendix C
CBP's Layered Cargo Security Strategy

Programs and Initiatives in the Layered Security Improving ATS' Effectiveness



Appendix C
CBP's Layered Cargo Security Strategy

U.S. Customs and Border Protection Officers
CBP Officers are the first line of defense in the security of the supply chain and the last to release the cargo.

Customs-Trade Partnership Against Terrorism (C-TPAT)
Voluntary government-business initiative to strengthen supply chain security. C-TPAT offers participating importers, carriers, consolidators, and brokers an incentive in having less frequent and expedited cargo inspections.

Intelligence Community
Shares critical information as needed, which ATS uses to assess cargo shipment risk.

Automated Targeting System
CBP's risk model system that uses information from multiple sources to screen 100% of the cargo shipped into the United States against a set of rules to determine each shipment's risk level.

100% Cargo Screening
CBP's goal is to screen 100% of U.S.-bound cargo before it leaves the port of origin.

Importer Security Filing
Provides additional advanced cargo information intended to enhance CBP's ability to identify and stop dangerous cargo from entering the United States through ATS risk-based assessments.

24-Hour Rule
Requires the submission of complete and accurate manifest information 24 hours before a container destined for the United States is loaded onto a vessel in a foreign port.

Secure Freight Initiative (SFI)
Initiative to improve the ability to scan containers for nuclear and radiological materials overseas to better assess the risk of inbound containers. This is a joint partnership between DHS and the Department of Energy for radiological equipment acquisition.

Container Security Initiative (CSI)
A reciprocal program enabling bilateral arrangements between CBP and foreign authorities to help identify high-risk containers before they are loaded onto U.S.-destined vessels.

International Ship and Port Facility Security (ISPS) Code
A 2002 amendment to the International Maritime Organization (IMO), International Convention for the Safety of Life At Sea (SOLAS). According to the IMO, the ISPS Code establishes "a comprehensive set of measures to enhance the security of ships and port facilities" that were developed in the wake of the September 11, 2001, attacks against the United States.

USCG Advance Notice of Arrival
U.S. Maritime Domain Awareness safeguards our systems of transportation by integrating legacy information and intelligence systems with current and emerging intelligence capabilities. This includes detailed crew and passenger information and cargo details, as well as voyage history from shipping companies, intelligence and law enforcement community and others 96 hours before arrival at a U.S. port.

Appendix D
Related Automated Targeting System Reports

Report Title	Date Issued
***Audit of Targeting Oceangoing Cargo Containers*, OIG-05-26**	July 31, 2005
***Audit of Targeting Oceangoing Cargo Containers*, OIG-07-09**	November 21, 2006
***Targeting Oceangoing Cargo Containers*, OIG-07-72**	August 28, 2007
***Targeting of Cargo Containers 2008: Review of CBP's Cargo Enforcement Reporting and Tracking System*, OIG-08-65**	June 11, 2008
***CBP's Ability to Detect Biological and Chemical Threats in Maritime Cargo Containers,* OIG-10-01**	October 7, 2009

To obtain copies of these reports, visit the OIG website at www.dhs.gov/oig.

Appendix E
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