The United States Coast Guard's Program for Identifying High Interest Vessels
SEP 22 2009

Preface

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

The report identifies measures that the Coast Guard can take to improve the effectiveness of its scoring matrix for identifying high interest vessels that could pose security risks to the United States. 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

  Coast Guard  United States Coast Guard
  DHS  Department of Homeland Security
  HIV  High Interest Vessel
  OIG  Office of Inspector General

The United States Coast Guard’s Program for Identifying High Interest Vessels
Executive Summary

In the aftermath of September 11, 2001, the U.S. Coast Guard established the High Interest Vessel Program as part of a larger, multifaceted effort to improve its ability to identify and respond to vessels, cargoes, and crews that might pose security risks to the United States. The purpose of our review was to determine whether improvements can be made to the application and oversight of the risk-based scoring matrix used by Coast Guard Sectors to identify high interest vessels that could pose security risks to the United States.

The Coast Guard needs to take steps to ensure that its scoring matrix is being used as intended to identify high interest vessels. Sector personnel are not consistently interpreting the guidance for completing the scoring matrix, resulting in inaccurate vessel scores, and the Coast Guard’s oversight of matrix scoring could be improved to further reduce matrix reporting errors. Further, the Coast Guard Sectors do not consistently archive the scoring data, which could be used to assess implementation of the matrix and identify areas for improvement. Without an effective mechanism to evaluate program performance, the Coast Guard does not have adequate assurance that the layer of security provided by the identification of high interest vessels is operating effectively and that resources are appropriately used to board vessels posing the highest risks to national security.

We made three recommendations to the Coast Guard to improve the application and oversight of the scoring matrix process for identifying high risk vessels. In response to our report, the Coast Guard concurred with our recommendations. We have incorporated the Coast Guard’s response to our recommendations in Appendix B.
Background

Federal regulations require all U.S. and foreign flag commercial vessels greater than 300 gross tons, all vessels carrying certain dangerous cargo, all foreign flag vessels entering Coast Guard District Seven,¹ and all foreign recreational vessels to submit Notices of Arrival to the National Vessel Movement Center at least 96 hours before arrival. Each Notice of Arrival must contain specific information about the vessel, cargo, crew, and passengers (see Figure 1).

In FY 2008, there were more than 68,000 arrivals to U.S. ports of vessels required to file such notices. The United States Coast Guard could mitigate the potential risks posed by these vessels by conducting security boardings on each one. However, the number of arrivals and the Coast Guard’s limited resources signal a need for a risk-based targeting approach.

The Coast Guard established its High Interest Vessel (HIV) Program to address increased U.S. maritime security requirements in the aftermath of the terrorist events of September 11, 2001. The program targets HIVs, or those that might pose high relative security risks to U.S. ports or alternate destinations. The Coast Guard’s Foreign and Offshore Vessel Activities Division manages the HIV Program, while the Coast Guard’s 35 Sector Commands (see Appendix C) are responsible for its implementation. The Coast Guard also created the National Vessel Movement Center to be the central clearinghouse for notifications of vessels arriving at the United States.

While vessels use self-reported data to submit the Notices of Arrival, the Coast Guard employs a multilayered approach to verify this information. The National Vessel Movement Center reviews the Notices of Arrival to ensure their accuracy and completeness. The

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¹ The Seventh District includes South Carolina, most of Georgia and Florida, the U.S. island possessions of Puerto Rico and the U.S. Virgin Islands, and the U.S. Naval reservations in the West Indies and on the northern coast of South America.

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National Vessel Movement Center then electronically transfers Notice of Arrival information to its Ship Arrival Notification System database, where it can be accessed by Coast Guard headquarters and Sector personnel who use it to complete the HIV targeting matrix. This matrix is a risk-based targeting tool that applies relative ranking based on maritime security concerns. Sector staff use multiple databases and intelligence data to complete the matrix, focusing on security factors such as the vessel’s size, cargo, operations, and security performance. Each of these security factors constitutes a component of the vessel’s HIV score. When a vessel’s HIV score meets or exceeds a specific number, the Sector Commander designates the vessel as an HIV and takes action to mitigate the risks it poses.

The Coast Guard Intelligence Program also contributes to the HIV Program by conducting analyses that could affect a vessel’s HIV score. The Coast Guard Intelligence Coordination Center is the national-level coordinator for collection, analysis, production, and dissemination of Coast Guard intelligence. Its Coastwatch Branch screens Notice of Arrival information and performs federal database checks on arriving vessels, cargoes, crews, and passengers.

In addition, the Coast Guard employs intelligence staffs at Area, District, and Sector levels. Each Area has a Maritime Intelligence Fusion Center that provides tactical intelligence analysis and collection, including vessel screening. The Maritime Intelligence Fusion Centers provide a threat warning when intelligence indicates that a vessel, person, or cargo poses a potential threat. Coast Guard vessel boarding teams directly verify Notice of Arrival information whenever Sector Commanders order a security boarding.

**Results of Review**

The Coast Guard needs to take steps to ensure that its scoring matrix is being used as intended to identify HIVs. Sector personnel are not consistently interpreting the guidance for completing the scoring matrix, resulting in inaccurate vessel scores, and the Coast Guard’s oversight of matrix scoring could be improved to further reduce matrix reporting errors. Further, the Coast Guard Sectors do not consistently archive the scoring data, which could be used to assess implementation of the matrix and identify areas for improvement. Without an effective mechanism to evaluate program performance, the Coast Guard does not have adequate assurance that the layer of security provided by the identification of HIVs is operating effectively, and that resources are used appropriately to board vessels that pose the highest risks to national security.
Matrix Scoring, Reporting, and Archiving

The Coast Guard can reduce errors and inefficiencies by strengthening written guidance and ensuring oversight of the HIV matrix scoring process. For example, Commandant Instruction 16614.1B, *High Interest Vessel Targeting Policy*, provides guidance for Coast Guard Sectors to use the matrix to score vessels. The Instruction describes the matrix’s fields and lists sources for staff to consult when assigning points, but does not provide specific procedures on how to use Notice of Arrival information in the HIV targeting matrix, report HIV designations, and archive scored matrices.

Because of the lack of clarity, Coast Guard Sectors misinterpret the guidance, resulting in errors and inefficiencies. For example, HIV Program officials at Coast Guard headquarters rescored 631 matrices from 24 Sectors from June 2008 through January 2009 that were originally designated as HIVs by the Sectors and boarded. Those officials concluded that 14% of the selected matrices had been scored incorrectly and suggested the unnecessary use of Coast Guard resources by boarding vessels that may not have been high interest. Officials indicated that the error rate may have been lower than 14% because the reviewers did not have access to information originally used in the matrix. They also said that Sector misinterpretation of the Instruction and message guidance caused errors in assigning and deducting points from the matrix, primarily regarding port call history and prior boarding history.

Improving Coast Guard oversight of matrix scoring could lead to reducing matrix reporting errors. For example:

- Program officials indicated that for the matrices reviewed from June 2008 through February 2009, there were 14 HIV-related reporting errors in the Maritime Information for Safety and Law Enforcement database.

- Coast Guard HIV Program statistics indicated that one Sector reported no HIVs for calendar year 2008. However, officials at the Sector said that there were 66 HIVs designated during that year. Coast Guard headquarters officials acknowledged that this discrepancy was caused by Sector personnel not correctly entering vessels as HIVs in the Marine Information for Safety and Law Enforcement database.

- The Commandant Instruction contains the following reporting procedure: “For all HIV security boardings conducted, create a special note to expire in one year, that states the key reason why the vessel
was determined to be a HIV.” However, Coast Guard officials told us that from January through May 2009, 44% of the vessels designated as HIVs and boarded did not have special notes attached to their profiles.

Commandant Instruction 16614.1B does not contain written procedures for archiving the results of past HIV matrices. Maintaining the scored matrices could serve several purposes. In addition to creating a vessel history, archiving would allow the Coast Guard to assess the accuracy, timeliness, completeness, and uniformity of HIV scoring, and identify emerging trends that could be used to improve the HIV matrix. However, because the completed matrices are classified, Coast Guard headquarters recommends that Sectors keep them for at least 3 days, or only long enough for analysts to review HIV designations. As a result, Sector Commands do not consistently retain past HIV scorings for future analysis.

For example, the Pacific Area electronic system archives 100% of scored HIV matrices. The Pacific Area also maintains all paper scored matrices for 3 days if its automated system is unavailable. In contrast, Atlantic Area Sectors have varying requirements for archiving completed matrices, ranging from 30 days to 6 months. The Atlantic Area’s automated database system, once operational, will provide a complete archive of all scored matrices.

Coast Guard officials at headquarters have made efforts to improve Sector understanding and compliance with the Commandant Instruction on implementing the matrix process by issuing messages to the Sectors and answering questions from Sector personnel. Furthermore, at one District visited, an HIV Program official determines, on a limited basis, whether its Sectors are in compliance with the Instruction. This District also provides policy guidance and clarification when its Sectors have questions about the Instruction. Although these communications and clarifications may help, more detailed procedures with step-by-step instructions on how to use the HIV matrix could reduce errors and inconsistencies in HIV scoring, reporting, and archiving.

Matrix Scoring Automation

The Coast Guard could improve its efforts to automate matrix scoring to reduce the possibility of human errors. The extent of HIV matrix

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2 The Pacific Area Command is responsible for the maritime states of Alaska, California, Hawaii, Oregon, and Washington. The Command is also responsible for Arizona, Idaho, Montana, Nevada, and Utah, and extends from the North to the South Poles and across the Pacific to Asia.

3 The Atlantic Area Command is responsible for the area east of the Rocky Mountains to the Arabian Gulf, from Canada to the Caribbean Sea.

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automation depends on whether the Sector is located in the Pacific Area or the Atlantic Area.

Sectors in the Pacific Area have made progress in automating the HIV matrix, but more could be done. Sector staff now complete HIV matrices online using software that automatically generates points and calculates scores. However, this automated process could benefit from a user interface to link the HIV matrix with other databases that supply relevant information. Creation of a user interface could reduce the current labor-intensive requirement for personnel to search through multiple databases to complete the scoring matrix.

In contrast, the Atlantic Area still completes the HIV matrix manually. The Atlantic Area is testing the matrix automation software, with a goal of having the system up and running by July 2009; however, officials feel that date may need to be moved back.

Performance Measurement

The HIV Program does not have methodologies in place to measure and evaluate program performance, such as the accuracy, timeliness, and completeness of HIV matrices and the uniformity of scoring across Sectors. The Coast Guard oversees the HIV Program through quality control reviews. Coast Guard headquarters analysts review samples of matrices resulting in HIV designations to determine whether the Sectors scored them according to the Commandant Instruction. As previously stated, from June 2008 through January 2009, 14% of the selected matrices were determined to have been scored incorrectly. Coast Guard officials indicate that this error rate is a reduction from a 24% error rate in April 2008. Although reduced, additional attention is needed to further reduce the 14% error rate. As a result, resources may have been used to board vessels that were not high interest.

As part of these quality control reviews, analysts do not examine any scored matrices of vessels not designated as HIVs. Consequently, HIV Program officials could be overlooking errors in which a vessel should have been designated an HIV but was not. Although it may be difficult to assess the extent to which the HIV Program is improving security at U.S. seaports, output measures that assess HIV scoring matrix implementation would be useful to gauge program performance. Such a methodology would also help identify trends and areas for improvement.

Recommendations

To improve High Interest Vessel Program performance, we recommend that the Commandant of the Coast Guard:
**Recommendation #1:** Clarify guidance and provide oversight to ensure that the High Interest Vessel scoring matrix is used as intended, and that resulting scoring data is accurately reported and archived.

**Recommendation #2:** Complete automation of the High Interest Vessel matrix scoring process.

**Recommendation #3:** Develop and implement a performance mechanism to evaluate High Interest Vessel scoring matrix implementation and identify trends and areas for improvement.

**Management Comments and OIG Analysis**

The Coast Guard provided specific comments to this report and recommendations, which are attached as Appendix B. The Coast Guard concurred with the three recommendations in our report. We consider the three recommendations resolved, but they will remain open until the Coast Guard provides details and documentation on corrective actions taken so that we can determine whether the actions adequately address the substance of our findings and recommendations.

**Management Comments to Recommendation #1**

The Coast Guard concurred with our recommendation to clarify guidance and provide oversight to ensure that the HIV scoring matrix is used as intended and that resulting scoring data is accurately reported and archived. The Coast Guard stated that it is revising user guidance to include more detailed directions regarding the application of the matrix and reporting designation of a vessel as a HIV. The Coast Guard also provided details of other proposed oversight improvements in response to Recommendation #3.

**OIG Analysis**

We consider the Coast Guard’s proposed actions responsive to this recommendation. By revising the guidance for scoring the HIV matrix and providing more detailed directions on applying the matrix and reporting designation of a vessel as a HIV, Sector misinterpretation of the instructions should be reduced, resulting in a lower error rate of matrix scoring. We consider this recommendation resolved, but it will remain open until the Coast Guard provides evidence of revised user guidance to include more detailed directions on how to apply the matrix and report HIV designations.
Management Comments to Recommendation #2

The Coast Guard concurred with our recommendation to complete automation of the HIV matrix scoring process.

OIG Analysis

We consider the Coast Guard’s proposed actions responsive to this recommendation. Our concern with some Sectors not archiving the results of past HIV matrices will be resolved as automation is completed. The Coast Guard has made progress in automating the HIV scoring process. We observed the automated system used in the Pacific Area and also the progress being made in the Atlantic Area. We consider this recommendation resolved, but it will remain open until the Coast Guard provides evidence that the automation of the HIV scoring process has been completed in the Atlantic Area.

Management Comments to Recommendation #3

The Coast Guard concurred with our recommendation to develop and implement a performance mechanism to evaluate HIV scoring matrix implementation, and identify trends and areas for improvement. The Coast Guard stated that program officials and analysts intend to implement regular audits of Notices of Arrival that were not scored as HIVs to measure the accuracy of both automated and hand written matrix scores. In addition, the Coast Guard response stated that program officials have established a standard error rate that, when exceeded, will trigger more extensive review of the HIV instruction application at the Sector level.

OIG Analysis

We consider the Coast Guard’s proposed actions responsive to this recommendation. As detailed in this report, Coast Guard program officials and analysts were reviewing selected matrices that were scored as HIVs, but did not examine those matrices that did not score high enough to be designated as an HIV. Our concern was that program officials could be overlooking errors when a vessel was incorrectly not designated as an HIV. Also, establishing a standard error rate that when exceeded, will trigger more extensive reviews of HIV instructions should be useful in gauging program performance, identifying trends, and pinpointing areas needing improvement.

We consider this recommendation resolved, but it will remain open until the Coast Guard provides evidence that regular audits are being conducted and provides initial results from establishing a standard error rate.
OIG Response to General Management Comments (Appendix B)

The Coast Guard also commented that the draft report did not reflect improvements in matrix scoring due to Coast Guard oversight. The Coast Guard cited statistics showing a reduction in the matrix recording error rate from 24% in April 2008 to 14% at the time of our review. We have revised the report to note the reduction cited by the Coast Guard, but believe more improvement is needed because possibly one in seven vessels continue to be incorrectly scored through the use of the matrix.

Also, the Coast Guard raised concerns regarding our statement that “the Coast Guard does not have adequate assurance that all HIVs are correctly identified and that resources are used appropriately to board vessels that pose the highest risks to national security”. We have revised the report to clarify that we are only addressing the layer of security provided by the high interest vessel program. We also state in the Executive Summary that the HIV program is part of a larger, multifaceted effort to improve the Coast Guard’s ability to identify and respond to vessels, cargoes, and crews that might pose security risks to the United States. Regarding the appropriate use of resources, Coast Guard analysts noted that vessels scored as an HIV in error and boarded could cause a “possible unnecessary use of resources.”
The purpose of our review was to determine whether improvements can be made to the application and oversight of the risk-based scoring matrix used by Coast Guard Sectors to identify high interest vessels that could pose security risks to the United States.

To accomplish this objective, we reviewed applicable laws, regulations, Commandant Instructions, and Department of Homeland Security and Coast Guard procedures and reports relating to Coast Guard intelligence and high interest vessels entering U.S. seaports. We then interviewed officials and obtained supporting documentation at the Office of Intelligence and Criminal Investigations and the Office of Operations at U.S. Coast Guard headquarters in Washington, DC.

We interviewed Coast Guard officials at the Intelligence Coordination Center, the Maritime Intelligence Fusion Centers, the National Vessel Movement Center, and the Foreign and Offshore Vessel Activities Division. We also visited the Office of Naval Intelligence, co-located with the Coast Guard’s Intelligence Coordination Center at the National Maritime Intelligence Center. In addition, we met with an official from the U.S. Customs and Border Protection’s National Targeting Center.

We interviewed officials and observed matrix scoring procedures at various locations. Field Area and District Coast Guard units we visited included Atlantic and Pacific Area Maritime Intelligence Fusion Centers and District offices in Boston, MA; Alameda, CA; and Seattle, WA. Sector Commands we visited included Boston, MA; Hampton Roads, VA; Los Angeles–Long Beach, CA; Portland, OR; San Diego, CA; and Seattle, WA. We also sent and received questionnaires from the Sector Commands in Boston, MA; Portland, OR; and Seattle, WA. We visited Field Intelligence Support Team units in Baltimore, MD; Boston, MA; Hampton Roads, VA; Los Angeles–Long Beach, CA; Portland, OR; San Diego, CA; and Seattle, WA.

We performed initial fieldwork from June 2006 through June 2007. We updated our audit work from December 2008 through February 2009. Our review was conducted under the authority of the Inspector General Act of 1978, as amended. We conducted this performance audit in accordance with generally accepted government auditing standards, except that we relied on Coast Guard data and did not verify data against original documentation. 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 appreciate the cooperation and courtesies extended to our review team by Coast Guard officials. Major contributors to this report are identified in Appendix D.
MEMORANDUM

From: K. A. TAYLOR, RDML
COMDT (CG-8)

To: Assistant Inspector General
Department of Homeland Security

Subj: USCG COMMENTS ON OIG DRAFT REPORT ON HIV PROGRAM (JULY 2009)

Ref: (a) DHS OIG DRAFT Report of July 7, 2009

1. This memorandum transmits the Coast Guard’s response to the Office of Inspector General (OIG) report findings and recommendations contained in reference (a).

2. The Coast Guard appreciates the OIG’s analysis of our HIV program and concurs with the majority of the findings outlined in the report. However, there are concerns with the results of review stating “the Coast Guard has not instituted an effective oversight mechanism, resulting in matrix reporting errors,” and “does not have adequate assurance that all HIVs are correctly identified and that resources are used appropriately to board vessels that pose the highest risks to national security.”

3. With regard to the first statement, the Coast Guard reviews all vessel HIV matrix activities for accuracy in scoring and compliance with the reporting policy contained in the instruction. The review is aimed at determining the source of potential errors in using the matrix. Identified sources are communicated to the District program managers and Sectors for resolution. The rate of potential errors has been reduced from 24% in April 2008 to 14% at the time of this report. The report should recognize those improvements in matrix-use accomplished through HIV program oversight.

4. The statement “the Coast Guard does not have adequate assurance that all HIVs are correctly identified and that resources are used appropriately to board vessels that pose the highest risks to national security” implies vessels posing high risks to national security enter U.S. ports without scrutiny from the Coast Guard. The HIV program is part of a system of layered regimes aimed at detecting and deterring threats to the maritime transportation system.

5. If you have any questions, my point of contact is Mr. Mark Kulwicki at (202) 372-3533. Alternatively, Commander Todd Offutt, my Chief of External Coordination, can be reached at (202) 372-3535.

Enclosure: (1) USCG Comments

The United States Coast Guard’s Program for Identifying High Interest Vessels
UNITED STATES COAST GUARD (USCG) COMMENTS ON THE DEPARTMENT OF HOMELAND SECURITY INSPECTOR GENERAL DRAFT REPORT

TITLE: “U.S. COAST GUARD’S PROGRAM FOR IDENTIFYING HIGH INTEREST VESSELS”

COAST GUARD’S GENERAL COMMENTS ON DHS OIG FINDINGS:

The Coast Guard generally concurs with the findings in the report.

SPECIFIC COAST GUARD RESPONSES TO DHS OIG RECOMMENDATIONS:

Recommendation #1: Clarify guidance and provide oversight to ensure that the High Interest Vessel (HIV) scoring matrix is used as intended and that resulting scoring data are accurately reported and archived.

Concur. The Coast Guard is revising user guidance to include more detailed directions on how to apply the matrix, and report HIV designations of vessels.

Recommendation #2: Complete automation of the HIV matrix scoring process.

Concur. The implementation of an automated scoring matrix for Atlantic Area Sectors is in its final stages. The system is currently being tested for accuracy by select Sectors and is anticipated to be online in the fall of 2009.

Recommendation #3: Develop and implement a performance mechanism to evaluate HIV scoring matrix implementation, and identify trends and areas for improvement.

Concur. Program officials and analysts intend to implement regular audits of advance notices of arrival (ANOAs) of vessels not scored as HIVs in order to measure the accuracy of both automated and manual (hand-written) matrix scores. Moreover, program officials have established a standard error rate, when exceeded, will trigger more extensive review HIV instruction application at the Sector level.

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Appendix C
Maps of Coast Guard Areas, Districts, and Sectors

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Appendix D
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  Washington, DC 20528.

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