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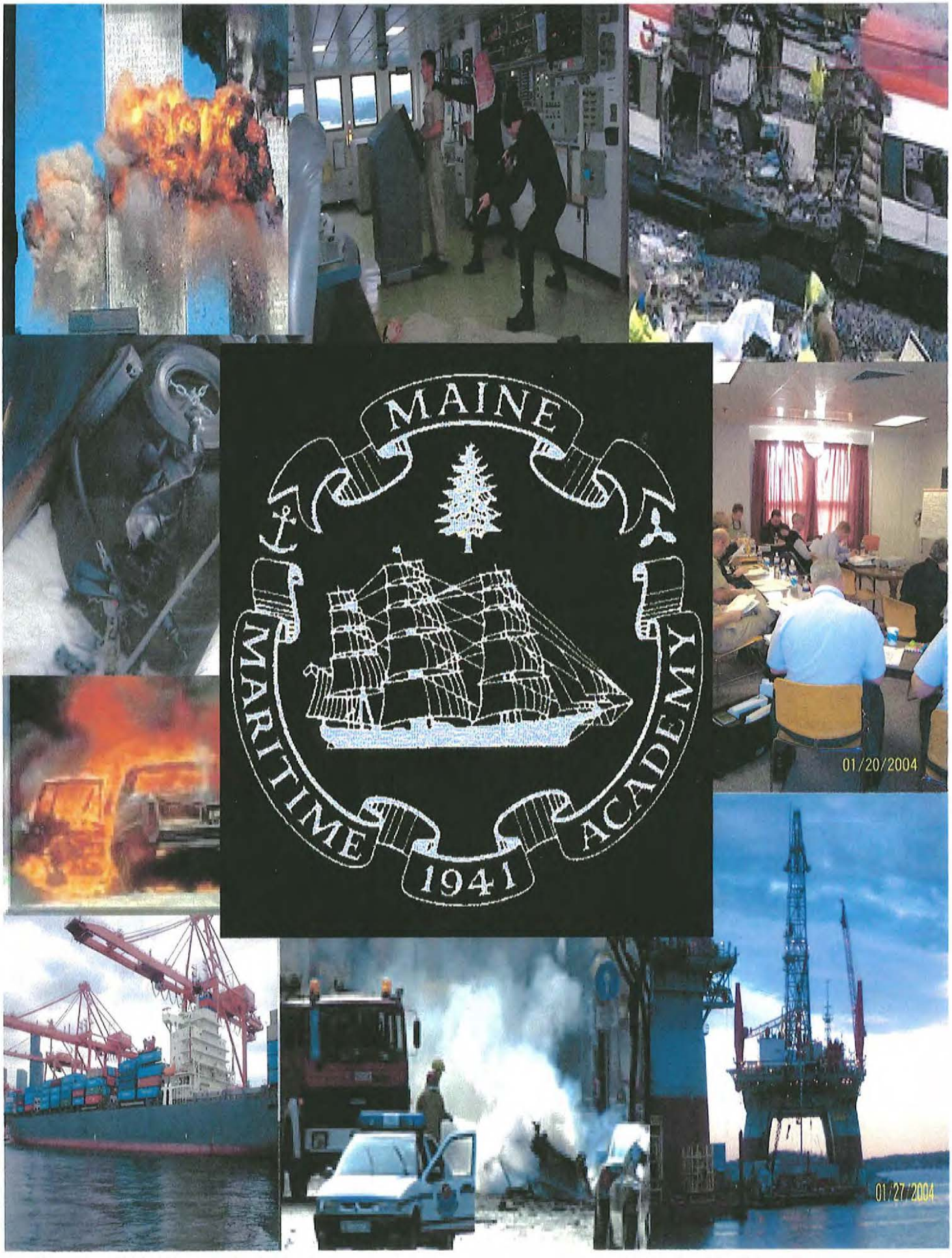
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A Proposal to the Governor's Task Force on Homeland Security
From Maine Maritime Academy
January 13, 2006

MAINE MARITIME ACADEMY
CASTINE, MAINE 04420
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OFFICE OF THE PRESIDENT

January 13, 2006

To: Members of Governor Baldacci's Task Force on Homeland Security:
Task Force Senate Chair- Ethan Strimling, Paul Liebow, Hugh Tilson, Charles Updegrath, Senator David R. Hastings III, Senator Kimberly J. Boothby-Ballantyne, Representative Stanley J Gerzofsky, Task Force House Chair- Representative Richard B. Brown, Representative Roderick W. Carr, Representative Carol A Grose, Dr. Lawrence Mutty.

Re: Maritime domain security awareness training for Maine

Maine Maritime Academy is pleased to present the Task Force with a proposal we believe will provide a single bridge solution to federal mandates, USCG limited resources and unmet public safety needs for maritime domain security awareness training in Maine. When applied, this solution will not only serve our regional needs but may also put Maine forward as a model for other states to follow.

As Maine's only public maritime education and training institution, the Academy is uniquely qualified for this task. In 2004 and 2005, International Maritime Organization (IMO) and US federal Maritime Transportation & Security Act (MTSA) maritime security related training mandates were addressed by the Academy in a series of Ship, Company and Port Facility Security Officer courses for maritime, military and state organizations, through our outreach division of Continuing Education.

In the wake of hurricanes Katrina and Rita, the federal Maritime Administration (MARAD) a division of the Department of Transportation, conducted a joint hearing on October 6, 2005 with the USCG, a division of Homeland Security. Shortly thereafter, MARAD extended the maritime security training umbrella to include a course aimed not only at Security, Law Enforcement and Military Personnel, but also those First Responders whose operational theatres lie within the maritime domain.

Maine Maritime Academy is now ready to submit its proposed course for MARAD's approval. This 15 hour, 2 day, level one maritime security domain awareness course could easily be distributed to all Harbor Masters and Coastal Watch members along with Maine's more traditional first responder, the public safety community. A certificate awarding 1.5 Continuing Educational Units from Maine Maritime Academy would be given to each attendee.

With the proper legislative support, this course could be added to the required Public Sector annual training roster and delivered to the entire maritime first responder community in Maine by the end of 2007, if not sooner. Discussions of exact course costs, funding support, the number and locations of students and practical delivery methods, *i.e.* CD, ITV network or live – will require only a single joint working session involving MEMA, USCG and Maine Maritime Academy.

With the awareness level course being a prerequisite, follow-on joint training courses at the operator and technician levels are also under construction and are designed to further test and improve maritime domain communications and coordination.

Input and support for Maine Maritime's involvement in this training solution has come from:

- M-P.A.C.T. (Maritime Protection, Auditing, Consulting and Training LLC.)
- Dr. Larry Mutty (a Castine resident and member of your committee)
- USCGR Senior Chief Jim Drinkwater of the Belfast Marine Safety Detachment
- USCGR Commander Dale Ferriere (author of the area Maritime Security Plans for Portsmouth, Portland and Bar Harbor)
- Captain Larry Wade, Master *T/S State of Maine* and Co-Chair Ship Operators Cooperative Program
- Dr. Frank L. Wiswall of the Coast Guard Auxiliary and former Chairman of the IMO Legal Committee (on issues of piracy and maritime violence)
- Mr. Joe Mokry of Ocean Rescue Systems in Cape Elizabeth
- Mr. Greg Hanscom of Southern Maine Community College's Criminal Justice and Public Safety Divisions
- Mr. Bruce Fitzgerald of MEMA

In closing, I ask that the task force give serious consideration to including this course with their other recommendations to the Governor.

Respectfully,

Leonard H. Tyler
President

A Chronological Review of US National Maritime Security Events

The Defense Production Act of 1950 (DPA) ... and related Executive Orders provided authority to plan for defense mobilization and emergency preparedness of merchant shipping, including the establishing of priorities, allocations, and voluntary agreements. Under DPA, The US Maritime Administration (MARAD) identifies staging areas and berths in specific strategic defense ports, and ensures that a defense agency may use these facilities in a deployment of military forces.

Maritime Security Act of 1996 ... established the Maritime Security Program (MSP) under Title VI of the Merchant Marine Act of 1936. The MSP was intended to ensure that an active US merchant fleet, and the trained personnel needed to operate both active and reserve vessels, will be available to meet US military requirements for sealift capacity during conflict or in humanitarian and peacekeeping missions.

Sep 11, 2001, Terrorists attack the United States ... and the direction, needs, and priorities of our national security change forever.

Oct 2001, The Office of Homeland Security (OHS) ... is created and announced by President Bush. As its first responsibility, the President directs OHS to produce the first *National Strategy for Homeland Security*. (Following subsequent Legislative Approval, this Office later became a Department -DHS)

Nov 2002, The Maritime Transportation Security Act (MTSA) of 2002 ... is signed into law. MTSA is designed to protect the nation's ports and waterways from a terrorist attack. This law is the US equivalent of the International Maritime Organization's (IMO – a United Nations organization) International Ship and Port Facility Security Code (ISPS). Developed using risk-based methodology, MTSA created security regulations that focus on those sectors of the maritime industry that have a higher risk of involvement in a transportation security incident.

May 2003, MTSA Section 109 Implementation begins ... in a report to congress, the report characterizes security threats to the marine and intermodal[1] transportation system; summarizes relevant domestic legislation international conventions, and other guidance; delineates key workforce development issues; describes the project undertaken by MARAD in fulfillment of the Secretary's Section 109 responsibilities; presents the standards and curriculum developed in response to the MTSA mandate; and offers recommendations for the certification and oversight of maritime security education and training.

Sep 2003, the Maritime Administration (MARAD) Strategic Plan for Fiscal Years 2003-2008 ... is completed and revealed. The plan calls for a course of action and attainable goals in three specific areas: commercial mobility, national security, and environmental protection.

Jul 2004, MTSA becomes fully implemented

Aug 2005, Hurricane Katrina hits and devastates the Gulf Coast ... Although not a maritime security event per se, the tragedy provided clear evidence that the organization, training, and coordination of local, state, and federal resources (both in manpower and financial aid) are insufficient to provide an efficient, effective, and timely response. The event did, however, highlight the importance, strength, and value of MARAD, who provide the ship The State of Maine as a safe harbor for federal workers and for the USCG who were nothing less than stellar in the performance of their duties and contributions to the rescue efforts.

Sep 2005, The White House presents The National Strategy for Maritime Security. While the plan addresses different aspects of maritime security, they are all mutually linked and reinforce each other.

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[1] Intermodal is defined by the Intermodal Association of North America as ... The transfer of products involving multiple modes of transportation - truck, railroad, and or ocean carrier.

The eight supporting plans include:

1. National Plan to Achieve Domain Awareness
2. Global maritime Intelligence Integration Plan
3. Interim Maritime Operational Threat Response Plan
4. International Outreach & Coordination Plan
5. Maritime Infrastructure Recovery Plan
6. Maritime Commerce Security Plan
7. Domestic Outreach Plan

Oct 2005, MARAD releases model course outline for MTSA 05-01 – Military, First Responder, and Law Enforcement Personnel … The model course is one of seven courses developed and intended as detailed guidance upon which education and training providers can immediately base instruction in maritime security matters. The scope of this specific 15 hours training course is to provide the knowledge required for military, first responders, and law enforcement personnel to conduct their duties aboard vessels, in port facilities and elsewhere in the marine environment. These "training, knowledge, and awareness" requirements are also driving by Section 33 of the US Code of Federal Regulations (33 CFR).

National Maritime Security
Chronological Order of
Significant Events

- **Oct 05** MARAD released new model training course
- **Sep 05** Nat'l Strategy for Maritime Security
- **Aug 05** Hurricane Katrina
- **Jul 04** MTSA becomes fully implemented
- **Sep 03** MARAD Strategic Plan unveiled
- **May 03** MTSA Section 109 Implemented
- **Nov 02** Maritime Transportation Security Act of 2002
- **Oct 01** Office of Homeland Security created
- **Sep 01** US Attacked
- **Mar 96** Maritime Security Act of 1996

Key to relevant acronyms:

EMA – Emergency Management Agency

DOD – Department of Defense

IMO – the International Maritime Organization, a Specialized Agency of the United Nations headquartered in London

MARAD – United States Maritime Administration, Department of Transportation

MEMA – Maine Emergency Management Agency

MTSA – the Maritime Transportation Security Act, Title 33 USC and 33CFR

USCG – United States Coast Guard, Department of Homeland Security

USCGA (or USCGAux) – United States Coast Guard Auxiliary, Department of Homeland Security

USCGR – United States Coast Guard Reserve, Department of Homeland Security

MARITIME SECURITY BACKGROUND

General

The marine areas under U.S. jurisdiction cover some 3.5 million square miles of ocean area and 95,000 miles of coastline. America's 361 salt and freshwater ports provide numerous entry points through which more than 95 percent (by volume) of the U.S. overseas trade arrives in this country. However, those seeking to endanger the security of the American people may very well use these same ports

The U.S. Marine Transportation System (MTS) consists of waterways, ports, and their intermodal connections, vessels, vehicles, and system users, as well as Federal maritime navigation systems. The System's objective is the safe, secure, environmentally sound movement of goods, people, and military assets in the most efficient and economically effective manner possible. Annually, the MTS handles more than 2 billion tons of freight, 3 billion tons of oil, more than 134 million ferry passengers, and more than 7 million cruise ship passengers. Approximately 7,500 foreign ships, manned by 200,000 foreign sailors, enter U.S. ports every year to offload approximately six million truck-size cargo containers onto U.S. docks. Additionally, many of these seaports are critical military strategic sealift ports whose availability must be constantly assured.

Critical coastal facilities, marine and otherwise, such as military installations, nuclear power plants, oil and gas refineries, fuel tanks, pipelines, chemical plants, and vital bridges, line American ports, waterways, and shores. These and many other national assets are critical to our economic and national security, and vital for the free and seamless movement of passengers and goods throughout the country.

Generally, ports are often very open and exposed and are susceptible to large-scale acts of terrorism that could cause catastrophic loss of life and economic disruption. Despite the importance of seaport security, perhaps no other mode of transportation is currently more vulnerable to future attacks than our Nation's Marine Transportation System.

Recent Congressional Action

On November 25, 2002, President Bush signed into law the Maritime Transportation Security Act (MTSA) of 2002, (Public Law 107-295). In 2003, the Subcommittee on Coast Guard and Maritime Transportation conducted two oversight hearings concerning port security, focusing on the U.S. Coast Guard's promulgation of regulations to implement maritime security requirements mandated by chapter 701 of title 46 (Port Security), United States Code, as enacted in the MTSA. As such, the Coast Guard has published six final rules consisting for implementation of National Maritime Security Initiatives:

- ⇒ General provisions and national maritime transportation security (33 CFR parts 101 & 102)
- ⇒ Area Maritime Security (33 CFR part 103),
- ⇒ Vessel Security (33 CFR parts 104, 160 & 165),
- ⇒ Facility Security (33 CFR part 105),
- ⇒ Outer Continental Shelf Facility Security (33 CFR part 106), and
- ⇒ Automatic Identification System (33 CFR parts 26, 161, 164, & 165)

Maritime Transportation Security Act of 2002

The MTSA contains several provisions intended to protect America's maritime community against the threat of terrorism without adversely affecting the flow of U.S. commerce through our ports. Section 102 of the MTSA creates a new subtitle VI of title 46, United States Code, to establish a comprehensive national system of transportation security enhancements. Chapter 701 of this subtitle contains provisions related to port security.

The U.S. Coast Guard has been designated as the lead Federal agency for maritime homeland security and is

currently the only RSO (Recognized Security Organization agency as defined in the ISPS code) for the United States. The Coast Guard's homeland security mission is to protect the U.S. maritime domain and the U.S. Marine Transportation System and deny their use and exploitation by terrorists as a means for attacks on U.S. territory, population, and critical infrastructure.

The Act creates a national maritime security system and requires Federal agencies, ports, and vessel owners to take numerous steps to upgrade security. The Act requires the Coast Guard to conduct vulnerability assessments of U.S. ports. The MTSA requires the Coast Guard to develop national and regional area maritime transportation security plans and requires that seaports, waterfront terminals, and certain types of vessels develop and submit security and incident response plans to the Coast Guard for approval. The MTSA also requires the Coast Guard to conduct antiterrorism assessments of certain foreign ports. Under this law, certain vessels operating in U.S. navigable waters are required to be equipped with and operate an Automatic Identification System (AIS). Finally, the Act authorizes a federal grant program to help defray the cost of security upgrades at U.S. seaports.

International Efforts to Improve Maritime Security

Many of the requirements in the MTSA directly align with the international security requirements of the ISPS code adopted by the International Maritime Organization (IMO); however, the MTSA has broader application that includes domestic vessels and facilities.

In December of 2002, the IMO adopted amendments to the International Convention for the Safety of Life at Sea (SOLAS) and an International Ship and Port Facility Security (ISPS) Code that are designed to parallel domestic requirements for U.S. facilities and vessels required under the MTSA. The ISPS Code requires ships on international voyages and the port facilities that serve them to conduct a security assessment, develop a security plan, designate security officers, perform training and drills, and take appropriate preventive measures against security incidents.

In general, the bulk of the ISPS Code provisions called for full enforcement by July 1, 2004, and the MTSA requirements essentially align with the deadline.

Implementation of U.S. Maritime Security Regulations

On October 22, 2003, the Coast Guard published a series of final rules that, with changes, adopt the temporary interim rules published on July 1, 2003, which promulgate maritime security requirements mandated by MTSA. The final rules were effective on November 21, 2003. These regulations are part of the new Subchapter H of title 33 of the Code of Federal Regulations (CFR), except for AIS, which amends several sections of Title 33 of the CFR.

The rules require certain sectors of the maritime industry to take significant measures to increase the security of vessels, shore-side facilities, and offshore facilities under U.S. jurisdiction. The regulations also require the carriage of automatic identification systems on board certain vessels on specified navigable waters of the United States.

The regulations will affect approximately 10,000 vessels, 5,000 facilities, 361 ports, and 40 offshore facilities. The Coast Guard believes that the industry's present value (PV) cost of implementation could be approximately $7.5 billion over the next 10 years (2003-2012, 7% discount rate).

Section 70102 - United States Facility and Vessel Vulnerability Assessments

Section 70102 of title 46, United States Code, as enacted by the MTSA, requires the Coast Guard to conduct initial domestic assessments to identify vessel types and facilities that pose a high risk of being involved in a transportation security incident. Based on the results of the initial assessments, the Coast Guard is then required to conduct a detailed vulnerability assessment for these vessel types and facilities. The Coast Guard has identified 55 militarily and economically strategic U.S. ports that were scheduled to have both initial and comprehensive vulnerability assessments completed by the end of calendar year 2004.

Section 70103 - Maritime Transportation Security Plans

Section 70103 of title 46, United States Code, as enacted by the MTSA, requires the Coast Guard to prepare a National Maritime Transportation Security Plan to deter and respond to transportation security incidents. The Coast Guard is also required to designate area Federal Maritime Security Coordinators. Each Federal Maritime Security Coordinator is required to prepare an Area Maritime Transportation Security Plan for each individual area established under the National Maritime Transportation Security Plan.

The MTSA regulations designate Coast Guard Captains of the Port as the local Federal Maritime Security Coordinators. In this role, they are responsible for conducting area security assessments and developing area maritime security plans for their respective areas of responsibility.

Finally, section 70103 requires owners and operators of vessels and facilities, which may be involved in a transportation security incident, to develop vessel and facility security plans and submit them to the Coast Guard for approval. In order to meet the requirements in the MTSA and the ISPS Code, the Coast Guard must review and approve vessel and facility security plans no later than July 1, 2004. Instead of reviewing and approving foreign vessel security plans themselves, the Coast Guard has stated that it intends to accept vessel security plans approved by IMO recognized security organizations on behalf of foreign governments.

The Coast Guard's final rules establish an alternative security program that allows industry to submit, for Coast Guard approval, alternative security programs that provide an equal level of security as required in the regulations.

Section 70104 - Transportation Security Incident Response

Section 70104 of title 46, United States Code, as enacted by the MTSA, requires the Coast Guard to establish a system of security incident response plans developed for vessels and facilities that may be involved in a transportation security incident. The Coast Guard is also required to make these plans available to the Federal Emergency Management Agency. Transportation security incident response plans may be included in the vessel or facility security plan prepared under section 70103.

Section 70107 - Grants

Section 70107 of title 46, United States Code, as enacted by the MTSA, provides financial assistance for enhanced security to implement facility or area maritime security plans approved by the Coast Guard or an interim security measure required by the Coast Guard. This section authorizes matching grants for various types of security upgrades at U.S. ports and U.S. maritime areas including reimbursements for security enhancements that have corrected security vulnerabilities since September 11, 2001, that are consistent with their Area Maritime Transportation Security Plans and facility security plans. In addition, this section provides $15 million for each of fiscal years 2003 through 2008 for research and development grants for port security.

Sections 70108 through 70110 - Foreign Port Assessments, Notification, and Action

Sections 70108 through 70110 of title 46, United States Code, as enacted by the MTSA, require the Coast Guard to assess the effectiveness of the antiterrorism measures maintained at foreign ports, notify foreign authorities if those measures are not effective, and exercise control over vessels, including prescribing conditions of entry or denial of entry into a U.S. port. In carrying out these assessments and actions, the Coast Guard is required to consult with the Department of Defense, Department of State, and Department of the Treasury, appropriate foreign government authorities, and vessel operators as appropriate. IMO measures essentially correspond with the requirements of the MTSA and also contain a robust port state control mechanism that authorizes control of vessels that have called on foreign ports not in compliance with SOLAS and the ISPS Code.

The Coast Guard plans to conduct assessments of foreign ports in 20 countries per year commencing in the summer of 2004. Also, the Service intends to deploy liaison officers to selected foreign ports. The Coast Guard has recently completed a port visit to Singapore, which is the first country to participate in the Coast Guard's international port security program. These visits reinforce the implementation of the ISPS Code at foreign ports and provide an opportunity to conduct the assessments mandated by the MTSA.

Section 70114 - Automatic Identification System

Section 70114 of title 46, United States Code, as enacted by the MTSA, requires that certain vessels operating on U.S. navigable waters be equipped with and operate an Automatic Identification System (AIS) under regulations prescribed by the Secretary of Homeland Security. The AIS includes a position indicating transponder and an electronic charting or situation display for accessing the information made available by the transponder system. This will allow a vessel operator to more easily identify the position and heading of their vessel and other vessels navigating in the area. It will also allow shore-based Coast Guard facilities to more easily monitor the location and heading of vessels in their area.

The Coast Guard's regulations require the installation of AIS on board certain vessels engaged in international trade, as well as certain vessels that transit through vessel traffic systems (VTS) in the United States. The AIS regulations exempt certain fishing and passenger vessels. The Coast Guard is considering expansion of AIS implementation to vessels not on international voyages outside of VTS and Vessel Movement Reporting System (VMRS) areas.

While the MTSA required AIS equipment on all navigable waters of the United States, it allowed the Coast Guard to exempt certain vessels if AIS is not needed for safe navigation on specified navigable waters. The Coast Guard initially has decided to implement AIS predominantly in VTS and VMRS areas as they become equipped with AIS capability. The Coast Guard intends to carry out this mandate completely, however, at this early stage of AIS deployment, the Service deems it important to require an AIS, particularly in congested waters, where it has the capability to manage the AIS VHF data link. The Coast Guard anticipates having these facilities in most major U.S. waterways, but intends to proceed on a rollout plan by waterway.

Synopsis of the Bills under Consideration

H.R. 2193, the Port Security Improvement Act of 2003, was introduced by Rep. Ose (CA) on May 21, 2003, and provides for the enhancement of security measures at ports nationwide. This bill would make available to the Secretary of Homeland Security a percentage of the customs duties collected at each port that exceed the total port security costs incurred at that port for a period of five fiscal years to fund port security improvements. These improvements include the administration of the transportation security card program (also known as the transportation worker identification credentials (TWIC) program); the inspection of cruise passengers, cargo and empty containers; and upgrades to port security infrastructure.

H.R. 2193 also establishes deadlines for the issuance of interim and final regulations regarding the transportation security card program and establishes national minimum standards for security requirements for each port and facility in the United States and each vessel entering a U.S. port.

H.R. 3712, the United States Seaport Multiyear Security Enhancement Act - introduced by Rep. Millender-McDonald (CA). This bill would authorize the Secretary of Homeland Security to make grants to seaports to provide funds for port security improvements. Additionally, the bill establishes criteria for projects that may be funded by such awards and would require that funds from federal grants not exceed 75 percent of the total costs of any project except under certain circumstances.

H.R. 3712 provides for the issuance of a letter of intent by the Secretary of Homeland Security committing to obligate funds from future budget authority to a seaport. This provision would allow ports to move ahead with security improvements with the expectation that funds will be provided in the future to meet part of the costs incurred by any such projects. The bill also authorizes appropriations in the amount of $800 million for each of fiscal years 2005 through 2009 to carry out the grant program and remain available to the Secretary until expended.

The National Strategy for Maritime Security

September 2005

The safety and economic security of the United States depends upon the secure use of the world's oceans. Since the attacks of September 11, 2001, the Federal government has reviewed and strengthened all of its strategies to combat the evolving threat in the War on Terrorism. Various departments have each carried out maritime security strategies which have provided an effective layer of security since 2001. In December 2004, the President directed the Secretaries of the Department of Defense and Homeland Security to lead the Federal effort to develop a comprehensive National Strategy for Maritime Security, to better integrate and synchronize the existing Department-level strategies and ensure their effective and efficient implementation.

Maritime security is best achieved by blending public and private maritime security activities on a global scale into an integrated effort that addresses all maritime threats. The new National Strategy for Maritime Security aligns all Federal government maritime security programs and initiatives into a comprehensive and cohesive national effort involving appropriate Federal, State, local, and private sector entities.

In addition to this Strategy, the Departments have developed eight supporting plans to address the specific threats and challenges of the maritime environment. While the plans address different aspects of maritime security, they are mutually linked and reinforce each other. The supporting plans include:

- National Plan to Achieve Domain Awareness
- Global Maritime Intelligence Integration Plan
- Interim Maritime Operational Threat Response Plan
- International Outreach and Coordination Strategy
- Maritime Infrastructure Recovery Plan
- Maritime Transportation System Security Plan
- Maritime Commerce Security Plan
- Domestic Outreach Plan

Development of these plans was guided by the security principles outlined in this National Strategy for Maritime Security. These plans will be updated on a periodic basis in response to changes in the maritime threat, the world environment, and national security policies.

Together, the National Strategy for Maritime Security and its eight supporting plans present a comprehensive national effort to promote global economic stability and protect legitimate activities while preventing hostile or illegal acts within the maritime domain.

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Section I
Introduction – Maritime Security

"In this century, countries benefit from healthy, prosperous, confident partners. Weak and troubled nations export their ills -- problems like economic instability and illegal immigration and crime and terrorism. America and others ... understand that healthy and prosperous nations export and import goods and services that help to stabilize regions and add security to every nation."

President George W. Bush
November 20, 2004

The safety and economic security of the United States depend in substantial part upon the secure use of the world's oceans. The United States has a vital national interest in maritime security. We must be prepared to stop terrorists and rogue states before they can threaten or use weapons of mass destruction or engage in other attacks against the United States and our allies and friends. Toward that end, the United States must take full advantage of strengthened alliances and other international cooperative arrangements, innovations in the use of law enforcement personnel and military forces, advances in technology, and strengthened intelligence collection, analysis, and dissemination.

Salt water covers more than two-thirds of the Earth's surface. These waters are a single, great ocean, an immense maritime domain[1] that affects life everywhere. Although its four principal geographical divisions – Atlantic, Arctic, Indian, and Pacific – have different names, this continuous body of water is the Earth's greatest defining geographic feature.

The oceans, much of which are global commons under no State's jurisdiction, offer all nations, even landlocked States, a network of sea-lanes or highways that is of enormous importance to their security and prosperity. They are likewise a source of food, mineral resources, and recreation, and they support commerce among nations. They also act as both a barrier to and a conduit for threats to the security of people everywhere. Like all other countries, the United States is highly dependent on the oceans for its security and the welfare of its people and economy.

In today's economy, the oceans have increased importance, allowing all countries to participate in the global marketplace. More than 80 percent of the world's trade travels by water and forges a global maritime link. About half the world's trade by value, and

[1] The maritime domain is defined as all areas and things of, on, under, relating to, adjacent to, or bordering on a sea, ocean, or other navigable waterway, including all maritime-related activities, infrastructure, people, cargo, and vessels and other conveyances. Note: The maritime domain for the United States includes the Great Lakes and all navigable inland waterways such as the Mississippi River and the Intra-Coastal Waterway.

90 percent of the general cargo, are transported in containers. Shipping is the heart of the global economy, but it is vulnerable to attack in two key areas. Spread across Asia, North America, and Europe are 30 megaports/cities that constitute the world's primary, interdependent trading web. Through a handful of international straits and canals pass 75 percent of the world's maritime trade and half its daily oil consumption. International commerce is at risk in the major trading hubs as well as at a handful of strategic chokepoints.

The infrastructure and systems that span the maritime domain, owned largely by the private sector, have increasingly become both targets of and potential conveyances for dangerous and illicit activities. Moreover, much of what occurs in the maritime domain with respect to vessel movements, activities, cargoes, intentions, or ownership is often difficult to discern. The oceans are increasingly threatened by illegal exploitation of living marine resources and increased competition over nonliving marine resources. Although the global economy continues to increase the value of the oceans' role as highways for commerce and providers of resources, technology and the forces of globalization have lessened their role as barriers. Thus, this continuous domain serves as a vast, ready, and largely unsecured medium for an array of threats by nations, terrorists, and criminals.

Defeating this array of threats to maritime security – including the threat or use of weapons of mass destruction (WMD)[2] – requires a common understanding and a joint effort for action on a global scale. Because the economic well-being of people in the United States and across the globe depends heavily upon the trade and commerce that traverses the oceans, maritime security must be a top priority. Maritime security is required to ensure freedom of the seas; facilitate freedom of navigation and commerce; advance prosperity and freedom; and protect the resources of the ocean. Nations have a common interest in achieving two complementary objectives: to facilitate the vibrant maritime commerce that underpins economic security, and to protect against ocean-related terrorist, hostile, criminal, and dangerous acts. Since all nations benefit from this collective security, all nations must share in the responsibility for maintaining maritime security by countering the threats in this domain.

> A strong world economy enhances our national security by advancing prosperity and freedom in the rest of the world. Economic growth supported by free trade and free markets creates new jobs and higher incomes. It allows people to lift their lives out of poverty, spurs economic and legal reform, and the fight against corruption, and it reinforces the habits of liberty. We will promote economic growth and economic freedom beyond America's shores.
>
> Ignite a New Era of Global Economic Growth through Free Markets and Free Trade
> Goal VI of the *National Security Strategy of the United States*

[2] The term "weapon of mass destruction" (WMD) is defined in 18 U.S. Code § 2332a(c) as including any destructive device as defined in [18 U.S. Code] section 921...; any weapon that is designed or intended to cause death or serious bodily injury through the release, dissemination, or impact of toxic or poisonous chemicals, or their precursors; any weapon involving a biological agent, toxin, or vector (as those terms are defined in [18 U.S. Code] section 178...); or any weapon that is designed to release radiation or radioactivity at a level dangerous to human life.

Section II
Threats to Maritime Security

"America, in this new century, again faces new threats. Instead of massed armies, we face stateless networks; we face killers who hide in our own cities. We must confront deadly technologies. To inflict great harm on our country, America's enemies need to be only right once. Our intelligence and law enforcement professionals in our government must be right every single time."

President George W. Bush
December 17, 2004

Complexity and ambiguity are hallmarks of today's security environment, especially in the maritime domain. In addition to the potential for major combat operations at sea, terrorism has significantly increased the nature of the nonmilitary, transnational, and asymmetric threats in the maritime domain that the United States and its allies and strategic partners must be prepared to counter. Unlike traditional military scenarios in which adversaries and theaters of action are clearly defined, these nonmilitary, transnational threats often demand more than purely military undertakings to be defeated.

Unprecedented advances in telecommunications and dramatic improvements in international commercial logistics have combined to increase both the range and effects of terrorist activities, providing the physical means to transcend even the most secure borders and to move rapidly across great distances. Adversaries that take advantage of such transnational capabilities have the potential to cause serious damage to global, political, and economic security. The maritime domain in particular presents not only a medium by which these threats can move, but offers a broad array of potential targets that fit the terrorists' operational objectives of achieving mass casualties and inflicting catastrophic economic harm. While the variety of actors threatening the maritime domain continues to grow in number and capability, they can be broadly grouped as nation-states, terrorists, and transnational criminals and pirates. Defeating the threat of the widely dispersed terrorist networks that present an immediate danger to U.S. national security interests at home and abroad remains our foremost objective.

Nation-State Threats

The prospect of major regional conflicts erupting, escalating, and drawing in major powers should not be discounted. Nonetheless, in the absence of inter-state conflict, individual state actions represent a more significant challenge to global security. Some states provide safe havens for criminals and terrorists, who use these countries as bases of operations to export illicit activities into the maritime domain and into other areas of the globe. The probability of a hostile state using a WMD is expected to increase during the next decade.[3] An alternative danger is that a foreign state will provide critical advanced

[3] Mapping the Global Future, National Intelligence Council, Washington, DC: December 2004.

conventional weaponry, WMD components, delivery systems and related materials, technologies, and weapons expertise to another rogue state or a terrorist organization that is willing to conduct WMD attacks. WMD issues are of the greatest concern since the maritime domain is the likely venue by which WMD will be brought into the United States.

Terrorist Threats

Non-state terrorist groups that exploit open borders challenge the sovereignty of nations and have an increasingly damaging effect on international affairs. With advanced telecommunications, they can coordinate their actions among dispersed cells while remaining in the shadows. Successful attacks in the maritime domain provide opportunities to cause significant disruption to regional and global economies. Today's terrorists are increasing their effectiveness and reach by establishing links with other like-minded organizations around the globe. Some terrorist groups have used shipping as a means of conveyance for positioning their agents, logistical support, and generating revenue. Terrorists have also taken advantage of criminal smuggling networks to circumvent border security measures.

Terrorists have indicated a strong desire to use WMD.[4] This prospect creates a more complex and perilous security situation, further aggravated by countries that are unable to account for or adequately secure their stockpiles of such weapons and associated materials. This circumstance, coupled with increased access to the technology needed to build and employ those weapons, increases the possibility that a terrorist attack involving WMD could occur. Similarly, bioterrorism appears particularly suited to use by smaller but sophisticated groups because this tactic is exceedingly difficult to detect in comparison to other mass-effects weapons.

Terrorists can also develop effective attack capabilities relatively quickly using a variety of platforms, including explosives-laden suicide boats[5] and light aircraft; merchant and cruise ships as kinetic weapons to ram another vessel, warship, port facility, or offshore platform; commercial vessels as launch platforms for missile attacks; underwater swimmers to infiltrate ports; and unmanned underwater explosive delivery vehicles. Mines are also an effective weapon because they are low-cost, readily available, easily deployed, difficult to counter, and require minimal training. Terrorists can also take advantage of a vessel's legitimate cargo, such as chemicals, petroleum, or liquefied natural gas, as the explosive component of an attack. Vessels can be used to transport powerful conventional explosives or WMD for detonation in a port or alongside an offshore facility.

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[4] The *National Security Strategy of the United States of America*, p. 15.

[5] This maritime mode of terrorist attack has been established, tested, and repeated. The terrorist group al-Qaida in October 2000 successfully attacked *USS Cole* in Yemen with an explosives-laden suicide small boat and 2 years later attacked the French oil tanker *M/V Limburg*.

The U.S. economy and national security are fully dependent upon information technology and the information infrastructure.[6] Terrorists might attempt cyber attacks to disrupt critical information networks, or attempt to cause physical damage to information systems that are integral to the operation of marine transportation and commerce systems. Tools and methodologies for attacking information systems are becoming widely available, and the technical abilities and sophistication of terrorists groups bent on causing havoc or disruption is increasing.

> However, the nature and motivations of these new adversaries, their determination to obtain destructive powers hitherto available only to the world's strongest states, and the greater likelihood that they will use weapons of mass destruction against us, make today's security environment more complex and dangerous.
>
> Prevent Our Enemies from Threatening Us, Our Allies, and Our Friends with Weapons of Mass Destruction
> Goal V of the *National Security Strategy of the United States*

Transnational Criminal and Piracy Threats

The continued growth in legitimate international commerce in the maritime domain has been accompanied by growth in the use of the maritime domain for criminal purposes. The smuggling of people, drugs, weapons, and other contraband, as well as piracy and armed robbery against vessels, pose a threat to maritime security. Piracy and incidents of maritime crime tend to be concentrated in areas of heavy commercial maritime activity, especially where there is significant political and economic instability, or in regions with little or no maritime law enforcement capacity. Today's pirates and criminals are usually well organized and well equipped with advanced communications, weapons, and high-speed craft. The capabilities to board and commandeer large underway vessels – demonstrated in numerous piracy incidents – could also be employed to facilitate terrorist acts.

Just as the world's oceans are avenues for a nation's overseas commerce, they are also the highways for the import or export of illegal commodities. Maritime drug trafficking[7] generates vast amounts of money for international organized crime syndicates and terrorist organizations. Laundered through the international financial system, this money provides a huge source of virtually untraceable funds. These monetary assets can then be used to bribe government officials, bypass established financial controls, and fund additional illegal activities, including arms trafficking, migrant smuggling, and terrorist operations. Further, these activities can ensure a steady supply of weapons and cash for terrorist operatives, as well as the means for their clandestine movement.

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[6] The *National Strategy to Secure Cyberspace* is part of our overall effort to protect the Nation. It is an implementing component of the *National Strategy for Homeland Security* and is complemented by a *National Strategy for the Physical Protection of Critical Infrastructures and Key Assets.*

[7] The *National Drug Control Strategy* outlines U.S. goals in this area.

Environmental Destruction

Intentional acts that result in environmental disasters can have far-reaching, negative effects on the economic viability and political stability of a region. Additionally, in recent years, competition for declining marine resources has resulted in a number of violent confrontations as some of the world's fishers resort to unlawful activity. These incidents underscore the high stakes for the entire world as diminishing resources, such as fish stocks, put increasing pressure on maritime nations to undertake more aggressive actions. These actions continue to have the potential to cause conflict and regional instability. Similarly, massive pollution of the oceans, whether caused by terrorists or individuals who undertake intentional acts in wanton disregard for the consequences, could result in significant damage to ecosystems and undermine the national and economic security of the nations that depend on them.

Illegal Seaborne Immigration

International migration is a long-standing issue that will remain a major challenge to regional stability, and it will be one of the most important factors affecting maritime security through the next 10 years. Transnational migration, spurred by a decline of social well-being or internal political unrest, has become common over the past decades. It will continue to drive the movement of many people, with the potential to upset regional stability because of the strain migrants and refugees place on fragile economies and political systems. In some countries the collapse of political and social order prompts maritime mass migrations, such as the ones the United States has experienced from Cuba and Haiti. The humanitarian and enforcement efforts entailed by the management of such migrations require a significant commitment of security resources.

The potential for terrorists to take advantage of human smuggling networks in attempts to circumvent border security measures cannot be ignored. As security in our ports of entry, at land-border crossings, and at airports continues to tighten, criminals and terrorists will likely consider our relatively undefended coastlines to be less risky alternatives for unlawful entry into the United States.

Section III
Strategic Objectives

"It is the policy of the United States to take all necessary and appropriate actions, consistent with U.S. law, treaties and other international agreements to which the United States is a party, and customary international law as determined for the United States by the President, to enhance the security of and protect U.S. interests in the Maritime Domain..."

Presidential Directive
Maritime Security Policy
December 21, 2004

Today's transnational threats have the potential to inflict great harm on many nations. Thus, the security of the maritime domain requires comprehensive and cohesive efforts among the United States and many cooperating nations to protect the common interest in global maritime security. This Strategy describes how the United States Government will promote an international maritime security effort that will effectively and efficiently enhance the security of the maritime domain while preserving the freedom of the domain for legitimate pursuits. [8]

This approach does not negate the United States' inherent right to self-defense or its right to act to protect its essential national security interests. **Defending against enemies is the first and most fundamental commitment of the United States Government. Preeminent among our national security priorities is to take all necessary steps to prevent WMD from entering the country and to avert an attack on the homeland.** This course of action must be undertaken while respecting the constitutional principles upon which the United States was founded.

Three broad principles provide overarching guidance to this Strategy. First, *preserving the freedom of the seas* is a top national priority. The right of vessels to travel freely in international waters, engage in innocent and transit passage, and have access to ports is an essential element of national security. The free, continuing, unthreatened intercourse of nations is an essential global freedom and helps ensure the smooth operation of the world's economy.

Second, the United States Government must *facilitate and defend commerce* to ensure this uninterrupted flow of shipping. The United States is a major trading nation, and its economy, environment, and social fabric are inextricably linked with the oceans and their

[8] The *National Strategy for Maritime Security* is guided by the objectives and goals contained in the *National Security Strategy* and the *National Strategy for Homeland Security.* This Strategy also draws upon the *National Strategy for Combating Terrorism*, the *National Strategy to Combat Weapons of Mass Destruction*, the *National Strategy for the Physical Protection of Critical Infrastructure and Key Assets*, the *National Defense Strategy*, the *National Military Strategy*, and the *National Drug Control Strategy.*

resources. The adoption of a just-in-time delivery approach to shipping by most industries, rather than stockpiling or maintaining operating reserves of energy, raw materials, and key components, means that a disruption or slowing of the flow of almost any item can have widespread implications for the overall market, as well as upon the national economy.

Third, the United States Government must *facilitate the movement of desirable goods and people across our borders, while screening out dangerous people and material.* There need not be an inherent conflict between the demand for security and the need for facilitating the travel and trade essential to continued economic growth. This Strategy redefines our fundamental task as one of good border management rather than one that pits security against economic well-being. Accomplishing that goal is more manageable to the extent that screening can occur before goods and people arrive at our physical borders.

In keeping with these guiding principles, the deep-seated values enshrined in the U.S. Constitution, and applicable domestic and international law, the following objectives will guide the Nation's maritime security activities:

- Prevent Terrorist Attacks and Criminal or Hostile Acts
- Protect Maritime-Related Population Centers and Critical Infrastructures
- Minimize Damage and Expedite Recovery
- Safeguard the Ocean and Its Resources

This Strategy does not alter existing authorities or responsibilities of the department and agency heads, including their authorities to carry out operational activities or to provide or receive information. It does not impair or otherwise affect the authority of the Secretary of Defense over the Department of Defense, including the chain of command for military forces from the President and Commander-in-Chief, to the Secretary of Defense, to the commander of military forces, or military command and control procedures.

Prevent Terrorist Attacks and Criminal or Hostile Acts

Detect, deter, interdict, and defeat terrorist attacks, criminal acts, or hostile acts in the maritime domain, and prevent its unlawful exploitation for those purposes.

The United States will prevent potential adversaries from attacking the maritime domain or committing unlawful acts there by monitoring and patrolling its maritime borders, maritime approaches, and exclusive economic zones, as well as high seas areas of national interest, and by stopping such activities at any stage of development or deployment. The United States will work to detect adversaries before they strike; to deny them safe haven in which to operate unobstructed; to block their freedom of movement between locations; to stop them from entering the United States; to identify, disrupt, and dismantle their financial infrastructure; and to take decisive action to eliminate the threat they pose. As part of this undertaking, the *National Strategy to Combat Weapons of*

Mass Destruction and related presidential directives address the most serious of these threats, and outline plans and policies to execute timely, effective interdiction efforts against the proliferation of WMD, their delivery systems, and related materials, technologies, and expertise.

The basis for effective prevention[9] measures – operations and security programs – is awareness and threat knowledge, along with credible deterrent and interdiction capabilities. Without effective awareness of activities within the maritime domain, crucial opportunities for prevention or an early response can be lost. Awareness grants time and distance to detect, deter, interdict, and defeat adversaries – whether they are planning an operation, or are en route to attack or commit an unlawful act.

Forces must be trained, equipped, and prepared to detect, deter, interdict, and defeat terrorists throughout the maritime domain. Some terrorist groups, however, commit terrorist acts without regard to their own personal risk. They will never be easily deterred. No amount of credible deterrent capability can guarantee that attacks by such groups will be prevented. If terrorists cannot be deterred by the layered maritime security, then they must be interdicted and defeated, preferably overseas.

Protect Maritime-Related Population Centers and Critical Infrastructure

Protect maritime-related population centers, critical infrastructure, key resources, transportation systems, borders, harbors, ports, and coastal approaches in the maritime domain.

The United States depends on networks of critical infrastructure[10] – both physical networks such as the marine transportation system, and cyber networks such as interlinked computer operations systems. The ports, waterways, and shores of the maritime domain are lined with military facilities, nuclear power plants, locks, oil refineries, levees, passenger terminals, fuel tanks, pipelines, chemical plants, tunnels, cargo terminals, and bridges. Ports in particular have inherent security vulnerabilities: they are sprawling, easily accessible by water and land, close to crowded metropolitan areas, and interwoven with complex transportation networks. Port facilities, along with the ships and barges that transit port waterways, are especially vulnerable to tampering, theft, and unauthorized persons gaining entry to collect information and commit unlawful or hostile acts.

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[9] The *National Response Plan* defines prevention as actions taken to avoid an incident or to intervene to stop an incident from occurring. It involves applying intelligence to a range of activities that may include such countermeasures as deterrence operations, improved security operations, and specific law enforcement operations aimed at deterring, preempting, interdicting, or disrupting illegal activity and apprehending potential perpetrators.

[10] The USA PATRIOT Act of 2001, 42 U.S.C. § 519 c(e), defines critical infrastructure as those "systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters."

The critical infrastructure and key resources of the maritime domain constitute a vital part of the complex systems necessary for public well-being, as well as economic and national security. They are essential for the free movement of passengers and goods throughout the world. Some physical and cyber assets, as well as associated infrastructure, also function as defense critical infrastructure, the availability of which must be constantly assured for national security operations worldwide. Beyond the immediate casualties, the consequences of an attack on one node of a critical infrastructure may include disruption of entire systems, significant damage to the economy, or the inability to project military forces. Protection of infrastructure networks must address individual elements, interconnecting systems, and their interdependencies.

Protection of critical infrastructure and key resources is a shared responsibility of the public and private sectors. The Department of Homeland Security is the lead agency for the overall national effort to enhance the protection of critical infrastructure and key resources. Since it is impossible to protect all infrastructure and resources constantly, all levels of government and the private sector must collectively improve their defenses by conducting prudent risk management assessments to identify facilities that require physical or procedural security upgrades or those that are not likely targets.

The Federal Government has three primary responsibilities in regard to this national effort: (1) to produce and distribute timely and accurate threat advisory and alert information and appropriate protective measures to State, local, and tribal governments and the private sector via a dedicated homeland security information network; (2) provide guidance and standards for reducing vulnerabilities; and (3) provide active, layered, and scalable security presence to protect from and deter attacks.

Since private industry owns and operates the vast majority of the nation's critical infrastructure and key resources, owners and operators remain the first line of defense for their own facilities. They are responsible for increasing physical security and reducing the vulnerabilities of their property by conducting routine risk management planning, as well as investing in protective measures – e.g., staff authentication and credentialing, access control, and physical security of their fixed sites and cargoes – as a necessary business function.

As security measures at ports of entry, land-border crossings, and airports become more robust, criminals and terrorists will increasingly consider the lengthy U.S. coastline with its miles of uninhabited areas as a less risky alternative for unlawful entry into the United States. The United States must therefore patrol, monitor, and exert unambiguous control over its maritime borders and maritime approaches. At-sea presence reassures U.S. citizens, deters adversaries and lawbreakers, provides better mobile surveillance coverage, adds to warning time, allows seizing the initiative to influence events at a distance, and facilitates the capability to surprise and engage adversaries well before they can cause harm to the United States.

Minimize Damage and Expedite Recovery

Minimize damage and expedite recovery from attacks within the maritime domain.

The United States must be prepared to minimize damage and expedite recovery[11] from a terrorist attack or other Incident of National Significance[12] that may occur in the maritime domain. Our experience dealing with the catastrophic effects of Hurricane Katrina reinforces this key point. The response to such incidents is implemented through the comprehensive National Incident Management System, governed by the *National Response Plan*, which coordinates public and private sector efforts and brings to bear all required assets, including defense support of civil authorities.

The public and private sectors must be ready to detect and rapidly identify WMD agents; react without endangering first responders; treat the injured; contain and minimize damage; rapidly reconstitute operations; and mitigate long-term hazards through effective decontamination measures. These actions will preserve life, property, the environment, and social, economic, and political structures, as well as restore order and essential services for those who live and work within the maritime domain.

A terrorist attack or similarly disruptive Incident of National Significance involving the marine transportation system can cause a severe ripple effect on other modes of transportation, as well as have adverse economic or national security effects. From the onset of a maritime incident, Federal, State, local, and tribal authorities require the capability to assess the human and economic consequences in affected areas rapidly, and to calculate the effects that may radiate outward to affect other regional, national, or global interests. These entities must also develop and implement contingency procedures to ensure continuity of operations, essential public services, and the resumption or redirection of maritime commercial activities, including the prioritized movement of cargoes to mitigate the larger economic, social, and possibly national security effects of the incident. Recovery of critical infrastructure, resumption of the marine transportation system, and restoration of communities within the affected area must all occur simultaneously and expeditiously.

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[11] Recovery is defined by the *National Response Plan* as the development, coordination, and execution of service- and site-restoration plans for impacted communities and the reconstitution of government operations and services.

[12] An Incident of National Significance is based on the criteria established in Homeland Security Presidential Directive-5, Management of Domestic Incidents, February 2003.

Safeguard the Ocean and Its Resources

Safeguard the ocean and its resources from unlawful exploitation and intentional critical damage.

The unlawful or hostile exploitation of the maritime domain also requires attention. The vulnerability is not just within U.S. territorial seas and internal waters. In the future, the United States can anticipate increased foreign fishing vessel incursions into its exclusive economic zones, which may have serious economic consequences for the United States. Protecting our living marine resources from unlawful or hostile damage has become a matter of national concern. Potential consequences of such damage include conflict and regional instability among nations over the control of marine resources to the detriment of all. The United States and other nations have a substantial economic and security interest in preserving the health and productive capacity of the oceans. We will continue to project a U.S. presence by monitoring and patrolling the United States' exclusive economic zones and certain high seas areas of national interest.

Assisting regional partners to maintain the maritime sovereignty of their territorial seas and internal waters is a longstanding objective of the United States and contributes directly to the partners' economic development as well as their ability to combat unlawful or hostile exploitation by a variety of threats. For example, as a result of our active discussions with African partners, the United States is now appropriating funding for the implementation of border and coastal security initiatives along the lines of the former Africa Coastal Security (ACS) Program. Preventing unlawful or hostile exploitation of the maritime domain requires that nations collectively improve their capability to monitor activity throughout the domain, establish responsive decision-making architectures, enhance maritime interdiction capacity, develop effective policing protocols, and build intergovernmental cooperation. The United States, in cooperation with its allies, will lead an international effort to improve monitoring and enforcement capabilities through enhanced cooperation at the bilateral, regional, and global level.

Section IV
Strategic Actions

"The tasks of the 21st century ... cannot be accomplished by a single nation alone."

President George W. Bush
December 1, 2004

The United States recognizes that, because of the extensive global connectivity among businesses and governments, its maritime security policies affect other nations, and that significant local and regional incidents will have global effects. Success in securing the maritime domain will not come from the United States acting alone, but through a powerful coalition of nations maintaining a strong, united, international front. The need for a strong and effective coalition is reinforced by the fact that most of the maritime domain is under no single nation's sovereignty or jurisdiction. Additionally, increased economic interdependency and globalization, largely made possible by maritime shipping, underscores the need for a coordinated international approach. Less than 3 percent of the international waterborne trade of the United States is carried on vessels owned, operated, and crewed by U.S. citizens. The United States also recognizes that the vast majority of actors and activities within the maritime domain are legitimate. Security of the maritime domain can be accomplished only by seamlessly employing all instruments of national power in a fully coordinated manner in concert with other nation-states consistent with international law.

Maritime security is best achieved by blending public and private maritime security activities on a global scale into a comprehensive, integrated effort that addresses all maritime threats. Maritime security crosses disciplines, builds upon current and future efforts, and depends on scalable layers of security to prevent a single point of failure. Full and complete national and international coordination, cooperation, and intelligence and information sharing among public and private entities are required to protect and secure the maritime domain. Collectively, these five strategic actions achieve the objectives of this Strategy:

- Enhance International Cooperation
- Maximize Domain Awareness
- Embed Security into Commercial Practices
- Deploy Layered Security
- Assure Continuity of the Marine Transportation System

These five strategic actions are not stand-alone activities. Domain awareness is a critical enabler for all strategic actions. Deploying layered security addresses not only layers of prevention (interdiction and preemption) and protection (deterrence and defense) activities, but also the integration of domestic and international layers of security provided by the first three strategic actions.

Enhance International Cooperation

Enhance international cooperation to ensure lawful and timely enforcement actions against maritime threats.

As the world's individual national economies become ever more closely integrated, it is critical that nations coordinate and, where appropriate, collectively integrate their security activities to secure the maritime domain. Accordingly, the United States supports close cooperation among nations and international organizations that share common interests regarding the security of the maritime domain. This strategic action is designed to involve all nations that have an interest in maritime security, as well as the ability and willingness to take steps to defeat terrorism and maritime crime. Fundamental to this cooperation must be a shared understanding of threat priorities to unify actions and plans.

New initiatives are needed to ensure that all nations fulfill their responsibilities to prevent and respond to terrorist or criminal actions with timely and effective enforcement. More robust international mechanisms will ensure improved transparency in the registration of vessels and identification of ownership, cargoes, and crew of the world's multinational, multi-flag merchant marine. Weak regulations and enforcement by some nations hinder transparency. Terrorists and criminals are currently exploiting this vulnerability by re-registering vessels under fictitious corporate names, and renaming and repainting vessels. New initiatives will be pursued diplomatically through international organizations such as the International Maritime Organization, the World Customs Organization, and International Standards Organization that already involve strong participation by industry. Where appropriate, these initiatives will build upon existing efforts, such as the Container Security Initiative, the Proliferation Security Initiative, the Customs-Trade Partnership Against Terrorism, the nonproliferation amendments to the Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation and the International Code for the Security of Ships and Port Facilities (ISPS Code), and the 2002 amendments to the International Convention for the Safety of Life at Sea, 1974. Initiatives will be coordinated by the Department of State and will include provisions such as:

- Implementing standardized international security and World Customs Organization frameworks for customs practices and standards to ensure that goods and people entering a country do not pose a threat;
- Expanding the use of modernized and automated systems, processes, and trade-data information to make vessel registration, ownership, and operation, as well as crew and cargo identification, more transparent and readily available in a timely manner;
- Developing, funding, and implementing effective measures for interdicting suspected terrorists or criminals;
- Developing and expanding means for rapid exchanges among governments of relevant intelligence and law enforcement information concerning suspected terrorist or criminal activity in the maritime domain;

- Adopting streamlined procedures to verify nationality and take appropriate and verifiable enforcement action against vessels in a timely manner consistent with the well-established doctrine of exclusive flag State jurisdiction;
- Expanding the United States Government's capabilities to prescreen international cargo prior to lading;
- Adopting procedures for enforcement action against vessels entering or leaving a nation's ports, internal waters, or territorial seas when they are reasonably suspected of carrying terrorists or criminals or supporting a terrorist or criminal endeavor; and
- Adopting streamlined procedures for inspecting vessels reasonably suspected of carrying suspicious cargo and seizing such cargo when it is identified as subject to confiscation.

The smooth operation of the global economy depends on the free flow of shipping through straits used for international navigation. About one third of the world's trade and half its oil traverse the Straits of Malacca and Singapore. Many of these key international waterways are relatively narrow and could be closed to shipping, at least temporarily, by an accident or terrorist attack. The United States will use the agencies and components of the Federal Government in innovative ways to improve the security of sea-lanes that pass through international straits. We will work with our regional and international partners to expand maritime security efforts. Regional maritime security regimes are a major international component of this Strategy and are essential for ensuring the effective security of regional seas.

The United States will continue to promote development of cooperative mechanisms for coordinating regional measures against maritime threats that span national boundaries and jurisdictions. By reducing the potential for regional conflict, maritime security is enhanced worldwide. The United States will also work closely with other governments and international and regional organizations to enhance the maritime security capabilities of other key nations by:

- Offering maritime and port security assistance, training, and consultation;
- Coordinating and prioritizing maritime security assistance and liaison within regions;
- Allocating economic assistance to developing nations for maritime security to enhance security and prosperity;
- Promoting implementation of the Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation and its amendments and other international agreements; and
- Expanding the International Port Security and Maritime Liaison Officer Programs, and the number of agency attachés.

Maximize Domain Awareness

Maximize domain awareness to support effective decision-making.

A key national security requirement is the effective understanding of all activities, events, and trends within any relevant domain – air, land, sea, space, and cyberspace – that could threaten the safety, security, economy, or environment of the United States and its people. Awareness and threat knowledge are critical for securing the maritime domain and the key to preventing adverse events. Knowledge of an adversary's capabilities, intentions, methods, objectives, goals, ideology, and organizational structure, plus factors that influence his behavior, are used to assess adversary strengths, vulnerabilities, and centers of gravity. Such knowledge is essential to supporting decision-making for planning, identifying requirements, prioritizing resource allocation, and implementing maritime security operations. Domain awareness enables the early identification of potential threats and enhances appropriate responses, including interdiction at an optimal distance with capable prevention forces.

Achieving awareness of the maritime domain is challenging. The vastness of the oceans, the great length of shorelines, and the size of port areas provide both concealment and numerous access points to the land. Many maritime threats are conveyed in ways that thwart early detection and interdiction. The lack of complete transparency into the registration and ownership of vessels and cargoes, as well as the fluid nature of the crewing and operational activities of most vessels, offer additional opportunities for concealment and challenges for those attempting to maintain maritime security. Domain awareness requires integrating all-source intelligence, law enforcement information, and open-source data from the public and private sectors. It is heavily dependent on information sharing and requires unprecedented cooperation among the various elements of the public and private sectors, both nationally and internationally.

To maximize domain awareness, the United States will leverage its global maritime intelligence capability and the diverse expertise of the intelligence and law enforcement communities. The efforts of the existing maritime collection and analysis means will contribute to an intelligence enterprise equipped to collect, fuse, integrate, and disseminate timely intelligence and information. This intelligence enterprise will support United States Government agencies and international partners in securing the maritime domain, as well as their other statutorily assigned missions. Additionally, the Departments of Homeland Security, Defense, and Justice will oversee the implementation of a shared situational awareness capability that integrates intelligence, surveillance, reconnaissance, navigation systems, and other operational information inputs, combined with access at multiple levels throughout the United States Government. Authorized elements in the public and private sectors will have access to this integrated shared situational awareness capability, as well as relevant information within their specific area of responsibility. The establishment of this intelligence enterprise underscores the need for an integrated and robust maritime command and control system to defeat all maritime threats.

"The increasing mobility and destructive potential of modern terrorism has required the United States to rethink and renovate fundamentally its systems for border and transportation security. Indeed, we must now begin to conceive of border security and transportation security as fully integrated requirements because our domestic transportation systems are inextricably intertwined with the global transport infrastructure. Virtually every community in America is connected to the global transportation network by the seaports, airports, highways, pipelines, railroads, and waterways that move people and goods into, within, and out of the Nation. We must therefore promote the efficient and reliable flow of people, goods, and services across borders, while preventing terrorists from using transportation conveyances or systems to deliver implements of destruction."

National Strategy for Homeland Security

The United States will continue to enhance the capabilities of current systems and develop new capabilities and procedures to locate and track maritime threats and illicit activities. Initiatives to maximize domain awareness include expansion and enhancement of the following:

- Both short- and long-range vessel detection and monitoring capabilities;
- Regulatory and private sector initiatives and agreements to enhance advance notices of arrival, vessel movement information, supply-chain security practices, and manifest and entry information for cargo;
- International arrangements that promote enhanced visibility into the maritime supply chain and the movement of cargo, crews, and passengers;
- Sensor technology, human intelligence collection, and information processing tools to persistently monitor the maritime domain;
- International coalitions to share maritime situational awareness on a timely basis;
- Global maritime intelligence and integration enterprise for intelligence analysis, coordination, and integration that supports all other national efforts;
- Shared situational awareness to disseminate information to users at all levels;
- Automated tools to improve data fusion, analysis, and management in order to systematically track large quantities of data, and to detect, fuse, and analyze aberrant patterns of activity – consistent with the information privacy and other legal rights of Americans; and
- In order to advance to the next level of threat detection, transformational research and development programs in information fusion and analysis – these programs will develop the next qualitative level of capability for detection threats.

Embed Security into Commercial Practices

Embed security into commercial practices to reduce vulnerabilities and facilitate commerce.

Potential adversaries are opportunistic and will attempt to exploit existing vulnerabilities, choosing the time and place to act according to the weaknesses they observe. Private owners and operators of infrastructure, facilities, and resources are the first line of defense for their own property, and they should undertake basic facility security improvements. They can improve their defenses against terrorist attacks and criminal acts by embedding into their business practices scalable security measures that reduce systemic or physical vulnerabilities. The elimination of security weaknesses depends upon incorporating best practices and establishing centers of excellence, including feedback loops for lessons learned, as well as a periodic review of each country's security standards for mutual compatibility.

A close partnership between government and the private sector is essential to ensuring critical infrastructure and key resource vulnerabilities are identified and corrected quickly. Since 2001, the United States Government has developed and implemented a cargo container security strategy to identify, target, and inspect cargo containers before they reach U.S. ports. Under this strategy, the United States Government uses intelligence to review information on 100 percent of all cargo entering U.S. ports, and all cargo that presents a risk to our country is inspected using large x-ray and radiation detection equipment.

Additionally, the United States Government requires that advance information about all containers be given to U.S. Customs and Border Protection well before they arrive. In fact, the information is required 24 hours before cargo is loaded onto vessels at foreign seaports (24-Hour Rule). Containers posing a potential terrorist threat are identified and targeted before they arrive at U.S. seaports by the National Targeting Center (NTC). The NTC was established as the centralized coordination point for all of Customs and Border Protection's anti-terrorism efforts. NTC uses intelligence and terrorist indicators to review advance information for all cargo, passengers, and imported food shipments before arrival into the United States. NTC coordinates with other Federal agencies such as the U.S. Coast Guard, Federal Air Marshals, FBI, Transportation Security Administration, and the Departments of Energy and Agriculture, as well as the intelligence community.

Both the government and the private sector will continue to conduct vulnerability assessments to identify defenses that require improvement. A consistent risk management approach, which requires a comprehensive assessment of threat, likelihood, vulnerability, and criticality, will allow the private sector to invest in protective measures as a supporting business function.

Further reduction in security vulnerabilities will also occur by encouraging the private sector, by means of outcome-based security standards, incentives, and market

mechanisms, to conduct comprehensive self-assessments of their supply chain security practices; adhere voluntarily to baseline security criteria; and implement other regulatory security measures as deemed necessary by the Department of Homeland Security. Enhanced reporting, verification, and compliance procedures by the private sector, as well as the use of technology to allow greater visibility into the supply chain, will enable the government to develop more accurate processes for separating high-risk cargo from that which can be afforded expedited clearance. In exchange, the shipments of firms that comply will be eligible for expedited clearance and have a reduced likelihood of inspections at departure, transshipment, and arrival ports.

The complexity of the process for handling containerized shipments makes it more difficult to embed security practices and reduce vulnerabilities than for other types of cargo. Container ships carry cargo for thousands of companies, and the containers are loaded individually away from the port. Each transfer of a container from one party to the next is a point of vulnerability in the supply chain. The security of each transfer facility and the trustworthiness of each company are therefore critical to the overall security of the shipment. Cargo must be loaded in containers at secure facilities and the integrity of the container maintained to its final destination. Supply chain personnel will employ various methods to prevent the misuse of containers and conveyances for transporting illegal commodities, as well as to detect tampering. They will report the occurrence of each incident to the Department of Homeland Security and, when appropriate, resolve such incidents prior to the arrival of the identified containers in the United States.

Embedding security practices and vulnerability reduction efforts into commercial practices rests upon the implementation of key legislation, such as the Maritime Transportation Security Act of 2002 and the Trade Act of 2002, as well as International Maritime Organization requirements such as the International Ship and Port Facility Security Code, and public-private partnerships such as the Customs-Trade Partnership Against Terrorism. The United States will build upon these statutes, international instruments, and identified best practices to develop a program of formal maritime security governance.

Commercial businesses must put in place effective means to control access to their facilities. In cooperation with the private sector, the United States will establish a system-wide common credential for use across all transportation modes by individuals requiring unescorted physical access to secure, restricted, and critical areas of the maritime domain. The identification card for access will use biometrics to link the person to the credential definitively. To receive this credential, individuals will undergo appropriate background checks. Credential services will also be available on a voluntary basis for frequent travelers under various registered traveler programs.

Overly restrictive, unnecessarily costly, or reactionary security measures to reduce vulnerabilities can result in long-term harm both to the United States and global economies, undermine positive countermeasures, and unintentionally foster an environment conducive to terrorism. Security measures must accommodate commercial

and trade requirements, facilitate faster movement of more cargo and more people, and respect the information privacy and other legal rights of Americans. To support the accelerating growth of global commerce and security concerns, security measures must: (1) be aligned and embedded with supply chain information flows and business processes; (2) keep pace with supply chain developments; (3) optimize the use of existing databases; and (4) be implemented with the minimum essential impact on commercial and trade-flow costs and operations. This will require new and enhanced partnerships, as well as cost- and burden-sharing between the private and public sectors.

Deploy Layered Security

Deploy layered security to unify public and private security measures.

The ability to achieve maritime security is contingent upon a layered security system that integrates the capabilities of governments and commercial interests throughout the world. The public and private sectors acting in concert can prevent terrorist attacks and criminal acts only by using diverse and complementary measures, rather than relying upon a single point solution. Specifically, a layered approach to maritime security means applying some measure of security to each of the following points of vulnerability: transportation, staff, passengers, conveyances, access control, cargo and baggage, ports, and security *en route*. This layered security is not static, but deters attack by continually evolving through calculated improvements that introduce uncertainty into the adversary's deliberate planning process and efforts to conduct surveillance or reconnaissance. In deciding whether to implement a new security layer, the United States must take into account its effectiveness and cost in reducing risks Americans face, both in absolute terms and relative to other possible measures, and must ensure consistency with the information privacy and other legal rights of Americans.

- The Department of Homeland Security, the Department of Defense, and the Department of Justice, as well as the Department of State when diplomatic activities are required, will lead the United States' efforts to integrate and align all United States Government maritime security programs and initiatives into a comprehensive, cohesive national effort of scalable, layered security. This includes full alignment and coordination with appropriate State and local agencies, the private sector, and other nations.

- To intercept and defeat transnational threats, the Department of Homeland Security and the Department of Defense will develop a mutually agreed process for ensuring rapid, effective support to each other. Terrorist threats will be addressed as national security incidents employing as appropriate all instruments of national power to defeat the threat. All other maritime threats will be addressed through national authorities, consistent with national and international law, for mission accomplishment and self-defense, employing use-of-force protocols where necessary.

Physical protection is a fundamental layer of security. Primary protection measures by government agencies include maritime security or enforcement zones, vessel movement control, and the inspection of targeted cargo. Security zones are established and enforced around designated fixed facilities, certain vessels in transit, and sensitive geographic areas to provide an exclusion zone for controlled access and use only by the government. Around these zones, the private sector employs other layers of physical security, such as access barriers, fencing, lighting, surveillance cameras, and guards, along with oversight procedures, to ensure system integrity for the critical infrastructure and key resources that they own and operate. Security standards and procedures employed in the United States are developed in conjunction with other nations and industry, and are shared with State, local, and tribal governments.

- The rapid and accurate identification of individuals for access to secure, restricted, and critical areas is a paramount protection measure that must be implemented by the private sector, in cooperation with the Federal Government. Persons seeking to enter the United States will undergo identity checks and biometric screening at the border and in the coastal approaches to verify their lawful admission.

- Protection layers also include the positive control of high-interest vessels. Mandatory adherence to a national vessel-movement reporting system is required for all vessels entering and departing U.S. ports. Security forces assigned to provide physical security for critical infrastructure and key resources must be trained and equipped to detect, identify, interdict, and defeat vessels that pose a threat.

- Not all maritime assets, facilities, systems, or ports require equal protection. The Federal Government will collaborate with State, local, and tribal governments and the private sector to assess and prioritize critical facilities, resources, infrastructure, and venues that are at greatest risk from hostile or unlawful acts.

Physical cargo inspection adds another layer of security. With as many as 30,000 containers entering the United States every day, physical inspection of all cargo would effectively shut down the entire U.S. economy, with ripple effects far beyond the seaports. Inspections on this scale are prohibitively expensive and often ineffective. Using mandatory reporting information provided by the private sector, the United States will screen all inbound cargo and inspect all cargo designated as high-risk and ideally prescreen it before loading. In addition, all inbound cargo will be screened for WMD or their components. Establishment of the Domestic Nuclear Defense Office will contribute to improving the detection of a nuclear device or fissile or radiological material entering the United States through the maritime domain.

Interdiction of personnel and materials that pose a threat to the United States or the maritime domain is an essential layer of security. Interdiction, whether against terrorist personnel, terrorist materiel support, WMD, or other contraband, will be carefully coordinated to ensure prioritization of intelligence, proper allocation of resources, and, when necessary, swift, decisive action. The United States, along with its international partners, will monitor those vessels, cargoes, and people of interest from the point of

origin, through intervening ports, to the point of entry to ensure the integrity of the transit, to manage maritime traffic routing, and, if necessary, to interdict or divert vessels for inspection and search. The United States will promote efforts to enhance the efficiency and effectiveness of detecting and determining the status of unidentified or unauthorized vessels, people, and cargo within the maritime domain.

Military and law enforcement response provides a fourth security layer. For maritime security operations on the high seas or in its exclusive economic zones, territorial seas, internal seas, inland rivers, ports, and waterways, the United States must have well-trained, properly equipped, and ready maritime security forces from both the U.S. Armed Forces and national, regional, State, and local law enforcement agencies to detect, deter, interdict, and defeat any potential adversary. For protection and deterrence to be successful, maritime security forces must be visible, vigilant, well-trained, well-equipped, mobile, adaptive, and capable of generating effective presence quickly, randomly, and unpredictably.

In many instances each layer of maritime security is the responsibility of a different agency with multiple jurisdictions and functions. Integrating these disparate maritime security layers requires a clear delineation of roles and responsibilities and cannot be achieved through cooperation alone. In particular, to achieve unity of effort and operational effectiveness, maritime security forces from both the U.S. Armed Forces and law enforcement agencies must have the capability and authority to operate in mutually supporting and complementary roles against the spectrum of expected security threats. These security forces must have a high degree of interoperability, reinforced by joint, interagency, international training and exercises to ensure a high rate of readiness, and supported by compatible communications and, where appropriate, common doctrine and equipment.

- Recognizing the critical importance of interoperability, maritime security actions at the operational and tactical levels will be based on a network-centric approach that employs resources, as needed, from multiple agencies – primarily from the Department of Homeland Security and the Department of Defense – including surveillance and reconnaissance assets, aircraft, ships, boats, land units, and shore support facilities, all linked by an operational information network.

- Wherever feasible and operationally effective, agencies should co-locate in multiagency centers to facilitate direct interaction and efficient use of limited resources. Additionally, concrete and well-defined coordination protocols and communication mechanisms including procedures for operating jointly to prevent and respond to threats, and for assigning lead agencies for both pre- and post-incident operations, will be implemented. The coordination protocols must also outline defined procedures for ensuring national execution of maritime security policy for specific threats or incidents, and more routine encounters where a multiagency response must be seamlessly coordinated.

- Integrated planning and effective management of agency resources – Federal, State, and local – are essential for an effective response. Therefore, agencies will also share training, planning, and other resources, where practical and permissible, to standardize operational concepts, develop common technology requirements, and coordinate budget planning for maritime security missions.

- Acquisition and logistics processes must support the continuous assessment of all requirements to optimize the allocation of appropriate resources and capabilities. Cooperative research and development efforts, coupled with reformed acquisition processes with coordinated requirements, funding, and scheduling, along with management, will identify unmet and emerging needs.

Assure Continuity of the Marine Transportation System

Assure continuity of the marine transportation system to maintain vital commerce and defense readiness.

The United States will be prepared to maintain vital commerce and defense readiness in the aftermath of any terrorist attack or other similarly disruptive incidents that occur within the maritime domain. The response to such events should not default to an automatic shutdown of the marine transportation system; instead, the United States will be prepared to disengage selectively only designated portions, and immediately implement contingency measures to ensure the public's safety and continuity of commerce. This requires (1) a common framework with clearly defined roles for those charged with response and recovery; (2) ready forces that are properly trained and equipped to manage incidents, especially those involving WMD; (3) carefully crafted and exercised contingency plans for response, assessment, and recovery; and (4) extensive coordination among public, private, and international communities. As stated in the Maritime Transportation Security Act and the National Response Plan, the Department of Homeland Security, with the U.S. Coast Guard as its executive agency, has the primary responsibility for maritime homeland security, including the coordination of mitigation measures to expedite the recovery of infrastructure and transportation systems in the maritime domain, with the exception of DOD installations.

Although this Strategy advocates that incidents should be managed at the lowest possible organizational and jurisdictional level, maritime incidents of national significance will require the combined expertise of all levels of government and the private sector, and coordination with international trading partners. The United States will respond using the common coordinating structures contained within the National Response Plan and the National Incident Management System. Similarly, there is a need for corresponding international coordinating mechanisms to reconstitute commerce and minimize the global impact in the event of a significant maritime incident or threat.

The first line of response in the aftermath of any terrorist attack is the first-responder community – police officers, firefighters, emergency medical care providers, public works personnel, and emergency management officials. However, this first line of

response may have only limited capabilities for dealing with the effects of a WMD event within the maritime domain, such as a nuclear or radiological dirty bomb exploded on a vessel in a major port area. The United States must build rapid-reaction forces to support first responders with capabilities to respond to WMD and other terrorist incidents that occur in the maritime domain. These response forces will blend the expertise and resources of the public and private sectors. They will be organized, trained, equipped, and exercised to operate in contaminated environments and manage the consequences of WMD incidents. Specifically, they will develop and deploy capabilities to detect and identify harmful chemical and biological agents, as well as conduct casualty extraction and mass decontamination in the maritime environment.

Concurrent with efforts to ensure the public's well-being, actions to maintain continuity of commerce must be implemented as quickly as possible, with a focus on expediting the recovery of maritime infrastructure, transportation systems, and affected maritime communities. Contingency and continuity plans for the public and private sector must be developed and exercised. Protocols for assessment, recovery, and reconstitution must effectively prioritize local, regional, and national interests, manage risk and uncertainty within acceptable levels, and achieve validation through regular drills and exercises. The marine transportation system will not be shut down as an automatic response to a maritime incident. Instead, a prudent and measured response will be taken based on an assessment of the specific incident, including available intelligence. Assessment and recovery efforts must be a shared responsibility of the public and private sectors. Accurate assessments regarding closures of selected commercial nodes within the marine transportation system, as well as effective efforts to redirect the affected modes of commerce, can only be achieved with the full cooperation of the private sector. To facilitate these actions, a formally recognized, national-level, coordinating body comprising private sector interests will liaison with Federal and State governments in developing and implementing these significant measures.

The direct and indirect costs associated with a prolonged and systemic disruption of the marine transportation system can be avoided by following the provisions of in-place contingency and continuity plans. These plans for assessment, recovery, and reconstitution must prioritize local, regional, and national interests, as well as manage risk and uncertainty within acceptable levels. These contingency and continuity plans must be developed and exercised in a coordinated fashion by the public and private sectors.

Section V
Conclusion

"Ultimately, the foundation of American strength is at home. It is in the skills of our people, the dynamism of our economy, and the resilience of our institutions. A diverse, modern society has inherent, ambitious, entrepreneurial energy. Our strength comes from what we do with that energy. That is where our national security begins."

National Security Strategy of the United States

This National Strategy presents a vision for the achievement of maritime security for the people and interests of the United States while respecting the information privacy and other legal rights of Americans. Moreover, it underscores our commitment to strengthening our international partnerships and advancing economic well-being around the globe by facilitating commerce and abiding by the principles of freedom of the seas.

As a vision for the future, it certainly faces some serious challenges. The sheer magnitude of the maritime domain complicates the arduous and complex task of maintaining maritime security. The United States confronts a diverse set of adversaries fully prepared to exploit this vast milieu for nefarious purposes. The seas serve as the medium for a variety of transnational threats that honor no national frontier and that seek to imperil the peace and prosperity of the world. Many of these threats mingle with legitimate commerce, either to provide concealment for carrying out hostile acts, or to make available weapons of mass destruction, their delivery systems, and related materials to nations and non-state actors of concern.

In this ambiguous security environment, responding to these unpredictable and transnational threats requires teamwork to prevent attacks, protect people and infrastructure, minimize damage, and expedite recovery. It necessitates the integration and alignment of all maritime security programs and initiatives into a far-reaching and unified national effort involving the Federal, State, local, and private sectors. Since September 11, 2001, Federal departments and agencies have risen uncompromisingly to the challenge of maritime security. But even an enhanced national effort is not sufficient. The challenges that remain ahead for the United States, the adversaries we confront, and the environment in which we operate compel us to strengthen our ties with allies and friends and to seek new partnerships with others. Therefore, international cooperation is critical to ensuring that lawful private and public activities in the maritime domain are protected from attack and hostile or unlawful exploitation. Such collaboration is fundamental to worldwide economic stability and growth, and it is vital to the interests of the United States. It is only through such an integrated approach among all maritime partners – governmental and nongovernmental, public and private – that we can improve the security of the maritime domain.

Thus, effective implementation of this National Strategy requires greater cooperation, not less. It requires deeper trust and confidence, not less. It requires a concerted application

of collective capabilities to: increase our awareness of all activities and events in the maritime domain; enhance maritime security frameworks domestically and internationally; deploy a layered security based on law enforcement authorities, private sector partners' competencies, and military might; pursue transformational research and development to move to the next level of information fusion and analysis and WMD detection technologies for qualitative improvements in threat detection; and lastly improve our response posture should an incident occur.

With this National Strategy, the course has been set, but rhetoric is no substitute for action, and action is no substitute for success.

Annex A
Supporting Implementation Plans

This Strategy directs the coordination of United States Government maritime security programs and initiatives to achieve a comprehensive and cohesive national effort involving appropriate Federal, State, local, and private sector entities. In support of this Strategy, eight national implementation plans provide amplifying detail and specificity:

1. **National Plan to Achieve Maritime Domain Awareness** lays the foundation for an effective understanding of anything associated with the maritime domain that could impact the security, safety, economy, or environment of the United States, and identifying threats as early and as distant from our shores as possible.
2. **Global Maritime Intelligence Integration Plan** uses existing capabilities to integrate all available intelligence regarding potential threats to U.S. interests in the maritime domain.
3. **Maritime Operational Threat Response Plan** aims for coordinated United States Government response to threats against the United States and its interests in the maritime domain by establishing roles and responsibilities that enable the government to respond quickly and decisively.
4. **International Outreach and Coordination Strategy** provides a framework to coordinate all maritime security initiatives undertaken with foreign governments and international organizations, and solicits international support for enhanced maritime security.
5. **Maritime Infrastructure Recovery Plan** recommends procedures and standards for the recovery of the maritime infrastructure following attack or similar disruption.
6. **Maritime Transportation System Security Plan** responds to the President's call for recommendations to improve the national and international regulatory framework regarding the maritime domain.
7. **Maritime Commerce Security Plan** establishes a comprehensive plan to secure the maritime supply chain.
8. **Domestic Outreach Plan** engages non-Federal input to assist with the development and implementation of maritime security policies resulting from NSPD-41/HSPD-13.

Maritime Administration

Strategic Plan for Fiscal Years 2003-2008

U.S. Department of Transportation
Maritime Administration

Memorandum

Subject: Date:

From: Reply to Attn. of:

To:

My Fellow Employees,

Our Partners in Government and Industry,

and the American People:

The Maritime Administration's 2003-2008 Strategic Plan defines who we are and where we are headed in the near future. Our strategic plan is important because it spells out our mission, our cted achievements, and the specific strategies and actions that we plan to pursue in our quest for results that matter to the American people. We will continue to implement our statutory mandates to ensure the availability of efficient water transportation service to American shippers and consumers; an adequate shipbuilding and repair base; efficient ports; effective intermodal water and land transportation connections; and sufficient intermodal shipping capacity for use by the Department of Defense in times of national emergency.

This plan will help us meet the challenges and changes facing our transportation system, the U.S. maritime industry and the Federal Government. The Maritime Administration intends to focus its efforts through 2008 on the strategic areas of commercial mobility, national security, and environmental stewardship. As you will read in our strategic plan, the Maritime Administration also directly supports achievement of the strategic objectives of the Department of Transportation. One of our greatest challenges is to increase our national transportation options in order to support our Nation's economic growth. Greater use of the maritime transportation system, through elements like short sea shipping, offers the potential to reduce passenger and

freight congestion. In addition, we expect the U.S. military will increase its reliance on commercial transportation systems. These two factors are of such importance that we must plan wisely now to meet these needs. Our plan requires a more effective intermodal transportation system that serves our national need for personal mobility and for the safe and efficient movement of domestic and international freight.

Maritime Administration Strategic Objectives

> **Commercial Mobility:** Promote and facilitate a United States maritime transportation system that improves the safe and efficient movement of goods and people.
>
> **National Security:** Assure that sufficient sealift capability and intermodal transportation infrastructure exist to support vital homeland and national security interests.
>
> **Environment:** Promote maritime and intermodal transportation solutions that enhance environmental stewardship.

The Maritime Administration also will seek continual improvement in our service to the U.S. maritime industry and to the public. Our organizational excellence objective is to advance the ability of the Maritime Administration to manage resources in order to accomplish measurable results and achieve the goals of the President's Management Agenda.

Our ability to achieve our mission and goals is dependent on our commitment, our ability to work well with all of our partners, and the skill and talents of our staff. I look forward to working with all of you to make the planned results in this document a reality.

Sincerely,

/signed/

Captain William G. Schubert

Maritime Administrator

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I. INTRODUCTION AND SCOPE

As the world's largest trading nation, the United States exports and imports about one-fourth of all global merchandise trade ($1.9 trillion in 2001). The largest parts of this merchandise trade – over one billion tons of cargo – are moved by water. Another billion tons of cargo is carried in domestic waterborne movements, which serve over 90 percent of the U.S. population. By the year 2020, U.S. foreign trade in goods may grow by more than half its current tonnage, and inland waterway traffic will increase as well.

Within the United States, changing demographics and trading patterns, and advances in economic growth and consumer demand are straining the transportation infrastructure, intensifying congestion, and increasing transportation-related pollutants. Passenger vehicle travel on public road is expected to grow by 24.7 percent between 2000-2010. Expansion of waterborne services could relieve congestion and improve air quality. Strategic transportation planning at all levels of government, with greater emphasis on freight mobility, will be critical to addressing congestion and environmental issues within the transportation system as a whole.

The Department of Transportation (DOT) has complementary roles in ensuring that the marine transportation system will be able to meet the challenges ahead by assuring the safety and environmental soundness of marine transportation, and in supporting a strong U.S. maritime industry and an integrated marine transportation system nationwide. In the past, policy development and oversight of maritime commerce and industrial activities was shared within DOT among the U.S. Coast Guard (USCG), the Maritime Administration (MARAD), and the St. Lawrence Seaway Development Corporation. With the transfer of the USCG as an entity to the Department of Homeland Security (DHS) on March 1, 2003, MARAD will become the principal advocate within DOT for an integrated waterborne transportation system and Federal programs supporting the marine mode.

MARAD's mission is to strengthen the U.S. maritime transportation system - including infrastructure, industry and labor - to meet the economic and security needs of the Nation. MARAD seeks to promote the development and maintenance of an adequate, well-balanced United States merchant marine, sufficient to carry the Nation's domestic waterborne commerce and a substantial portion of its waterborne foreign commerce, as well as be capable of serving as a naval and military auxiliary in time of war or national emergency. MARAD also seeks to ensure that the United States maintains adequate shipbuilding and repair services, efficient ports, effective intermodal water and land connections, and reserve shipping capacity for use in time of national emergency.

Within this framework, MARAD has developed this strategic plan laying out our course of action and accomplishment for the fiscal years 2003 - 2008 in three strategic areas: commercial mobility, national security, and environment.

Commercial Mobility: Our commercial mobility strategic objective primarily addresses congestion reduction. Currently, the nation's inland waterway, marine and landside infrastructure is operating at or near capacity due to global industry changes. These changes are currently generating additional demand for more marine terminal capacity, more efficient landside access and better intermodal connections to the surface transportation system. Due to constraints on capital, environment and land use, it is uncertain whether sufficient new terminals and infrastructure will be added to meet projected demands on the transportation system. Solutions to prevent congestion of the existing system and to alleviate impediments will require a systemic

approach to moving freight as those who use the network demand more reliable door-to-door freight services. We will explore ways to develop the technology and infrastructure that will improve the use of the marine transportation system to alleviate congestion, e.g. establishment of a domestic short sea shipping system, and also improve waterside-landside connection points. Additionally, MARAD will continue to formulate and present the U.S. position on international maritime issues and actively participate in international activities to assist the U.S. maritime industry in achieving equitable and competitive maritime transportation operations worldwide.

National Security: We recognize that our transportation system must remain a vital link for mobilizing our armed forces for military contingencies and for supporting civilian emergency response. MARAD's national security strategic objective addresses these needs by continuing to support the transportation requirements of the Department of Defense (DOD) and through initiatives to make our ports and container shipping system more secure. In addition, we understand the urgency in securing our port facilities and waterborne commerce from terrorist attack. With funding from the DHS, MARAD has implemented port security grant activities that play a major role in the improvement of U.S. port security. The port security grant program allows ports throughout the U.S. to compete for federal security improvement funding. Projects funded by these grants increase the security of the U.S. port system.

Environment: MARAD expects to focus considerable attention on three critical maritime environment issues: ship disposal, marine air emissions and energy use, and ballast water management. We will lessen the risk of environmental contamination posed by MARAD-owned transportation assets, particularly the obsolete vessels in the National Defense Reserve Fleet. We will dispose of these ships in an environmentally responsible manner and assure that they do not contaminate the environment as they await disposal. At the same time, MARAD will implement President Bush's Executive Orders on environmental stewardship and leadership in environmental management. The Executive Order on environmental stewardship streamlines the environmental review process for development of transportation infrastructure projects. The Executive Order on leadership in environmental management requires the development of an environmental management system (EMS). We will formalize environmental considerations in our operations and in our partnerships with other agencies and private stakeholders to streamline processes that lead to environmentally friendly transportation improvements.

Each strategic objective area in the MARAD strategic plan includes the following sections:

- A statement of our strategic objective.
- Our perspective and outlook for the future. [i.e. a description of the context within which we expect to operate over the years of the strategic plan]
- A definition of our desired outcomes.
- A description of the means and strategies that we will use to achieve our outcomes.
- Identification of the specific key external factors that will heavily influence whether we achieve results, or not.
- A description of the relationship between our strategic objectives and outcomes and those of the Department.

- A description of the relationship between our strategic objectives, our desired outcomes, and the performance measures that we have chosen to demonstrate our success.

MARAD is also committed to the timely implementation of the President's Management Agenda (PMA). The PMA seeks to improve Federal government operations in five areas: human capital management, competitive sourcing for labor, financial management, the conduct of business by electronic means, and the integration of performance into the Federal budget process. Our new Organizational Excellence objective will focus our energies on implementation of the PMA and on continual improvement in our efforts to manage for results.

MARAD will take the steps necessary to strengthen our organizational structure and to ensure that we have continual access to a highly skilled talent pool from which current and future critical staffing needs will be filled. Having identified those critical needs, we will proceed to develop and implement sound strategies for addressing them through the full implementation of the five government-wide initiatives included in the PMA. We will assess our existing organizational structure and determine what approaches or combination of approaches will yield the most efficient and effective organization. Our recruitment strategies will be based upon sound workforce planning and strategic management of our human capital to ensure that the workforce is aligned to meet the critical mission-related needs of the agency. We will also inventory and study our positions to identify any potential opportunities to utilize competitive sourcing as a means of staffing certain agency functions. Improved accountability will occur as we integrate our budget with clearly defined performance measures that will allow us to measure the success of agency programs and activities. The introduction of sound financial management strategies, including the implementation of cost accounting, will further strengthen our ability to associate costs with specific activities and outcomes. Finally, the expanded use of information technology will enhance the agency's performance and make us more readily accessible to our customers.

I. THE MARITIME ADMINISTRATION

Our Mission

Improve and strengthen the U.S. maritime transportation system – including infrastructure, industry and labor – to meet the economic and security needs of the Nation.

II. MAJOR LEGISLATIVE AUTHORITIES

The primary legislative authority governing MARAD's current role in maritime transportation is the **Merchant Marine Act of 1936, as amended**. Section 101 of the Act declares that it is U.S. policy to foster the development and encourage the maintenance of a merchant marine that is (a) sufficient to carry its domestic water-borne commerce and a substantial portion of the water-borne export and import commerce of the United States..., (b) capable of serving as a naval and military auxiliary in time of war or national emergency, (c) owned and operated under the United States flag by citizens of the United States insofar as may be practicable, (d) composed of the best equipped, safest, and most

suitable types of vessels, constructed in the United States and manned with a trained and efficient citizen personnel, and (e) supplemented by efficient facilities for shipbuilding and ship repair.

Our other major existing authorities are as follows:

National Security

Maritime Transportation Security Act of 2002 (P.L. 107-295) - This Act imposed broad security requirements on the maritime industry by requiring comprehensive security plans for U.S. ports and mandated improved identification and screening of seaport personnel. The United States has 95,000 miles of coastline that must be protected and patrolled in addition to hundreds of ports and waterways that need to be secured. The goal of this port security legislation is to deter terrorist attacks against ocean shipping without adversely affecting the flow of U.S. commerce through U.S. ports.

Maritime Security Act of 1996 (P.L. 104-239) - The Maritime Security Act established the Maritime Security Program (MSP) under Title VI of the Merchant Marine Act of 1936. The MSP is intended to ensure that an active U.S. merchant fleet, and the trained personnel needed to operate both active and reserve vessels, will be available to meet U.S. military requirements for sealift capacity during conflict or in humanitarian and peacekeeping missions. The MSP will also ensure America's continued presence in the movement of U.S. import and export commerce.

The Defense Production Act of 1950 (DPA) and related Executive Orders provide authority to plan for defense mobilization and emergency preparedness of merchant shipping, including the establishment of priorities, allocations, and voluntary agreements. Under the DPA, MARAD identifies staging areas and berths in specific strategic defense ports, and ensures that a defense agency may use these facilities in a deployment of military forces. Under the DPA and **Executive Order 12919**, MARAD has entered into a Voluntary Intermodal Sealift Agreement and a Voluntary Tanker Agreement that allow the pooling of essential shipping-related resources for defense purposes. **Executive Order 12656** assigns emergency planning and preparedness function to the Secretary, and MARAD is delegated the authority to develop national emergency plans and preparedness programs for ocean shipping, ports and facilities.

The Merchant Ship Sales Act of 1946 authorizes MARAD to maintain a National Defense Reserve Fleet, of which the Ready Reserve Force is the vital surge component assuring the rapid ability to support military sealift requirements.

Movement of Government-Generated Cargo

The Cargo Preference Act of 1954 requires that at least 50 percent (by weight) of all Government-generated cargoes be shipped on privately owned, U.S.-flag commercial vessels to the extent such vessels are available at fair and reasonable rates. The **Food Security Act of 1985** increased the U.S.-flag requirement from 50 to 75 percent for shipments of certain agricultural foreign assistance cargoes: Titles I, II and III of P.L. 83-

480; Section 416 of the Agricultural Act of 1949; and, the Food for Progress Act of 1985.

Public Resolution 17 enacted in 1934 (73rd Congress) requires that all cargoes generated by agencies which provide loans to promote exports, such as the Export-Import Bank, be shipped on U.S.-flag vessels, unless a waiver is granted.

The Cargo Preference Act of 1904 requires that all items procured for or owned by U.S. military departments and defense agencies be carried exclusively on U.S.-flag vessels available at the same rates as commercial shippers and not otherwise unreasonable.

III.

IV. THE RELATIONSHIP BETWEEN THE DOT AND MARAD STRATEGIC OBJECTIVES

MARAD's strategic objectives are an outgrowth of those of DOT, and as such, success in achieving MARAD's strategic objectives and performance goals will have a direct bearing on the achievement of the Department's objectives, as shown below:

DOT		MARAD
Mobility: Advance accessible, efficient, intermodal transportation for the movement of goods and people. **Global Connectivity:** Facilitate a more efficient domestic and global transportation system that enables economic growth and development.		**Commercial Mobility:** Promote and facilitate a United States maritime transportation system that improves the safe and efficient movement of goods and people.
Security: Balance homeland and national security transportation requirements with the mobility needs of the Nation for personal travel and commerce.	↔	**National Security:** Assure that sufficient sealift capability and intermodal transportation infrastructure exists to support vital homeland and national security interests.
Environmental Stewardship: Promote transportation solutions that enhance communities and protect the national and built environment.	↔	**Environment:** Promote maritime and intermodal transportation solutions that enhance environmental stewardship.
Organizational Excellence: Advance the Department's ability to manage for results and achieve the goals of the President's Management Agenda.	↔	**Organizational Excellence:** Advance the ability of the Maritime Administration to manage resources to accomplish measurable results and to achieve the goals of the President's Management Agenda

A specific example of the linkage between our strategic objectives, outcomes, and annual performance goals and targets is shown below:

DOT Security Strategic Objective: Balance homeland and national security transportation requirements with the mobility needs of the Nation for personal travel and commerce.

↑

DOT Outcome: The U.S. transportation system meets homeland and national security requirements.

↑

DOT FY 2004 Annual Performance Goal and Target: Availability of 94% of DOD's required shipping capacity [both commercial and government-owned], complete with crews, within mobilization timelines.

↑

MARAD National Security Strategic Objective: Assure that sufficient sealift capability and intermodal transportation infrastructure exist to support vital homeland and national security interests.

↑

MARAD Outcome: Sufficient surge and sustainment sealift [both commercial and government-owned] and shipyard capacity is available to support DOD deployment requirements.

↑

MARAD FY 2004 Annual Supplementary Performance Goal and Target: Availability of 165,000 [twenty-foot container equivalent units (TEUs)] of ship capacity to meet DOD's intermodal, commercial sealift requirement.

MARAD reports actual performance for Department-level performance targets annually in the Department's Performance and Accountability Report as well as in the annual MARAD budget request. MARAD reports actual performance for supplementary performance targets annually in the MARAD budget request. The actual performance information provides an indication of MARAD's success in achieving not only the specific targets, but progress towards the desired outcomes and strategic objectives of this strategic plan. MARAD will annually review its strategies for achieving the targets by taking into account actual performance, the availability of resources, and the influence of external factors.

V.

VI. COMMERCIAL MOBILITY STRATEGIC OBJECTIVE

Promote and facilitate a United States maritime transportation system that improves the safe and efficient movement of goods and people.

A. Perspective and Outlook:

The United States transportation system is a key element of our Nation's economic growth and the well being of our people. The confluence of geography and the demands of a growing nation heavily influenced the rapid growth of our marine transportation system over many decades. Our great ports became our great cities, and freight throughput grew quickly, aided by easy access to waterfront land and technology advances that expanded capacity and system efficiency. In the years ahead, America will continue to exhibit a strong demand for efficient capacity growth in the marine transportation system. Yet, the ability of the system to increase capacity will be constrained in built up urban areas, limited by federal budgets, will raise concerns over environmental hazards, and require the implementation of fully integrated new security mandates into our commercial activities. The great challenge we face is that of stimulating capacity growth through increased system efficiency, as infrastructure growth will likely be constrained.

The years covered by this strategic plan will carry us to the end of the first decade of the 21st Century. As U.S. trade increases and our population grows, the importance of an efficiently linked intermodal transportation system becomes more urgent. The recent U.S. Chamber of Commerce Report on North American port and intermodal systems cites a conservative estimate of a 67 percent increase in domestic shipments, and a doubling of international trade by the year 2020. This increase will place significant stress on an already overloaded landside transportation system. Marine freight, in particular, is growing at a fast pace because of market globalization brought about by innovations in both logistics and production patterns. One of the great challenges, and opportunities, for the marine transportation system is identifying new and better ways to team with the rail and truck industries to provide a true value-added modal shift (to water) to relieve congestion in the surface modes, add to their overall capacity, and speed delivery of their freight loads. We see this as the essential context for the emergence of new "all water," and land-water, short sea shipping services.

Continued movement of markets and shifts in primary facilities by operators will not only affect transportation patterns, but also shape or influence the available labor pools and introduce significant pressure on local infrastructures. Presently, major congestion occurs in and around marine ports and terminals at specific points and time. This includes loading and discharging cargo as ships arrive and depart terminal areas, which is complicated when freight is moved during peak travel times in and around urban areas. This is compounds matters if the movement of cargo coincides with rush hour traffic for passengers in the same urban area. These conflicting priorities for the movement of people vs. freight, as business use vs. personal/private use of facilities, and the movement of goods vs. transit needs, effect both policymaking and the governance of infrastructure.

As an example of the trend toward increasing congestion, the MARAD publication "Intermodal Access to U.S. Ports - Report on Survey Findings" summarized that unacceptable conditions were more often found at the ports handling containerized cargo, particularly those situated in urban areas. The report also indicated that the ports located in key U.S. population centers face more congestion on landside transportation systems, but serve a critical need by directly supplying these areas.

Better use of the U.S. waterway system could help alleviate some congestion. Increased use of the waterway system would add much needed capacity without further expansion of infrastructure. The waterway system includes:

- 25,000 miles of inland and coastal waterways
- Waterways connections to 152,000 miles of rail
- Port connections to 45,000 miles of interstate highways
- Over 3,700 waterfront passenger and cargo terminals
- Extensive regional and local passenger ferry systems
- Waterway links to 460,000 miles of pipelines

The fiscal pressures on all levels of Government to fund the current defined transportation needs

are enormous. Many localities are already stretched beyond their means and unable to direct attention to the maritime arena in a meaningful way. To fully realize a multi-modal transportation system that allows for maximum personal mobility and economic growth, capital investments and management of marine transportation must be optimized. To some extent, this optimization could be assisted by continued Federal efforts to reduce red tape and eliminate excessive control and approval mechanisms. Infrastructure that is at capacity must be improved to assure the free flow of trade upon which the nation depends, without impairing personal mobility.

The U.S. maritime industry is challenged by the need to invest in new technologies, best practices and standards in the United States. Our trading partners have already adopted many of these technologies. Maritime industry has largely accepted trends from other industries. There are signs of change, but much more needs to be done to utilize technology to alleviate systemic congestion while minimizing expensive infrastructure projects.

The free flow of trade also depends on a modern fleet of ships. Recent trends indicate that there will be a need for the construction of environmentally responsible vessels over the coming years. First, due to the Oil Pollution Act, vessels will have to be retired. There will be a need to build replacement U.S.-flag tonnage to respond to market needs. Secondly, the emphasis on short sea shipping may create a need to build vessels to serve this trade. Finally, the increasing use of fast ferries for both passengers and car transportation is anticipated to continue. In order to meet the projected demand for these new vessels, U.S. shipyards will also have to upgrade and modernize their facilities.

Commercial mobility issues also reach beyond our concerns for the national transportation infrastructure and the renewal of our commercial fleet. The U.S. maritime industry continues to contend with barriers imposed by foreign governments that restrict market access. These restrictions impinge on United States maritime companies' access to foreign transportation markets, add to costs, limit revenues, and impede efficient operations of the U.S. maritime industry in international trade. Removal of such barriers would improve the operating efficiency of U.S. shipping companies. United States maritime policy will need to continue to preserve and expand opportunities that the market affords to United States carriers serving international trade.

B. Outcomes:

1. The U.S. maritime transportation system better meets customer needs and expectations.
2. Increased efficient transportation choices.
3. Enhanced marine and surface transportation linkages.
4. Improved safety in the maritime industry.

C. Means and Strategies:

1. Support compliance with mission-related Federal maritime laws, regulations, and standards and preserve U.S. cabotage laws. (supports outcome 1)
2. Support American maritime education institutions and the development of public-private

partnerships to expand maritime education and training. (supports outcome 1)

3. Work closely with state and local governments to implement programs to educate the public to the importance of the maritime transportation system and its impact on the nation's global connectivity, national security, and environment. (supports outcome 1)

4. Manage agency financial assistance programs in an effective and efficient manner to preserve and protect the interests of the government while maximizing flexibility and efficient operations for the private sector. (supports outcome 1 and 2)

5. Provide support for a fleet of commercial cargo vessels to sustain a U.S. presence in international commercial shipping. This will be done through pursuit of several activities desired by the Administrator, such as investigating the potential effects of tax regime changes on the competitive position of U.S.-flag ship operators. (supports outcomes 1 and 2)

6. Increase the identification, adoption, and implementation of technologies for dual commercial/military use. (supports outcomes 1 and 2)

7. Partner with public and private organizations to increase the use of waterborne transportation to relieve landside congestion, improve overall transportation safety and mitigate environmental problems. (supports outcomes 1, 2, and 3)

8. Partner with industry, state, and local governments, and other Federal agencies to assess the potential social, economic, and environmental advantages of increased maritime trade, to improve the existing network for shipping operations, and to identify new business opportunities for U.S. inland, domestic, and international maritime industries. (supports outcomes 1, 2, and 3)

9. Negotiate agreements, understandings, and arrangements to reduce barriers that restrict access to foreign transportation markets, add to costs, limit revenues, and impede efficient operations of the U.S. maritime industry in international trade. Negotiate reciprocal foreign market access treatment for U.S. carriers in worldwide commerce, including landside access to port facilities, the ability to establish connecting truck and rail services, and access to foreign trade cargoes. (supports outcomes 1, 2, and 3)

10. Foster public-private partnerships to improve land and waterside access to ports and marine terminals and transportation infrastructure, to move freight more efficiently in a safe, secure, and environmentally responsible manner. (supports outcomes 1, 2, 3, 4)

11. Partner with industry and other government organizations, both foreign and domestic, to reduce barriers to intermodal transportation through the adoption of safe and environmentally responsible national/international containerized and non-containerized standards. (supports outcomes 1, 2, 3, 4)

12. Provide technical expertise and leadership to assist U.S. efforts to positively influence international agreements that affect the safe, secure, and efficient transport of cargo and passengers. (supports outcomes 1, 2, 3, 4)

13. Transfer surplus Federal property to State or local ports to improve services at those facilities. (supports outcomes 1 and 3)

14. Support efforts to eliminate unnecessary U.S. regulatory standards, to reduce major bridge impediments that restrict full utilization of navigable waterways, and to assure effective solutions to environmental issues, including dredging, which inhibits the throughput of U.S. ports and waterways. (supports outcomes 1, 3, and 4)

15. Support and facilitate development of innovative, safe, secure, and environmentally sound vessel designs, technologies, shipbuilding processes, and consensus standards to improve U.S. maritime efficiency. (supports outcome 4)

D. Key External Factors

The external factors presented below may affect our ability to achieve our commercial mobility outcomes:

Disruptions in the transportation system could seriously impact freight and passenger movements as well as the economy. Ports and the maritime system have come under intense scrutiny in the aftermath of the September 11, 2001 terrorist attacks. Other examples, such as the September 2002 West Coast ports shutdown, demonstrated the disruption of, and impact on, the entire transportation system and the economy. Closure or disruption in any other modal segment would have a similar impact in slowing down freight movement and increasing costs to consumers. In addition, the transportation system continues to be impacted over the long term by congestion, the threat of terrorism, and the unexpectedly high cost of new security measures.

An efficient transportation system is essential for U.S. businesses to be competitive in the global marketplace. As 95 percent of all international seaborne commerce arrives via ships, there needs to be improved coordination and planning in making public-private sector investments to improve both domestic and international intermodal transportation connections. A loss of public support for global trade investments could lead to a decrease in the competitiveness of U.S. businesses in the global marketplace.

Continuing trade deregulation as well as horizontal integration of the global transportation system across all modes of transport will be important in developing and sustaining a transportation system that supports global economic activity. Transportation has become part of the supply chain management by allowing time optimization of shipments. This is done through reliable and flexible mixed modes of integrated transportation.

The development and adoption of IT. The United States has been lagging behind our trading partners in the area of research and development. While the U.S. has been accepting of these new trends, Americans are not currently leaders in transportation research and development.

Developing a transportation system that supports global economic activity. A change in the global regulatory climate towards favoring minimal national trade regulations would reduce barriers to international trade, and develop criterion to facilitate trade, which in turn would lead to an increase in global economic activity.

Commercial Viability of U.S. Maritime Industry is dependent on its ability and willingness to

invest/reinvest in capital improvements. The economic revitalization of the industry could make the shipbuilding infrastructure more competitive, which in turn could increase the inventory of U.S.-built and-flagged vessels.

E. Crosswalk to the DOT Strategic Plan:

MARAD's commercial mobility strategic objective ties to the Department's mobility and global connectivity strategic objectives. The mobility strategic objective seeks to advance accessible, efficient, intermodal transportation for the movement of goods and people. The global connectivity strategic objective is to promote and facilitate a more efficient domestic and global transportation system that enables economic growth and development. In the maritime arena, MARAD will play a key role in helping the Department to achieve a number of DOT outcomes. Of specific relevance to MARAD, the Department seeks reduced congestion, increased transportation system reliability, reduced barriers to trade, more efficient movement of cargo, enhanced international competitiveness for the U.S. transport industry, and harmonized international standards and regulations. The Department plans to pursue 26 specific strategies to achieve these desired outcomes and MARAD will have a role in many of them, particularly as they relate to the maritime transportation system.

F. Crosswalk between MARAD's strategic objectives, outcomes, & annual performance measures:

MARAD's commercial mobility strategic objective is to promote and facilitate a U.S. maritime transportation system that improves the safe and efficient movement of goods and people. The following table presents a crosswalk between our desired outcomes in this area and our candidate annual performance measures. Most of these measures are of an interim nature and indicate where we intend to go and how we plan to demonstrate our future success.

Outcomes	Candidate Performance Measures
The U.S. maritime transportation system better meets customer needs and expectations.	1. Number of short sea shipping demonstration projects initiated. *New* 2. Number of ship design technologies developed that improve environmental soundness of vessels and their shipboard technologies. *New* 3. Number of ship design technologies developed that improve or streamline shipbuilding processes. *New* 4. Number of ship design technologies developed that improve consensus standards. *New* 5. Level of private sector investment in

	U.S. shipbuilding supported by financial assistance program. *New* 6. Default rate on Title XI loan guarantees. *New*
Increased efficient transportation choices.	1. Number of technologies/projects developed to increase maritime transportation efficiency. *New*
Enhanced marine and surface transportation linkages.	1. Number of technologies/projects developed to improve marine-surface linkages. *New*
Improved safety in the maritime industry.	1. Number of ship design technologies developed that improve the safety of vessels. *New*

I. NATIONAL SECURITY STRATEGIC OBJECTIVE

Assure that sufficient sealift capability and intermodal transportation infrastructure exist to support vital homeland and national security interests.

A. Perspective and Outlook:

Waterborne transportation provides a vital link for deploying our armed forces to defend our national interests. An important national security function is prioritizing and allocating civil transportation and infrastructure during wartime. A key element of the U.S. defense strategy is the capability for power projection – the ability to quickly move troops and supporting equipment worldwide and to sustain their presence if necessary.

Global deployments from bases in the continental United States increases the demand for surge transportation resources, compared to relying on overseas garrisons. The transition from routine operations to deploying heavy equipment in support of an overseas ground war requires greater use of sealift and the U.S. commercial maritime sector to meet DOD requirements. Thus, the ability of the United States to respond to major military contingencies in the future will continue to require: adequate U.S.-flagged active and reserve sealift resources, skilled U.S. maritime labor, and the associated infrastructure of America's maritime industry.

Another critical element is security at commercial facilities. Keeping facilities secure while minimizing commerce flow disruptions is vital to national and international interests. By assisting with the administration of port security grants, funded by the Transportation Security Administration, MARAD will help to mitigate known security vulnerabilities at U.S. seaports. In addition, MARAD must develop standards and curriculum that provide for the effective training and certification of maritime security professionals. Also, to the extent funding is available, MARAD will provide security training to personnel of U.S. and selected foreign ports. MARAD will also work to identify and alleviate any adverse impacts that may result from the implementation of U.S. and international security requirements.

The challenges for maritime education and training have taken on a new focus, which spans several recent trends in the maritime industry not seen before in traditional seafaring. The concepts of intermodalism and national transportation systems continue to expand, and thus require the skills and services of an increasing number of qualified, well-trained professionals. The aging mariner workforce, additional safety and training related mariner qualifications, decline in the number of commercial sea-going billets, and attractive shore-side employment opportunities represent obstacles in adequately meeting demand for both licensed and unlicensed U.S. mariners in the future. Given this situation, establishing a mariner reserve system or service composed of qualified sailors who would be obligated to serve in the event of a national emergency is prudent to assure availability of a qualified mariner pool.

The existing fleet of readily available, government-owned ships need significant modernization or recapitalization within in the next decade. The same is true of the U.S.-flag commercial fleet. If this recapitalization does not occur in a timely manner, there could be a shortage of heavy-lift vessels to deliver smaller floating craft, and tankers needed to move petroleum or potable water for sea-based forces. Programs must be available to facilitate the building or re-flagging of ships under the U.S. flag.

Key to the recapitalization of the fleet is an efficient, effective, and modern American shipbuilding infrastructure and supporting workforce, available and positioned to build and maintain government-owned and commercial vessels designed to meet our national defense and commercial needs. Today, American shipyards are at a severe competitive disadvantage in the international commercial marketplace due, in part, to unfair foreign subsidies and pricing policies. As a consequence, shipyard jobs and skills have been declining steadily and investment in modern infrastructure has been drastically curtailed. In short, our national defense needs are at risk and will require government/private sector partnerships to reverse this condition.

Vigorous global competition is expected to continue to fuel the consolidation of today's international liner carriers into a few, but more cost-efficient mega-carriers. Commercial carriers will become components of integrated worldwide transportation providers whose services link land, sea, and air operations. To help maintain national and economic security, the U.S. must control a portion of the ships carrying U.S.-foreign trade and essential resources. Integrating the commercial and defense transportation systems will conserve Federal resources.

B. Outcomes:

1. Sufficient surge and sustainment sealift (both commercial and government-owned) and shipyard capacity is available to support DOD deployment requirements.

2. Sufficient, well-qualified U.S. maritime labor is available to support DOD deployment requirements while sustaining commerce.

3. Commercial ports are available when needed by DOD for deployments.

4. The security of the U.S. maritime transportation system is strengthened, while minimizing disruption to commerce.

C. Means and Strategies:

1. Maintain and/or enter into sealift agreements with DOD and the industry to enhance the delivery of equipment and intermodal and other transportation services to DOD by utilizing the best commercial practices to meet DOD's needs in a cost-effective manner. (supports outcome 1)

2. Continue the RRF maintenance and repair regime by awarding multi-year performance-based contracts to commercial ship maintenance and repair firms for all RRF vessels and by providing for berthing arrangements for each RRF ship according to its prescribed readiness. (supports outcome 1)

3. Increase the efficiency and security of the fleet sites to speed activations and protect assets. (supports outcome 1)

4. Devise a strategy to address re-capitalization of the Ready Reserve Force to meet future DOD requirements. (supports outcome 1)

5. Coordinate and facilitate efforts to revitalize U.S. shipbuilding and repair capacity, processes and procedures through the application of existing federal program assistance, government/industry partnerships in research and development, and support for other initiatives. (supports outcome 1)

6. Assure compliance with the cargo preference laws to provide an economic base to maintain U.S.-flag commercial vessels and crews are available for national security sealift. (supports outcomes 1 and 2)

7. Create effective plans for the smooth movement of DOD personnel and material from origin to destination by participating in joint mobilization exercises, strengthening cooperative partnerships and ensuring effective emergency planning and coordination with the North Atlantic Treaty Organization (NATO), DOD, the Federal Emergency Management Agency (FEMA), Regional Emergency Transportation Coordinators, commercial transportation providers, and other Federal agencies. (supports outcome 1 and 3)

8. Undertake joint initiatives with DOD, carriers and maritime labor to ensure rapid crewing of Ready Reserve Force (RRF) vessels during emergencies. This includes working with the Ship Operations Cooperative Program members and other industry partners to improve mariner recruitment and retention. (supports outcome 2)

9. Provide leadership in implementing education, safety, and training standards and ensuring the continuing renewal of the maritime industry workforce to meet the nation's economic and national security requirements. (supports outcome 2)

10. Provide leadership in the development and implementation of domestic and international standards and training curricula for maritime transportation professionals. (supports outcome 2)

11. Administer federal port controller contracts, issue port planning orders, and chair the National Port Readiness Network to ensure effective military deployments through U.S. ports. (supports outcomes 3)

12. Trains federal port controllers and conduct military deployment exercises at strategic commercial ports. (supports outcome 3)

13. Develop and support international, federal, state, and local maritime security initiatives that ensure effective flow of commerce. (supports outcome 4)

14. Administer the Title XII war risk insurance program to assure that adequate sealift is available to respond to major military contingencies, when commercial insurance is not available. (supports outcome 4)

D. Key External Factors:

How security issues will impact transportation has become a concern for the maritime industry. The factors listed below are likely to play a part in our ability to achieve our security outcomes.

Our security is dependent on many factors beyond our control. It is difficult for the U.S. to hold foreign countries to the same standards of security that we insist on within our borders. Some security measures may be easily implemented, while other more costly measures may not be adapted. The inability of the global community to resolve regional conflicts could lead to further attacks.

Combating the increased risk of terrorism. Since the incidents on September 11, 2001, improving the security of U.S. ships, shipyards, ports and supporting infrastructure systems has taken on new significance. Protecting 96,000 miles of coastline and waterways will require diligence and advances in technology to assure the safety of our waterborne transportation systems.

Maintaining flexibility and flow of information between Public Authorities and the Private Sector may prove essential in protecting seaports/lanes. Improving the flow of information, sharing of sensitive and propriety information between public and private entities may be increasingly important to meeting future transportation security challenges.

Public tolerance and industry response to security measures is a growing concern. Industry and the public expect reliability in the delivery of goods. Security measures that add on frequent and lengthy delays increasing the cost of transportation without adding to apparent security will not be well tolerated by the public or the transportation industry.

E. Crosswalk to the DOT Strategic Plan:

The Department's security strategic objective is to balance homeland and national security transportation requirements with the mobility needs of the Nation for personal travel and commerce. Specifically, the Department desires that the national transportation system meet both homeland and national security requirements. MARAD has a key role in this area. The Department plans to pursue 14 specific strategies to achieve this outcome. Three strategies are particularly pertinent to MARAD. The first is maintaining DOT responsibility for oversight of national security initiatives affecting the maritime transportation system within the Maritime Administration. The second is to develop, test, and evaluate plans for seaborne movement of personnel and material from origin to destination during military contingencies and disaster response. Third, maintain the resources and capacity to support national defense requirements

and assist in disaster response and recovery efforts.

MARAD plays an important role with other DOT Operating Administrations in working with other agencies to develop and implement improved transportation security initiatives, to provide financial assistance for security improvements and to develop new uses for technology to improve security. All of these activities are designed to maintain a seamless, but secure transportation system for all users of the maritime transportation network.

MARAD's role is to address the national security requirements for waterborne transportation, particularly sealift from the United States mainland to other parts of the globe. Oceanborne transport is the prime method by which DOD moves material to overseas locations. For this reason, MARAD has a leadership role in developing, testing and evaluating plans for seaborne movement of personnel and material from origin to destination during military contingencies and disaster response. MARAD also has expertise in maintaining the maritime resources and capacity to support national defense requirements. Our success in both of these areas is measured by the Department's annual performance goal for Strategic Mobility.

F. Crosswalk between MARAD's strategic objectives, outcomes, & annual performance measures:

MARAD's national security strategic objective is to successfully maintain the resources and capacity needed each year to support national defense sealift and intermodal transportation requirements. The following table presents a crosswalk between our desired outcomes in this area and the candidate annual performance measures that we plan to use to demonstrate our success.

Outcomes	Candidate Performance Measures
Sufficient surge and sustainment sealift (both commercial and government-owned) and shipyard capacity is available to support DOD mobilization requirements.	1. Percentage of DOD-required shipping capacity [both commercial and government-owned] complete with crews available within mobilization timelines. ***Existing*** 2. Percent of Ready Reserve Force (RRF) no-notice activations that meets assigned readiness timelines. ***Existing*** 3. Percent of days that RRF ships are mission capable while under DOD control. ***Existing*** 4. Ship capacity (in thousands of twenty-foot container equivalent units, or TEUs) available to meet DOD's requirements for intermodal, commercial sealift capacity. ***Existing*** 5. Shipyard capacity (graving

	docks/drydocks, etc.) to meet DOD's requirements for sealift capacity. *New*
Sufficient, well-qualified U.S. maritime labor is available to support DOD mobilization requirements while sustaining commerce.	1. Of the mariners needed to crew the combined RRF sealift and commercial fleets during national emergencies, the percent of the total that are available. ***Existing*** 2. Percentage of U.S. Merchant Marine Academy (USMMA) and the State Maritime Academies (SMA) Student Incentive Payment (SIP) program graduates who obtain an afloat position in the U.S. maritime industry. *New* 3. Percentage of USMMA and SMA SIP program graduates who are commissioned as an active duty officer in the armed forces of the United States. *New* 4. Percentage of USMMA and SMA SIP program graduates receiving a determination to work ashore in maritime-related employment. *New* 5. Percentage of USMMA and SMA SIP program graduates who have received a service obligation deferral to attend graduate school in a maritime-related program. *New* 6. Percentage of USMMA midshipmen who have received a general deferral to complete coursework after the time when they were expected to graduate and SMA SIP cadets who take longer than four years to graduate. *New* 7. Percentage of USMMA and SMA SIP program graduates who have not achieved appropriate employment. *New* 8. Percentage of USMMA and SMA SIP program graduates who successfully complete their service obligation according to MARAD policies. *New*

	9. Percentage of USMMA-admitted plebe candidates who graduate with a Coast Guard license and a commission qualified to serve the nation in the merchant marine and in the armed forces of the United States. *New*
Commercial ports are available when needed by DOD for deployments.	1. Percentage of DOD-designated commercial ports available for military use within DOD established readiness timelines. ***Existing***
The security of the U.S. maritime transportation system is strengthened, while minimizing disruption to commerce.	1. Number of security training courses approved by MARAD under the Marine Transportation Security Act (MTSA) of 2002. *New* 2. Percentage of preference cargo carried. *New*

I. ENVIRONMENT STRATEGIC OBJECTIVE

Promote maritime and intermodal transportation solutions that enhance environmental stewardship.

A. Perspective and Outlook:

Over the past five years, the impact of maritime transportation on the human and natural environment has become more evident particularly in areas such as aquatic nuisance species and air quality. In the Great Lakes and other important watersheds the introduction of nuisance species has severely degraded native species in the aquatic environment. In port communities, in particular, the adverse contribution of maritime transportation activities to air quality has become more evident. Yet as we move into the 21st Century, landside congestion, the expected growth in the volume of cargo moved through the Nation's transportation system, and the need for energy efficiency will place tremendous pressure on the nation's already stressed transportation system and the environment. As Marine Transportation responds to this projected growth and increasingly serves as a relief valve to congested highway and rail transportation corridors, marine-related environmental impacts will become more profound. Unless these impacts are anticipated and addressed, they could impede the nation's economic growth and quality of life.

At the same time, the government, like the private sector, is challenged with new trends in environmental accountability that involve top to bottom management in the form of integration of environmental management systems (EMS) to provide organizations of all types with a structured approach for managing environmental and regulatory responsibilities to improve overall environmental performance. There is also the increasing attention paid to environmental compliance issues in maritime industry sectors on such issues as storm water runoff from

shipbuilding, ship repair and ship recycling facilities. This trend will continue. These factors will drive MARAD's environmental agenda through 2008.

B. Outcome:

1. Reduced pollution and other adverse environmental effects of transportation and transportation facilities.

C. Means and Strategies:

1. Exercise leadership in working with national and international partners to develop and implement marine transportation related national and international environmental standards and requirements.

2. Provide leadership within the maritime community to support the President's Hydrogen Fuel initiative through cooperative research on marine applications of hydrogen technologies.

3. Act as a catalyst in moving ballast water treatment technologies from the laboratory to the ship through a cooperative partnership with other federal agencies and stakeholders to test and evaluate ballast water treatment technologies aboard MARAD vessels and platforms and aboard commercial vessels.

4. Adopt transportation policies and promote marine related technologies and systems that reduce degradation of environmental quality.

5. Serve as a catalyst with federal and state agencies and stakeholders to conduct research and identify, demonstrate, and promote energy efficient, alternative fuels, and air pollution reduction technologies for maritime applications.

6. Work proactively with our transportation partners to implement integrated multi-modal approaches to resolving transportation challenges that harmonize transportation and environmental protection goals and enhance intermodal transportation planning tools through the development and use of multi-modal models that incorporate environmental impact considerations.

7. Provide leadership in partnering with federal, state, and local government agencies and the private sector to encourage the identification and use of brownfields for port and intermodal development.

8. Support research on connections among transportation, energy and the environment.

9. Collaborate with federal, state, and local emergency response organizations to improve prevention and response measures for hazardous materials releases at MARAD facilities.

10. Improve MARAD-owned facilities for the benefit of host communities by recycling, using recycled products, and preventing pollution.

- MARAD's obsolete vessels pose a significant challenge to the Agency. In this regard, MARAD will:

Reduce the environmental risk associated with its obsolete vessels at fleet sites by: (a) Disposing of high-risk vessels first; (b) Evaluating vessel conditions quarterly, unless circumstances warrant more frequent evaluation; (c) Exploring innovative approaches to oil and oily-water removal and remediation; (d) Testing and improving emergency response procedures and capabilities at the fleets; and (e) Exploring and implementing the most expedient cost effective combination of disposal options consistent with appropriate environmental and worker protections; and (f) Participating actively in international efforts (including those at the IMO, ILO and Basel Convention) to address issues of environmental and worker protection is ship recycling.

- MARAD will also review its procedures, training, and responses related to hazardous materials handling and release response.

1. Partner with federal and state environmental regulatory agencies and the private sector to develop guidelines and best management practices to assist maritime industry partners in improving environmental stewardship and compliance.

2. Continue to partner with other federal agencies and stakeholders to establish appropriate testing protocols and test and verify ballast water treatment technology to reduce the introduction of aquatic nuisance species.

D. Key External Factors:

MARAD's ability to achieve its environmental outcomes will depend in large part on the continued recognition of marine transportation as an integral part of our nations transportation system affecting the environment, quality of life, and economic well being of the nation. That recognition is central to the establishment of the public/private partnerships that will be necessary to achieving our goals. Other important factors affecting the outcomes include:

Transportation faces significant challenges to control environmental degradation and energy consumption. Those same challenges affect marine transportation. Addressing those challenges in the maritime sector, however, has taken on new significance. As marine transportation grows in response to increases in global trade and landside congestion, its environmental impacts and benefits are being more fully recognized. Properly assessing those benefits and mitigating environmental impacts will be critical to an integrated national transportation system that considers environmental benefits of multi-modal planning.

Landside congestion and air quality require new approaches to transportation. Short sea shipping and passenger ferry operations are viable options for addressing congestion and the resulting air quality issues along major transportation corridors.

New local, national, and international regulatory requirements and standards will play a pivotal role in marine transportation, particularly as they relate to air emissions and ballast water protection. Regional air quality (non-attainment) and global climate change are demand cleaner emissions marine power plants.

Technology transfer and adaptation of advanced air pollution control and alternative fuel technologies to the marine transportation industry will be key factors. Historically, investment in research, development, and deployment of air pollution reduction technologies in the maritime

sector (including port equipment and vessels) has been minimal. As a result, while landside transportation has seen vast improvements in pollution control technologies and processes, marine transportation has advanced slowly. Emphasis must be given to identifying technology transfer and adaptation opportunities along with significant public/private investment to narrow the gap. That effort will require the cooperation of multiple federal agencies and stakeholders.

Moreover, the extent to which energy efficient and clean emission power plants are adopted by the maritime transportation industry will depend upon the demonstrated availability of marine power systems that are economically viable as well as clean.

The role of MARAD is changing with respect to marine transportation. Today there is growing recognition that ports and marine transportation are vital to the national interests. Given the global nature of marine transportation, environmental issues related to marine transportation, such as air emissions and aquatic nuisance species, require national and international attention. Transportation congestion mitigation and air quality require regional and national approaches so as not to create new barriers to smart growth and passenger and goods movement. With the transfer of the Coast Guard to the Department of Homeland Security, the maritime responsibilities of the Department now fall on MARAD. While the focus on decentralized government control over transportation will continue, MARAD, as an integral part of the Department, must act as catalyst for regional transportation thinking and national and international standardization of marine environmental requirements.

The growing emphasis on the integration of environmental management continues to challenge government agencies. The development and implementation of environmental management systems and procedures for streamlining environmental review processes require changes in legislative and regulatory authorities.

The proliferation of aquatic nuisance species poses a particularly difficult challenge for marine transportation because of the global nature of marine transportation. Scientific uncertainty and the lack of standards and protocols against which to test potential ballast water treatment systems continue to make progress on technological solutions difficult. Efforts by the International Maritime Organization and individual states are other factors that will affect the advancement of viable technological solutions.

The international nature of marine transportation makes international standards vital to the continued free flow of goods to and from our nation. Unilateral actions of governments adversely affect this flow by creating market disparities and shifts transportation patterns. Actions of international organizations will be important factors to the achievement of MARAD goals.

The lack of domestic disposal opportunities and international concerns over environmental and worker protections in ship recycling facilities is a dominant factor in MARAD's ability to dispose of obsolete vessels. Existing domestic ship recycling capacity is very limited and what exists must serve both MARAD and Navy needs. Other options, such as artificial reefing and deep sinking of vessels are also limited, in part by the cost of preparing a ship for those activities. Foreign disposal remains a challenge because of concerns over environmental and worker protections in developing countries. Numerous international efforts are underway to address those problems; however, they continue to inhibit MARAD's ability to develop a robust foreign recycling component for the ship disposal program.

E. Crosswalk to the DOT Strategic Plan:

The Department's environment strategic objective is to promote transportation solutions that enhance communities and protect the natural environment. Of specific relevance to MARAD, the Department seeks to achieve an outcome of reduced pollution and other adverse environmental effects attributable to transportation and transportation facilities. The Department will pursue 15 specific strategies to achieve this outcome.

MARAD will play a lead role in the pursuit of the Departmental strategy to improve DOT-owned or controlled facilities for the benefit of host communities primarily by preventing pollution at its National Defense Reserve Fleet sites and by disposing of obsolete vessels in an environmentally responsible manner.

MARAD maintains a large, government-owned reserve fleet at three sites. These fleet sites currently hold over 130 obsolete ships that are awaiting proper disposal. MARAD seeks to keep these obsolete ships safe and the environment around them clean while they wait for disposal. MARAD has an ongoing ship disposal program pursuing cost-effective ship disposal through several means that presently include domestic scrapping and the creation of artificial reefs. In the near future, MARAD hopes to also expand the scrapping program to include environmentally responsible scrap yards overseas.

F. Crosswalk between MARAD's strategic objectives, outcomes, & annual performance measures:

MARAD's environment strategic objective is to promote maritime and intermodal transportation solutions that enhance environmental stewardship. The following table presents a crosswalk between our outcome in this area and the annual performance measure that we will use to demonstrate our success.

Outcome	Performance Measure
Reduced pollution and other adverse environmental effects of transportation and transportation facilities.	*1.* Number of obsolete vessels removed from the National Defense Reserve Fleet (NDRF) sites for subsequent disposal. ***Existing***

I. ORGANIZATIONAL EXCELLENCE OBJECTIVE

Advance the ability of the Maritime Administration to manage resources to accomplish measurable results and to achieve the goals of the President's Management Agenda.

A. Perspective and Outlook:

The Maritime Administration recognizes the need to adopt a culture of continuous improvement if we are to be successful in managing for results and meeting the future marine transportation needs of the nation. As stated by the Department of Transportation, full implementation of the President's Management Agenda (PMA) will be our central strategy for achieving necessary

improvements. The current and future status of our workforce demands that we seize the opportunity now to begin to strengthen our existing organizational structure in order to achieve our present strategic objectives, while concurrently positioning ourselves to effectively meet our longer-term objectives over the next 5-10 years.

One key issue confronting the agency, of major significance, is our ability to ensure continued organizational excellence with an aging senior level workforce. Currently, approximately 53 percent of our SES workforce have already reached age eligibility for retirement, and that number will increase to over 90 percent within the next 5 years. Likewise, approximately 35 percent of our GS-13 through GS-15 workforce are currently age eligible and that number increases to as much as 60 percent within a 5 year period. Clearly, the impending likelihood for significant loss of experience and talent reflects the need to move decisively to achieve the goals under the PMA. Strategic management of our human capital and sound workforce planning will allow MARAD to seize an opportunity to recruit personnel with broad knowledge of, and links to, the entire transportation industry. Budget and performance integration coupled with sound financial management will facilitate the linkage between resources and results, thereby improving performance and accountability. By leveraging the expanded usage of information technology under the e-government goal, we can potentially ease the burden resulting from reduced staffing, as well as, improving customer service delivery. Finally, pursuing competitive sourcing goals can also potentially mitigate the impact of significant talent loss, while achieving organizational and economic efficiencies vital to the effective management of agency resources.

B. Outcomes:

1. Achieved strategic management of human capital.
2. Achieved competitive sourcing goals.
3. Achieved financial performance goals.
4. Achieved budget and performance integration goals.
5. Achieved e-government goals.

C. Means and Strategies:

1. The human resource office will consult with managers to develop an explicit workforce planning strategy that identifies current and future human capital needs including the size of the workforce, deployment across the organization, and the knowledge, skills, and abilities needed for MARAD to achieve its shared vision. (supports outcome 1)
2. Integrate MARAD's human capital strategies with the other President's Management Agenda initiatives, particularly e-government and competitive sourcing strategies. (supports outcome 1)
3. Sustain a learning environment that drives continuous improvements in performance through knowledge management, performance feedback, training, coaching and mentoring. (supports outcome 1)

4. Complete or initiate public/private competitions of MARAD's commercial activity full time equivalents (FTEs) by conducting an annual inventory of Federal Activities Inventory Reform (FAIR) Act positions and developing and implementing a long-term competitive sourcing plan. (supports outcome 2)

5. Develop a real property management program that is both mission effective and economically well justified. (supports outcome 3)

6. Migrate MARAD's accounting records to an enhanced accounting system or structure that will provide accurate and timely output, and produce meaningful financial reports developed in collaboration with MARAD program managers. (supports outcome 3)

7. Develop a cost accounting system. (supports outcome 3)

8. Utilize e-government initiatives to improve financial management. (supports outcome 3)

9. Improve collaboration between all offices involved in creating the budget by aligning and harmonizing all MARAD program management, planning, budgeting and financial management efforts that lead to creation of the MARAD budget request. (supports outcome 4)

10. Link general outcome goals and performance goal output targets by making relationships between organizations, programs and performance outcomes explicit and transparent. (supports outcome 4)

11. Align budget costs to goals by harmonizing budget accounts not only with organizations that receive budgetary resources [and transform these resources into program outputs], but also to the agency's strategic and performance goals. (supports outcome 4)

12. Determine the full budgetary cost for all MARAD objectives and goals by creating a consistent, accurate methodology to calculate the true cost [not merely the direct cost] of program outputs. (supports outcome 4)

13. Document program effectiveness by validating that the MARAD performance measurement system accurately captures program performance. (supports outcome 4)

14. Build and maintain an interoperable IT infrastructure to assist and strengthen the U.S. maritime transportation system. (supports outcome 5)

15. Enhance automated service delivery to citizens, businesses, industry, personnel, and other government entities. (supports outcome 5)

16. Achieve maritime information dominance through the use of technology to enhance mission effectiveness and improve productivity. (supports outcome 5)

D. Crosswalk to the DOT Strategic Plan:

The Department has a keen interest in implementing the PMA and MARAD will play a significant support role, along with the other Operating Administrations, in helping the Department to achieve the five desired outcomes in this area. The Department intends to pursue

nine specific strategies to achieve these outcomes.

E. Crosswalk between MARAD's objective, our desired outcomes & annual performance measures:

MARAD's organizational excellence objective is to manage for results and implement the PMA. The following table presents a crosswalk between our desired outcomes in this area and the candidate annual performance measures that we plan to use to demonstrate our success.

Outcomes	Candidate Performance Measures
Achieved strategic management of human capital.	1. Percentage of total human resource action items achieved. *New* 2. Percentage increase of all hires, including minorities, across all grade levels that are specifically linked to the targeted critical occupations included in MARAD's strategic recruitment plan. *New* 3. Percentage of employees, including senior executives, who participate annually in specific types of learning and development opportunities. *New* 4. Percentage of employees having access to and responding to HR surveys. *New*
Achieved competitive sourcing goals.	1. Percent of MARAD's commercial activity FTEs competed. *New* 2. Percentage of total competitive sourcing action items achieved. *New*
Achieved financial performance goals.	1. Percentage of total financial performance action items achieved. *New* 2. Percent reduction in accounting system corrective entries. *New*
Achieved budget and performance integration goals.	1. Percentage of total budget-performance action items achieved. *New*
Achieved e-government goals.	1. Percentage of total e-government action items achieved. *New* 2. Percentage of employees receiving upgraded IT equipment, software, and

	training. *New* 3. Number of agency-wide IT investment policies, procedures, and standards developed and implemented. *New* 4. Percentage of all IT business cases supporting Enterprise Architecture (EA) initiatives. *New*

I. CROSSCUTTING ACTIVITIES WITH OTHER FEDERAL AGENCIES

MARAD has recurrent contact with other Federal agencies in program areas of mutual interest. These interactions range from the sharing of information and data to program coordination. Federal agencies with whom we have regular contact were consulted on our goals and targets, and it was determined that no overlaps or inconsistencies were identified in the comments that we received. Nonetheless, we will continue to coordinate with other agencies to prevent conflicting goals, eliminate any overlapping activities, and find new opportunities to increase program efficiency and effectiveness.

The following summarizes significant MARAD interactions with other Federal agencies on major crosscutting functions:

Commercial Mobility

MARAD is working with the Department of Defense and the commercial sector to develop technologies and intermodal systems that will improve the efficiency and performance of the existing U.S. transportation system. Two of the major tasks are to: (1) investigate technologies and infrastructure opportunities which will improve inland freight transfer and lead to an efficient connection between ports and land transportation systems to serve both commercial and military logistics requirements, and (2) establish goals and carry out demonstration projects that integrate both the military and the commercial requirements for strategic port planning and design to create terminal facilities based on a "dual use" concept.

MARAD is also actively working with the U.S. Coast Guard, and the U.S. Army Corps of Engineers [COE]) to streamline the dredging process to reduce constraints to water and landside access. These efforts will enable metropolitan planning organizations to coordinate needed improvements and funding priorities. MARAD is also working jointly with the Saint Lawrence Seaway Development Corporation, as DOT representatives on a COE assessment of the commercial marine navigation infrastructure along the Great Lakes St. Lawrence Seaway. Transport Canada is also participating in this bi-national project.

In its international commerce activities, MARAD frequently works with other federal agencies charged with foreign trade and policy responsibilities, such as the Department of

State and the U.S. Trade Representative (USTR). MARAD personnel contribute their expertise by serving on U.S. delegations seeking to negotiate multilateral agreements through the World Trade Organization. During the Uruguay Round trade talks, MARAD provided expertise to develop the U.S. positions in maritime transportation. This was done in conjunction with other U.S. agencies, such as USTR, and the State, Commerce, and Treasury Departments. MARAD works closely with other government agencies (Agriculture, Export-Import Bank, USAID and DOD) to assist in implementing U.S. laws governing the ocean carriage of government cargoes in the foreign trade.

A parallel working relationship exits between MARAD and the Federal Maritime Commission (FMC), which is an independent regulatory agency. One of the goals of the FMC is to resolve U.S. shipping industry problems abroad. Using its expanded trade authority, the FMC has been able to act effectively in opening markets on behalf of U.S. shipper and carrier interests.

MARAD also works with the Ship Operations Cooperative Program (SOCP), with added support from Departments of Labor and Education, to establish a mariner recruitment program to address the issue of increasing the number of individuals interested in a maritime career.

In addition, MARAD works with the Cargo Handling Cooperative Program (CHCP), along with the Defense Advanced Research Programs Agency (DARPA) and industry members, to actively pursue industry-driven enhancements to cargo handling that increase productivity and improve customer service.

National Security

The SOCP is a maritime cooperative comprised of industry, labor, and government. Government members include the U.S. Coast Guard, National Oceanic and Atmospheric Administration, Naval Sea System Command, Military Sealift Command (MSC), and the U.S. Merchant Marine Academy. The SOCP helps support sealift ship readiness in times of national emergencies by addressing a variety of ship operations issues. Most recently, the SOCP has promoted shipboard security awareness for commercial-type vessels.

Under a 1984 Memorandum of Understanding (MOU) on Port Readiness, MARAD, Military Traffic Management Command, the U.S. Army Corps of Engineers, the U.S. Coast Guard, the Military Sealift Command, the U.S. Army Forces Command, USTRANSCOM, and the U.S. Northern Command, agreed to jointly support efficient movement of military forces and supplies through U.S. ports. The MOU established a National Port Readiness steering group and a working group; both chaired by MARAD. The steering group provides policy direction and sets broad priorities for accomplishing the objectives set forth in the MOU which the working group then implements.

Environment

MARAD's ship disposal program is similar to that of the U.S. Navy in that both programs pay for scrapping services, both programs offer economies associated with repeat business, and both programs were designed to reduce an increasing quantity of obsolete vessels. However, these are two parallel programs that do not overlap, and do not share

program management responsibilities. MARAD's program addresses disposal of noncombatant/merchant-type vessels. The Navy's scraps combatant vessels and their weapons systems it is a much more complicated elimination process.

MARAD is working with the SOCP to establish and implement a National Ballast Water Technology Testing Program. This program would test and evaluate technologies to determine their effectiveness in filtering out potential invasive species. Currently this effort is being lead by the federal agencies participating in SOCP. They are providing coordination and funding in cooperation with ship owners, technology providers, and State and local governments.

II.

III. FUTURE PLANNED PROGRAM EVALUATIONS

Program Name	Planned Completion Year	Evaluation Type
Ship Disposal	2004	Combination

U.S. Department of
Transportation
Maritime Administration

MARITIME TRANSPORTATION SECURITY ACT OF 2002: SECTION 109 IMPLEMENTATION

A Report to Congress

Prepared by

THE UNITED STATES MERCHANT MARINE ACADEMY

for

THE MARITIME ADMINISTRATOR

MAY 2003

FOREWORD

Section 109 of the Maritime Transportation Security Act of 2002 (MTSA) charged the Secretary of Transportation with the development of standards and curriculum to facilitate the education and training of maritime security personnel. This task was delegated to the Maritime Administration (MARAD) by the Secretary on April 3, 2003, and was completed, at my direction, by senior staff at the U.S. Merchant Marine Academy (USMMA). This Report to Congress documents the fulfillment of MARAD's MTSA Section 109 responsibilities.

This report contains the standards and curriculum called for by the MTSA in the form of model course frameworks for seven categories of maritime security professionals, including vessel, port and relevant law enforcement personnel who are charged with maritime security responsibilities that have become critically more important since the 9/11 attack on America. These model courses are intended as guidance for use by institutions and organizations that conduct maritime security education and training.

The report concludes that the development of a system of certification and oversight is essential to ensuring consistency and rigor in maritime security education and training. To this end, MARAD will begin drafting proposed regulations to provide the basis for course approvals, oversight, and student certification.

Effective education and training in port and maritime security will produce professionals who are able to play a vital role in hardening the global transportation system against the threat of terrorism and other criminal activity. This report provides the foundation for an undertaking that will make a pivotal contribution to the enhancement of our national security.

Captain William G. Schubert
Maritime Administrator

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EXECUTIVE SUMMARY

The U.S. Congress enacted the Maritime Transportation Security Act (MTSA) of 2002 (Public Law 107-295) on November 25, 2002. On April 3, 2003, the Secretary of Transportation (Secretary) delegated to the Maritime Administrator the authority to implement Section 109 of the MTSA, which requires the Secretary, not later than six months after the date of enactment, to develop standards and curriculum to allow for the training and certification of maritime security professionals. The Secretary found that the Maritime Administration (MARAD) has the expertise and staff to develop and implement a program for the training and certification of maritime security professionals within its area of responsibility and to make funding decisions in accordance with the statutory requirements.

At the request of the Maritime Administrator, the U.S. Merchant Marine Academy (USMMA) developed the standards and curriculum and prepared this report. The report characterizes security threats to the marine and intermodal transportation system; summarizes relevant domestic legislation, international conventions, and other guidance; delineates key workforce development issues; describes the project undertaken by MARAD in fulfillment of the Secretary's Section 109 responsibilities; presents the standards and curriculum developed in response to the MTSA mandate; and offers recommendations for the certification and oversight of maritime security education and training.

The standards, curriculum, and recommendations contained herein were developed through a deliberative and collaborative process, in which the Maritime Administration has proactively sought public comment and initiated interagency cooperation. Collaboration with the United States Coast Guard, the Transportation Security Administration, other public agencies, industry associations, and private-sector firms has been pursued to ensure that the education and training guidelines developed are responsive to the needs of affected parties and incorporate the views of stakeholders to the maximum extent possible.

Although the standards and curriculum development project was initiated in response to Section 109 of the MTSA, ongoing interagency partnerships and the developers' efforts to harmonize the requirements of domestic legislation and international conventions have led to the expansion of the original task to include the development by the USMMA (jointly with the government of India) of three model maritime security courses for the United Nations International Maritime Organization (IMO). The international implications and subsequent phases of the project are also discussed in this Report.

The standards and model course frameworks presented in this report constitute specific guidance upon which education and training institutions can immediately base instruction in port, maritime, and intermodal security. The report also recommends external certification of such education and training, and proposes that the Maritime Administration provide the leadership for a program of certification, quality control, and oversight in coordination with the U.S. Coast Guard and the Transportation Security Administration.

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1. INTRODUCTION

The events of September 11, 2001 prompted a large-scale assessment of the nation's vulnerabilities to terrorist acts and other forms of asymmetric warfare. The transportation system, for obvious reasons, is of particular concern. While the security of the U.S. commercial aviation system was the natural initial focus of this scrutiny, other modes and dimensions of transportation infrastructure are now being similarly examined. Unfortunately, our transportation system as a whole clearly offers both a target-rich environment and a potential means of access for those who seek to harm America through asymmetric warfare in general and terrorism in particular.

While all modes of transportation have specific vulnerabilities to asymmetric and terrorist attacks, perhaps no sector is more dangerously exposed than ports and the intermodal freight and passenger transportation systems to which they are connected. The potential insertion of Weapons of Mass Destruction (WMDs) into vessels, vehicles, and freight containers is a particularly acute risk in this context. A recent CIA analysis concludes that the delivery of WMDs to the United States via these mechanisms is more likely than via ICBMs.[1]

Although use of the transportation system to deliver Weapons of Mass Destruction is one of the gravest threats to have been recognized, it is certainly not the only area of concern. Piracy and other forms of violence at sea continue to plague the world merchant fleet. The outright takeover by terrorists of a vessel underway with the objective of using the ship as a "floating bomb" or to transport personnel and weapons are real dangers. The susceptibility of cruise ships to terrorist attack was shown years ago by the ***ACHILLE LAURO*** incident. Several examples in the past year have demonstrated that terrorists themselves are using, or attempting to use, the global marine transportation system as a means of access to prospective target nations. For example, the discovery in October 2001 by Italian authorities of an Al Qaeda operative in a container destined for Canada, complete with bed, bathroom, portable electronics, airport maps, and an airline mechanic's certificate is probably suggestive of the "tip of the iceberg."

Our adversaries have also discovered the relative ease with which attacks on merchant ships can be accomplished. The attack on the tanker ***LIMBURG*** off Yemen on September 6, 2002 vividly illustrates this vulnerability. Small craft, laden with explosives, can be difficult to detect and intercept in a timely manner and, as was demonstrated in this incident and in the ***USS COLE*** bombing, can have great destructive potential.

Maritime security also includes the problems of cargo theft, drug trafficking, alien smuggling, fraudulent certification of personnel, mis-declaration of cargoes, importation of counterfeit merchandise and other forms of contraband, and organized crime activities. Although each of these is a major problem in its own right, they are not issues that are necessarily separate from the problem of maritime terrorism. It has been established that terrorist organizations frequently finance their activities through such criminal use and abuse of the transportation system. Thus, the challenges of effective crime prevention in the port and maritime context are of even greater significance today, given the new imperatives of homeland security. The term "maritime security" should therefore be construed to have broader implications than the prevention of terrorism alone.

In the wake of 9/11, the federal government, especially the U.S. Department of Transportation, has moved rapidly to formulate new strategies and tactics to counter terrorism and related threats involving the transportation system. Creation of the Transportation Security Administration (TSA), reassignment of personnel to quickly assess vulnerabilities and respond to security challenges, and the provision of grants for port security improvements are some examples of recent initiatives undertaken by DOT to this end.

The U.S. Coast Guard has moved aggressively to provide for maritime security since 9/11. Examples of this activity include a requirement for 96-hour advance notice of arrival conveying vessel data and crew composition, creation of the High Interest Vessel Boarding Program and the deployment of Coast Guard personnel as "Sea Marshals" aboard certain ships entering and leaving port to ensure vessel control if needed, establishment of fixed and moving security zones around vessels and high-risk facilities, and provision of USCG escorts for merchant vessels depending on risk circumstances. In the wake of 9/11, the Coast Guard also began maritime security initiatives at the United Nations International Maritime Organization (IMO), which resulted in the International Ship and Port and Facility Security (ISPS) Code and amendments to the International Convention for the Safety of Life at Sea, 1974 (SOLAS Convention). On March 1, 2003, the Coast Guard became a component of the newly formed Department of Homeland Security (DHS).

The Transportation Security Administration (TSA) was created on November 19, 2001 through enactment of the Aviation and Transportation Security Act (ATSA). Although the primary emphasis of the agency in its early existence was on aviation security, its mission is to ensure the security of transportation of people and goods in all modes of the national transportation system. The short history of the TSA to date has been one of seemingly impossible deadlines, daunting management challenges, and impressive accomplishments. The agency has been responsible for establishing a results-oriented culture and organizational structure; creating a workforce of over 60,000 personnel; developing and implementing systems of airline passenger and baggage screening, managing a dramatically expanded Federal Air Marshal program; and formulating strategies to ensure the security of all modes of transportation. As an element of the DHS Border and Transportation Security directorate since March 1, 2003, the TSA is now integrating its operations with the other agencies that function under the DHS umbrella.

Other federal agencies have moved to secure the intermodal freight system against the threat of terrorism. For example, the U.S. Bureau of Customs and Border Protection, an organizational unit of DSH, has developed programs of international scope designed to provide point-of-origin to final destination visibility and control over containerized freight movements. Central to these initiatives are the accurate and timely flow of information on cargo and carrier movement and the identification of "trusted shippers"--those who demonstrate a degree of control over their loading facilities, personnel, and supply chains sufficient to justify characterization of their shipments as "low risk." Key programs include the Container Security Initiative (CSI), in which Customs is working with foreign ports to identify potentially dangerous shipments before they arrive in the United States, and the Customs-Trade Partnership Against Terrorism (C-TPAT), through which Customs provides streamlined clearance of cargo to firms that establish appropriate security procedures.

2. LEGISLATION, CONVENTIONS, AND OTHER GUIDANCE

MTSA 2002

The "Maritime Transportation Security Act (MTSA) of 2002" (P.L. 107-295) was enacted by the U.S. Congress on November 25, 2002. The MTSA amends the Merchant Marine Act of 1936 to "establish a program of greater security for United States seaports, and for other purposes." The Congress, in enacting the MTSA, noted the pivotal role of ports in the economy of the United States, the difficulties inherent in attempting to secure the Nation's port and intermodal transportation system, the vulnerabilities of that system to acts of terrorism, and the diverse types of federal crimes that are committed in the port environment.[2]

Some of the key features of the MTSA are as follows:

1. Requirements for port, facility, and vessel vulnerability assessments
2. Preparation by the Secretary of Transportation of a National Maritime Transportation Security Plan and Area Plans for each U.S. Coast Guard Captain of the Port Zone
3. Development of security plans for certain facilities and commercial vessels
4. The issuance and use of Transportation Security Cards for personnel whose responsibilities require them to access secure spaces aboard ships
5. Establishment of a permanent program of grants to facilitate the enhancement of maritime security
6. Assessment by the Secretary of Transportation of the effectiveness of antiterrorism measures at foreign ports
7. Establishment of an enhanced system of foreign seafarer identification
8. Creation of Maritime Security Advisory Committees at national and area levels
9. Installation and operation of Automatic Identification Systems aboard certain commercial vessels
10. Establishment of a program to better secure international intermodal transportation systems, to include cargo screening, tracking, physical security, compliance monitoring, and related issues.
11. Provision of civil penalties for violation of statutes or regulations
12. Extension of seaward jurisdiction of the Espionage Act of 1917 to 12 nautical miles offshore of the territorial sea baseline
13. Codification of the U.S. Coast Guard Sea Marshal program and consideration of utilizing merchant mariners and other personnel to assist the Coast Guard
14. Requirements that shipment data be provided electronically to U.S. Customs prior to arrival or departure of cargo
15. Reporting by the Secretary of Transportation to Congress on foreign-flag vessels calling at United States ports
16. Development of standards and curriculum for maritime security professional training

Section 109 of the MTSA addresses the need for maritime security education and training to counter terrorist and other security threats involving the port, maritime, and intermodal transportation environment. The MTSA specifically requires that "Not later than six months after the date of enactment of this Act, the Secretary shall develop standards and curriculum to allow for the training and certification of maritime security professionals."[3]

MTSA Conference Report

The conference report on Section 109 elaborates on the views of the Congress concerning the significance and necessary components of maritime security education and training. The report states, in part:

> *The Conferees believe that proper training is an essential element of any effective strategy to combat terrorism and enhance the security of our Nation's ports and waterways. Effective training requires both undergraduate and professional level training curricula. An essential element of undergraduate studies is to ensure that licensed maritime professionals have a full understanding of security procedures, principles, and methods along with a thorough grasp of intermodal transportation and logistics requirements. These trained individuals will be the first line of defense against a waterborne security threat. This training should also produce maritime professionals who will be able to implement methods of tracking and identification of containerized cargo that could potentially threaten the security of our country.*

Effective professional level training curricula involves two elements. The first is advanced and refresher training of licensed maritime and other transportation professionals in port and transportation security. The second element is to provide security and law enforcement professionals, charged with port security responsibilities, with the necessary background in methods and operation of a safe and efficient intermodal transportation system.[4]

IMO ISPS Code

The United Nations International Maritime Organization (IMO), spurred by the United States, has moved very quickly to promulgate new international requirements to strengthen maritime security in the wake of the 9/11 attacks. The IMO Maritime Safety Committee has developed amendments to the International Convention for the Safety of Life at Sea, 1974 (SOLAS Convention) that consist of measures intended to enhance maritime security including maritime security education and training. The "International Ship and Port Facility Security (ISPS) Code" was adopted at a diplomatic conference in London held December 9-13, 2002.[5] Further detail on the intent of the ISPS Code is provided by the IMO as follows:

In essence, the Code takes the approach that ensuring the security of ships and port facilities is basically a risk management activity and that to determine what security measures are appropriate, an assessment of the risks must be made in each particular case.

The purpose of the Code is to provide a standardized, consistent framework for evaluating risk, enabling governments to offset changes in threat with changes in vulnerability for ships and port facilities.

To begin the process, each Contracting Government will conduct port facility security assessments. Security assessments will have three essential components. First, they must identify and evaluate important assets and infrastructures that are critical to the port facility as well as those areas or structures that, if damaged, could cause significant loss of life or damage to the port facility's economy or environment. Then, the assessment must identify the actual threats to those critical assets and infrastructure in order to prioritise security measures. Finally, the assessment must address vulnerability of the port facility by identifying its weaknesses in physical security, structural integrity, protection systems, procedural policies, communications systems, transportation infrastructure, utilities, and other areas within a port facility that may be a likely target. Once this assessment has been completed, Contracting Governments can accurately evaluate risk.

This risk management concept will be embodied in the Code through a number of minimum functional security requirements for ships and port facilities. For ships, these requirements will include:

Ship Security Plans
Ship Security Officers
Company Security Officers
Certain onboard equipment

For port facilities, the requirements will include:

Port Facility Security Plans

Port Facility Security Officers
Certain security equipment

In addition the requirements for ships and for port facilities include:

Monitoring and controlling access
Monitoring the activities of people and cargo
Ensuring security communications are readily available

Because each ship (or class of ship) and each port facility present different risks, the method in which they will meet the specific requirements of this Code will be determined and eventually be approved by the Administration or Contracting Government, as the case may be.[6]

Part A of the ISPS Code, which is mandatory, calls for the designation of Ship Security Officers, Company Security Officers, Port Facility Security Officers, and other personnel with security functions for certain vessels and facilities involved in international trade. Part A specifically states that these personnel "shall have knowledge and have received training, taking into account the guidance given in part B of this Code." Part B of the Code provides "recommendatory" guidelines for the training of security officers and other shipboard and port facility personnel. The Code defines the duties and responsibilities and knowledge required of:

1. Ship Security Officer
2. Company Security Officer
3. Port Facility Security Officer
4. Shipboard Personnel having Specific Security Duties
5. All other Shipboard Personnel
6. Port Facility Personnel having Specific Security Duties
7. All other Port Facility Personnel.

SOLAS Chapter XI-2

During the December 2002 diplomatic conference in London, the representatives of 108 contracting governments to the 1974 SOLAS Convention adopted a new chapter to that instrument. Chapter XI-2 of the SOLAS Convention is concerned with "Special Measures to Enhance Maritime Security," and is summarized as follows:

This chapter applies to passenger ships and cargo ships of 500 gross tonnage and upwards, including high speed craft, mobile offshore drilling units and port facilities serving such ships engaged on international voyages.

Regulation XI-2/3 of the new chapter enshrines the International Ship and Port Facility Security Code (ISPS Code). Part A of this Code will become mandatory and part B contains guidance as to how best to comply with the mandatory requirements. The regulation requires Administrations to set security levels and ensure the provision of security level information to ships entitled to fly their flag. Prior to entering a port, or whilst in a port, within the territory of a Contracting Government, a ship shall comply with the requirements for the security level set by that Contracting Government, if that security level is higher than the security level set by the Administration for that ship.

Regulation XI-2/4 confirms the role of the Master in exercising his professional judgment over decisions necessary to maintain the security of the ship. It says he shall not be constrained by the Company, the charterer or any other person in this respect.

Regulation XI-2/5 requires all ships to be provided with a ship security alert system, according to a strict timetable that will see most vessels fitted by 2004 and the remainder by 2006. When activated the ship security alert system shall initiate and transmit a ship-to-shore security alert to a competent authority designated by the Administration, identifying the ship, its location and indicating that the security of the ship is under threat or it has been compromised. The system will not raise any alarm on-board the ship. The ship security alert system shall be capable of being activated from the navigation bridge and in at least one other location.

Regulation XI-2/6 covers requirements for port facilities, providing among other things for Contracting Governments to ensure that port facility security assessments are carried out and that port facility security plans are developed, implemented and reviewed in accordance with the ISPS Code.

Other regulations in this chapter cover the provision of information to IMO, the control of ships in port, (including measures such as the delay, detention, restriction of operations including movement within the port, or expulsion of a ship from port), and the specific responsibility of Companies.[7]

U.S. Coast Guard Guidance

The United States Coast Guard, in addressing port and maritime security challenges, has offered initial guidance through the mechanism of its "Navigation and Vessel Inspection Circulars (NVICs)." Specifically, NVIC 10-02 provides "Security Guidelines for Vessels," while NVIC 11-02 offers "Recommended Security Guidelines for Facilities."

NVIC 10-02, dated October 21, 2002, "establishes guidelines for vessels for performing security assessments, developing security plans, interfacing with facilities, and implementing security measures and procedures to reduce the risk to passengers, crew and port personnel on board vessels, in port areas, and to the vessels and their cargo."[8] The introductory material also indicates that the NVIC was developed "to assist vessel operators and owners to align with the security requirements being developed at the International Maritime Organization."

U.S. Coast Guard NVIC 11-02, dated January 13, 2003, is intended to provide "guidance on developing security plans, procedures, and measures for facilities." The NVIC states that the document "may be used as a benchmark to develop and implement security measures and activities in anticipation of evolving domestic and international security regimes." It is further noted that the Circular is similar in structure to the ISPS Code, which was adopted shortly prior to the issuance of the NVIC.[9]

These documents address maritime security training in much the same manner as does the ISPS Code. The Coast Guard has stated its intention to implement the MTSA through the requirements of the ISPS Code. This position is most clearly articulated in the Federal Register Notice of December 30, 2002, which served as the guiding document for a series of seven public meetings held by the Coast Guard to collect comments on developing requirements and regulations stemming from the MTSA, the ISPS Code, and amendments to the SOLAS convention. In this document, the agency states, ". . .the Coast Guard intends to implement the MTSA through the requirements in the SOLAS amendments and the ISPS Code parts A and B for all vessels and facilities that are currently required to meet SOLAS, as well as those

vessels exclusively on domestic trade and facilities that are at risk of being involved in a transportation security incident."[10] The term *security incident* in the ISPS Code (by reference to the definition contained in SOLAS Chapter XI-2) means "any suspicious act or circumstance threatening the security of a ship, including a mobile offshore drilling unit and a high speed craft, or of a port facility or of any ship/port interface or any ship-to-ship activity."[11]

While the Coast Guard has clearly indicated its intention to implement the MTSA through the SOLAS amendments and the ISPS Code, there are some interpretations unique to the emerging domestic regime. The terminology associated with some classes of personnel named as having security responsibilities in the ISPS Code has been altered for domestic implementation. Specifically, the term "Ship Security Officer" in the ISPS Code is replaced by the label "Vessel Security Officer" in the Coast Guard interpretation. The primary reason for this substitution is the broader applicability of the MTSA in the United States, in which some domestic vessels are subject to the provision of the Act. Further, the term "Port Facility Security Officer" that appears in the ISPS Code is replaced by the Coast Guard with the term "Facility Security Officer." The Coast Guard has designated the Coast Guard Captain of the Port (COTP) as "Port Facility Security Officer," and has translated the duties, responsibilities, and knowledge requirements associated with the "Port Facility Security Officer" of the ISPS Code into a domestic equivalent labeled "Facility Security Officer."

3. WORKFORCE DEVELOPMENT ISSUES

The emerging transportation security system will require: (1) the hiring of personnel to perform security-related tasks, (2) the education and training of new personnel, (3) the retraining of existing personnel to provide them with the knowledge and skills needed for successful performance in the new environment, and (4) the development of new mindsets and innovative approaches to transportation security.

It is difficult to quantify the need for new personnel and retraining in the transportation security realm. However, the example of the Transportation Security Administration is instructive in this regard. TSA has already hired some 64,000 personnel. Approximately 56,000 of these employees perform duties related to airline passenger and baggage screening. Beyond TSA, numerous other federal, state, and local government agencies—including the Coast Guard, FBI, local police forces, Customs, and port authorities—are expanding their organizations to include personnel having special expertise in transportation operations and security matters and will need to provide existing personnel with appropriate training and education. This is also true, to varying degrees, of parties in the private sector, such as vessel owners, terminal operators, intermodal carriers, and industrial shippers.

In the maritime context, the imposition of security-related duties on existing merchant vessel personnel is a matter of great concern. The typical merchant mariner is already overburdened as the result of the trend toward reduced manning, Oil Pollution Act of 1990 (OPA 90) regulations, STCW requirements for hours of rest, the loss of the ship radio operator position, implementation of the ISM Code and associated Safety Management Systems, and other pressures. There is substantial debate within the maritime field as to whether or not vessel security duties can be accommodated without increasing crew complements. Many in the industry have questioned the degree to which maritime security can be enhanced by adding security duties to the other responsibilities of these existing personnel.

Developing a full understanding of opportunities for terrorist attacks and other criminal activities involving the port and intermodal freight transportation system and evolving effective ways to counter those threats will require expertise that goes beyond the conventional security paradigm of "gates, guns, and guards." While knowledge of security and counter-terrorism *per se* is important, comprehension of port, maritime, and intermodal system structure and operations will be essential in stemming the tide of

potential threats. An appreciation of the importance of information technology, information sharing, and consciousness of what technology can and cannot do in this context are also essential. Awareness of potential "win/win" scenarios in supply chain security, in which security and efficiency are simultaneously furthered, is necessary.[12] Successful prevention of terrorist actions involving port and transportation systems will ultimately depend to a large extent on the degree to which those responsible for security understand the dynamics and operational particulars of those systems and are therefore able to identify and control their vulnerabilities.

4. THE MTSA SECTION 109 PROJECT

Project History

The Maritime Transportation Security Act of 2002 requires the Secretary of Transportation to develop standards and curriculum for the education, training, and certification of maritime security personnel. The Maritime Administrator forwarded this task, which had been delegated to MARAD by the Secretary, to the United States Merchant Marine Academy for execution. A working group formed by the Academy's Superintendent has been engaged in this project since December 20, 2002.

The Superintendent, recognizing the explicit intent of Congress that Section 109-related activities include "both undergraduate and professional level training," designated group members from both the USMMA undergraduate program and the Academy's Global Maritime and Transportation School (GMATS).

Major project subtasks were defined as: (1) identification and synthesis of relevant international conventions, domestic regulations, and other guidance, (2) establishment of personnel categories for which education and training standards and curriculum should be developed, (3) delineation of knowledge requirements for each personnel category, and finally (4) creation of course outlines or modification of existing course outlines consistent with the previous steps. The ultimate goal was defined as the generation of standards of knowledge and understanding for port, maritime, security, and law enforcement personnel and model courses of broad applicability that will render such personnel able to effectively conduct maritime security-related duties.

The standards and development project commenced with careful analysis of all relevant legislation, international conventions, Coast Guard NVICs, and other guidance. As a result of this analysis, nine discrete categories of personnel were identified as requiring specific maritime security training and knowledge. These are:

1. Vessel Security Officer
2. Company Security Officer
3. Facility Security Officer
4. Vessel Personnel with Specific Security Duties
5. Facility Personnel with Specific Security Duties
6. All Other Vessel Personnel
7. All Other Facility Personnel
8. Other Maritime Personnel
9. Military, Security, and Law Enforcement Personnel

Draft terms of reference containing the duties and responsibilities of personnel in the various categories and the knowledge standards associated with them were then prepared. In this portion of the task, a mapping of the requirements of relevant instruments to each category of personnel was accomplished. Standards of knowledge were formulated for each category, considering the particulars of the MTSA, the

MTSA conference report, the ISPS Code, and pertinent USCG guidance. Of particular concern in this phase was ensuring that the subject areas established supported the specified duties and responsibilities of personnel in the various categories.

Through interagency collaboration, public outreach, and participation in IMO deliberations, input on the draft terms of reference was solicited. Suggestions and comments thus obtained were used to further refine the draft terms of reference into model course frameworks that were presented to participants in a special conference held at the U.S. Merchant Marine Academy. This event provided the opportunity for the working group to acquire further information that was employed in finalizing the model course frameworks. The results of this process are the model course frameworks and discussion of associated issues that are presented in this report.

Interagency Collaboration

Discussions early in the project identified mutual objectives and potential synergies between and among the U.S. Coast Guard, the Merchant Marine Personnel Advisory Committee (MERPAC), the Transportation Security Administration, the International Maritime Organization, and MARAD/USMMA in the context of the MTSA Section 109 project.

Where TSA is concerned, the working group sought input and comment on the developing standards and curriculum to ensure that they are responsive to, and supportive of, the needs of the agency. Briefings to senior personnel in TSA's Office of Maritime and Land Security on the goals and details of the project led to the direct participation of TSA officers in the refinement of the course frameworks and in the public outreach component of the project.

Collaboration with the U.S. Coast Guard and the MERPAC committee on the project has been direct and productive. To a large degree, the focus of this partnership has been on the needs of the IMO with respect to the development of model courses for maritime security education and training. The international implications of the MTSA Section 109 project are discussed below.

International Implications

Although the standards and curriculum development project was initiated in response to the MTSA Section 109 mandate, as a result of the working group's efforts to harmonize the requirements of domestic legislation and international conventions and through ongoing collaboration with the U.S. Coast Guard, MERPAC, and other agencies and entities, the task has expanded to include the development (jointly with the government of India) of three model maritime security courses for the International Maritime Organization.

With the objective of avoiding an unnecessary burden of compliance on industry that would result from the imposition of multiple standards, and recognizing the explicit intention of the U.S. Coast Guard to implement the MTSA in parallel with the ISPS Code and SOLAS amendments, the working group sought from the outset of the MTSA project to ensure that the developing maritime security standards and curriculum were consistent with the emerging international framework. The group's work and intentions in this regard were brought to the attention of USCG personnel early in the project.

The discovery that the USCG had plans to volunteer to develop IMO model courses for Ship Security Officer and Company Security Officer led to direct involvement of USCG personnel and the Chairman of MERPAC in the working group's early deliberations. Recognizing that the objectives of the MTSA project were very similar to those of the IMO where maritime security education and training are

concerned, it was decided to leverage elements of the MTSA standards and curriculum for international purposes.

A meeting of the IMO STW Subcommittee was held in London from February 24-28, 2003. The U.S. delegation included a representative from MARAD Headquarters and a member of the USMMA working group. The following is excerpted from the latter's summary of the meeting:

> *[Working Group One] met for several days of the week long meeting and focused on the training and education of Ship Security Officers (SSOs), Company Security Officers (CSOs) and Port Facility Security Officers (PFSOs). Deliberations resulted in the details of three relevant model courses that describe the areas of competence and knowledge needed by these three categories of personnel to perform their duties under the new ISPS Code.*
>
> *On the first day of the meeting at IMO Headquarters the United States delegation offered to the plenary that the United States Merchant Marine Academy could develop two of these courses (SSO and CSO) based on terms of reference created in connection with concurrent domestic activities spurred by the MTSA 2002. The government of India announced that it had completed work on these same courses. Initially it was felt by many members that the PFSO course was outside the scope of the STW but it was ultimately agreed that the United States and India should jointly develop all three of the courses, with the United States as lead.*
>
> *First drafts of the SSO, CSO, and PFSO courses are due at IMO on May 30, 2003. A validation committee will then ensure that the product meets the terms of reference stated by the STW secretariat. A final photo ready copy is due in London by September 8, 2003. These rather accelerated milestones were deemed necessary in order to meet the July 2004 in-force date of the ISPS Code. Members of the STW Subcommittee were invited to the public meeting that will be held at USMMA on March 20, 2003 to gather input from various national and international interests.*
>
> *Given the July 2004 deadline for the implementation of the ISPS Code, it was announced that the course frameworks and outlines that were agreed upon at this meeting should be regarded as final in terms of content and as such, may be used immediately as guidelines for the training of security personnel. As developers of the complete IMO model courses for SSO, CSO, and PFSO, the U.S. Merchant Marine Academy, working jointly with the government of India, will be bound by these terms as agreed in London.*[13]

Public Outreach

In the interest of obtaining public comment on draft standards and curricula developed as part of the project, on March 20, 2003, the U.S. Maritime Administration hosted the "Conference on Maritime Security Standards and Curricula" at the United States Merchant Marine Academy in Kings Point, New York. The Maritime Administrator personally invited many organizations, government entities, and industry associations to attend the conference. One hundred and thirty-six delegates from the United States and numerous other countries attended this international event.

Highlights of the conference included presentations of the U.S. Coast Guard and Transportation Security Administration perspectives on the project. The review and public comment sessions that occupied the balance of the agenda focused on seven model course frameworks that had been provided to registrants in advance and a discussion of certification and quality control issues. A panel consisting of USMMA

working group members and representatives from USCG, TSA, and MARAD responded to questions and comments from participants.

Interest in the content of the course frameworks and related issues was strong. Sufficient time was available for all who wished to make statements or pose questions for the record. Delegates were also encouraged to provide additional detail via e-mail as soon as possible following the conference.

Some of the principal views and concerns that were voiced are summarized below:

Participants offered overwhelming support for the working group's interest in harmonizing domestic and international education and training requirements. Representatives of ocean carriers noted the burden that would be imposed if their vessels should be required to meet more than one set of standards in this connection.

It was observed that an integrated, intermodal, "holistic" approach to maritime security education and training should be implemented. The need to recognize and maintain a careful balance between security and the flow of commerce was emphasized. The working group was urged not to recommend economically unpalatable education, training, and certification requirements. A suggestion was made that government funding for maritime security education and training be made available. Concerns were articulated about the imposition of additional (security-related) responsibilities on already overburdened merchant vessel personnel.

A consensus emerged that instruction of roughly three days' duration would be appropriate for both Vessel Security Officer and Company Security Officer courses. A comment was offered that course duration might be better measured in hours, rather than in days. Comments were made that available videos are valuable resources, but that these are not sufficient for maritime security education and training on a stand-alone basis. The importance of conducting background checks on prospective students was underscored, noting the aviation training received in the U.S. by 9/11 hijackers. It was recommended that the subjects of liability and the legal implications of security activities be incorporated into model courses. Questions were raised concerning "train-the-trainer" scenarios and the degree to which maritime security personnel would bear responsibility for training their subordinates. Suggestions were made that refresher training could be accomplished through mechanisms other than the formal classroom.

Generally, vessel and facility operators appeared to favor company self-certification of security training; most other organizations seemed to support external certification. It was suggested that implementation of the STCW Convention as an analogue to maritime security training certification shows that results do not justify costs incurred. Comments were made that the USCG position not requiring formal training or certification will lead to selective enforcement and inconsistency. Other comments were offered indicating agreement with the USCG decision not to require formal training, course approval, or external certification of security personnel. Speculation was made that the present USCG position on security training certification may be only temporary and that there is a critical need for government intervention. A suggestion was offered that the USCG could add questions pertaining to maritime security to its merchant marine officer licensing exams. A comment was received from a classification society noting that it will certify maritime security courses by comparison with IMO model courses being developed. It was noted that the U.S. Department of Transportation, via MARAD, could oversee security training certification and quality control and that it has the authority to do so.

The full text of formal presentations, discussion, and public comments made during the meeting can be found in the conference proceedings, which are available as a separate document upon request.

5. STANDARDS AND CURRICULUM

The model course frameworks that constitute the "curriculum" called for by Section 109 of the MTSA can be found in the appendix to this report. The seven frameworks presented incorporate comments and suggestions received as a result of the public outreach effort described above. The frameworks are:

1. "Vessel Security Officer"
2. "Company Security Officer"
3. "Facility Security Officer"
4. "Maritime Security for Vessel Personnel with Specific Security Duties"
5. "Maritime Security for Facility Personnel with Specific Security Duties"
6. "Maritime Security for Military, Security and Law Enforcement Personnel"
7. "Maritime Security Awareness"

The standards and curriculum are discussed below in terms of how they specifically address the requirements of MTSA Section 109. Relevant language from the Act is quoted for reference.

> *(b) MINIMUM STANDARDS.—The standards established by the Secretary under subsection (a) shall include the following elements:*
>
> *(1) The training and certification of maritime security professionals in accordance with accepted law enforcement and security guidelines, policies, and procedures, including, as appropriate, recommendations for incorporating a background check process for personnel trained and certified in foreign ports.*

The course frameworks are intended as specific guidance upon which education and training providers can immediately base instruction in port, maritime, and intermodal security matters. They are the result of a careful effort to ensure that the requirements of relevant domestic legislation, international conventions, and other pertinent guidance are addressed through standards of knowledge and the acquisition of specific understanding through education and training. In addition, expert advice and public comment have been solicited and obtained through a focused public outreach effort. Input thus received has helped to ensure that the standards and curriculum are fully consistent with applicable law enforcement, government, and industry standards.

The standards and curriculm call for student background and character checks, not only for "personnel trained and certified in foreign ports," but for all trainees.

> *(2) The training of students and instructors in all aspects of prevention, detection, investigation, and reporting of criminal activities in the international maritime environment.*

The course frameworks in their present form constitute a base-level curriculum for maritime security education and training that includes those subjects listed in Sec. 109 (b)(2). In addition to delineating the duties and responsibilities of personnel in various categories and identifying the subject areas that should be contained in education and training that is intended to be responsive to these requirements, the curriculum suggests resources that can be employed in delivery of the material. These resources include reports, regulations, conventions, books, videotapes, and other adjuncts to education and training that will assist instructors in conducting the training envisioned in Sec. 109 (b)(2).

The topics of "prevention, detection and reporting" are common to all seven course frameworks. However, the subject area of "investigation" is addressed only in the model course framework entitled "Maritime Security for Military, Security and Law Enforcement Personnel," given that investigation is the responsibility of law enforcement professionals and not that of vessel and facility personnel.

> *(3) The provision of off-site training and certification courses and certified personnel at United States and foreign ports used by United States-flagged vessels, or by foreign-flagged vessels with United States citizens as passengers or crewmembers, to develop and enhance security awareness and practices.*

The standards and curriculum developed as part of the Maritime Administration's implementation of the Section 109 mandate are intended to be fully portable and adaptable to education and training environments in a wide variety of locations and situations. The "Course Delivery" criteria provide flexibility in this regard; each of the course frameworks appended states: "The outcome of this course may be achieved through various methods, including classroom training, in-service training, distance learning, computer-based training, or combinations of these methods." The curriculum is not institution-specific.

The Section 109 conference report specifies that maritime professionals should:

> *. . . have a full understanding of security procedures, principles, and methods along with a thorough grasp of intermodal transportation and logistics requirements. . . . This training should also produce maritime professionals who will be able to implement methods of tracking and identification of containerized cargo that could potentially threaten the security of our country.*

The standards and curriculum presented in this report address these requirements both implicitly and explicitly. The subject area of "vessel and port operations and conditions" is intended to provide an understanding of the intermodal and logistics context in which modern ports and marine transportation systems operate. The course framework for military, security, and law enforcement personnel is most detailed in this realm, recognizing that personnel in this category are in greatest need of a comprehensive grasp of these topics. "Supply chain and intermodal transportation structure and operations," "port and transportation information and tracking systems," and "cargo and transportation documentation" are examples of subject areas that provide the necessary depth in this framework.

The conference report also identifies a need for both undergraduate and professional-level curricula. The standards and frameworks contained in this report are suitable for use in either setting. The U.S. Merchant Marine Academy and the State Maritime Academies are well positioned to satisfy the need in both areas. The U.S. Merchant Marine Academy currently provides port, maritime, and transportation security education and training at the undergraduate level through its Logistics and Intermodal Transportation Program,[14] and at the professional level through its GMATS program.[15] The labor-operated industry schools also represent excellent potential for constituent-based maritime security training.

In creating the curricula and its associated standards, the developers have avoided imposing additional requirements beyond those mandated by law or convention. The frameworks provide coverage of what the working group considered the minimum, essential material. The base-level curriculum could, given sufficient time and financial resources, be expanded to provide detailed teaching syllabi for use by education and training providers. Internationally, this will occur for the Ship Security Officer, Company Security Officer, and Port Facility Security Officer as a result of the MTSA project's expansion to include model course development for the International Maritime Organization. These three international model

courses are analogous to the first three MTSA courses listed above, that is: Vessel Security Officer, Company Security Officer, and Facility Security Officer.

6. CERTIFICATION AND OVERSIGHT

The issues of course approval, requirements for formal maritime security training, certification, quality control, and governmental oversight were the most contentious of all topics discussed during the "Conference on Maritime Security Standards and Curricula." The panel heard multiple statements from participants arguing both for and against government certification of security personnel and their training, formal or otherwise.

The certification issue was discussed during the aforementioned February 24-28, 2003 meeting of the IMO STW Subcommittee. At that time, the Working Group on Unlawful Practices Associated with Certificates of Competency and Measures to Enhance Maritime Security reported to the Plenary that:

> *During the deliberations of the group the question arose, in the context of the provisions of Parts A and B of the ISPS Code, as to certification of those who may undergo training in accordance with the model courses under development, as well as, who should issue the documentary evidence of attendance envisaged in the relevant course frameworks. It was felt that the issue was outside the scope of the terms of reference of the group.*
>
> *It is recommended that the Sub-Committee refer the matter to the Committee for its consideration and eventual guidance on the issue and invite Member Governments and Non-Governmental Organizations with a consultative status to make relevant submissions for the consideration of the Committee in the subject.*[16]

The STW Sub-Committee referred the question of certification to the IMO Maritime Safety Committee (MSC), which is scheduled to address the matter at its 77th session, to be held in London May 28-June 6, 2003. The U.S. delegation may have the opportunity at that time to present the DOT position on the subject of certification and oversight of maritime security education and training.

At the time of this writing, regulations for implementation of the MTSA are being developed at U.S. Coast Guard Headquarters. However, as previously noted, authority to implement Section 109 has been delegated by the Secretary to the Maritime Administrator.

In the absence of a systematic and verifiable program of external certification and oversight, insufficient rigor and a lack of consistency may render maritime security education and training less effective than it should be. The working group agrees with those comments received from the public suggesting that even if a scheme of company self-certification is necessary to meet the implementation deadline, a formal system of training and certification must be planned as early as possible. Also, those maritime and facility personnel who already possess the security qualifications and knowledge specified in the ISPS Code should be accommodated through a mechanism that would permit them to demonstrate their competence and thereby avoid potentially redundant or unwarranted training. In such cases, the working group suggests the development of a certification provision involving examinations administered by a qualified body, in which candidates claiming to have the required knowledge and understanding are allowed to "test out" of a given maritime security course. Efficiency and conservation of resources for both government and industry would thus be furthered.

It is further recognized and appreciated that the port and maritime industry has been the subject of ever-increasing regulation and oversight over time. Compliance with the STCW convention, the ISM Code,

OPA 90, and other conventions and domestic regulations have imposed significant administrative burdens for carriers and certain facilities, often including a multitude of inspections. Given this, it seems desirable to leverage existing mechanisms and frameworks, integrating maritime security education and training requirements into existing procedures and institutions to the extent possible.

It is the opinion of the working group that in order to make maritime security education and training effective, the following conditions must be met:

1. Uniformity of content: the development of the MTSA model course frameworks and IMO model courses, their respective domestic adoption and approval by IMO, and the subsequent development of education and training courses based upon them will serve this purpose in part.

2. Consistency of training: in order to ensure adequate quality and rigor, approval of training courses by a recognized certifying institution or organization is necessary.

3. Stability of training: creation of a system of periodic audits of courses and training institutions and of companies employing course graduates is essential to verifying the continued adherence to established standards.

To satisfy these conditions, it is recommended that the U.S. Department of Transportation, through MARAD, establish a system of maritime security education and training course approval and quality control. MARAD has long been deeply involved in the analysis of marine transportation activities, workforce requirements, and personnel education and training. MARAD, having been delegated responsibility for Section 109 implementation, could readily assume oversight and certification responsibility for maritime security education and training.

Consistency of training can be ensured through a course approval process that should be developed and administered directly by the Maritime Administration. Education and training institutions wishing to conduct courses leading to certification would submit applications for course approval to MARAD. Application packages would be expected to include such documents as the course outline, course framework, course schedule, detailed teaching syllabus, instructor manual, examination and assessment policy, instructor resumes, and similar materials. The essence of the course approval task would be to ensure that these elements are consistent with established maritime security education and training standards derived from the present project. MARAD personnel with expertise in maritime security course development and related education and training would be well positioned to undertake this duty.

A system of training oversight will be necessary to ascertain that approved courses are delivered in a manner consistent with their original approval and applicable standards. To accomplish this, the working group recommends the creation of a Quality Standards System (QSS) for maritime security education and training programs. In this approach, MARAD, as lead agency, would supervise organizations that would audit maritime security education and training. MARAD would chair a team that would operate under a charter and that could include experts from TSA and the Coast Guard. This team would establish performance criteria that approved organizations would be required to meet. Designated organizations would then conduct ongoing assessment of courses to verify that their delivery, instructors, facilities, and other training elements adhere to recognized standards. A current analogue to this approach is the QSS called for in the STCW Convention, through which the American Council on Education, the American Bureau of Shipping, Det Norske Veritas, and Lloyd's Register of Shipping are approved by the U.S. Coast Guard to monitor STCW-related training on its behalf. The Coast Guard provides explicit guidance to organizations that wish to undertake these responsibilities.[17]

7. CONCLUSION

The U.S. Congress enacted the MTSA on November 25, 2002. On April 3, 2003, the Secretary delegated to the Maritime Administrator the authority to implement Section 109 of the Act, which requires the Secretary, not later than six months after the date of enactment, to develop standards and curriculum to allow for the training and certification of maritime security professionals. The Secretary found that the Maritime Administration (MARAD) has the expertise and staff to develop and implement a program for the training and certification of maritime security professionals within its area of responsibility and to make funding decisions in accordance with the statutory requirements.

The Section 109 conference report defines the focus of this mandate as the undergraduate education of licensed maritime professionals, advanced and refresher training of licensed maritime and other transportation professionals, and the provision of security and law enforcement professionals with background in the methods and operation of a safe and efficient intermodal transportation system.

The project that was undertaken by the U.S. Merchant Marine Academy on behalf of the Maritime Administrator in fulfillment of this charge has resulted in the creation of a base-level curriculum that addresses the need for maritime security education and training specific to each of these domains. Seven sets of standards and course frameworks are presented. These outlines are not binding, but are intended for immediate use by education and training providers as guidance for instruction in port, maritime, and intermodal security. Their content is consistent with the requirements contained in the MTSA, the ISPS Code, and other pertinent instruments.

Further elaboration of three of these frameworks will be accomplished by May 30, 2003, at which time the USMMA working group (via the U.S. Coast Guard and on behalf of the United States), in cooperation with the government of India, will submit full model courses to the International Maritime Organization for review by a designated IMO Validation Panel. The finalized model courses for Ship Security Officer, Company Security Officer, and Port Facility Security Officer will be returned to the IMO by September 8, 2003 with the expectation that they will be approved and made available to the international maritime community.

The issue of certification and oversight of maritime security education and training is also addressed by this report. The working group recommends that a system of oversight be established and suggests that the Maritime Administration is well positioned to carry out this task.

The standards, curriculum, and recommendations contained herein have been developed through a deliberative and collaborative process, in which the Maritime Administration proactively sought public comment and initiated interagency cooperation. Collaboration with the United States Coast Guard, the Transportation Security Administration, other public agencies, industry associations, and private-sector firms has been pursued to ensure that the guidelines developed are responsive to the needs of affected parties and incorporate the views of stakeholders to the maximum extent possible.

The standards and curricula that are the focus of this Report to Congress, if implemented through a comprehensive and integrated system of certification and oversight, have the potential to significantly enhance port and maritime security. Maritime security education and training are pivotally important elements in what will clearly be a long-term struggle to prevent attacks upon, and criminal activity involving, the nation's port, maritime, and intermodal transportation systems. The effectiveness of this response will be crucial to the future national security of the United States and its allies.

U.S. Department of Transportation
Maritime Administration

Maritime Security for Military, First Responder, and Law Enforcement Personnel

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Model Course MTSA 05-01

Prepared by

THE UNITED STATES MERCHANT MARINE ACADEMY

18 October 2005

Contents

Foreword

This course is one of a series developed by the U.S. Maritime Administration in fulfilment of its charge under the Maritime Transportation Security Act of 2002 (MTSA 2002). Section 109 of the Act required the Secretary of Transportation to develop standards and curricula to allow for the certification of maritime security professionals. This responsibility was delegated by the Secretary to MARAD and subsequently assigned by me to the U.S. Merchant Marine Academy for execution.

Through a collaborative effort with industry and other government agencies, the Academy created seven model course frameworks in response to the training needs identified by the Congress and articulated in the MTSA of 2002. These model course frameworks, and a discussion of key issues related to maritime security education and training, are contained in MARAD's Report to Congress titled "*Maritime Transportation Security Act of 2002: Section 109 Implementation.*"

The MTSA project led to the creation by the U.S. Merchant Marine Academy, in a joint effort with the United States Coast Guard and the Directorate General of Shipping, Government of India, of three model courses for the International Maritime Organization. The Ship Security Officer, Company Security Officer, and Port Facility Security Officer courses have been published by the IMO and are now the global benchmark for maritime security training in their respective areas.

In a style similar to the IMO model courses, the course that follows is one of four stemming from the MARAD Report to Congress that provide training guidance for security personnel not addressed by the IMO model courses. In addition to informing and helping to standardize maritime security training, this course is one that will be used as a reference in the interim system of course approval and certification that has been jointly established by MARAD and the U.S. Coast Guard. Organizations that wish to submit maritime security courses for approval under this system should use this course, the others in the MTSA series, and the three IMO model courses as the standard reference for the development and operation of courses in this domain.

The Maritime Administration gratefully acknowledges the contributions to the development of this course made by the Department of Homeland Security's Federal Law Enforcement Training Center (FLETC). FLETC and the U.S. Merchant Marine Academy jointly conducted a training needs assessment survey and held an important national conference to solicit the input of military first responder, and law enforcement personnel on draft training curricula and training requirements.

It is my hope that this course and the others like it will serve to harmonize and standardize port, maritime, and intermodal transportation security education and training, and that this will enhance the security of our Nation.

John Jamian
Acting Maritime Administrator

Introduction

This model course is intended as specific guidance upon which education and training providers can immediately base instruction in maritime security matters. It is the result of a careful effort to ensure that the requirements of relevant domestic legislation, international conventions, and other pertinent guidance are addressed through standards of knowledge and the acquisition of specific understanding through education and training. In addition, expert advice and public comment have been solicited and obtained through a focused public outreach effort. Input thus received has helped to ensure that the model course is fully consistent with applicable law enforcement, government, and industry standards.

This model course and others in the series of which it is a part constitute a base-level curriculum for maritime security education and training that includes those subjects listed in MTSA Sec. 109 (b)(2). In addition to delineating the duties and responsibilities of personnel in various categories and identifying the subject areas that should be contained in education and training that are intended to be responsive to these requirements, the curriculum suggests resources that can be employed in delivery of the material. These resources include reports, regulations, conventions, books, videotapes, and other adjuncts to education and training that will assist instructors in conducting the training envisioned in Sec. 109 (b)(2).

This course is also intended to serve as a comparison reference for courses that are submitted for approval under the MARAD/USCG MTSA Section 109 course approval system. It should be noted in this connection that U.S. domestic training courses for Vessel Security Officer, Company Security Officer, and Facility Security Officer should use the IMO model courses for Ship Security Officer (Model Course 3.19), Company Security Officer (Model Course 3.20), and Port Facility Security Officer (Model Course 3.21), respectively, as standards for course content, schedule, and related matters.

Part A: Course Framework

Scope

This model course is intended to provide the knowledge required for military, first responder, and law enforcement personnel without prior maritime background to conduct their duties aboard vessels, in port facilities and elsewhere in the marine environment in accordance with the requirements of the Maritime Transportation Security Act of 2002.

Objective

The principal objective of this course is to provide military, first responder, and law enforcement personnel with an understanding of enhancements to security in the maritime arena and the unique circumstances and operational conditions that prevail therein.
Those who successfully complete the course should better be able to undertake their duties and responsibilities as military, first responder and law enforcement personnel in the port, maritime, and intermodal context, which may include, but are not limited to:

1. inspecting vessels, terminals, and other facilities;
2. responding to crises involving threats of terrorism or actual attacks;
3. monitoring and controlling access to facilities and vessels;
4. interviewing, examining, and credentialing transportation workers and facility personnel;
5. conducting surveillance operations and participating in undercover assignments;
6. tracking and interdicting suspicious cargo, persons, vessels, or vehicles;
7. recognizing and detecting the presence of bombs, explosives, and Weapons of Mass Destruction;
8. interacting on security matters with Vessel Security Officers, Company Security Officers, Facility Security Officers, and relevant federal, state, and local agencies; and
9. performing threat, risk, and vulnerability assessments; security planning; and contingency planning.

■ Entry standards

It is assumed that those attending this course will be experienced military, first responder, or law enforcement personnel. Training providers must verify trainee identity and citizenship.

■ Course certificate, diploma or document

Following verification of identity and citizenship, documentary evidence should be issued to those who have successfully completed this course indicating that the holder has completed training in "Maritime Security for Military, First Responder, and Law Enforcement Personnel" based on this model course.

■ Course delivery

The outcome of this course may be achieved through various methods, including classroom training, in-service training, distance learning, computer-based training or combinations of these methods.

■ Course intake limitations

The maximum number of trainees should depend on the facilities and equipment available, bearing in mind the aims and objectives of this course.

■ Staff requirements

The instructor in charge of the course shall have had training and/or acceptable equivalent practical experience in the subject matter of this course, including knowledge of vessel, facility, and port operations, maritime security matters, the requirements of the Maritime Transportation Security Act of 2002, Chapter XI-2 of SOLAS 74 as amended, the IMO ISPS Code, and relevant U.S. Coast Guard regulations.

It is recommended that instructors should either have appropriate training in or be familiar with instructional techniques and training methods.

■ Teaching facilities and equipment

An ordinary classroom or similar meeting room with a blackboard or equivalent is sufficient for the lectures. In addition, when making use of audiovisual materials, it should be ensured that appropriate equipment is available. Finally, the use of actual or simulated vessel and facility environments for certain segments of the course may enhance the overall effectiveness of this training.

Teaching aids

Course Framework (Part A of the course)

Instructor Manual (Part D of the course)

Audiovisual aids: video cassette player, TV, slide projector, overhead projector, etc.

Photographs, models, or other representations of various vessels and vessel parts to illustrate operational elements and security vulnerabilities.

Video cassette(s)

Distance learning package(s)

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Instruments, legislation, and regulatory references

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Coast Guard, Department of Homeland Security. (2003, 22 October). *33 CFR (Navigation and Navigable Waters), Chapter 1, Subchapter H—Maritime Security, Parts 101, 103, 104, 105, 106.*

United States Congress. (2002, 25 November). *Maritime Transportation Security Act of 2002 (P.L. 107-295).*

■ Textbooks (T)

None recommended at this time.

Part B: Course Outline

Subject Area		Hours
1	**Introduction**	1.5
	1.1 Course overview	
	1.2 Competences to be achieved	
	1.3 Historical perspective	
	1.4 Current security threats and patterns	
2	**Maritime, Intermodal, and Supply Chain Conditions and Operations**	3.5
	2.1 Maritime orientation and definitions	
	2.2 Supply chain and intermodal transportation system structure and operations	
	2.3 Port and transportation information and tracking systems	
	2.4 Cargo and transportation documentation	
	2.5 Hazardous materials security	
	2.6 Port and maritime security measures	
3	**Maritime Security Policy**	1.0
	3.1 Relevant international conventions, codes, and recommendations	
	3.2 Relevant government legislation and regulations	
	3.3 Definitions	
	3.4 Legal implications of action or non-action by security personnel	
	3.5 Handling sensitive security-related information and communications	
4	**Security Responsibilities**	1.0
	4.1 Contracting governments	
	4.2 The company	
	4.3 The vessel	
	4.4 The port facility	
	4.5 Vessel Security Officer	
	4.6 Company Security Officer	
	4.7 Facility Security Officer	

Subject Area		Hours
	4.8 Vessel personnel with specific security duties	
	4.9 Facility personnel with specific security duties	
	4.10 Other personnel	
5	**Vessel and Facility Security Planning**	1.0
	5.1 Methodology of vessel and port facility security assessment	
	5.2 Methods of vessel and port facility security surveys	
	5.3 Methods of conducting inspections, control, and monitoring	
	5.4 Security aspects of vessel and facility layout	
	5.5 The Vessel Security Plan, Facility Security Plan, and related procedures	
6	**Emergency Preparedness**	2.0
	6.1 Emergency preparedness, emergency response, and contingency planning	
	6.2 Crisis management	
	6.3 Security drills and exercises	
	6.4 Crowd management and control techniques	
7	**Threat Identification, Recognition, and Response**	3.0
	7.1 Maritime intelligence gathering and dissemination	
	7.2 Meaning and consequential requirements of different security levels	
	7.3 Methods of physical searches and non-intrusive inspections	
	7.4 Recognition and detection of weapons, dangerous substances and devices	
	7.5 Recognition, on a non-discriminatory basis, of persons posing potential security risks	
	7.6 Techniques used to circumvent security measures	

8	**Security Equipment**	1.0
	8.1 Security equipment and systems	
	8.2 Operational limitations of security equipment and systems	
		1.0
9	**Security Administration**	
	9.1 Documentation and records	
	9.2 Reporting security incidents	
	Total:	**15.0**