

USAWC STRATEGY RESEARCH PROJECT

**THE SECURITY AND DEFENSE OF AMERICA'S PORTS: AN ASSESSMENT OF  
COAST GUARD AND NAVY ROLES, CAPABILITIES, AND SYNCHRONIZATION**

by

Commander Timothy P. Richardt  
United States Navy

Captain Albert Lord  
Project Adviser

This SRP is submitted in partial fulfillment of the requirements of the Master of Strategic Studies Degree. The U.S. Army War College is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools, 3624 Market Street, Philadelphia, PA 19104, (215) 662-5606. The Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation.

The views expressed in this student academic research paper are those of the author and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government.

U.S. Army War College  
CARLISLE BARRACKS, PENNSYLVANIA 17013

# Report Documentation Page

*Form Approved  
OMB No. 0704-0188*

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE <b>15 MAR 2006</b>	2. REPORT TYPE	3. DATES COVERED <b>00-00-2005 to 00-00-2006</b>			
4. TITLE AND SUBTITLE <b>Security and Defense of America's Ports An Assessment of Coast Guard and Navy Roles, Capabilities and Synchronization</b>		5a. CONTRACT NUMBER			
		5b. GRANT NUMBER			
		5c. PROGRAM ELEMENT NUMBER			
6. AUTHOR(S) <b>Timothy Richardt</b>		5d. PROJECT NUMBER			
		5e. TASK NUMBER			
		5f. WORK UNIT NUMBER			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>U.S. Army War College, Carlisle Barracks, Carlisle, PA, 17013-5050</b>		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 <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT <b>See attached.</b>					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES <b>28</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			

## ABSTRACT

AUTHOR: Commander Timothy P. Richardt  
TITLE: Defending America's Ports: An Assessment of Coast Guard and Navy Roles, Capabilities, and Synchronization  
FORMAT: Strategy Research Project  
DATE: 15 March 2006 WORD COUNT: 7,513 PAGES: 27  
KEY TERMS: Homeland Security, Maritime Defense, National Security  
CLASSIFICATION: Unclassified

The National Strategy for Maritime Security discusses the threats to the United States' maritime security through acts committed by nation-states and terrorist organizations. To enforce maritime security, the nation's strategic objectives include preventing terrorist attacks and hostile criminal acts in protection of maritime industry, ensuring the safety of coastal population centers and infrastructure, instituting measures to safeguard the maritime domain to include territorial seas and internal waterways. The United States must thus act to increase security for seaborne commerce, and create depth of enforcement through the assets of the Department of Homeland Security and the Department of Defense to ensure the nation's maritime transportation system is defended and secure. This paper defines the roles of the Departments of Homeland Security and Defense, as well as the respective missions and means of the Coast Guard and Navy to protect the nation's maritime domain. Coordination and interoperability between the two services is reviewed with an emphasis on seams, gaps, and vulnerabilities identified in counter to Coast Guard and Navy efforts to provide security and defense for the nation's maritime boundaries and commercial ports. The paper concludes with recommendations to mitigate those seams and vulnerabilities detected in this research.



## DEFENDING AMERICA'S PORTS: AN ASSESSMENT OF COAST GUARD AND NAVY ROLES, CAPABILITIES, AND SYNCHRONIZATION

In his remarks while recognizing the 213<sup>th</sup> birthday of the United States Coast Guard, the first Secretary for Homeland Security, Tom Ridge stated, "the enemies of freedom have no regard for the innocent, no concept of the just, and no desire for peace. They will stop at nothing to destroy our way of life, and we, on the other hand, we stop at nothing to defend it."<sup>1</sup> The 11 September 2001 terrorist attack on the World Trade Center was a clear message to the world of the intent of terrorist organizations to harm the United States. It also revealed the unique and critical vulnerabilities of open societies, as well as the challenging difficulty in defending these societies from such attacks. As significant progress has been made in reducing America's vulnerability to airborne terrorist attacks, it has become evident that America's maritime approaches provide another avenue which the United States must defend.

The feasibility and effectiveness of waterborne attacks can be deduced from the bombing of USS COLE in 2000,<sup>2</sup> the attack on the French tanker MV LIMBURG in 2002,<sup>3</sup> and the November 2005 assault against the cruise liner SEABOURN SPIRIT.<sup>4</sup> However, it would be a mistake to plan a defense from maritime based attacks from these examples alone, as the challenge facing America is the seemingly unlimited variation in plans, directions, and angles of attack from which terrorists may choose to strike. How they utilize asymmetrical warfare to hit the United States is limited only by imagination and will. For America to defend itself, a layered defense and security network is required, spanning the maritime domain from overseas to the nation's coastline and ports, harbors, and docks.

The purpose of this paper is to address the roles of the Coast Guard and the Navy in the execution of homeland security and maritime defense, and their abilities to carry out their missions and synchronize their effort in support of the strategic objectives identified in the National Strategy for Homeland Security,<sup>5</sup> the goals outlined by the Department of Homeland Security,<sup>6</sup> and the capabilities required by the Department of Defense Strategy for Homeland Defense and Civil Support.<sup>7</sup> What is the capability of the Coast Guard in enforcing port security, and how is the Navy supporting the Coast Guard while ensuring the nation's defense?

### Homeland Security and Maritime Defense

Since the nation's beginning, security of the coastline and of seaports has been a concern and a shared task. On 4 July 1789, President George Washington signed the Tariff Act in response to the need for revenue as a result of the United States' War of Independence with Great Britain. This act authorized the collection of duties on imported goods, required federal

enforcement, for which the United States Customs Service was established for ports of entry, and established the Revenue Cutter Service, tasked to enforce the U.S. Customs laws throughout the nation's ports and maritime domain. Thus, the United States Coast Guard, from its inception, has been charged with protecting America's ports and waterways.<sup>8</sup>

Before 9/11, the primary homeland maritime focus for the United States was on the safe and efficient use of the nation's waterways and the prevention of criminal acts. The events of 9/11, however, changed the focus of maritime security from fear that another terrorist attack via exploitation of the maritime domain would occur. National security was thrust to the forefront as application of the United States' National Security Strategy abruptly shifted from a Cold War posture of deterrence, to a position and strategy centered on pre-emption. The President of the United States revised the national strategy and established the Department of Homeland Security with the strategic objectives of preventing terrorist attacks within the United States while reducing America's vulnerability to terrorism.<sup>9</sup>

The Homeland Security Act of 2002 was created to mobilize and organize the nation in defense from terrorist attacks, and established the Department of Homeland Security (DHS). This new department was established as the lead agency and unifying core for the multitude of federal organizations already working to keep the nation secure, but without a synchronized unity of effort. As a result, federal agencies, essential toward ensuring the security of the United States, were transferred to the Department of Homeland Security, and include the Coast Guard, the Immigration and Naturalization Service, and the Transportation Security Agency.<sup>10</sup>

Homeland security is defined as the prevention, preemption, and deterrence of, and defense of aggression targeted at U.S. territory, sovereignty, domestic population, and infrastructure, as well as the management of the consequences of such aggression and other domestic emergencies.<sup>11</sup> In support of homeland security, the Coast Guard serves as the lead federal agency for Maritime Homeland Security, and the Federal Maritime Security Coordinator for all U.S. ports. As the lead agency within the Department of Homeland Security, the Coast Guard coordinates with the Federal Bureau of Investigation (FBI), U.S. Marshals, U.S. Customs, the U.S. Immigration and Naturalization Service, and the Department of Defense (DOD), particularly U.S. Northern Command (USNORTHCOM). The Coast Guard coordinates with other non-federal agencies as well, such as state and local law enforcement organizations. The overall mission for the Coast Guard within the DHS is to protect the nation's maritime domain, to include the Maritime Transportation System, and to deny the exploitation by terrorists of the maritime domain, as a means for attacking the United States, its territories, population, and infrastructure. To achieve this, the Coast Guard has sought to enhance maritime security

operations; minimize gaps in port security; increase proficiency in security enforcement; leverage partnerships with other organizations to mitigate security risks; and increase domestic maritime awareness and readiness for homeland defense operations.<sup>12</sup>

Homeland defense is the protection of the nation's sovereignty, territory, domestic population, and critical infrastructure against military attacks deriving from outside the United States. Throughout the history of the United States, the highest priority of the Department of Defense was to protect the United States homeland from attack. To achieve this, DOD conducts global operations to deter, prevent, and defeat threats and aggression against the United States. As the Department of Homeland Security is more domestically oriented, DOD is globally focused toward a forward leaning, offensive layered defense of the nation with the intent of defeating enemies of the United States as far from the U.S. homeland as possible. In order to best implement this active, layered, global defense, DOD integrated the military's capabilities throughout forward areas of the world with the geographic approaches to U.S. territory. This strategy includes achieving maximum awareness of potential threats, and deterring, intercepting, and defeating all threats to the U.S., including state directed and non-state sponsored threats.<sup>13</sup>

The Department of Defense established USNORTHCOM in 2002 as the United States' Regional Commander responsible for planning, organizing, and executing homeland defense and civil support missions throughout the country, including Alaska and all territorial waters. U.S. Pacific Command is responsible for providing homeland defense and civil support for Hawaii and all US territories throughout the Pacific region.<sup>14</sup>

Within DOD, supporting combatant commanders have implemented a layered strategy for homeland and maritime defense, with the Navy as the lead service responsible for detecting, identifying, and intercepting maritime based threats to U.S. national security. To accomplish this vast mission, the Navy is charged with: 1) detecting, identifying, and tracking maritime threats throughout the world's forward regions; 2) maintaining wide-area surveillance and reconnaissance of U.S. maritime approaches; 3) providing appropriate levels of warning to homeland security agencies on any detected maritime threats approaching the U.S. mainland.

In addition, the potential for weapons of mass destruction (WMD) entering the nation's ports and waterways is a particular concern of the Department of Defense. Accordingly, the Navy is responsible for detecting state and non-state actors armed with, or transporting WMD on the high seas, and to intercept the threat while it is still at a safe distance from the U.S. coast.

Utilizing the National Strategy for Homeland Security, the Departments of Homeland Security and Defense focus on six areas to defend and secure the nation. These include intelligence and warning, border and transportation security, domestic counterterrorism, protecting critical infrastructure, defending against catastrophic terrorism, and emergency preparedness and response.<sup>15</sup> In support of these objectives, both departments depend heavily on the Coast Guard and Navy to execute their respective missions in the execution of maritime security and defense. The effectiveness of any strategy is ultimately in the hands of those charged with its implementation, and both services have carefully planned how to best support their strategies for enforcing maritime and port security in the areas of force structure, technology and funding, in the face of an increasingly dynamic international environment, and an intelligent and challenging world terrorist organization determined to bring harm to the United States and marginalize America's influence around the world.

#### The Coast Guard's Execution of Port Security

On 25 November 2002, the Maritime Transportation Security Act (MTSA) was signed into law with the primary function of increasing security at U.S. ports by protecting entry points and other vulnerable areas of port facilities, and inspecting cargo containers entering U.S. ports. This act created a framework for enhancing the nation's maritime security and directed the DHS and the Coast Guard to develop national Area Maritime Transportation Security Plans.

Using the National Strategy for Maritime Security and MTSA for direction, the Coast Guard has focused its maritime and port security mission on preventing terrorist events from occurring within the maritime domain of the United States. To achieve this, the Coast Guard concentrated on achieving and maintaining maritime domain awareness; detecting, deterring, and defending against attack; monitoring and controlling the movement of high-interest vessels; defending maritime borders and coastal approaches; safeguarding the U.S. maritime transportation system; and reducing America's vulnerability to terrorism.<sup>16</sup> Providing security for the nation's ports, waterways, and coastline, the Coast Guard has dramatically ratcheted up its port security mission to offset acknowledged vulnerabilities in maritime security which continues to draw national as well as international attention.<sup>17</sup> With 39,000 active duty and 8,100 selected reserve personnel, the Coast Guard has grown from a force of 36,000 since 9/11. Expanding to meet the increased requirements of providing port security against terrorist attack, the Coast Guard has increased the number of personnel and assets assigned to the nation's major ports, while still maintaining other traditional Coast Guard missions such as immigration, fisheries, drug enforcement, and the nation's marine navigation system.

The smallest of the five uniformed services, the Coast Guard's monumental task is to provide security to 361 U.S. commercial and government ports spread over an area of 95,000 miles of coastline. To execute this vast undertaking, the U.S. Coast Guard enforces a wide range of security measures for ships entering the U.S., with attention on regions that encompass the country's busiest major ports: Boston, New York, New Jersey, Baltimore, Norfolk and the Chesapeake Bay, Charleston, Miami, New Orleans, Houston and Galveston, San Diego, Los Angeles and Long Beach, San Francisco, Seattle and Tacoma, and Alaska as well as Hawaii.

#### Administrative Enforcement

In order to ensure security for U.S. ports which receive over 7,500 foreign flagged ships each year,<sup>18</sup> the Coast Guard made a number of changes in an ongoing and urgent effort to identify, track, and monitor the large number of ships that enter through the nation's maritime borders.

Organized into major areas, the Atlantic and Pacific, and nine districts encompassing the U.S. coastline from New England to Alaska, each District Commander oversees security for the ports within his or her region. For example, the First Coast Guard District includes all U.S. ports from Maine to New York and New Jersey, while the Seventeenth district covers the ports of Alaska and Prince William Sound. The Fifth, Seventh, Eighth, Ninth, Eleventh, Thirteenth, and Fourteenth Coast Guard District Commanders likewise are responsible for all ports and waterways included within their respective districts, with the Eighth District encompassing the ports of New Orleans and Houston-Galveston, as well as the inland ports along the Mississippi and Ohio rivers. The Ninth Coast Guard District covers the ports along the Great Lakes, and the Fourteenth District covers maritime security for Hawaii and Guam.

Within each district, a Coast Guard Captain of the Port Zone is assigned to each major port. Wielding significant authority, Captains of the Port are responsible for all security operations within their Marine Inspection Zone, and can employ any measure deemed necessary to ensure safety and security of the port, associated areas, and infrastructure.<sup>19</sup> This authority includes the power to enact safety and security standards for all port facilities, to enforce civil penalties and collect fines, and to close a port, or a portion thereof, if concerns and directives are not addressed by the port's management, companies, and operators.



Figure 1. Coast Guard Areas and Districts<sup>20</sup>

### Enhanced Enforcement

Since 9/11, Captains of the Port Zone have implemented passenger vessel and port terminal security plans to the maximum extent possible during periods of heightened awareness, such as determinations that are made that the threat of an unlawful act against a vessel or terminal is probable or imminent and intelligence indicates that terrorists have chosen specific targets within the jurisdiction of a local port authority.

In addition, the Coast Guard has extended the notification timelines for all vessels entering the U.S. by requiring ships to submit a Notice of Arrival, 96 hours in advance of crossing the U.S. 12 mile maritime border. This notice was expanded from a pre-9/11 stipulation that required only 24 hours advance notice. The Coast Guard has also increased notification requirements for vessels carrying cargoes of interest, considered as potentially dangerous or hazardous, such as containers of fertilizer, chemicals, or electronic equipment. Ships designated by the Coast Guard as vessels of interest now must submit an Advance Notice of Arrival with detailed information on the ship's crew and passengers, their dates of birth, nationality, and passport or mariner's documentation, the name of the vessel, country of registry, call sign, official number, the vessel's owner, operator and classification, as well as a general description of the cargo, and the name of and date of departure from the last port.

The Coast Guard also works closely with operations and security personnel at the International Council of Cruise Lines which represents the bulk of large passenger vessels operating out of the United States. Examples of added security measures mandated by the

Coast Guard include restricted areas around vessels carrying passengers, and embarkation and debarkation points protected by fences or walls protected by intrusion detection systems and security patrols. Other security measures include the screening of all baggage, cargo, and stores that are placed on a cruise liner, and the screening of passengers before they are allowed to board the ship.

#### Waterfront Security

As a measure to enhance port physical security, the Coast Guard implemented the Sea Marshal program to enhance port safety and security, and to reduce the threat of using a commercial vessel as a terrorist instrument. Sea Marshals, while trained to neutralize terrorist tactics employed to gain control of commercial carriers perform armed escort duties for ships' pilots who have traditionally met arriving vessels out to sea or at the port's entrance, guide the visiting ships in to safe harbor. These armed escorts are assigned to major ports nationwide to enhance safety and security, and are highly trained law enforcement officers strategically placed on board deep draft vessels transiting U.S. ports to deter and thwart potential terrorist actions. They provide armed security on the bridge of the vessels, while providing protection to the pilots, masters, and bridge navigation teams during the ship's transit in to a U.S. port. The number of Sea Marshals boarding a ship varies from two to six, depending on the type of vessel and other factors, such as the vessel's size, cargo, ship's information, as well as the identification of critical areas on the ship. Once aboard, Sea Marshals meet with the vessel's captain to explain their purpose and check cargo manifests and crew lists. They then stand guard in key areas, such as the bridge, ensuring that only authorized personnel remain in control of the ship at all times while approaching, and inside a U.S. port.<sup>21</sup>

Patrolling the waterfront areas for increased security and response at each of the nation's major commercial ports, the Coast Guard utilizes Maritime Safety and Security Teams (MSSTs).<sup>22</sup> Made up of approximately 75 to 105 persons, MSSTs, like the Sea Marshals, are unhindered by the restrictions of the Posse Comitatus Act which forbids DOD counterparts from engaging in law enforcement activities. Primarily focused on security and harbor defense, these mobile, multi-mission law enforcement teams patrol port areas and adjacent waterways on armed speedboats while providing maritime interdiction and law enforcement services in the prosecution of waterborne anti-terrorism and force protection duties. Based regionally for immediate response to more than one U.S. port, the highly mobile MSSTs provide quick response capability for rapid deployment via air, ground, or sea transportation in response to any emerging maritime security missions.<sup>23</sup> MSSTs provide enhanced port safety and security

and law enforcement capabilities to economic and military ports around the country, and deploy on Coast Guard and Navy vessels in support of port safety, security, drug enforcement, and other related maritime security missions.<sup>24</sup>

The Coast Guard has increased port security and safety through the use of Port Security Units (PSU). Primarily manned by select reserve personnel working with active duty counterparts, PSUs provide waterborne and limited land-based protection for U.S. shipping and critical port facilities as stand-alone elements, and as a supplement to the MSSTs at major U.S. ports. Able to operate on short notice, PSUs deploy within 24 hours of notification and establish operations within 96 hours.

Concerned about threats from beneath the water's surface, the Coast Guard has taken steps to initiate a network of sensors and the deployment of divers for all of the ports where the MSSTs operate. As a measure to thwart underwater attacks or smuggling operations, this system utilizes underwater sonar, dive teams, and remotely operated sub-surface vehicles equipped with sonar, video equipment, and cameras. Currently, Coast Guard MSST divers conduct underwater searches and inspections on vessels of high interest, while remotely piloted vehicles are used in areas deemed too dangerous for divers, as well as for random pier and ship hull inspections.<sup>25</sup>

#### Cutters, Boats and Aircraft

The Coast Guard utilizes a number of surface and air platforms in support of providing security for the nation's ports and waterways. These include the 87-foot Marine Protector class Coastal Patrol Boat, the 41-foot multi-mission Utility Boat, and the 25-foot Transportable Port Security Boat, a twin engine boat capable of speeds in excess of 40 knots, as well as a design for transport via the C-130 aircraft in addition to more conventional means of deployment.<sup>26</sup> Aircraft utilized for maritime and port security include the HU-25 Surveillance plane and the HC-130 Long Range Surveillance plane also used for the transport of personnel and assets. The Coast Guard also relies on the MH-60 Medium Range Recovery, and the MH-68A Short Range Armed Interdiction helicopters.<sup>27</sup>

For meeting commercial vessels further out, away from U.S. ports, the Coast Guard has a fleet of 378 and 270-foot cutters outfitted with Specific Emitter Identifiers, high-resolution detectors that can identify the presence of radiological materials.<sup>28</sup>

#### Intelligence

Relatively new to the intelligence world, the Coast Guard now has two intelligence facilities established for the purpose of enhancing maritime and port security. Located on each

coast, U.S. Coast Guard Intelligence Fusion Centers operate 24 hours a day to gather and collect information on international shipping and related maritime threats. The information is distributed to the nine Coast Guard districts and to all Captains of the Port Zones.

Coast Guard Intelligence Fusion Centers also provide information to the Navy for enhanced maritime defense, and routinely compare data with the Navy's Office of Naval Intelligence for any additional information on potential maritime threats approaching the U.S.<sup>29</sup>

#### Port Assessments

The Coast Guard is in the process of conducting security assessments of both foreign and domestic ports utilized for U.S. shipping, and produces detailed vulnerability assessments of specific vessels and port facilities. These vulnerability assessments identify and address such things as vessel types, ports, and facilities that could potentially pose a high risk of being involved in transportation security incidents. Responding to requirements listed in the Marine Transportation Security Act, the Coast Guard performs antiterrorism assessments at foreign ports where the majority of cargo containers destined for the United States are loaded onto ships. By establishing an International Port Security Program, the Coast Guard's aim is to assess the effectiveness of antiterrorism measures at ports overseas. This program entails visits to 135 foreign and domestic ports every three years. To date, the Coast Guard has completed Port Security Assessments on 55 U.S., and 11 foreign ports identified as major departure points for cargo containers bound for the U.S.<sup>30</sup>

As a result of Port Security Assessments, the Coast Guard is determining the current state of security at U.S. ports. These assessments have determined that substantial work remains to ensure effective port security with a projected cost of \$7.3 billion over the next 10 years, shouldered mainly by shipping companies and port facilities.<sup>31</sup>

Steps to improve security are now in progress. These include a Coast Guard requirement that all cargo and passenger vessels in U.S. waters (an average of 9,000 a day), and the 3,200 port facilities and off-shore oil rigs to develop and implement security plans, or face a \$10,000 fine. In addition, commercial vessels entering U.S. ports must have automatic identification systems installed to allow monitoring by Coast Guard and other U.S. agencies.<sup>32</sup>

#### Summary

While ensuring security for the nation's ports, the Coast Guard spent \$1.5 billion in 2005, up from \$1.3B the year prior.<sup>33</sup> In 2004 alone, the Coast Guard conducted 43,000 surface and air patrols at U.S. ports, escorted over 7,200 vessels, performed 29,000 security boardings,

conducted 20,000 inspections on commercial vessels, and maintained more than 115 security zones for U.S. Navy ships.<sup>34</sup>

### The Navy's Execution of Port Defense

#### Forward, Offensive Defense

The Navy executes its mission of homeland and port defense under the premise that homeland security requires a layered, in-depth, and forward postured maritime defense, with decisive operations in support of homeland defense occurring as far from the U.S. coast as possible. In the conduct of the United States' Global War On Terror, the Navy has maintained a strategic role, providing a forward deployed, global presence and maritime expression of national force. In conjunction with naval support to Operations ENDURING and IRAQI FREEDOM, the Navy continues to execute a global deterrence to recognized and potential enemies, and conducts diverse and significant interdiction operations on the high seas and throughout the world's literals, thwarting illegal arms smuggling, nuclear proliferation, piracy, and other potential terrorist threats. This strategy is traditionally, and still remains, a fundamental and effective principle of sea power for the U.S. Navy.

#### Organization for Maritime Homeland Defense

As a result of 9/11 and following the establishment of USNORTHCOM, the Department of Defense established a chain of command for maritime forces to ensure of sustained and enhanced deterrence, defense in depth, and emergency response attacks against the U.S. homeland. To support this, the Navy maintains a Maritime Alert Posture (MAP) based on a scale of 5 to 1, which increases in postures of readiness from a 5 (sustained deterrence), through 4 (enhanced deterrence), 3 (pre-decisive operations), 2 (decisive operations), to 1 (major combat).

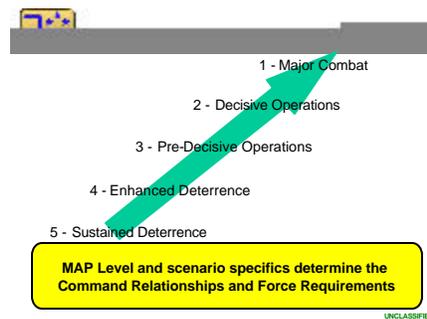


Figure 2. Maritime Alert Posture (MAP)<sup>35</sup>

Throughout periods of MAP 5 and 4 (normal and enhanced postures of readiness), the Navy's Atlantic Fleet is aligned under the U.S. Joint Forces Command, and the Pacific Fleet operates under the direction of Pacific Command, while the Joint Forces Maritime Component Command, currently the U.S. Navy's Fleet Forces Command, maintains a supporting role for both of the fleets. However, when Maritime Alert Posture 3 (pre-decisive operations) is implemented by the DOD and USNORTHCOM, the Joint Forces Maritime Component Command assumes tactical control over the Atlantic and Pacific Fleets and directs, from a single source, all DOD maritime operations. In addition, when MAP 2 or 1 (decisive operations and major combat) is executed, the Navy's Atlantic and Pacific fleets take operational control of Coast Guard Defense Forces assigned to those areas in defense of the U.S. homeland.

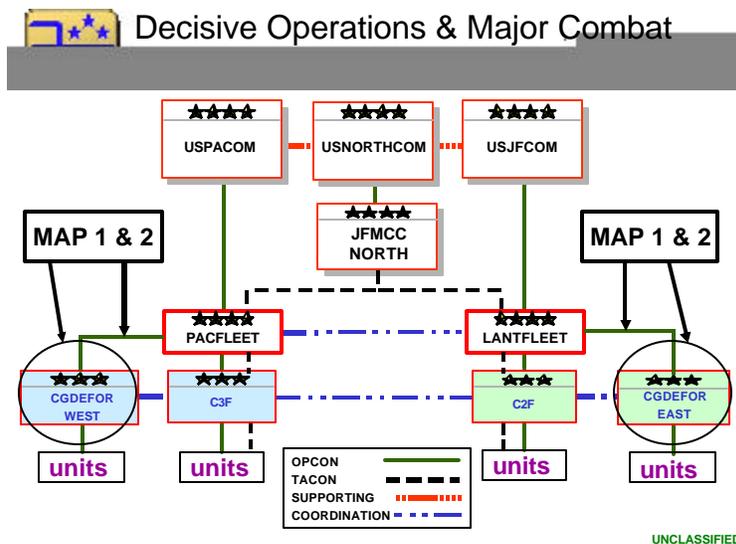


Figure 3. Organization of USN and USCG forces during MAP 1 & 2<sup>36</sup>

#### Maritime Defense Initiatives

As a result of National Security Presidential Directive (NSPD-41), the Navy continues to cultivate relationships and develop capabilities to maximize the advantage the maritime domain brings to homeland security. The Navy has broadened and synchronized its relationship with the navies of allies in the Global War On Terror, and expanded the Proliferation Security Initiative to other countries while cultivating bilateral vessel boarding initiatives in all hemispheres. The Navy is also integrating intelligence and command and control systems with other governmental agencies to include the Coast Guard, to effectively evaluate the maritime

environment for anything that could adversely influence the nation's security, safety, or economy.

The Navy has developed its role in the Maritime Domain Awareness concept to identify threats as early and as distant from U.S. ports as possible. The Navy has also worked with other agencies within the Department of Defense and with the Department of Homeland Security to develop a comprehensive national maritime security response plan to address specific security threats and command and control relationships.

In order to continue sustained, global, offensive operations, the Navy has implemented a Fleet Response Plan (FRP). The FRP fundamentally changes the way the Navy operates its forces and fleet of 281 ships, while providing a higher level of sustained readiness and providing a surge capability necessary for the global security environment.<sup>37</sup>

The Navy has also developed "Sea Power 21" for operating well into the 21<sup>st</sup> century while focusing on the importance of agility and flexibility in light of today's global threats to maritime security. Sea Power 21 includes the coordinated employment of carrier strike groups, expeditionary strike groups, submarines, combat logistics force ships, maritime pre-positioning force platforms, and will later include high speed support vessels.<sup>38</sup>

In addition, the Navy is reintroducing Riverine units, not seen since the Vietnam war. These units promise to be a significant asset in the Global War On Terror, with the goal of pushing the front lines of maritime defense as far forward as possible. Creating an initial force of three 12-boat squadrons with a total force of 700 sailors, the Navy's first post-Vietnam riverine mission will be to patrol the Euphrates River in Iraq with the goal of thwarting insurgents' use of the river's shallow waterways as critical lines of communication. Likewise, the Navy plans to deploy these forces in other littorals of the world, to the Pacific region and elsewhere, as the potential for terrorists' movement of weapons, personnel, and arms on the rivers exists, as these critical enemy lines of communication cannot be interdicted by land based forces.<sup>39</sup>

#### Summary

Orchestrating its strategy of forward, offensive defense, the Navy continues to operate as it has done throughout its history. Direct involvement in harbor and coastal defense has seldom been a primary mission of the Navy, as the service continues to concentrate its efforts on deterring and striking threats to America's homeland, from a distant, forward leaning, offensive posture.<sup>40</sup>

## Coast Guard and Navy Synchronization

### Unity of Effort

Although the Coast Guard and Navy have a history of collaboration spanning over two centuries, both services realized the unprecedented threat facing the nation as a result of 9/11. In response, major strides in force recapitalization and transformation have been made. Even prior to the Global War On Terror, the two services recognized the need for a cohesion of effort in maritime security and defense, as the National Fleet Policy Statement was signed in 1998 (it was later updated in 2002) by both the Chief of Naval Operations and the Commandant of the Coast Guard. Under the leadership of an established Navy-Coast Guard Board, the two services now work together to plan and build a National Fleet of shared assets, personnel resources, and shore Command and Control nodes toward optimized effectiveness throughout the nation's maritime domain. In addition, the 2002 National Fleet Policy directed both services to further synchronize multi-mission platforms, infrastructure, and personnel to gain the highest level of naval and maritime capability.<sup>41</sup>

Since 9/11, the two services have met to align homeland security, defense, roles, and to define and delineate other responsibilities. This renewed partnership has improved global intelligence by the establishment of an all-force maritime tracking operation, as the Navy is providing global intelligence and satellite imagery while tracking ship movements at sea and through ports all over the world.

### Compatible Initiatives

Both services are seeking greater overall collaboration, as evidenced by plans to develop assets aligned toward a layered and integrated defense of the U.S. homeland. The Coast Guard is developing an integrated deepwater system which incorporates a new national security cutter, offshore patrol cutter, and other platforms designed to enhance port security. The Navy, in close coordination with the Coast Guard, is aggressively pursuing funding to build a Littoral Combat Ship (LCS), a multi-mission destroyer, and a guided missile cruiser, all of which will maintain interoperability with the new Coast Guard cutters. The LCS design is optimized to assure access and the ability to exploit littoral waters as maneuver space for naval, joint, and combined expeditionary forces in the execution of a myriad of mission areas to include proliferation and asymmetric threats from mines, diesel submarines, and small, fast surface craft. In addition, the LCS will be capable of performing other duties such as intelligence, surveillance, and reconnaissance, homeland defense, special operations, and logistics support.<sup>42</sup>

The Coast Guard's contribution to the National Fleet includes its statutory authorities (law enforcement), multi-mission cutters, boats, aircraft, and C4ISR systems designed for the full spectrum of maritime security missions.<sup>43</sup> This, in conjunction with the Navy's efforts through Sea Power 21 to streamline its approach to warfare and defense of the homeland, the Coast Guard's deepwater program likewise upgrades surface and air assets while developing more capable platforms, including improved systems for command, control, communications, computers, intelligence, surveillance, and reconnaissance and advanced logistics capabilities. When fully implemented, the total integrated deepwater system will consist of three classes of cutters and associated small boats, upgraded fixed-wing aircraft, new and upgraded helicopters, and unmanned aerial vehicles launched from both land and from larger Coast Guard cutters.<sup>44</sup>

Although these are separate acquisition programs from the Navy's Sea Power 21 project, the goal of both services is to ensure future Coast Guard air and surface platforms are fully compatible in areas of command and control, and in operational capabilities with those platforms utilized by the Navy. These shared objectives by both services emphasize Navy-Coast Guard collaboration in the development of fully interoperable, compatible, and complimentary forces that share the responsibility to meet national maritime security and defense needs.

#### Joint Exercises

Both departments, Homeland Security and DOD have increased maritime threat response and interoperability training over the last two years, and conducted eleven exercises during the last year which focused on joint maritime security response and interdiction; detection and prevention of mining and other attacks on U.S. ports; the detection and interdiction of targeted vessels and cargo; and terrorist attacks on vessels carrying U.S. citizens.

Examples of these events include Exercise LEADSHIELD and ROGUEX which combined the Coast Guard's Pacific Area units and assets with those of the Navy's Third Fleet in response to a simulated mining of the ports of Los Angeles and Long Beach. Other joint training events such as Exercise NORTHERN EDGE stressed the integration of Coast Guard, Navy, and Air Force commands, and established critical venues for joint Command and Control in response to attacks in the North Pacific region and Alaska coast.<sup>45</sup>

#### Integrated Intelligence

The Coast Guard and Navy have also taken important steps in the sharing of information and intelligence for improved port security. The Coast Guard now has two Maritime Intelligence Fusion Centers, for the collection and dissemination of tactical intelligence on ship movements,

mariners, migration, smuggling, high-risk vessels, port security, and threat assessments on the ports and waterways of both U.S. coasts and the Caribbean. These centers produce daily intelligence briefings and teleconferences for each Coast Guard district and for the Navy's Fleet headquarters, in addition to providing data to all members of the nation's intelligence community.<sup>46</sup>

The Navy's contribution to maritime related intelligence is likewise critical in the Global War On Terrorism. Naval Intelligence provides the Coast Guard with maritime intelligence on global merchant shipping activities in support of homeland defense, counter-proliferation, and customs enforcement. Naval Intelligence also monitors maritime shipments of goods to identify illicit cargoes of military systems and nuclear material, and provides to the Coast Guard, data and imagery of vessels of high interest, their at-sea and in-port movements and activities.<sup>47</sup>

#### Shared Assets

Another area of Coast Guard - Navy synchronization includes the use of Navy Cyclone-class coastal patrol ships in support of Coast Guard maritime security missions. Having signed an agreement whereby the Navy pays for maintenance and operations, the vessels operate under tactical control of the Coast Guard. Currently, 6 of the 13 ships conduct homeland security patrols, vessel escort operations, ship boardings, as well as security zone patrols around naval ships, military loading operations, and critical infrastructure such as off-shore oil rigs, in-port oil refineries and natural gas platforms.<sup>48</sup>

#### Findings: Seams and Vulnerabilities

The Coast Guard and Navy approach to port security and defense is an in-depth strategy providing for both a long range "preventive" maritime defense that is well to seaward, and enhances the Coast Guard's execution of and capabilities toward the daunting challenge of a goal-line defense inside U.S. ports and waterways. Layered defense offers the best opportunities to identify and prosecute threats to U.S. maritime homeland security as far from U.S. shores as possible. Since 9/11, the Navy and the Coast Guard have both executed their respective missions extremely well. The Navy, operating far forward, distant from U.S. shores, continues to patrol the high seas and peripheries for terrorists, pirates, and enemies of the U.S., while the Coast Guard proficiently manages a seemingly overwhelming task of ensuring security for U.S. ports.

The two services' seemingly well integrated and layered strategy of maritime defense and security is effective and has proven successful to date since the 9/11 terrorist attacks. Historically, coordination between both sea services has been strong, and the Global War On

Terror, to include port security and defense, has only strengthened this bond and urgent sense of joint cooperation. This is highlighted by the sharing and integration of intelligence, assets, and manpower. Still, in light of ongoing efforts to further synchronize and coordinate Coast Guard and Navy efforts in homeland defense, a seam exists in the following area:

#### Seam: Shared but Separated Intelligence

Both the Coast Guard and the Navy have intelligence facilities with data and information that is distributed between both services and throughout the intelligence community. Critical information (including satellite imagery when requested) on vessels of interest, their ports of origination, movements, and destinations, as well as intelligence covering the contents of cargo containers destined for the United States is provided to the other service on request. The primary sources for this information are the Navy's Office of Naval Intelligence (ONI) at Suitland, Maryland, and the Coast Guard's Maritime Intelligence Fusion Centers located at Dam Neck, Virginia and Alameda, California. However, a seam exists within the shared intelligence as each service does not assign a liaison officer (LNO) and associated personnel at either the Coast Guard, or the Navy's intelligence centers. This lack of direct inter-service liaison creates a seam as both the Coast Guard and Navy are focused on the same strategic mission, but for each service, a different objective. Currently, a Coast Guard LNO cell, who's primary focus is on domestic port security, is not assigned to the Navy's Office of Naval Intelligence. Likewise, Naval Intelligence LNOs are not working within the Coast Guard Fusion Centers, and thus, do not have direct access, or maintain a focus on potential threats to Naval forces overseas and at home. Instead, both Navy and Coast Guard intelligence assets work independently of each other, and are not fully integrated for a seamless maritime defense posture.

#### Vulnerability: Inadequate Maritime Tracking

The U.S. maritime jurisdiction represents a daunting test for the Coast Guard and the Navy in providing maritime defense and security for the nation. The U.S. coastline contains more than 1,000 harbor channels with 25,000 miles of inland intra-coastal and coastal waterways that serve 361 ports containing more than 3,700 passenger and cargo terminals.

The Coast Guard and the Navy are grappling with this challenge with an increased sense of urgency due to the growing threat of international terrorism. Both services continue to make homeland defense and security a priority, and have coordinated their efforts and integrated assets. However, a major vulnerability exists in the area of inadequate tracking of maritime traffic approaching, and entering the nation's maritime borders and ports.

Annually, the U.S. Maritime Transportation System manages over 2 billion tons of freight, 3 billion tons of oil, more than 134 million ferry passengers, and an estimated 7 million cruise ship travelers. The dimensions of this unquestioned difficult task confronting the Coast Guard and the Navy, centers on an estimated 7,500 foreign flagged ships, manned by 200,000 foreign seamen, entering U.S. ports every year. The more than six million cargo containers that enter annually represent two-thirds of the total value of all U.S. maritime trade.

Over twenty-one thousand cargo containers arrive in the United States each day, off-loaded and concentrated in less than a dozen ports. These are chiefly the same major ports previously identified in this paper. Additionally, approximately five thousand vessels of all types, pleasure boats, fishermen, tugs, oilfield-support vessels, and research ships are active every day in the vast area from fifty to a thousand nautical miles offshore. All of these vessels are large enough to conceal significant and potentially dangerous cargoes, and to sail into the major U.S. ports as well as smaller and discrete moorings and anchorages.<sup>49</sup>

The United States currently has no system in place to track and monitor this high volume of maritime traffic transiting the world's oceans and entering U.S. ports. This places the nation's ports, infrastructure, and adjacent population centers at great risk.

### Recommendations

#### Assign Liaison Officers to Coast Guard and Navy Intelligence Facilities

The Navy and the Coast Guard should assign Intelligence LNOs at each of the services' intelligence facilities. This would ensure the Coast Guard mission in maritime security receives primary attention at DOD institutions, and that the Navy's mission, and information associated with maritime defense is integrated within Coast Guard intelligence facilities. What may be of importance for maritime defense, when overlooked, may become of great importance to homeland and port security. In addition, Liaison Officers and the information they desire, will better integrate and educate each service as to what information is important to the other. Although this may be redundant in certain respects, still, the duplicity of information and effort will enhance the Navy and Coast Guard's efforts to form an integrated and cohesive approach toward homeland defense.

#### Establish a North American Maritime Defense Command

The United States must maintain the security of its ports. A critical step toward ensuring this is to track and identify every ship, along with its cargo, crew, and passengers, well before any of those vessels and what they carry enter the country's ports or pass near anything of

value to the United States. To do this, the Navy and Coast Guard should work together to establish a maritime counterpart to the North American Aerospace Defense Command (NORAD), such as a North American Maritime Defense Command.

As the United States does not now have an integrated system that provides visibility and awareness of the surface traffic approaching the United States, a North American Maritime Defense Command could implement such a system and eventually have the ability to attain and track vessels of all types, to include vessel names and nationalities, the ship's position, course, speed, intended destination, as well as the identities of the crews, and a description of cargoes. NORAD currently collects similar information on all aircraft entering North American airspace, and the need exists for a related system for the nation's maritime domain.

The monitoring of ships bound for the United States is a task for the Navy and Coast Guard, as well as other federal agencies such as the U.S. Customs Service. Currently, ship tracking is only conducted by exception, on "vessels of interest". However, the close monitoring of ships should be accomplished as a matter of routine, with vessels being identified and monitored from foreign ports, while transiting to the U.S.<sup>50</sup>

### Conclusion

The events of 11 September 2001 signaled the end of a long-held belief that the United States was somehow immune to attack on its homeland, and although other countries felt the sting of terrorism, it was widely believed that terrorism could not reach America. After recovering from the shock of the terrorists' assault on the homeland, the nation went into motion to restructure the government with the establishment of the Department of Homeland Security, the implementation of the National Security Strategy for Maritime Security, and other related measures taken to bolster U.S. homeland and maritime security. The Coast Guard was subsequently designated as the lead agency within the Department of Homeland Security.

The Coast Guard executes its port security mission by tracking and monitoring the maritime traffic passing through the nation's borders and port system. Updated notification requirements have been implemented to help identify and monitor the vast numbers of foreign flagged vessels, their crews, and cargo entering the United States. Coast Guard Captains of the Port Zones have greater authority to enforce the maritime laws of the country, and to close ports, or portions thereof, if established rules are not strictly abided by visiting ships and port operators. Armed Coast Guard escorts board vessels entering U.S. ports to provide security for ships' pilots, and to protect U.S. Customs inspectors examining cargo. In addition, the Coast

Guard has dramatically increased waterfront security through the establishment of the Sea Marshal program, Maritime Safety and Security Teams, and Port Security Units.

In addition, the Coast Guard has implemented an aggressive program to toward the development and procurement of advanced, multi-mission cutters, aircraft and high speed boats, to enable its forces to execute their mission of providing comprehensive maritime security and enforcing the laws of the United States.

The Navy continues to carry out its mission of defending the nation through forward postured, offensive operations. Supporting the Coast Guard's mission, the Navy has augmented the Coast Guard with small and fast Naval Special Warfare Coastal Patrol ships, the crews and the platforms operating under Coast Guard tactical control while conducting patrols in the nation's coastal waterways and ports.

The Navy continues to execute maritime operations against terrorists on the high seas, in the peripheries, and throughout the literals. This is the central theme of the Navy's and DOD's strategy of a layered maritime defense.

The Navy is also designing new ships and platforms for enhanced integration with Coast Guard platforms, to ensure of seamless interoperability in the conduct of maritime security and defense of the homeland.

The Coast Guard and the Navy have increased joint maritime threat response training and exercises to improve command and control, interoperability, and synchronized capabilities. Both services have also increased sharing intelligence and information to ensure of joint visibility on real and potential threats throughout the maritime domain.

However, the need for improved sharing of intelligence exists, as the service's do not maintain LNO cells within their counterpart's intelligence facilities. This is necessary to ensure both services garner specific security and defense centric information, and facilitate each intelligence facility in gathering information most useful to both service's respective missions.

In addition, the need exists for creating a North American Maritime Defense Command to effectively identify and check the vast numbers of vessels, large and small, approaching and entering the U.S. A command dedicated to maritime defense would detect, track, and monitor maritime contacts approaching the U.S. coast, while stipulating vessels provide the same information currently required for all air traffic entering U.S. airspace.

The Navy and Coast Guard have a tradition of collaboration that goes back more than two centuries to their origins as sea services. Faced with an unprecedented threat after 9/11, they have made major strides in providing the nation a coordinated, integrated, and interoperable joint maritime force to ensure of the nation's maritime security and defense.

With the dawn of an unprecedented security environment that requires both services to build upon and move dramatically beyond the Cold War, defenses of the 21<sup>st</sup> century must be equally effective against the current threat posed by hostile nation states and transnational terrorist organizations. The Coast Guard and the Navy are aggressively striving to shape the nation's security apparatus and build maritime defenses necessary to check the current threat that challenges the United States, and remain viable for the duration of what will be a long war.<sup>51</sup>

#### Endnotes

<sup>1</sup> U.S. Department of Homeland Security, *Securing Our Homeland U.S. Department of Homeland Security Strategic Plan* (Washington, D.C.: U.S. Government Printing Office, 2004), 1.

<sup>2</sup> Tim Dryhouse, "Six Yemenis Charged In Cole Bombing," *VFW, Veterans of Foreign Wars Magazine*, 92 (September 2004), 11.

<sup>3</sup> U.S. Department of State, "United States Designates Muhsin Al-Fadhli as Terrorist," available from <http://usinfo.state.gov/ei/Archive/2005/Feb/17-341981.html>; Internet; accessed 7 January 2006.

<sup>4</sup> Rodrigue Ngowi, "New Boldness Seen in Pirate Attack; Same Somali Gang Likely Hijacked U.N. Aid Ship, Official Says," *The Washington Post*, (7 November 2005): p. A18 [database on-line]; available from ProQuest; accessed 7 January 2006.

<sup>5</sup> U.S. Office of Homeland Security, *National Strategy for Homeland Security* (Washington, D.C.: U.S. Government Printing Office, July 2002), 6.

<sup>6</sup> U.S. Department of Homeland Security, *Securing Our Homeland U.S. Department of Homeland Security Strategic Plan*, 9.

<sup>7</sup> U.S. Department of Defense, *Strategy for Homeland Defense and Civil Support* (Washington, D.C.: U.S. Government Printing Office, June 2005), 20.

<sup>8</sup> U.S. Department of Homeland Security, *Maritime Transportation System Security Recommendations for the National Strategy for Maritime Security* (Washington, D.C.: U.S. Government Printing Office, October 2005), 1.

<sup>9</sup> U.S. Office of Homeland Security, *National Strategy for Homeland Security*, (Washington, D.C.: U.S. Government Printing Office, July 2002), 6.

<sup>10</sup> *Ibid.*, 7.

<sup>11</sup> U.S. Northern Command Home Page, "Homeland Defense," available from [http://www.northcom.mil/about\\_us/vision.htm](http://www.northcom.mil/about_us/vision.htm); Internet; accessed 7 January 2006.

<sup>12</sup> U.S. Coast Guard Headquarters, *U.S. Coast Guard Maritime Strategy for Homeland Security* (Washington, D.C.: U.S. Coast Guard Headquarters, December 2002), 3.

<sup>13</sup> U.S. Department of Defense, *Strategy for Homeland Defense and Civil Support*, 3.

<sup>14</sup> *Ibid.*, 7.

<sup>15</sup> U.S. Office of Homeland Security, *National Strategy for Homeland Security*, viii.

<sup>16</sup> Chris Carter, "Coast Guard Strategy for Homeland Security," *The Officer* (September 2003): 23 [database on-line]; available from ProQuest; accessed 18 November 2005.

<sup>17</sup> Harold Kennedy, "U.S. Coast Guard Ratchets Up Port Security," *National Defense* (June 2003): 36 [database on-line]; available from ProQuest; accessed 18 November 2005.

<sup>18</sup> "A Maritime NORAD?," *Signal* (December 2004): 1 [database on-line]; available from ProQuest; accessed 21 January 2006.

<sup>19</sup> U.S. Coast Guard Navigation Center, "Coast Guard Organization," available from <http://www.navcen.uscg.gov/mwv/regulations/33CFR003/33CFR03.htm>; Internet; accessed 21 February 2006.

<sup>20</sup> CDR Joseph T. Baker, "U.S. Coast Guard Resources" briefing slide no. 4, Carlisle Barracks, U.S. Army War College, 12 January 2006.

<sup>21</sup> U.S. Congress, House of Representatives, Subcommittee on Coast Guard and Maritime Transportation, Hearing on *Port Security*, 26 March 2002; available from <http://www.house.gov/transportation/cgmt/03-26-02/03-26-02memo.html>; Internet; accessed 15 January 2006.

<sup>22</sup> Master Chief Gunners Mate Dennis E. Kirk, Command Master Chief, United States Coast Guard Special Missions Training Center, Camp Lejeune, N.C., interviewed by author, 29 December 2005.

<sup>23</sup> The United States Coast Guard Home Page, Fact File, "Maritime Safety and Security Teams," available from <http://www.uscg.mil/hq/g-cp/comrel/factfile/Factcards/MSST.htm>; Internet; accessed 18 November 2005.

<sup>24</sup> Carter.

<sup>25</sup> "Coast Guard Unveils New Port Security Tech," *National Defense* (April 2005): 9 [database on-line]; available from ProQuest; accessed 18 November 2005.

<sup>26</sup> Kennedy.

<sup>27</sup> The United States Coast Guard Home Page, Data Sheet, "Surface and Air assets," available from <http://www.uscg.mil/datasheet.htm>; Internet; accessed 15 January 2006.

<sup>28</sup> Joe Pappalardo, "Coast Guard Regaining Focus on WMD," *National Defense* (May 2005): 46 [database on-line]; available from ProQuest; accessed 18 November 2005.

<sup>29</sup> Sue A. Lackey, "More Clout," *Sea Power* (August 2005): 20 [database on-line]; available from ProQuest; accessed 5 January 2006.

<sup>30</sup> U.S. Department of Homeland Security, *United States Coast Guard FY 2005 Report* (Washington, D.C.: U.S. Government Printing Office, 2005), 40.

<sup>31</sup> Calvin Biesecker, "GAO Questions Coast Guard's Ability to Review Port Security," *Defense Daily* (1 July 2004): 1 [database on-line]; available from ProQuest, accessed 18 November 2005.

<sup>32</sup> Harold Kennedy, "Defending Harbors," *National Defense* (May 2004): 40 [database on-line]; available from ProQuest, accessed 5 January 2006.

<sup>33</sup> U.S. Department of Homeland Security, *United States Coast Guard FY 2005 Report*, 43.

<sup>34</sup> *Ibid.*, 3.

<sup>35</sup> VADM Barry Costello, Commander, U.S. Navy THIRD Fleet, "Maritime Homeland Defense Joint Forces Maritime Component Command," briefing slide no. 11; 23 August 2005.

<sup>36</sup> *Ibid.*, 14.

<sup>37</sup> U.S. Congress, House of Representatives, House Armed Services Committee, Testimony of Vice Admiral Kevin P. Green Deputy Chief of Naval Operations For Plans, Policy and Operations: Before the United States House of Representatives Committee on Armed Services Subcommittee on Total Force, *Regarding Adequacy of the Total Force*, 108<sup>th</sup> Cong., 10 March 2004.

<sup>38</sup> Robert P. Girrier, "The Enduring Relevance of Maritime Forces," *Proceedings* (February 2005): 60 [database on-line]; available from ProQuest, accessed 21 January 2006.

<sup>39</sup> Amy Klamper, "River War," *Sea Power*, 27 January 2006 [journal on-line]; available from <http://www.military.com/forums/0,15240,86512,00.html>; Internet; accessed 2 February 2006.

<sup>40</sup> Peter M. Swartz, "Forward ... From the Start: The U.S. Navy & Homeland Defense: 1775-2003," *Navy Department Library Center for Naval Analysis*, February 2003 [journal on-line]; available from <http://www.history.navy.mil/library/online/forward.html>; Internet; accessed 22 January 2006.

<sup>41</sup> U.S. Department of the Navy, United States Coast Guard, *National Fleet: A Joint Navy/Coast Guard Policy Statement* (Washington, D.C.: U.S. Department of the Navy, U.S. Coast Guard, 8 July 2002), 2.

<sup>42</sup> Charles S. Hamilton II and Patrick M. Stillman, "Charting New Seas; Navy-Coast Guard Cooperation," *Joint Force Quarterly*, no. 35 (2004): 50.

<sup>43</sup> RADM Patrick M. Stillman, "The Integrated Deepwater System: Exciting Opportunities for Coast Guard-Navy Cooperation," *The Bulletin*, March 2003 [journal on-line]; available from <http://www.uscg.mil/deepwater/media/articles-navycooperation.htm>; Internet; accessed 26 January 2006.

<sup>44</sup> Hamilton and Stillman, 50.

<sup>45</sup> Costello, briefing slide no. 17.

<sup>46</sup> Lackey, 20.

<sup>47</sup> United States Intelligence Community, "U.S. Navy Intelligence," available from [http://www.intelligence.gov/1-members\\_navy.shtml](http://www.intelligence.gov/1-members_navy.shtml); Internet; accessed 28 January 2006.

<sup>48</sup> Patricia Kime, "Cyclone Ships May Find New Life In War On Terrorism", *Sea Power* (August 2003): 14 [database on-line]; available from ProQuest; accessed 26 January 2006.

<sup>49</sup> Guy Thomas, "A Maritime Traffic-Tracking System, Cornerstone of Maritime Homeland Defense," Autumn 2003; available from <http://www.nwc.navy.mil/press/Review/2003/Autumn/rd1-a03.htm>; Internet; accessed 28 January 2006.

<sup>50</sup> Cole Maxwell and Tony Blanda, "Terror by Sea: The Unique Challenges of Port Security," *FBI Law Enforcement Bulletin* (September 2005): 23 [database on-line]; available from ProQuest; accessed 26 January 2006.

<sup>51</sup> Admiral Michael G. Mullen, Chief of Naval Operations, "The U.S. Navy," speech, Surface Navy Association National Symposium, Arlington, VA, 10 January 2006.

