Department of Homeland Security
Office of Inspector General

CBP's Ability to Detect Biological and Chemical Threats in Maritime Cargo Containers

(Redacted)

OIG-10-01

October 2009

Report Documentation Page

Form Approved
OMB No. 0704-0188

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1. REPORT DATE **01 OCT 2009**	2. REPORT TYPE	3. DATES COVERED **00-00-2009 to 00-00-2009**
4. TITLE AND SUBTITLE **CBP's Ability to Detect Biological and Chemical Threats in Maritime Cargo Containers**		5a. CONTRACT NUMBER
		5b. GRANT NUMBER
		5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)		5d. PROJECT NUMBER
		5e. TASK NUMBER
		5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Department of Homeland Security,Washington,DC**		8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)
12. DISTRIBUTION/AVAILABILITY STATEMENT **Approved for public release; distribution unlimited**		
13. SUPPLEMENTARY NOTES		
14. ABSTRACT		
15. SUBJECT TERMS		

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**Same as Report (SAR)**	**19**	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18

Office of Inspector General

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

October 7, 2009

Preface

The Department of Homeland Security Office of Inspector General 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 strengths and weaknesses of U.S. Customs and Border Protection's capability to target and detect biological and chemical threats in maritime cargo containers. 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

CBP	U.S. Customs and Border Protection

OIG

Department of Homeland Security
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 cargo inspection targeting system for international intermodal cargo containers. Customs and Border Protection is responsible for operation of the targeting system and conducting cargo container examinations. This review addresses the tools, information, and guidance that the U.S. Customs and Border Protection officers use to examine high-risk containers that potentially contain biological and chemical weapons.

U.S. Customs and Border Protection has taken steps to mitigate the threat of nuclear and radiological weapons in maritime cargo containers, but could do more to mitigate the threats posed by biological and chemical weapons. Customs and Border Protection officials said that new devices are currently being developed and tested that could help officers rapidly detect and identify biological and chemical threats during cargo inspections. However, Customs and Border Protection has not conducted a formal risk assessment to determine which pathways, including maritime cargo, pose the highest risk of biological and chemical weapons entering the Nation. Conducting a formal risk assessment of the various pathways would help ensure that Customs and Border Protection allocates its detection technology development resources to threat pathways that pose the highest risk to national security.

In addition, Customs and Border Protection needs updated policies and procedures on how inspections for such threats are to be conducted. Currently, [redacted] Operating procedures do not require that [redacted] nor do they describe [redacted] conduct the inspections. Without updated policies to focus cargo inspections, biological and chemical threats may go undetected.

Customs and Border Protection concurred with our recommendations to complete a risk assessment and update its policies and procedures for inspecting cargo containers for biological and chemical threats.

Background

U.S. Customs and Border Protection's (CBP) mission includes protecting the American public against terrorists and the instruments of terror. One widely recognized vulnerability for entry of weapons of mass destruction is through the nation's seaports. In 2008, approximately 11 million oceangoing cargo containers arrived at the nation's seaports. To manage this large volume of maritime cargo, CBP employs a layered approach that is centered on advanced intelligence, effective inspections, a secure port environment, and successful implementation of examination policies and procedures.

An effective inspection process includes the screening of shipping information, nonintrusive inspections, and physical examinations. The Automated Targeting System, which uses a complex model of weighted rules, assists CBP officers in screening shipping information and selecting shipments for inspection. 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 either the Automated Targeting System or local officers is held for a nonintrusive inspection. One type of nonintrusive inspection device takes x-ray images of the container, which CBP officers use to identify anomalies such as areas that appear unusual or inconsistent with the container contents listed on the shipping documents. Officers may refer a shipment with unresolved anomalies for physical examination, which may consist of a visual inspection of the container's interior, limited inspection of selected contents, or complete unloading of cargo. Officers also use physical examinations to determine whether a shipment contains undeclared or inadmissible cargo.

Both biological and chemical threats are classified as weapons of mass destruction. Biological threats, such as weaponized anthrax, smallpox, and foot-and-mouth disease, are disease-causing viruses or bacteria that can kill or cause harm to individuals or agricultural resources. Chemical threats, such as sarin and mustard gas, harm individuals or groups of people through exposure to toxic chemical substances.

Results of Audit

CBP has taken steps to mitigate the threat of nuclear and radiological weapons of mass destruction in maritime cargo containers, but could do more to mitigate threats posed by biological and chemical weapons. CBP officials said that new devices are currently being developed and tested that could better enable officers to rapidly detect and identify biological and chemical threats during cargo inspections. However, CBP has not conducted a formal risk assessment to determine which pathways, including maritime cargo, pose the highest risk of biological and chemical weapons entering the nation. Conducting a formal risk assessment of the various pathways would help ensure that CBP allocates its detection technology development resources to threat pathways that pose the highest risk.

In addition, CBP needs updated policies and procedures on how to conduct inspections for such threats. Currently, [redacted] Operating procedures do not require that [redacted] nor do they describe [redacted] conduct the inspections. Without updated policies to focus cargo inspections, biological and chemical threats may go undetected and officers may be exposed to health and safety risks.

Development of Detection Devices

CBP officers use nonintrusive inspection devices to scan cargo containers for anomalies and nuclear and radiological emissions. [redacted]

CBP officials said that new devices are currently being developed and tested that could better enable officers to detect and identify biological and chemical threats during a physical examination. These devices can potentially reduce the time and expertise needed to confirm the presence of a threat once a suspicious container is identified through targeting and x-ray imaging. [redacted]

[redacted]

Risk Assessment of Pathways

As devices and additional resources for detecting biological and chemical threats become available, CBP must determine whether deploying those resources in the maritime cargo environment will provide the most benefit. CBP officials identified a number of pathways within CBP's jurisdiction through which biological or chemical threats might enter the country [redacted] CBP officials must prioritize which pathways should receive the most attention and detection technology development resources to address biological and chemical threats.

CBP has not conducted a formal risk assessment of the pathways by which biological and chemical threats may enter the country as a basis for making its resource priority decisions. In 2007, CBP identified the need for a biological pathway risk assessment of where and how biological threats might enter the nation, but it has not taken significant action to address this need. CBP uses risk assessments prepared by other government agencies to target specific countries, shippers, and shipments for potential biological and chemical agents, [redacted]

One of CBP's biological/agricultural subject matter experts said that, in general, [redacted] However, the opinions of CBP's subject matter expert are not reflected in CBP policies or resource allocations for cargo examination personnel and equipment and are not a complete substitute for a formal evaluation or ranking of the relative risks of the various possible

threat pathways. A formal assessment would help identify which pathways pose the highest risk of biological and chemical weapons entering the country. It would assist in the evaluation of detection technologies under development. By focusing on the various pathways of entry, CBP could also better target its resources and better justify its approach to biological and chemical threat detection in the maritime cargo environment.

Recommendation

We recommend that the Commissioner, U.S. Customs and Border Protection:

Recommendation #1: Conduct or commission a formal risk assessment of potential pathways by which biological and chemical threats may enter the country, and ensure that detection technology resources are allocated to the pathways that pose the highest risk.

Management Comments and OIG Analysis

CBP Comments to Recommendation #1:

CBP concurred in part with our recommendation to conduct or commission a formal risk assessment of potential pathways by which biological and chemical threats may enter the country. CBP is participating in an initiative with DHS [redacted] A second initiative is the DHS [redacted]

Through participation in these initiatives, CBP believes it will be well positioned to identify pathways that pose the highest risk of biological and chemical weapons entering the country. CBP expects that these initiatives will be completed by August 31, 2010.

OIG Analysis

We consider CBP's proposed actions responsive to this recommendation. We encourage CBP to continue these efforts and to maintain focus on identification of pathways that pose the highest risk. We consider this recommendation resolved, but it will remain open until CBP finalizes and provides us with a formal risk assessment of potential pathways by which biological and chemical threats might enter the country.

Cargo Examination Policies and Procedures

CBP has not provided updated guidance to support inspections of cargo containers for biological and chemical threats. The only document that details how cargo examinations should be performed is CBP's [redacted] which was last updated [redacted] Despite the out-of-date guidance, CBP officers have broadened their examination techniques to search for weapons of mass destruction and they are trained to secure and isolate potentially hazardous containers. However, this guidance should be updated to address the current threats posed by biological and chemical weapons.

CBP's guidance also does not specify that officers conducting an examination [redacted] The Automated Targeting System or the local targeting team may identify a container as high risk and refer it for nonintrusive inspection and possibly physical examination. Once a container has been selected for examination, [redacted] The guidance does not [redacted] As a result, [redacted] This could adversely affect the effectiveness of the officers' inspections as well as their personal safety.

A senior CBP official said that each inspecting officer should be knowledgeable of the likelihood of biological or chemical threats concealed within a shipment. However, we observed different operating procedures at several of the ports we visited. At one

port, for example, supervisors emphasized that officers should always know what they are looking for during an examination. At this port, officers performing an examination were given a packet of information that listed shipping information and identified the reason a container was targeted. At another port, supervisors withheld the targeting information so that officers would not be predisposed to search for a specific threat. Updated policies that promote information sharing would provide the examining officers with consistent knowledge of the possibility of biological or chemical threats.

Recommendation

We recommend that the Commissioner, U.S. Customs and Border Protection:

Recommendation #2: Develop and issue guidance to help ensure that Customs and Border Protection officers use consistent processes to examine cargo for all potential threats and are [redacted] for examination.

Management Comments and OIG Analysis

CBP Comments to Recommendation #2:

CBP concurred with our recommendation that it develop and issue guidance to help ensure that CBP officers use consistent processes to examine cargo. CBP stated that the Office of Field Operations has initiated efforts to update the Anti-Terrorism Contraband Enforcement Team National Directive. [redacted]

In addition, the Office of Field Operations has initiated efforts, in conjunction with CBP's Office of Training and Development to explore the development of a training module for CBP officers that would include the different types of inspections/examinations. [redacted] CBP expects that these initiatives will be completed by June 30, 2010.

OIG Analysis

We consider CBP's proposed actions responsive to the recommendation. We encourage CBP to finalize and issue updated guidance as quickly as possible to ensure CBP officers have the most current guidance on cargo examination techniques. We also encourage CBP to pursue the development of a training module on the different types of inspections. We consider this recommendation resolved, but it will remain open until CBP issues and provides us with a copy of the updated guidance.

The purpose of this audit was to determine whether U.S. Customs and Border Protection (CBP) officers have the tools to identify and detect weapons of mass destruction, specifically biological and chemical agents, in maritime cargo containers.

We interviewed government officials located at CBP headquarters in Washington, DC, and the Field Operations Academy in southeast Georgia. We judgmentally selected and reviewed CBP operations at the seaports of [redacted] We also reviewed training material and equipment used in the cargo security process. We developed an understanding of internal controls over the cargo security process by reviewing our prior audit work and CBP's policies and procedures, interviewing knowledgeable CBP officials, and observing cargo inspections. The understanding we gained was used to plan the audit and determine the nature, timing, and extent of tests to be performed.

We did not test the effectiveness of the nonintrusive inspection equipment and the physical examination process that CBP is currently using.

We conducted this performance audit between November 2008 and March 2009 according to 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

July 27, 2009

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

FROM: ACTING DIRECTOR
OFFICE OF POLICY AND PLANNING
U.S. CUSTOMS AND BORDER PROTECTION

SUBJECT: U.S. Customs and Border Protection's Comments on Office of Inspector General Draft Report Entitled "CBP's Ability to Detect Biological and Chemical Threats in Maritime Cargo Containers" – For Official Use Only version

Thank you for providing us with a copy of the draft report entitled "CBP's Ability to Detect Biological and Chemical Threats in Maritime Cargo Containers" – 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 should remain "For Official Use Only" as the verbiage describes limitations and vulnerabilities that could be exploited to better enable biological or chemical attacks.

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 Policy and Planning, at (202) 344-1218.

Attachment

DHS Office of Inspector General's (OIG) Draft Report Entitled "CBP's Ability to Detect Biological and Chemical Threats in Maritime Cargo Containers"
For Official Use Only

CBP Corrective Action Plans

Recommendation 1: Conduct a formal risk assessment of potential pathways by which biological and chemical threats may enter the country, and ensure that resources are allocated to pathways that pose the highest risk.

CBP Response: Concur in Part. CBP is participating in two Department of Homeland Security (DHS) initiatives focused on biological and chemical threats to the United States of America and is working to develop [redacted] in CBP Automated Targeting System (ATS). To supplement its limited expertise in these areas, CBP will draw on the knowledge of DHS bio-terror subject matter experts as well as the knowledge of members of the intelligence community.

[redacted]

[redacted]

[redacted] Through participation in these initiatives and through the use of their recommendations, CBP will be well positioned to identify pathways that pose the highest risk of biological and chemical weapons entering the country. This will support the acquisition and deployment of biological and chemical detection equipment and will ensure that the appropriate guidance and training is provided to CBP personnel.

3

[redacted]

Due Date: August 31, 2010

Recommendation 2: Develop and issue guidance to help ensure that CBP officers use consistent processes to examine cargo for biological and chemical threats and are [redacted] for examination.

CBP Response: Concur. CBP's Office of Field Operations (OFO) initiated efforts to update the Anti-Terrorism Contraband Enforcement Team (A-TCET) National Directive in response to this recommendation. [redacted]

The policy will include the following:

[redacted] This [redacted] assessment will include an evaluation of security threats posed to each port of entry [redacted] These procedures will support a flexible and agile inspection process that applies risk management principles, addresses the threat, ensures the proper utilization of inspection tools/technology, and accurately reports the inspection results. [redacted]

[redacted]

[redacted]

4

[redacted]

In addition, CBP OFO has initiated efforts, in conjunction with CBP's Office of Training and Development (OTD), to explore the appropriate method(s) to develop a training module for CBP officers that would include the different types of inspections/examinations. This training would provide additional guidelines to help ensure the consistency of CBP examinations of all potential threats. [redacted]

Due Date: June 30, 2010

Appendix C
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Executive Director, Cargo Security and Conveyance
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Office of Management and Budget

Chief, Homeland Security Branch
DHS OIG Budget Examiner

Congress

Congressional Oversight and Appropriations Committees, as appropriate

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