

U.S. Department  
of Homeland Security

United States  
Coast Guard



Spring 2012

The **COAST GUARD** Journal of Safety  
& Security at Sea  
**PROCEEDINGS**  
of the Marine Safety & Security Council

# Combating Piracy



*Modern approaches  
to an age-old problem*

Also inside:

**Lessons Learned** from USCG Casualty Reports

# PROCEEDINGS



Spring 2012

Vol. 69, Number 1

Background

## Background

- 6 **To Break Up the Haunts of Pirates**  
The Revenue Cutters' war against maritime predators.  
*by Mr. Christopher B. Havern, Sr.*
- 12 **The International Maritime Organization**  
Orchestrating the maritime response.  
*by Ms. Tracy Peverett*
- 15 **Collaborating to Combat Piracy**  
The Contact Group on Piracy off the Coast of Somalia.  
*by Ms. Donna L. Hopkins*

## Prevention

Prevention

- 19 **Best Management Practices**  
Industry-approved techniques to avoid, evade, and defend against piracy.  
*by Mr. Giles Noakes*
- 21 **Anti-Piracy Programs and the Use of Arms Aboard Ships**  
The mariner's perspective.  
*by Capt. M.J. Hight and CDR Mike Rodriguez*
- 24 **Countering Piracy by Enhancing Vessel Security**  
U.S. Coast Guard efforts to develop and refine guidance for merchant ships in high-risk waters.  
*by CDR Lee Boone*
- 27 **Gathering Around the Table**  
Coast Guard, government, and industry collaborative efforts to combat piracy.  
*by LCDR James T. Fogle*
- 29 **Getting the Word Out**  
Regional information brokers keep mariners apprised.  
*by Mr. Todd Offutt*
- 32 **Pirate or Criminal?**  
A difference of location.  
*by Mrs. Christina Geisert*
- 35 **The Maritime Security Interagency Policy Committee**  
Working to eliminate piracy.  
*by Mr. Michael D. Callahan*
- 39 **Anti-Piracy Education and Training**  
*by Captain Jon S. Helmick*
- 43 **Defending Against Piracy**  
Private armed security teams.  
*by Mr. Owen Doherty*

## Response

- 45 **Locate, Disrupt, Detain**  
Collaborative efforts thwart a pirate attack.  
*by LCDR Tyson Weinert*
- 51 **Global Enforcers**  
Coast Guard law enforcement detachments tackle piracy at its source.  
*by LT James McLay and LCDR Hans Staffelbach*
- 54 **LEDET 406**  
A personal journey in pirate defense.  
*by LT Aaron Renschler*
- 56 **The Maritime Operational Threat Response Plan**  
The unified U.S. response to maritime piracy.  
*by Mr. Scott Genovese*
- 58 **An Evolving Target**  
The challenge of fighting piracy at sea.  
*by LCDR Paul Kapfer*
- 60 **Caring for Seafarers Affected by Piracy**  
*by Mr. Douglas B. Stevenson*

## Prosecution

- 65 **Enhancing International Efforts to Prosecute Suspected Pirates**  
*by Ms. Jennifer Landsidle*
- 67 **U.S. Prosecutions of Suspected Pirates**  
*by LCDR John Reardon*

## Lessons Learned

- 70 **Their Last Catch**  
The Bering Sea claims another fishing vessel.  
*by Ms. Krista Reddington*

## On Deck

- |    |  |    |  |
|----|--|----|--|
| 4  | <b>Assistant Commandant's Perspective</b><br><i>by RADM Paul Zukunft</i> | 78 | <b>Chemical of the Quarter</b><br>Understanding Sulfur<br><i>by Mr. Thomas Felleisen</i> |
| 5  | <b>Champion's Point of View</b><br><i>by CAPT Paul Thomas</i>            |    | <b>Nautical Queries</b>  |
| 83 | <b>Upcoming in Proceedings</b>   | 79 | Engineering  |
|    |  | 81 | Deck   |

Response

Prosecution

Lessons Learned

Pictured on the cover: Map provided by Reto Stockli, NASA Earth Observatory, <http://visibleearth.nasa.gov/>. Data points tracking piracy activity provided courtesy of U.S. Naval Forces Central Command/ U.S. Fifth Fleet.

**ADM Robert J. Papp Jr.**  
Commandant  
U.S. Coast Guard

**The Marine Safety  
& Security Council  
of the  
United States Coast Guard**

**RDML Frederick J. Kenney**  
Judge Advocate General  
Chairman

**RADM Paul Zukunft**  
Assistant Commandant  
for Marine Safety, Security  
and Stewardship  
Member

**Mr. Jeff Lantz**  
Director of Commercial  
Regulations and Standards  
Member

**RDML Cari B. Thomas**  
Director of Response Policy  
Member

**CAPT Paul Thomas**  
Director of  
Prevention Policy (acting)  
Member

**Mr. Dana A. Goward**  
Director of Marine Transportation  
Systems Management  
Member

**Mr. Craig Bennett**  
Director of National Pollution  
Funds Center  
Member

**RDML Stephen Metruck**  
Assistant Commandant for  
Resources, Chief Financial Officer  
Member

**RDML Karl Schultz**  
Director for Governmental  
and Public Affairs  
Member

**LCDR Erin Ledford**  
Executive Secretary

**Ms. Kathryn Sinniger**  
Legal Advisor

**View PROCEEDINGS online at  
[www.uscg.mil/proceedings](http://www.uscg.mil/proceedings)**



# *Assistant Commandant's Perspective*

by RADM PAUL ZUKUNFT  
*Assistant Commandant for Marine Safety, Security and Stewardship*

Piracy is one of the oldest international crimes and has probably existed as long as sea-borne trade itself. Piracy, along with crimes against humanity, genocide, slavery, and torture is one of the international offenses that establishes universal jurisdiction. Maritime piracy puts the lives of seafarers in jeopardy, and affects the economic interests of all nations. The February 2011 attack on the S/V *Quest* and the tragic murder of four American citizens illustrate pirates' indiscriminate and escalating violence.

Somalia-based piracy along the Horn of Africa impacts more than 2 million square miles of ocean and sea lanes and threatens global shipping. Approximately 33,000 vessels transit the Gulf of Aden and Suez Canal annually, including those transporting more than 10 percent of the world's daily oil supplies. The scope and complexity of piracy around the Horn of Africa require a multilateral and whole-of-industry approach to curtail pirate activity. The combination of maritime law enforcement activity by coalition forces and implementation of best management practices by the shipping industry has dramatically reduced the success rate—but not the occurrence—of piracy attacks in the high-risk waters. In addition to firmly establishing the rule of law in Somalia, eliminating piracy requires a holistic approach that takes maritime security into account while also addressing root causes, which often include poverty and a lack of good governance and rule of law.

The U.S. strategy for counter piracy was developed by the National Security Council and published as the "Countering Piracy of the Horn of Africa: Partnership and Action Plan." The plan lays out objectives via three lines of action: (1) prevent attacks by reducing vulnerabilities; (2) interrupt and terminate acts of piracy; and (3) ensure that those who commit acts of piracy are held accountable for their actions by facilitating prosecution. Accomplishing these objectives requires a coordinated whole-of-government approach that integrates military, law enforcement, judicial, diplomatic, and commercial interests in and beyond the affected region.

In accordance with this national strategy, the Coast Guard continues to be a leader, in coordination within the U.S. interagency and with industry partners. The Maritime Transportation Security Act of 2002 provides the legal authority for the Coast Guard to regulate safety and security to protect U.S. mariners, ships, and cargoes. Beyond U.S. flag direction, the Coast Guard has a unique role to play internationally. Leveraging our experience, as well as the strength and expertise of our U.S. interagency partners, the Coast Guard works closely with the International Maritime Organization and the Contact Group on Piracy off the Coast of Somalia to improve the protection of shipping in these high-risk waters.

We will remain engaged with the international maritime community, the U.S. interagency, and the maritime industry to implement counter-piracy measures. The Coast Guard's oversight of the U.S. flag fleet is the international gold standard and we will continue to make improvements wherever possible.

# Champion's Point of View



by CAPT PAUL THOMAS  
*Acting Director, U.S. Coast Guard Prevention Policy*

Maritime piracy is a violent criminal enterprise that operates on a distinct business model. The safety and security of vessels and crews depend on the disruption of that model. There are proven methods and procedures that can interrupt the pirate operation, and the opportunity to thwart the pirates is equally shared among vessel owners and operators, flag states, and the international community. In each of these areas, the Coast Guard is fully engaged and committed to the safety and security of mariners and vessels.

The International Maritime Bureau reports that 49 vessels were successfully hijacked off the coast of Somalia in 2010—accounting for 92 percent of all ship seizures throughout the world that year. Additionally, pirates held more than 1,180 innocent mariners and seafarers as hostages that same year. While the number of attacks has increased, the success of those attacks has appreciably declined. The reduction in successful attacks can be attributed to the deterrent work of naval forces from around the world as well as the use of self-protection best management practices recommended by the shipping industry.

The U.S. response to piracy is an issue of government-wide concern. As the lead federal agency for maritime safety and security, the Coast Guard works closely through the U.S. interagency to form a diverse counter-piracy action team. The team consists of representatives from more than 14 government agencies, including the Departments of State, Defense, Justice, Transportation, and Homeland Security. Meetings are held monthly as well as on an “as-needed” basis to discuss the current state of piracy and its impact. The development and the five updates to Maritime Security Directive 104-6 were all coordinated through this interagency team. Additional guidance also benefits from this interagency approach. The Coast Guard publishes port security advisories (PSAs), which provide supplemental guidance to ensure compliance with MARSEC 104-6. These PSAs are often developed and vetted via the interagency counter-piracy action team and provide information on topics including self-defense and defense of others; firearms laws and weapons carriage issues; minimum guidelines for security personnel; and post-attack coordination.

Working with the maritime industry, the Coast Guard has hosted joint agency roundtable meetings, providing an open forum for the exchange of information and ideas. This cooperation and interaction helps to maintain maritime domain awareness and compliance with MARSEC Directive 104-6 for U.S. flag commercial vessels operating in the Horn of Africa region.

While the U.S. fleet makes up only a fraction of the total vessels that operate in the region, we believe that our counter-piracy program has been very successful and encourage other nations to avail themselves of the work we have accomplished. All Coast Guard counter-piracy policy and guidance is posted on our CG Homeport website and is available to all stakeholders.

In this issue of *Proceedings* you will find articles spanning the full spectrum of activities to deter, prevent, respond to, prosecute, and recover from pirate attacks. The pirate attack on the S/V *Quest* and the horrific murder of U.S. citizens Scott and Jean Adam, Phyllis Macay, and Robert Riggle are stark reminders that the scourge of maritime piracy requires swift and concerted efforts. The U.S. Coast Guard and the U.S. government are committed to deter, disrupt, and suppress piracy through prevention measures, response procedures, and prosecuting pirates in a court of justice.

## Editorial Team

**Barbara Chiarizia**  
Executive Editor

**Leslie C. Goodwin**  
Art Director

**Sarah K. Webster**  
Managing Editor

*Proceedings* is published quarterly by the Coast Guard's Prevention Directorate, in the interest of safety at sea under the auspices of the Marine Safety & Security Council. Special permission for republication, either in whole or in part, except for copyrighted material, is not required, provided credit is given to *Proceedings*.

The articles contained in *Proceedings* are submitted by diverse public and private interests in the maritime community as a means to promote maritime safety and security. The views expressed by the authors do not necessarily represent those of the U.S. Coast Guard or the Department of Homeland Security or represent official policy.

## Editorial Contact

HQS-DG-NMCPProceedings@uscg.mil

Editor, *Proceedings* Magazine  
U.S. Coast Guard  
2100 2nd Street SW Stop 7681  
Washington, D.C. 20593-7681

[www.uscg.mil/proceedings](http://www.uscg.mil/proceedings)

202-372-2316

## Subscription Requests/ Changes

*Proceedings* is free.

Please include mailing label information when changing address.

Subscriptions  
*Proceedings* Magazine  
U.S. Coast Guard  
Attn: *Proceedings* Magazine  
2100 2nd Street SW Stop 7681  
Washington, D.C. 20593-7681  
[www.uscg.mil/proceedings](http://www.uscg.mil/proceedings)



# To Break Up the Haunts of Pirates

## *The Revenue Cutters' war against maritime predators.*

by MR. CHRISTOPHER B. HAVERN, SR.  
Staff Historian  
U.S. Coast Guard Historian's Office

Piracy, a violent criminal act against other parties at sea, has been a plague on maritime commerce since the days man first took to the seas in boats. Cilician pirates raided the Mediterranean in the age of Classical Greece and Rome, and the Vikings sailed out of Scandinavia to pillage and terrorize the coasts of early medieval Europe. Pirates also roamed the waves of the Arabian Sea and Indian Ocean, and fleets of Chinese pirate junks preyed on maritime traffic in the South China Sea.

Pirates, however, differed from privateers. Both parties seized ships and property on the seas; however, privateers held "letters of marque" issued by sovereign nations that authorized them to attack the ships of their war enemies. Pirates, on the other hand, were and are individuals or groups acting on their own accord and for their own profit. As such, they are "stateless" persons considered by maritime tradition and long-standing international law as "enemies of all nations." To those who historically suffered the predations of either, however, the legal distinction was probably irrelevant.

Privateers flourished in the 16<sup>th</sup> and 17<sup>th</sup> centuries, as the concurrent rise of the Spanish empire in the New World and the emergence of competing western European nation-states resulted in numerous wars. The Caribbean basin, astride the transit routes from the treasure port in Panama to Spain, became a hotbed of conflict as English, French, and Dutch privateers sailed west to intercept Spanish galleons laden with gold and silver.

In the rare periods of peace, those who had served the crowns of Europe often continued their raiding ways. The resumption of conflict with the War of Spanish Succession, from 1701 to 1714, saw the warring nations again issue large numbers of letters of marque. The intent was to cripple the maritime trade between their enemies and their colonies. When the Treaty of Utrecht ended the war, large numbers of privateer captains and crews were unemployed. With ships and dispositions ill-suited for the merchant trade, many turned to piracy.<sup>1</sup>

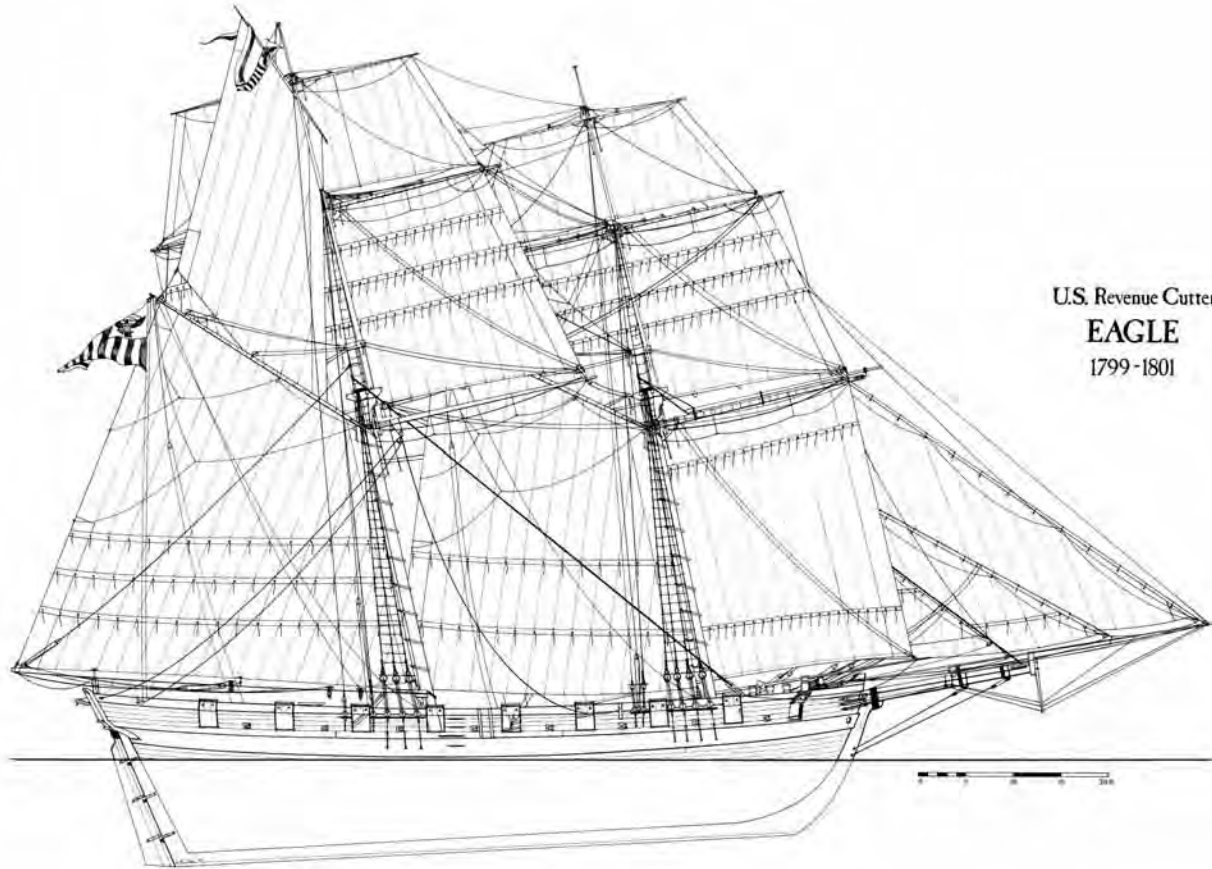
### **The Golden Age of Piracy**

This was the time of "Calico" Jack Rackham, Anne Bonny, Bartholomew Roberts, and Edward Teach or, as he is more commonly known, Blackbeard. Tortuga, New Providence, and Nassau, Bahamas were all pirate havens. Only through a concerted effort did Great Britain's Royal Navy largely put an end to this by the 1730s.<sup>2</sup>



**Edward Teach (Blackbeard).**

Much like it had in earlier centuries, however, war again broke out, and between 1793 and 1815 the waters of the Caribbean basin would see large-scale privateering. Unlike those previous wars, however,



U.S. Revenue Cutter  
**EAGLE**  
1799-1801

there was a new nation plying these waters—the United States of America.

Having secured its independence, the new republic laid the framework for national governance with the Constitution, and one of the first acts of Congress was to create the U.S. Treasury Department. President George Washington appointed Alexander Hamilton as the first Secretary of the Treasury. One of Hamilton's primary functions was "to superintend the collection of revenue," mainly via collectors of customs in the nation's ports.<sup>3</sup>



Alexander Hamilton

**The Revenue Cutters**

Even before he was named Treasury Secretary, Hamilton noted: "A few armed vessels, judiciously stationed at the entrances of our ports, might at small expense be made useful sentinels of the laws."<sup>4</sup> The enterprising collector in Philadelphia, Sharp Delany, wrote Hamilton in October 1789, notifying him that he had procured a barge with a sail to ply the Delaware River between Philadelphia and New Castle, Del., to prevent smuggling. In February 1790, Delany again wrote Hamilton on the subject. Instead of replying to Delany, Hamilton submitted a bill to Congress

to authorize establishment of a revenue marine with 10 cutters. After much debate, Congress enacted the bill and the cutter force was authorized on August 4, 1790. Initially referred to as the "Customs House Boats," this system of cutters came to be known as the Revenue Cutter Service. In 1915, after being combined with the United States Life-Saving Service, it became the United States Coast Guard.<sup>5</sup>

At the time of the founding of the Revenue Cutter Service there was no force to protect the maritime interests of the young republic, as the Continental Navy had been disbanded and the ships sold by 1785.<sup>6</sup> As such, though they were only intended to enforce the customs laws and prevent smuggling, the revenue

*continued on page 11*



Ensign of the early U.S. Revenue Marine. All graphics courtesy of USCG Historian's Office.



# The Revenue Cutters in Action

## Wartime

In 1794, the cutter *Virginia* arrested *Unicorn*, which was being fitted-out as a privateer by supporters of the French republic. It was also during 1794 that Congress passed resolutions to construct ships for a navy.



The revenue cutter *Pickering*.

During the Quasi-War with France (1797-1801), eight cutters (one sloop, five schooners, and two brigs) operated along the U.S. southern coast and among the West Indies. Eighteen of the 22 prizes captured by the United States, from 1798 to 1799, were taken by unaided cutters. Revenue cutters also assisted in capturing two others. The cutter *Pickering* made two West Indies cruises and captured 10 prizes.



The revenue cutter *Eagle* pursues the French privateer *Bon Pere* during the Quasi-War with France. USCG Bicentennial painting.





One of the more noteworthy actions was the capture of the British privateer *Dart* in a night engagement on October 4, 1813. *Dart*, formerly an American vessel out of New Haven, Conn., had successfully cruised along the coast and captured 20 to 30 small American merchantmen. Late on October 4, the captain of the privateer mistakenly appeared at Newport, R.I., with two prizes. Captain John Cahoone of the cutter *Vigilant* placed extra men aboard and immediately set sail after sunset. He located the enemy sloop off the east end of Block Island. *Vigilant* fired broadside and then boarded *Dart*. During the fight, the first officer of *Dart* was killed and two crewmen were wounded. Much as they had in the undeclared war against France, the cutters distinguished themselves against the British.



The night action between the revenue cutter *Vigilant* and the British privateer *Dart*. USCG Bicentennial painting.



### Revenue Cutter *Active*

From 1816 to 1819, the aptly named revenue cutter *Active* was involved in a half-dozen actions requiring seizing a vessel acting as a pirate or privateer without legal standing. On August 22, 1816, the *Active* crew seized the Spanish brig *Servia* near the Patuxent River, as it was about to be carried off by a new crew.

On June 23, 1817, *Active* chased from the Chesapeake Bay two South American armed merchantmen cleared from Galveston (then Mexican territory). A couple of months later, on August 12, the cutter fired a few shots across the bow of the *Margaret*. When the ship hove to, she was found to be armed with munitions of war and her crew was rallying to join a group of pirates.

On July 18, 1818, *Active* overtook *India Libre*, a Venezuelan brig in the Chesapeake. Captained by a boatswain's mate, her crew had mutinied and intended to embark on a voyage of piracy. On April 25, 1819, crew from *Active* seized the highly successful pirate brig *Irresistible* off New Point Comfort in the Chesapeake Bay.

At the same time *Active* was operating in the Chesapeake, so too was the cutter *Monroe*, which seized the armed brig *Columbia* on October 23, 1818, and the privateer *General Artigas* off the Severn River on March 16, 1819.



### *Dallas*

Meanwhile *Dallas*, out of Savannah, seized the pirate ship *Young Spartan* along with a prize, the sloop *Pastora*, as she was loitering off Port Royal, S.C., on June 17, 1818. Just over three weeks later, on July 11, *Dallas* seized the Venezuelan privateer, *Cerony*, also known as *Felix*. Just about a year later, on July 11, 1820, *Dallas* captured the brig *General Ramirez* with a cargo of 280 slaves off St. Augustine, Fla. The ship's American captain was subsequently tried and imprisoned.



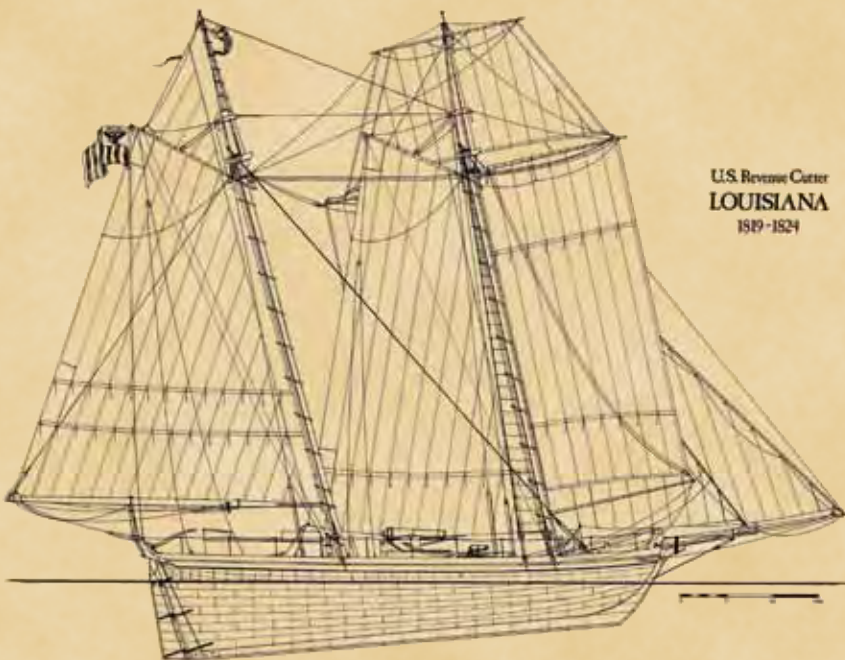


## The Alabama Class

Pirates even worked the waters off Rhode Island. On May 17, 1818, *Vigilant* seized the brig *Belle Corunnes* off Block Island. While cutters worked to clear the Chesapeake and waters from New England to Florida, major actions were taking place between pirates and two of the newest cutters, the sister ships *Alabama* and *Louisiana*.

Known as the Alabama-class, these two vessels were built by Christian Bergh in New York. They were topsail schooners that displaced 56 tons, 52 feet in length, nearly 20 feet in breadth, with five feet, nine inches in depth of hold. Costing \$4,500 each, they were armed with one pivot gun, and nine-, 12-, and 18-pounder guns. Though both were temporarily stationed at New Orleans, *Alabama* came to be permanently homeported at Mobile. These vessels were fast and well-armed, designed to counter the small, quick corsairs of the pirates and suppress the slave trade.

On August 31, 1819, Jean LaFarge, who commanded the pirate ship *Bravo*, attacked the cutters *Louisiana* and *Alabama* off the southern coast of Florida. The action was furious, but of short duration, and was terminated when the cuttermen boarded the enemy vessel and carried its decks in a hand-to-hand struggle.



## Pursuing the Pirates

Soon it became too hazardous for the pirates to base themselves along the Gulf Coast, as cutters' shallow drafts allowed them to pursue the pirates through the numerous bayous and attack them wherever they were found. The pirates, therefore, established themselves on Bretons Island, La.

On April 19, 1820, *Alabama* and *Louisiana* discovered the new base. The cuttermen attacked and drove the pirates off, destroying everything on the island that could make it habitable. The destruction of this hideout practically ended pirate bases on U.S. territory.

In July and August 1820, *Louisiana* cruised off the British colony of Belize and captured nine pirate vessels. Two years later, in November 1822, the cutter cooperated with USS *Peacock* and HMS *Speedwell*, a schooner in the Royal Navy, off Cuba. During this cruise, she was credited with capturing five pirate vessels.

A few years later, a new *Louisiana*, the original having been decommissioned and sold in 1824, cruised the Gulf of Mexico in search of pirates. The Colombian privateer turned pirate *Bolivar* was preying on ships at the mouth of the Mississippi River. On May 7, 1827, *Louisiana* overtook *Bolivar* in the Southwest Pass and brought her to the Admiralty Court of New Orleans.

From 1825 to 1829, the cutter *Marion* sailed out of Charleston and Savannah in search of pirates. On June 24, 1826, she captured the sloop *Brilliant* off the Bahamas.

cutters were the only means by which the American coasts, maritime trade, and ships could be protected. Cutters soon became involved in military affairs, which included threats from privateers and pirates.

### Cutter Wartime Service

When war broke out between Revolutionary France and Britain in 1793, privateers from both sides operated in American waters and preyed upon U.S.-flagged ships, some even operating out of American ports.

As a result, from 1797 to 1799, Congress passed laws that formalized the military role of the cutters, authorized the president to employ cutters to defend the seacoasts, and made provisions for assigning marines to cutters.

The act of March 2, 1799, provided that the cutters “shall, whenever the President of the United States shall so direct, cooperate with the Navy of the United States, during which time they shall be under the direction of the Secretary of the Navy ... .” With the American declaration of war against Britain in 1812, the revenue cutters again augmented the Navy. During the war’s opening phases, Treasury Secretary Albert Gallatin requested from Congress, small, fast sailing vessels, because there were “but six vessels belonging to the Navy, under the size of frigates; and that number is inadequate ... .” Though the revenue cutters were small and lightly armed ships and could not risk an engagement with the larger British warships, they did seize a number of the enemy’s smaller ships and protected American merchantmen from privateers.<sup>8</sup>

When the War of 1812 and the Napoleonic Wars ended in 1815, many of the privateers did much as their forbears had at the conclusion of the War of Spanish Succession—they turned to piracy.

### A Capital Offense

In response, on March 3, 1819, Congress passed the Act to Protect the Commerce of the United States and Punish the Crime of Piracy. Section five of this legislation stated, “That if any person or persons whatsoever shall, on the high seas, commit the crime of piracy, as defined by the law of nations, and such offender or offenders shall afterwards be brought into or found in the United States, every such offender or offenders shall, upon conviction thereof ... be punished by death.”

There were subsequent amendments to this act in 1820 and 1823. The first added engaging in the maritime slave trade as a piratical act, the second made the act perpetual. As a result, the Revenue Cutter Service, in conjunction with the U.S. Navy and the Royal Navy, commenced a relentless war upon the pirates and privateers.

Nevertheless, piratical craft operating from bases in Mexico, Central and South America, and Cuba, often with the complicity of the local government, still made frequent visits to American waters, resulting in engagements with revenue cutters. Through their efforts (see sidebar), the pirate threat was largely eliminated by the 1830s.

Though the cutters’ combat actions with the pirates and privateers were not large-scale engagements, they were important in the development of the Revenue Cutter Service. They were also important in forming the service’s national defense and law enforcement missions. As such, they shaped the ethos of the United States Coast Guard as a multi-mission, maritime, military force.

### About the author:

*Mr. Havern has been a historian in the USCG Historian’s Office since 1997. A former infantry officer in the U.S. Army, he holds a B.A. in history from Pennsylvania State University, and a M.A. in history from University of Maryland-College Park. He has written a number of articles on USCG history for print and Internet publication.*

### Bibliography:

USCG Historian’s Office, “Record of Movements: Vessels of the United States Coast Guard, 1790-December 31, 1933,” (reprint) Washington, DC: Government Printing Office, 1989.  
Donald L. Canney, “U.S. Coast Guard and Revenue Cutters, 1790-1935,” Annapolis, MD: Naval Institute Press, 1995.  
Irving H. King, “The Coast Guard under Sail: The U.S. Revenue Cutter Service, 1789-1865,” Annapolis, MD: Naval Institute Press, 1989.

### Endnotes:

1. For the history of piracy see David Cordingley, “Under the Black Flag: The Romance and the Reality of Life Among the Pirates,” (New York: Random House, 1996) and Angus Konstam, “The History of Pirates,” (Guilford, CT: Lyons Press, 1999).
2. For more on the “Golden Age of Piracy,” see Marcus Rediker, “Villains of All Nations: Atlantic Pirates in the Golden Age,” (Boston: Beacon Press, 2004).
3. 1 Stat. 65, Chapter XII, Act of Congress Establishing the Treasury Department, approved September 2, 1789.
4. See Alexander Hamilton, “The Utility of the Union in Respect to Revenue from the New York Packet,” in *The Federalist Papers*, Tuesday, November 27, 1787.
5. RADM Stephen H. Evans, USCG, “Forerunners of the Cutter Fleet,” stamped 15 March 1962. Copies of correspondence between Hamilton and Delany located in Revenue Cutter Service subject file, USCG Historian’s Office.
6. The last ship remaining from the Continental Navy was USS *Alliance* which was ordered sold on 3 June 1785. See David M. Cooney, “A Chronology of the U.S. Navy: 1775-1965,” (New York: Franklin Watts, Inc., 1965), p. 14.
7. Robert L. Scheina, “Coast Guard at War,” (Washington: U.S. Coast Guard Historian’s Office, 1987).
8. *Ibid.*



# The International Maritime Organization

*Orchestrating the maritime response.*

by Ms. TRACY PEVERETT  
 Head of Maritime Security  
 International Maritime Organization

Piracy is a worldwide issue, but it is the deteriorating security situation in the seas off Somalia and the Gulf of Aden and in the increasingly volatile wider Indian Ocean that is of particular concern. The eventual solution to piracy may lie in restoring effective governance in Somalia. But, until then, the International Maritime Organization (IMO) has taken a stalwart role in coordinating efforts to alleviate the problem from the maritime perspective.

Piracy is, of course, too complex and has become too entrenched for any one entity to deal with it effectively. The United Nations, various governments, military forces, shipping companies, ship operators and ships' crews have all joined together to support a crucial mission that aims to rid shipping of this crime.

## IMO's Action Plan

The IMO has devised a multi-faceted action plan to proactively address piracy at several levels. This plan draws heavily on the organization's considerable experience in countering piracy in other parts of the world, most notably the straits of Malacca, Singapore, and the South China Sea.

IMO's action plan has six major objectives:

- ➔ to increase pressure at the political level to secure the release of all pirate hostages;
- ➔ to review and improve the IMO guidelines to administrations and seafarers and promote compliance with industry best management practices and the recommended preventive, evasive, and defensive measures for ships;

- ➔ to promote greater levels of support from and coordination with navies;
- ➔ to promote anti-piracy coordination and cooperation procedures among industry, states, regions, and organizations;
- ➔ to assist states to build capacity in piracy-infested regions of the world and elsewhere to deter, interdict, and bring to justice those who commit acts of piracy and armed robbery against ships;
- ➔ to provide care for those attacked or hijacked by pirates and for their families.

A key element of the work of the organization is facilitating discussions among industry, member states, security forces, and other U.N. agencies with an interest in piracy and other maritime-security issues, as is developing mandatory instruments and guidance. The IMO works to create solutions in consultation with representatives of governments; through the London diplomatic community; with other U.N. organizations, including the United Nations Office on Drugs and Crime and the World Food Programme; naval and military personnel; the shipping industry; seafarers; other concerned entities; and individuals.

## Developing Regulations and Guidance

The action plan emphasizes improving IMO guidelines promoting compliance by recommending preventive, evasive, and defensive measures. The IMO's Maritime Safety Committee (MSC) continues to stress the importance of self-protection as a deterrent to successful pirate attacks.

Consequently, the MSC adopted a resolution that recognizes the urgent need for merchant shipping to take every possible measure to protect itself from a pirate attack and that effective self-protection is the best defence. The resolution strongly urges all those concerned to take action to ensure that, as a minimum, ships' masters receive updated information when sailing through high-risk areas, ships register with the Maritime Security Centre–Horn of Africa and report to United Kingdom Maritime Trade Operations in Dubai, and effectively implement all recommended preventive, evasive, and defensive measures.

The International Maritime Organization recognizes that there is an increase in the use of privately contracted armed security personnel. Therefore, the organization approved interim recommendations and guidance on the use of armed security personnel aboard ships. However, it is important to note that this guidance does not change IMO's position on the use of armed personnel: Seafarers should not be armed, and carriage of armed personnel remains a decision for the ship owner to request and the flag state to decide. Flag states should have a policy in place on whether armed security personnel are authorized and under what conditions. Furthermore, armed personnel should not be considered an alternative to the self-protective measures detailed in the best management practices and other IMO guidance.

The International Maritime Organization encourages flag states to utilize the IMO Information Distribution Facility, to provide long-range identification and tracking (LRIT) information to security forces operating in the Gulf of Aden and the western Indian Ocean. Giving the naval forces a clear indication of where the merchant vessels are allows them to identify and contact those who have not registered with the Maritime Security Centre–Horn of Africa, and to pass on warnings of pirate activity so the merchant vessels can take early action to avoid trouble.

### Regional Cooperation

The Regional Cooperation Agreement on Combating Piracy and Armed Robbery against ships in Asia is a good example of successful regional cooperation, which includes an information-sharing center to communicate piracy-related information. Additionally, the International Maritime Organization has established similar information-sharing centers in Yemen, Kenya, and the United Republic of Tanzania. IMO is also establishing a regional training center in Djibouti.

## IMO Piracy Statistics

### The Bad News: More Attacks

There were 489 acts of piracy and armed robbery against ships reported to IMO in 2010. This increase of 20.4 percent from 2009 figures is largely due to an escalation of acts of Somalia-related piracy. The use of motherships has enabled pirates to extend their reach, and the range of attacks—which are reportedly becoming increasingly violent—now stretches to more than 1,750 nautical miles from the shore bases of the pirates.

### The Good News: Fewer Attacks are Successful

Figures for the first half of 2011 (187 attacks leading to 22 hijacks) indicate that 88 percent of attacks were defeated, a positive increase from previous years, where attacks were thwarted in only 40 to 50 percent of cases. This is largely due to deterrent effect of a naval presence and to merchant ships properly using best management practices and other self-protection measures.

The United Nations Office on Drugs and Crime has partnered with IMO to help regional states develop the legal framework necessary to prosecute pirates. The IMO is also working with the international community, member states, the Maritime Organization of West Africa (MOWCA), and others to address the dramatic spike in the number of reported attacks in the Gulf of Guinea in 2011. These attacks are growing in number and in violence and pose a significant risk to



The vast sea area in which pirates operate makes it difficult to patrol and monitor effectively. Photos courtesy of the European Union Naval Force.



IMO encourages member governments to provide needed naval, aerial surveillance, and other resources.

shipping in the area, although they differ from Somalia-based piracy in several ways and to date have not involved long-term hijack for ransom.

The sub-regional integrated coast guard network is a joint IMO/MOWCA project aimed at reinforcing cooperation among member states. Its purpose is to strengthen coast guard functions in the area in the face of mounting problems of piracy, armed robbery, and other illicit acts against ships.

## Guidelines

Interim guidance on the use of privately contracted armed security personnel is available at:  
[www.imo.org/OurWork/Security/news/Pages/default.aspx](http://www.imo.org/OurWork/Security/news/Pages/default.aspx).

“Guidelines to Assist in the Investigation of the Crimes of Piracy and Armed Robbery Against Ships,” are intended to be used in conjunction with the existing IMO-developed “Code of Practice for the Investigation of the Crimes of Piracy and Armed Robbery Against Ships,” to help investigators collect evidence in support of prosecutions.

### Continued Cooperation

The depth of concern for international piracy is amply demonstrated by the levels of cooperation and coordination among naval and other forces from several countries that have assembled in the Indian Ocean region and the Gulf of Aden to escort ships carrying humanitarian aid to Somalia and to protect vulnerable shipping.

Unfortunately, there is no easy and quick solution to the problem of piracy and armed robbery. Many challenges remain, but ongoing efforts to tackle the problem are showing some success. The right support from the international community can bring about more effective results and eventually lead to a long-term solution.

#### About the author:

*Ms. Tracy Peverett is head of Maritime Security at the IMO. She provides secretariat support to IMO committees and working groups, and advises IMO member governments, international organizations, and non-governmental organizations regarding maritime security, piracy, and related issues. She was previously a senior security analyst for the Canadian Coast Guard.*

#### Bibliography:

“Best Management Practices for Protection Against Somalia Based Piracy,” Marine Security Council, Circ.1339.

# Collaborating to Combat Piracy

## *The Contact Group on Piracy off the Coast of Somalia.*

by Ms. DONNA L. HOPKINS  
Coordinator, Counter Piracy and Maritime Security  
U.S. Department of State  
Bureau of Political-Military Affairs

Piracy occurs in every region of the seafaring world, but maritime piracy emanating out of Somalia has posed a unique set of challenges to the international community. The large-scale, hostage-ransom business model in Somalia exists due to a unique confluence of geopolitical factors:

- ✘ state failure in a country with a long coastline affords a safe haven along a critical and heavily trafficked sea route,
- ✘ a region where its neighbors are unable or unwilling to intervene.

Combating piracy requires enforcing the rule of law, but Somali authorities in these regions are either unwilling or unable to exercise meaningful jurisdiction over their citizens, territory, or territorial waters.

### Genesis

The international community has conducted naval counter-piracy operations under formal mandate off the Horn of Africa since 2008. The European Union's "Operation Atalanta," NATO's "Operation Ocean Shield," and the Coalition Maritime Forces' counter-piracy Combined Task Force 151, are all making efforts to protect World Food Programme shipments and other maritime trade from pirate attacks with a high degree of tactical success.

As shipping in the region has increasingly come under threat of hijacking, nations such as Australia, China, Russia, Japan, India, Indonesia, Malaysia, New

Zealand, Singapore, and Thailand have dispatched naval forces to escort their merchant shipping and to collaborate with other navies to provide safe transit for international shipping.

However, it was obvious early on that a multi-faceted approach would be required to deal with the cause and effects of Somali piracy, since the issues brought about by this maritime crime could not be solved by naval operations alone. So, the United States and other nations pressed to establish the Contact Group on Piracy off the Coast of Somalia in 2008, which has since become the focal point of international efforts to address maritime piracy emanating from Somalia.

From its inception, the contact group was specifically intended to address piracy, although its participants have always recognized that piracy is but a symptom of the larger problem—the inability of Somali authorities to control Somali territory. By contrast, the International Contact Group (ICG) on Somalia, which operates under the direction of the United Nations Political Office on Somalia, was created in 2006 to address the crippling political, economic, social, and institutional conditions in Somalia wrought by two decades of civil war.

Maritime piracy presents acute challenges to international commerce and security that demand specific and targeted actions, including capacity building in regional states and political, judicial, and military

actions that are beyond the purview of the ICG to undertake or oversee.

As a result, the two contact groups share certain goals, the most important of which is the eventual restoration of legitimate and effective authority in Somalia. However, the two groups operate very differently, in that the International Contact Group on Somalia is a U.N. entity with a special representative who reports to the U.N. Secretary General, while the Contact Group on Piracy off the Coast of Somalia is an *ad hoc* group of nations and organizations that is not convened, financed, staffed by, nor subject to the conventions and protocols of the United Nations.



Truly an international effort, the Contact Group on Piracy off the Coast of Somalia is not overseen or managed by any one country, but instead operates as a community of interested states with an evolving structure of working groups that report to a plenary body chaired on a rotational basis by volunteer nations. Egypt, Japan, Greece, Norway, Korea, Turkey, and Singapore, in addition to the United States, have chaired plenary meetings. The Netherlands, United Arab Emirates, Spain, and India will chair upcoming sessions. The United States operates as an informal secretariat for the contact group, maintaining participant contact information and archives, but does not direct the form or substance of the contact group's deliberations.

### Modus Operandi

The United States convened the first meeting of the Contact Group on Piracy off the Coast of Somalia at the U.N. in January of 2009, after extensive consultation with other governments on its form, structure, and functions. Decisions made at this first plenary session helped to advance international and national efforts endorsed by piracy-related U.N. Security Council resolutions and sharply focused the international community's counter-piracy efforts along several lines, including:

- improving military coordination,
- delivering judicial consequences for piracy,
- increasing shipping self-awareness and self-protection,

- improving strategic communications through public affairs and public diplomacy.

The intervening plenary sessions have documented significant progress in the fight against piracy. The success rate of pirate attacks has sharply decreased, due to effective naval patrols and greatly improved shipping self-protection measures.

### Working Groups

Most of the substantive work in the contact group takes place in the five working groups, each chaired by a volunteer nation in collaboration with international organizations that are chartered to implement programs of work related to the issues at hand. All working group meetings are open to all contact group members, and the program of work undertaken along with the positions or decisions developed by these groups are reported at plenary meetings for validation by the contact group at large.

Working Group 1 of the Contact Group on Piracy off the Coast of Somalia (WG1) is chaired by the United Kingdom. This group was originally tasked to improve military coordination and information sharing among nations seeking to combat piracy, and has since taken on coordination of the many and varied efforts to build institutional capacity related to countering piracy in Somalia and its neighboring states. WG1 acts as the interface for the contact group, which is a political body, and the shared awareness and deconfliction mechanism, which is the means by which the various military counter-piracy missions coordinate operational and tactical actions. Shared awareness and deconfliction meetings are co-chaired by the Coalition Maritime Forces and European Union Naval Forces, held quarterly at the U.S. Naval Forces Central Command in Bahrain.

Denmark chairs Working Group 2, which focuses on legal issues related to piracy, in particular judicial consequences for suspected pirates. Comprised of legal advisers from contact group nations and organizations, WG2 provides practical legal guidance to states on issues related to the apprehension, prosecution, and imprisonment of pirates. WG2 also works closely with U.N. technical agencies, in particular the U.N. Office of Drugs and Crime, to advance programs designed to enhance the judicial capacity of regional states to investigate, prosecute, and imprison pirates.

Working Group 2, with support from participating states, started a focused effort to build regional capacity in affected states to counter piracy, and the contact



group created a multi-donor trust fund to help fund counter-piracy prosecution support and capacity building.

Working Group 3, co-chaired by the U.S. Maritime Administration and the U.S. Coast Guard, focuses on improving the self-awareness and self-defense capabilities of the commercial shipping industry. WG3 works closely with the International Maritime Organization (IMO) to adopt and implement technical guidance on self-protection measures, and interfaces with industry on complex and controversial issues, such as armed security on commercial ships. WG3 meetings alternate between Washington, D.C., and IMO headquarters, in London, with much of the work accomplished via email and intercessional meetings on specific aspects of industry concern.

Egypt chairs Working Group 4, which deals with public diplomacy and strategic communications. An important but perhaps less obvious line of effort, public information campaigns have the potential to build resistance among Somali communities to the piracy criminal enterprise by raising awareness of its destructive effect on Somali society, and the ways that the influx of pirate ransom money is subverting developing a political culture and economy.

The newest addition to the contact group is Working Group 5. Chaired by Italy, this group promotes efforts to disrupt the pirate enterprise ashore, including the illicit financial networks that enable and incentivize piracy. WG5 was established at the ninth plenary session, in July 2011, in widespread recognition that concerted international attention is required to attack the heart of the piracy problem—the increasingly organized and transnational criminal networks that finance, operate, and benefit from maritime piracy.

These groups thrive by funding piracy operations and laundering ransom money. With strong support from other countries, and working in close collaboration with INTERPOL, Italy will lead an effort to centralize information on pirate financiers, organizers, and affiliates, and seek to have these criminals arrested on criminal charges related to piracy, including extortion, conspiracy, and racketeering.

### Proceedings

Originally convened quarterly, the Contact Group on Piracy off the Coast of Somalia now meets annually in March, July, and November. By consensus, and for reasons of both convenience and economy, plenary meetings continue to be held at the U.N. headquarters



The 10th Plenary Meeting of the Contact Group on Piracy off the Coast of Somalia meets at U.N. headquarters in November 2011. U.S. Coast Guard photos by CDR Lee Boone.



From left: Ms. Linda Willson, UK Department of Transport; Mr. Owen Doherty, U.S. Maritime Administration, co-chair of Working Group 3; Mr. Bob Gauvin, U.S. Coast Guard, co-chair of Working Group 3; and Mr. Henk Swarttouw, chairman of the 10th plenary meeting of the Contact Group on Piracy off the Coast of Somalia, address plenary participants.

in New York. Working group meetings are scheduled to meet in locations as their national chairs designate, but as a matter of practice, convene formally at least once prior to the subsequent plenary meeting.

The report of each plenary meeting includes working group chair reports and discussion on topics raised during the meeting. Delegations to plenary meetings may make formal interventions on any topic relating to piracy and generally provide the written text of such interventions to the plenary body for the record. By design, the contact group does not have a formal charter or other written terms of reference beyond the contents of the plenary communiqués, and no action or decision taken in or by the contact group or any of its participants is binding in any way upon governments or organizations participating in its proceedings.

### Financial Support

In 2010, contact group members recognized a need for a dedicated financial source to support counter-piracy initiatives. So they established the Trust Fund



Members of a U.S. Coast Guard maritime safety and security team and members of a visit, board, search and seizure team respond to a suspect vessel in the Gulf of Aden. Photo courtesy of U.S. Navy.

to Support the Initiatives of States Countering Piracy off the Coast of Somalia at the United Nations. This multi-donor fund receives contributions from governments, private industry, or individuals to fund counter-piracy efforts. Funded initiatives include defraying the costs associated with prosecuting and imprisoning pirates; training prosecutors, judges, and law enforcement personnel; and building courtrooms, prisons, or other judicial infrastructure projects. The trust fund has also been used to develop a counter-piracy media program. To date, the trust fund has received \$9.2 million and disbursed \$7 million on a wide variety of projects essential to counter-piracy efforts.

#### Future Plans

As an *ad hoc* organization grounded solely in the desire of its participants to collaborate to counter the threat of piracy emanating from Somalia, the Contact Group on Piracy off the Coast of Somalia will function only as long as its constituents feel that it provides a valuable forum for discussion, debate, and collaborative action. Because the contact group functions only by informal agreement, and has no permanent structure or continuing overhead, there is no impetus for

its continuation beyond the value that participants ascribe to it. Informal discussions among the most participative governments indicate that the contact group continues to be a valuable venue.

The U.N. Security Council has continuously commended the work of the contact group in facilitating efforts to deter acts of piracy. Additionally, the contact group serves as a model for adaptive collaboration on issues of regional or global concern.

Similar models may serve to address other threats of common international concern, such as conventional arms smuggling and trafficking in persons. However, fiscal constraints may limit any effort to create new standing intergovernmental bodies, and even those of long standing and relative effectiveness will be challenged to continue to meet their missions.

#### About the author:

Ms. Donna Hopkins is the U.S. Department of State coordinator for Counter Piracy and Maritime Security, responsible for coordinating U.S. and international efforts to combat piracy. She retired from United States Navy and Navy Reserve as a captain in 2009.

# Best Management Practices

*Industry-approved techniques to avoid, evade, and defend against piracy.*

by MR. GILES NOAKES  
BIMCO Chief Maritime Security Officer

During 2008, the number of pirate attacks on merchant ships soared throughout the Gulf of Aden, off the coast of Somalia, and within the wider North West Indian Ocean. The majority of attacks were initially clustered around the northern side of the Gulf of Aden but quickly spread further off the east coast of Somalia.

As the number of attacks grew, the maritime industry and other entities including the U.S. State Department and the United Nations searched for ways to counter this threat.

## BMP1

Using existing maritime industry guidance, maritime industry associations and other stakeholders created an early version of what is now coined “best management practices” or BMP to assist companies and ships in avoiding, deterring, and delaying pirate attacks.

Concurrent to this effort, the Contact Group on Piracy off the Coast of Somalia (CGPCS), created pursuant to a United Nations Security Council resolution, held its first meeting in January 2009. Since the maritime industry had been dealing with the problem for some considerable time and had many existing sources, BMP1 was drafted in time for the CGPCS meeting.<sup>1</sup>

On Jan. 15, the contact group praised the effort in its meeting report,

“The CGPCS applauds the work of the maritime industry and the IMO to establish self-defense standards for commercial vessels transiting the region. ... Of note is the adoption by the world’s leading shipping, cargo, and insurance organizations of a set of common best practices.”<sup>2</sup>

## Ongoing Industry Efforts

In the years since this first effort, the maritime industry has reviewed current practices, gathered lessons learned, and produced several updates. The current edition, the pocket-sized BMP4, was specifically designed with ship operators and seafarers in mind.

Produced in consultation with interested stakeholders including the European Union Naval Force, the NATO Shipping Centre, and the United Kingdom

## Best Management Practices

Maritime industry analysis of successful pirate attacks uncovered common vulnerabilities, including:

- ▼ low speed,
- ▼ low freeboard,
- ▼ inadequate planning and procedures,
- ▼ visibly low state of alert or lack of evident self-protective measures,
- ▼ slow threat response.

To counter these, best management practices include:

- ▲ mounting watches,
- ▲ maintaining good speed,
- ▲ adding physical barriers,
- ▲ keeping up to date with pirate activity.

# BMP4

## Best Management Practices for Protection against Somalia Based Piracy



Produced and supported by:



**BMP4: “Best Management Practices for Protection against Somalia Based Piracy.”**  
Courtesy of the Oil Companies International Marine Forum and Witherby Publishing Group Ltd.

### For more INFORMATION:

Additional advice augmenting BMP4 is available on the MSC-HOA’s website:  
[www.mschoa.eu](http://www.mschoa.eu)  
and the NATO website:  
[www.shipping.nato.int](http://www.shipping.nato.int)

Maritime Trade Operations, BMP4 provides a common-sense, risk management process, based on effective implementation of defense measures.

#### About the author:

Mr. Noakes is the chief maritime security officer and for BIMCO, a large international shipping association. As such, he is heavily involved with the shipping industry from a practical and advocacy position regarding anti-piracy efforts. He is a former Royal Marine of 20 years.

#### Endnotes:

<sup>1</sup> Existing maritime industry sources include International Maritime Organization circulars originally drafted some 10 years ago to more recent publications, including the BIMCO Shipmasters Security Manual, the International Chamber of Shipping Booklet on Piracy, the BIMCO pamphlet “Tips on avoiding Piracy and Armed Robbery,” (produced in conjunction with the International Maritime Bureau), and the BIMCO Automated Voyage Risk Assessment planning service.

<sup>2</sup> [www.state.gov](http://www.state.gov)

## BMP4 Signatories

The Baltic and International Maritime Council

Cruise Lines International Association

The International Chamber of Shipping

The International Group of P&I Clubs

ICC International Maritime Bureau

International Maritime Employers’ Committee Ltd

International Association of Dry Cargo Shipowners

InterManager

International Association of Independent Tanker Owners

The International Shipping Federation

The International Transport Workers’ Federation

The International Parcel Tankers Association

The Joint Hull Committee

The Joint War Committee

The Oil Companies International Marine Forum

The Society of International Gas Tanker and Terminal Operators

The Mission to Seafarers

The World Shipping Council

# Anti-Piracy Programs and the Use of Arms Aboard Ships

*The mariner's perspective.*

by CAPT. M.J. HIGHT  
*American Maritime Officers*

CDR MIKE RODRIGUEZ, USN  
*Maritime Domain Awareness  
Coordination Office*



The human toll of piracy, especially piracy off the coast of Somalia, has reached horrifying proportions; the statistics alone are terrifying for mariners. The International Maritime Bureau reports that, from January to September 2011, Somali pirates hijacked **23 ships**, took **399 hostages**, and **killed seven**. Worldwide, there were **326 ships attacked** during that time, resulting in **33 successful hijacks**.<sup>1</sup>

Mariners around the world are deeply and rightly concerned for their safety, since they are the ones who run the risks of captivity, torture, and even death at the hands of pirates. For U.S. mariners, the attack on the cargo ship *Maersk Alabama* and subsequent abduction of her captain in April 2009 forever changed the way merchant vessels prepare for operating in the vital trade lanes through the Middle East.

## Seafaring Labor Effort

U.S. mariners are active participants on International Transport Workers' Federation (ITF) delegations to the U.N. Contact Group on Piracy off the Coast of Somalia, and attend meetings of the International Maritime Organization's Maritime Safety Committee (IMO MSC). Under this paradigm, the contact group develops anti-piracy practices, and then the IMO circulates adopted practices to member states for implementation.

While this coordinated maritime industry action is very welcome, there are some differences in views of the various maritime industry organizations and those of mariners. Additionally, anti-piracy practices are useless if not communicated and followed.

For example, in 2007, the Danish ship M/V *Danica White* was hijacked off Somalia. According to ITF documents, only five crewmembers were aboard during the attack. The master was on the bridge but no other crewmembers were maintaining a piracy watch, and the master had received no specific instructions from its company regarding the IMO's guidance on operating in a high-risk area.<sup>2</sup>

This incident became a symbol for the concerns that seafaring labor would come to voice over the anti-



piracy guidelines, and the International Transport Workers' Federation called for flag states to compel shipping companies to take their responsibilities seriously and to penalize those that do not. Anti-piracy guidance, the ITF held, was unfairly directed at mariners.

#### Best Management Practices Evolve

In 2009, the International Maritime Organization's Maritime Safety Committee worked to revise IMO's existing piracy guidance, "Best Management Practices to Deter Piracy in the Gulf of Aden and off the Coast of Somalia." While 11 maritime industry groups endorsed these best management practices or BMPs, ITF repeated its earlier concerns that only 50 percent of companies were exercising their duty of care to protect mariners.

The ITF also stated it was in general agreement with the BMPs, but believed the problem of enforcing reasonable anti-piracy measures remained, mariners' welfare was not being addressed with appropriate urgency, and ITF's proposal to include provisions on piracy in the International Ship and Port Facility Security Code had not been addressed.<sup>3</sup>

In addition, ITF expressed deep concerns over guidance that placed mariners at risk—such as pitting mariners with fire hoses against armed pirates. The federation also suggested training mariners to survive hostage situations, and called for efforts to keep family members informed and to provide post-incident counseling for mariners and family members.

In August 2011, Best Management Practices version four was published, and 18 industry organizations, including the International Transport Workers' Federation, endorsed it.<sup>4</sup>

#### What This Means for U.S. Mariners

In respect to best management practices, ITF and U.S. mariners hold some differences in their views. The International Transport Workers' Federation represents mariners engaged aboard ships operating under the flags of open registers; as such, these mariners generally do not have representation afforded by national unions like U.S. mari-

ners. In addition, most U.S. mariners enjoy close relationships with U.S. shipping companies.

U.S. mariners may also be better prepared to implement BMPs than their international counterparts. For example, U.S. mariners sailing aboard ships chartered by the U.S. military are required to complete force protection training. While the training is aimed at securing a ship in port, it helps to make U.S. mariners more aware of overall security issues.

Additionally, U.S.-flagged ships make use of the internationally recognized transit corridor and routinely keep in contact with agencies such as the Maritime Security Centre–Horn of Africa, UK Maritime Trade Operations in Dubai, and the Maritime Liaison Office in Bahrain. These agencies track merchant shipping and provide round-the-clock contact or, at a minimum, a place to report suspicious activity.

Nonetheless, many U.S. mariners remain concerned regarding imposing anti-piracy duties on already overburdened mariners and are also apprehensive about some of the best management practices that put mariners at risk, like using razor wire to discourage access to ship's decks. After all, decks aren't the most stable environments, and barbed wire cuts both ways.

#### Armed Security is Best Left to Professionals

A sense of urgency developed throughout the U.S. merchant fleet in the wake of the *Maersk Alabama* incident. The issue of arming U.S. merchant ships caused much debate on both sides; there remains strong consensus within the U.S. shipping industry that mariners should not be armed.

The main reasons:

- mariners receive insufficient weapons training to counter pirate attacks;
- the risks associated with mariners carrying loaded firearms are too great;
- U.S. crews are already stretched thin, and round-the-clock armed security watches would only add to this burden, most likely to the detriment of their other duties.

Many U.S. mariners have experience operating under charters to the Military Sealift Command. These mariners have an advantage since the command deploys embarked security teams. The relationships between U.S. companies and U.S. mariners are also important with respect to effective deployment of armed security teams. Effective communication among U.S. flag

carriers, their senior ships' officers, and the security teams helps to establish roles and expectations. In addition, officers and crew become familiar with the weapons packages deployed on their ships and the issues surrounding weapon placement and storage.

The coordinated efforts of the armed personnel and the crews creates a secure presence that benefits the customers, the mariners, and their families. Perhaps most important, relieved of the burden of physical security, mariners are able to focus on what they know best—the ship.

#### **Consistent Rules Among Coastal States**

As the international maritime industry grows to accept the need for armed security to protect mariners against piracy, there remains a corresponding need for coastal and flag states to develop policies that facilitate deployment of armed security teams and permit ships to transport weapons without delays.

**“I’ve been forced to transfer defense weapons ashore for overland transport when calling on consecutive ports in the same country. Many times this involves maneuvering the vessel in close proximity to shoals in less than ideal weather.**

**“No company is interested in hearing that the vessel is anchored, awaiting weapons, because service boats will not come out to the vessel a safe distance from shoal water, due to high winds.”**

**—Capt. M. J. Hight**

#### **What’s Next?**

Today, mariners all over the world continue to be concerned about piracy and work to actively participate in developing anti-piracy practices. Implementing best management practices and adding onboard armed security teams help mariners protect themselves, but evolving pirate tactics may enable outlaws to defeat anti-piracy measures.

Foul weather, fatigue, and isolation from family are common stressors that take a toll on seafarers. Now, the escalation of piracy in the Gulf of Aden, the Indian Ocean, and around the world, adds even more stress. Mariners will continue to adapt, endure, and serve in their efforts to power world economies; the world owes them its best effort at ending the scourge of piracy.

#### **About the authors:**

*Capt. M.J. Hight is in his 18th year with the American Maritime Officers union, where he has sailed with several contract companies on various types of ocean-going vessels. He is also a 1994 graduate of Maine Maritime Academy.*

*CDR Mike Rodriguez, USN, is serving on active duty with the National Maritime Domain Awareness Coordination office. He is a 1979 graduate of the U.S. Merchant Marine Academy, sailed for 16 years, and served as an ITF delegate to the IMO.*

#### **Endnotes:**

- <sup>1</sup> International Maritime Bureau, “Piracy News and Figures.” Website: [www.icc-ccs.org](http://www.icc-ccs.org).
- <sup>2</sup> International Transport Workers’ Federation, “Review of guidance provided by the Organization for preventing and suppressing piracy and armed robbery against ships,” (MSC 84/17/2) presented at the 84th Session of the Maritime Safety Committee, May 7 to 16, 2008.
- <sup>3</sup> International Maritime Organization, “Report of the Maritime Safety Committee on its 86th Session,” (MSC 86/26).
- <sup>4</sup> BMP4, “Best Management Practices for Protection against Somalia Based Piracy,” Version 4. Witherby Publishing Group Ltd., Scotland, August 2011.

**326 ships attacked • 33 successful hijacks**

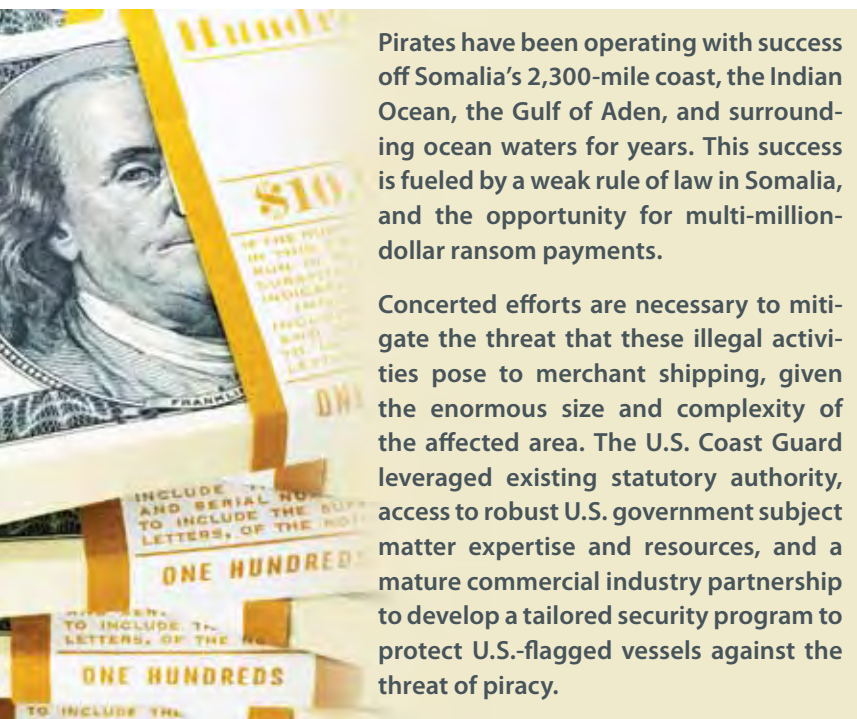
Jan.-Sept. 2011, Worldwide



# Countering Piracy by Enhancing Vessel Security

*U.S. Coast Guard efforts to develop and refine guidance for merchant ships in high-risk waters.*

by CDR LEE BOONE  
Chief, U.S. Coast Guard Office of Vessel Activities



Pirates have been operating with success off Somalia's 2,300-mile coast, the Indian Ocean, the Gulf of Aden, and surrounding ocean waters for years. This success is fueled by a weak rule of law in Somalia, and the opportunity for multi-million-dollar ransom payments.

Concerted efforts are necessary to mitigate the threat that these illegal activities pose to merchant shipping, given the enormous size and complexity of the affected area. The U.S. Coast Guard leveraged existing statutory authority, access to robust U.S. government subject matter expertise and resources, and a mature commercial industry partnership to develop a tailored security program to protect U.S.-flagged vessels against the threat of piracy.

## History, Serendipity

Following the terrorist attacks of September 11, 2001, Congress passed the Maritime Transportation Security Act (MTSA) of 2002 to address port, vessel, and waterway security in the U.S., and on U.S.-flagged merchant vessels operating worldwide. The act gave the U.S. Coast Guard the authority to require vessels and port facilities to conduct risk assessments and develop security plans to mitigate that risk, thus creating a consistent security program for all the nation's ports and vessels.

The MTSA was initially created to counter the threat of terrorism, however the drafters did not exclude any particular type of security threat. These regulations focus on countering any threat to life, property, the environment, or the flow of commerce due to political terrorism or criminal or other disruptive acts. Simply put: Security is security in the United States.

The MTSA allows the U.S. Coast Guard to issue maritime security (MARSEC) directives containing pertinent sensitive security information directly to affected mariners, while protecting this information's release to the general public. This tool proves to be valuable in creating a tailored and adaptive counter-piracy security program and allows U.S. vessels to counter the unique threat of piracy and armed robbery, which is still prevalent off the Horn of Africa.

For example, in February 2006, the Coast Guard released MARSEC Directive 104-6 to vessels subject to MTSA, providing general direction to vessels operating in waters where acts of piracy and armed robbery against ships are prevalent.<sup>1</sup> This directive included requirements to:

- augment navigation bridge watches to maximize detecting approaching watercraft,
- secure access to restricted areas,
- use water hoses to fend off would-be boarders,
- keep constant radio contact with appropriate authorities,
- increase speed and evasive maneuvering,
- set a course far away from shore.



These measures were taken from what many international shipping fleets considered to be “best practices.” Soon, the work of creating, revising, and disseminating industry-produced best management practices (or BMPs) to counter the threat of piracy off the coast of Somalia would take on a sustainable, efficient, and prominent life of its own.

### A “Game Changer” for the U.S. Fleet

Due to the quickly evolving situation off the Horn of Africa in 2008 and 2009, the Coast Guard and U.S. government interagency partners from the Department of State, Department of Homeland Security, Department of Transportation-Maritime Administration, Department of Defense, and Department of Justice immediately went to work to revise MARSEC Directive 104-6 to address this unique and dangerous situation.

During the four-week period between the attack on the *Maersk Alabama* and signing MARSEC Directive 104-6 (rev 2), the Coast Guard convened almost daily teleconferences with our U.S. government interagency partners to assess the vulnerability of U.S. vessels operating off the Horn of Africa and Gulf of Aden, and to decide what the second revision of MARSEC Directive 104-6 should include. As a result, it was decided that the threat off the Horn of Africa was so unique that a special annex was added that specifically addressed the threat.

Among many self-protection measures, the second revision to the MARSEC directive included requirements for U.S. vessels to:

- supplement their crew with professional security personnel (unless exempted due to low inherent vulnerability),
- to register and provide movement plans to the Maritime Security Center–Horn of Africa,
- to establish contact with U.K. Maritime Trade Operations,
- to join established vessel convoys through the internationally recommended transit corridor in the Gulf of Aden,
- to establish a “safe haven” or citadel in which crewmembers could take safe refuge prior to and during a pirate attack.

To refine and collect input on the newly designed security program, the U.S. Coast Guard and U.S. government interagency partners hosted a roundtable meeting with affected maritime industry stakeholders in 2009, at Coast Guard headquarters in Washing-

ton, D.C. Some of the topics discussed in this meeting included the state of counter-piracy and the U.S. government’s efforts to help protect U.S.-flagged vessels. This collaborative forum proved very effective in finalizing the revised security program and in shaping accompanying guidance that would be needed to assist U.S. vessel operating companies in complying with its provisions.

### A Rapid Evolution

To comply with the MARSEC Directive 104-6 (rev 2), 161 U.S.-flagged vessels submitted vessel security plan amendments to the U.S. Coast Guard Marine Safety Center for approval. Out of that figure, half of the vessels planned to operate in the Horn of Africa and/or Gulf of Aden area and many of them included provisions to use supplemental armed security personnel. This initial round of vessel security plan amendments was just the start of the “conversation” that the U.S. Coast Guard would have almost daily with the maritime industry over the course of the next year regarding vessel security plan amendments for piracy.

The Coast Guard and U.S. government interagency partners hosted several roundtable meetings since to discuss the state of counter-piracy and the U.S. government’s efforts to assist in protecting U.S.-flagged vessels, resulting in a series of port security advisories that provided supplemental guidance to facilitate compliance with the MARSEC directive itself.

### Specific Guidance for Mariners

**Use of force.** The first piece of guidance addresses the maritime industry’s concerns regarding the “use of force” that armed security teams may employ in defense of a vessel. Port security advisory (PSA) 3-09, “Guidance on Self Defense or Defense of Others,” published in June 2009, restates and re-emphasizes existing international law in this area. While this PSA doesn’t contain new standards with respect to the right of self-defense or defense of others, it provides examples that illustrate how the principles can apply to the issue of piracy.<sup>2</sup>

**Weapons.** PSA 4-09, published in May 2009, deals directly with compliance with U.S. and state laws and regulations, including the Gun Control Act, the National Firearms Act, and the International Traffic in Arms Regulations when placing self-defense weapons aboard U.S. vessels. The Department of State’s Directorate of Defense Trade Controls, U.S. Customs and Border Protection, and the U.S. Coast Guard all worked closely with the Department of Justice to outline potential methods of compliance with underly-



ing laws and regulations for the U.S. fleet, which in most cases included either obtaining a temporary export license, or a personal-use exemption to carry such weapons.

**Armed security personnel.** To address maritime industry's questions and concerns about privately contracted armed security personnel, guidelines were developed that deal with minimum standards for these teams. PSA 5-09, published in June 2009, outlines minimum competencies as well as credentialing, licensing, and training requirements expected for armed security personnel on U.S.-flagged vessels.<sup>3</sup>

Subsequent port security advisories continued, dealing with:

- procedures for obtaining a name-based check for security personnel (PSA 6-09),
- foreign port state responses to requests for information regarding rules for carriage and transport of weapons (PSA 8-09),
- expected courses of action following an attack (PSA 9-09).

MARSEC Directive 104-6 had been revised a total of five times by 2011. Revision number three encouraged use of industry best management practices, revision four provided additional clarification for U.S.-flagged vessels berthed or anchored in high-risk waters, and revision five incorporated more performance-based standards and expanded high-risk waters to account for the growing area of pirate operations in the Indian Ocean.

All Coast Guard-issued direction and guidance continues to be monitored, revised, or developed as necessary to ensure continuing usefulness, in close coordination with U.S. government interagency partners and maritime industry stakeholders.

#### **Future Plans**

The U.S. Coast Guard has been actively engaged at the IMO and with the Contact Group on Piracy off the Coast of Somalia to help protect the world's shipping fleet, while developing and monitoring its own counter-piracy program to protect U.S.-flagged merchant ships. Additionally, the U.S. Coast Guard and MARAD co-chair CGPCS Working Group 3 (WG3),

which is responsible for improving industry self-awareness, monitoring best management practices development and dissemination, and shepherding guidance regarding the protection and care of seafarers. At the next plenary meeting, this chairmanship will be handed from the U.S. to the Republic of Korea.

The scourge of piracy is expected to continue and evolve. Therefore, flag, coastal, and port states; non-governmental organizations; and the maritime industry must also evolve to meet the latest threats. Most recently, WG3 is coordinating two projects:

- a framework to improve flag state implementation of avoidance, evasion, and defensive best practices;
- guidance for security companies regarding the use of privately contracted armed security personnel.

#### **About the author:**

*CDR Lee Boone has served in the U.S. Coast Guard for nearly 20 years, most recently at U.S. Coast Guard headquarters. As the chief of the Domestic Vessel Compliance Division, he has been actively working with U.S. Coast Guard leadership, U.S. government interagency partners, international working groups, and U.S. commercial vessel operators to assess, design, and adapt a vessel security program tailored to counter the threat of piracy, and to protect U.S. merchant vessels and seafarers.*

#### **Endnotes:**

- <sup>1</sup> A non-sensitive version of MARSEC directive 104-6 is available in Port Security Advisory 2-09, posted on [homeport.uscg.mil/piracy](http://homeport.uscg.mil/piracy).
- <sup>2</sup> PSA 3-09 again proved its viability when, pursuant to Section 912 of the 2010 Coast Guard Authorization Act, Congress provided immunity to vessel owners, operators, time charterers, masters, mariners, or individuals who use or authorize the use of force against pirates, if such force was in accordance with standard rules for the use of force.
- <sup>3</sup> In creating and disseminating this guidance, the U.S. stopped short of establishing a certification regime for security teams, a function that was determined best and most efficiently performed under U.S. market forces. Almost two years after it was published, as the international community warmed to the idea of using armed security teams, the U.S. delegation to International Maritime Organization's Maritime Safety Committee helped develop interim guidance.

#### **For more INFORMATION**

The entire U.S. vessel security program for counter-piracy and informative links to other sources of information are posted on the U.S. Coast Guard's Homeport website at:  
<http://homeport.uscg.mil/piracy>

# Gathering Around The Table

*Coast Guard, government, and industry collaborative efforts to combat piracy.*

by LCDR JAMES T. FOGLE  
Vessel Security Program Manager  
U.S. Coast Guard Office of Vessel Activities

Combating maritime piracy is a responsibility shared among governments, vessel owners/operators, flag states, and the international maritime community. For this reason, the U.S. Coast Guard and U.S. government interagency partners have made every effort to provide the best possible direction and guidance to U.S.-flagged vessels operating in high-risk waters.

## Roundtable Meetings

Since the 2009 hijacking of the *Maersk Alabama*, the Coast Guard has hosted maritime industry stakeholders at several joint U.S. government agency/maritime industry piracy roundtable meetings and has participated in various other forums to discuss the state of counter-piracy and the U.S. government's efforts to protect the vital shipping interest of U.S. carriers.

Roundtable meetings can provide industry stakeholders with an ideal venue to communicate ideas and express concerns.

For example, shipping industry participants expressed the need for additional guidance on using privately contracted armed security personnel and identifying port state requirements for these armed personnel. As a result, the Coast Guard has issued multiple port security advisories, which provided the requested supplemental guidance to U.S. shippers, and helped facilitate compliance with Maritime Security (MARSEC) Directive 104-6, "Guidelines for U.S. Vessels Operating in High-Risk Waters."

## Company Security Officer and Stakeholder Engagement

In May 2009, shortly after revision 2 of MARSEC Directive 104-6, the Coast Guard held a meeting with company security officers of vessels operating in high-risk waters to discuss the essential elements of the revised directive and to share the Coast Guard's expectation for submitting a "piracy annex" to their approved vessel security plans (VSPs).

## The shipping industry needed guidance for using armed security.

Additionally, the Coast Guard hosted a Ship Operations Cooperative Program meeting<sup>1</sup>, in September 2009, to streamline the review and approval process for VSPs (or piracy annexes), hear concerns regarding vessel security, and to discuss industry recommendations regarding modification requests. The Coast Guard agreed with many of the recommendations and has made improvements to the process that enhanced vessel security by making VSPs more user-friendly.

## Counter-Piracy Summits

In October 2010 and December 2011, the U.S. government interagency hosted industry stakeholders at counter-piracy summits, during which key stakeholders exchanged views regarding appropriate preparations for and responses to piracy incidents (see sidebar).

# 2010 Counter-Piracy Summit

The summit's highlight: a facilitated counter-piracy exercise that allowed participants to:

- describe their roles, interests, specific objectives, and expectations;
- identify how they typically interact with cooperating counter-piracy forces in the region;
- share how they prepare for and respond to pirate attacks;
- discuss factors of success and failure.

## Anti-Piracy Measures

Homeland Security Studies and Analysis Institute facilitators led participants through a discussion on "normal operations," followed by a guided conversation regarding a situation of "heightened alert," "under attack," and "boarded and seized."

## The Take-Aways

The exercise uncovered counter-piracy procedures that U.S.-flag vessel operators can use to respond and support their crews should a piracy incident occur.

The facilitated discussions also identified the need for guidance clarification and improvement and noted matters for subsequent resolution.

## Piracy Action Team

Due to the dynamic nature of piracy, the Coast Guard hosts periodic "piracy coordination" calls with members of the piracy action team<sup>2</sup> to validate security measures and incorporate lessons learned.

This team serves as an information-sharing and coordination mechanism to support a whole-of-government approach to countering piracy. Representatives use this forum to examine changes in the piracy landscape and how those changes impact current U.S. counter-piracy policy.

## The Coast Guard hosts "piracy coordination" calls to validate security measures and incorporate lessons learned.

## Future Maritime Industry Engagement

The Coast Guard and the U.S. government inter-agency remains committed to working with our maritime industry stakeholder partners to develop effective strategies for combating piracy, and improve counter-piracy policy and doctrine.

It is the Coast Guard's goal to develop a program for continued engagement with industry, with a schedule of meetings devoted to updating stakeholders regarding experiences in the region, securing recommendations about revisions to best practice procedures and directives, and exercising to sustain skills and uncover issues.

### About the author:

*LCDR James T. Fogle works in the Office of Vessel Activities, Domestic Compliance Division at U.S. Coast Guard headquarters. He provides program oversight for the safety and security of U.S.-flagged commercial vessels.*

### Endnotes:

<sup>1</sup> SOCP is an industry/government partnership formed in 1993 to share resources in development and evaluation of technologies to advance shipboard safety, regulations, environment, training, reliability and productivity in an effort to improve the competitiveness of the U.S. maritime industry.

<sup>2</sup> The piracy action team members include representatives from the Department of State, Office of the Secretary of Defense, Joint Chief of Staff, Department of Transportation/Maritime Administration, Office of Naval Intelligence, Department of Commerce, Department of Justice, Military Sealift Command, Global Maritime Situational Awareness, Overseas Security Advisory Council, United States Agency for International Development, Naval Criminal Investigative Service, Customs and Border Protection, Transportation Security Administration, U.S. Africa Command, U.S. Central Command, U.S. Transportation Command, and Coast Guard Atlantic Area.

# Getting the Word Out

*Regional information brokers  
keep mariners apprised.*

by MR TODD OFFUTT  
*Officer in Charge  
Maritime Liaison Office, Kingdom of Bahrain*

Spotting pirate ships and small skiffs in 2.5 million square miles of ocean surrounding the Gulf of Aden is hard work. On top of that, pirate-spotting ability can sometimes go overboard when the hustle and bustle of other shipping, occasional equipment failure, shipboard medical emergency, oil spill, or any one of a hundred logistical nightmares are added to the mix.

## Keeping Mariners in the Know

Fortunately, mariners don't need to deal with this alone. Several organizations facilitate and manage critical shipping information flow, including:

- the United Kingdom Maritime Trade Operations,
- the Maritime Liaison Office Bahrain,
- Maritime Security Centre–Horn of Africa,
- the North Atlantic Treaty Organization Shipping Centre,
- the International Maritime Bureau's Piracy Reporting Centre.

All of these organizations deal with piracy in some form and provide unique capabilities and access to various types of resources.

**MARLO.** The Maritime Liaison Office facilitates information exchange among the United States Navy, combined maritime forces, and the commercial maritime community within the Middle East. MARLO operates as a conduit for information focused on the safety and security of shipping and is committed to assisting all members of the commercial maritime community. Liaison officers travel regularly throughout the Gulf of Aden region to foster communication,

stay apprised of changes in local port infrastructure and management, and proactively address concerns and questions raised by maritime industry members. MARLO has four maritime liaison units, located in Japan, Singapore, Italy, and Florida, to provide similar information and assistance in those regions.

**UKMTO.** The U.K. Maritime Trade Operations office acts as the primary point of contact for merchant vessels and liaison with military forces in the region during a report of suspicious activity or pirate attack. UKMTO also administers the voluntary reporting scheme under which merchant vessels are encouraged to send regular reports, providing their position/course/speed and estimated time of arrival at their next port, while transiting designated high-risk waters. UKMTO subsequently tracks vessels and passes the information to Combined Maritime Force and European Union headquarters.

**MSCHOA.** Maritime Security Centre–Horn of Africa is a coordination center dedicated to safeguarding the freedom of navigation. Through close dialogue with shipping companies, masters, and other interested parties, MSCHOA will build up a picture of vulnerable shipping in these waters and their approaches, then coordinate with a range of military forces operating in the region to provide support and protection to mariners.

**NSC.** NATO Shipping Centre provides the commercial link with NATO's maritime forces. It is NATO's primary point of contact with the maritime community, and is used as the tool for communicating and coordinating initiatives and efforts with other

military entities (most notably MARLO, UKMTO, and MSCHOA) as well as directly with the maritime community.

**IMB PRC.** The International Maritime Bureau's Piracy Reporting Centre raises awareness within the shipping industry, which includes shipmasters, ship owners, insurance companies, and traders in areas associated with pirate attacks or specific ports and anchorages associated with armed robberies aboard ships. IMB works closely with various governments and law enforcement agencies, and is involved in

information sharing in an attempt to reduce and ultimately eradicate piracy.

#### Mariner Contact

MARLO and others conduct ship visits (both in-port and at sea) throughout the Middle East to meet with vessel masters and crew and report current trends and other relevant information. In addition to contacting mariners, these information brokers reach out to others within the industry, including shipping company owners, agents, security officers, cargo owners, insurers, port authorities, and many other persons or groups that have a stake in the transport of goods. This outreach provides critical liaison, particularly for those organizations that cannot meet directly with crews.

When face-to-face meetings are not practical, MARLO, UKMTO, IMB, NSC, and MSCHOA use websites, newsletters, and weekly or monthly updates distributed via contact distribution lists to share information.

INTERNATIONAL SAILING FEDERATION



### PIRACY IN THE GULF OF ADEN AND SOMALI BASIN

**Guidelines for yachts** considering a passage through the Gulf of Aden, Yemeni and Somali waters or the NW Indian Ocean north of 15° south and west of 78° east

1. **The danger of piracy and consequent loss of life and property in these waters up to 750 miles offshore is high. Yachts are strongly recommended to avoid the area.** See UK Foreign Office advice at [www.fco.gov.uk](http://www.fco.gov.uk), the Noonsite website [www.noonsite.com/General/Piracy](http://www.noonsite.com/General/Piracy), the ISAF website [www.sailing.org/piracy](http://www.sailing.org/piracy) and UK Admiralty Anti-Piracy Planning Chart – Red Sea, Gulf of Aden and Arabian Sea Q6099.

2. Anti-piracy patrols by warships will provide surveillance and support as far as possible for yachts in the area but cannot guarantee the safe transit of any yacht through these waters.

3. A yacht which, despite the risks, decides to make a passage in these waters should advise her plans to:

**UKMTO (UK Maritime Trade Organisation)**, Royal Navy, Dubai

[ukmto@eim.ae](mailto:ukmto@eim.ae) (email), +971 50 552 3215 (telephone), (51) 210473 (telex)

**MSCHOA (Maritime Security Centre, Horn of Africa)**, EUNAVFOR, London

[postmaster@mschoa.org](mailto:postmaster@mschoa.org) (email), +44 (0) 1923 958 545 (telephone), +44 (0) 1923 958 520 (fax)

Communication should preferably be by email and should include full contact details for the yacht and identification features for the vessel, crew and skipper. Some check may be made on these with shore-based information. A 24-hour watch is maintained on all numbers

US-flagged vessels and all other vessels may also contact the Maritime Liaison Office (MARLO), US Navy, Bahrain: [marlo.bahrain@me.navy.mil](mailto:marlo.bahrain@me.navy.mil) (email)

+973 3940 1395 (telephone)

4. Yachts should register with these organisations at least two weeks before entering the high risk area when they will be invited to provide further information. Those coming south through the Red Sea should register before reaching Safaga/Jeddah.

5. On registration, UKMTO will pass details of the yacht to patrolling warships and will regularly send to the yacht piracy alerts by email.

6. During passage yachts should make routine reports as advised by the authorities and should monitor VHF 16 and VHF 8. VHF contact cannot, however, be guaranteed.

7. **If under attack a 'mayday' call should be made using VHF or HF DSC, VHF 16 or VHF 8, Sat-C or any other means, please contact UKMTO by telephone and pass your last known position.**

ISAF in consultation with MSCHOA and UKMTO March 2010 v 6.3

#### For more INFORMATION:

**MARLO**

Duty phone: +973-3940-1395

Duty email:

[marlo.bahrain@me.navy.mil](mailto:marlo.bahrain@me.navy.mil)

Website:

[www.cusnc.navy.mil/marlo/](http://www.cusnc.navy.mil/marlo/)

**UKMTO**

Phone: +971-50-552-3215

Email: [ukmto@eim.ae](mailto:ukmto@eim.ae)

**MSC-HOA**

Phone: +44-0-1923-958545

Email: [postmaster@mschoa.org](mailto:postmaster@mschoa.org)

Website: [www.mschoa.eu](http://www.mschoa.eu)

**NATO Shipping Centre**

Phone: +44-0-1923-956574

Email: [info@shipping.nato.int](mailto:info@shipping.nato.int)

Website: [www.shipping.nato.int](http://www.shipping.nato.int)

**IMB PRC**

Phone: +60-3-2078-5763

or +60-3-2031-0014

Email: [piracy@icc-ccs.org](mailto:piracy@icc-ccs.org)

Website: [www.icc-ccs.org](http://www.icc-ccs.org)

International Sailing Federation guidelines recommend yachts avoid the area.

Militaries and associated stakeholders involved in combating piracy meet regularly in Bahrain to keep apprised of developments and better coordinate organizational efforts. These efforts are supplemented by secure, controlled-access websites that provide real-time piracy activity, distress calls, and military counter-piracy response.

**About the author:**

Mr. Todd Offutt has served more than 20 years in maritime safety, security and environmental protection, including three overseas assignments and travels to more than 75 countries. He is a graduate of the U.S. Naval War College, earned two graduate degrees in management and national security and strategic studies, and completed operational training with industry in the Port of Baltimore.

**Contributing authors:**

LT Jamie Wrona and LT Chris Brown are liaison officers with MARLO, in Bahrain, and LT James Lloyd is a former MARLO liaison officer with the U.S. Navy Reserve.



## Spotlight on MARLO



The Maritime Liaison Office (MARLO) was established in 1987, during a time when tankers and dry cargo vessels of neutral nations were being indiscriminately attacked in the Arabian Gulf. The U.S. Navy created MARLO as a mechanism to communicate with and assist the commercial community and initiated a convoy system with escorts to avert further loss of life and property.

The MARLO mission: Facilitate information exchange among the United States Navy, combined maritime forces, and the commercial maritime community in the United States Central Command's area of responsibility. As such, it operates as a conduit for information focused on the safety and security of shipping and is committed to assisting all members of the commercial maritime community.

**MARLO Today**

MARLO remains part of the U.S. Naval Forces Central Command and works to support the commercial maritime community. The MARLO newsletter is distributed by email and provides current infor-

mation on navigational safety, threats to shipping, updates to marine regulation, and other items of interest.

Additionally, MARLO conducts a number of events where commercial mariners and industry representatives from the Gulf, East Africa, and Europe are invited to share their views with combined maritime forces senior leadership and other members of the maritime community. The annual MARLO maritime conference in Dubai typically features top military commanders, senior government officials, industry leaders, and experts from the maritime community.

In recent years, MARLO has hosted regional receptions in countries such as Kenya, Egypt, Bahrain, Jordan, Qatar, and Oman that focus on a particular sub-region, country, or specific groups within the commercial maritime community. These smaller meetings provide an opportunity to meet with individuals who may not have the opportunity to travel to the annual Dubai conference.

## Available from MARLO

**"Findings of Fact and Lessons Learned from Pirated Vessels,"** investigations of pirated vessels, hostage crew debriefings, and interviews of incarcerated pirates reveal a harrowing account of life aboard a pirated vessel. Email request to: [marlo.bahrain@me.navy.mil](mailto:marlo.bahrain@me.navy.mil).

**"MARLO News,"** a bimonthly e-publication that includes discussion on current news and feature articles about ongoing operations of the U.S. Navy and Combined Maritime Forces, convoy schedules,

exercises, and developments within the maritime industry in the Middle East. Available online at: [www.cusnc.navy.mil/marlo](http://www.cusnc.navy.mil/marlo).

**"Piracy Analysis and Threats to Shipping,"** a weekly e-newsbrief containing piracy events, weather forecasts, weather predictors of pirate activity, worldwide threat summary, counter-piracy and maritime crime announcements and advisories, and related information. Distributed via email. Send your email address to: [marlo.bahrain@me.navy.mil](mailto:marlo.bahrain@me.navy.mil).



# Pirate or Criminal?

## *A difference of location.*

by MRS. CHRISTINA GEISERT  
*Lead Intelligence Analyst*  
*U.S. Coast Guard Intelligence Coordination Center*

Sometimes it is hard to distinguish the difference between a maritime crime and an act of piracy, since both are challenging to designate, are based on location and description, and are often incorrectly attributed. Essentially, an act of violence or illegal detention is considered “maritime crime” if the action occurs within the territorial waters of a state without the nation’s penal code criminalizing the action as piracy.

### **International Engagement**

In 1988, the Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation (SUA convention) required that states prosecute acts of armed robbery as well as any other unlawful act that is not covered by the United Nations Convention on the Law of the Sea (UNCLOS) definition of piracy (see sidebar). This convention specifically mandates prosecution if a criminal act is committed aboard or against a ship that is flying the state’s flag, or is in its territorial sea, or if the crime is committed by one of its nationals.

The International Maritime Organization (IMO), the International Chamber of Commerce, and the International Maritime Bureau all define maritime crime from the SUA convention and its subsequent protocols. The IMO and the U.N. have taken steps to assist member states that lack effective legislation. The aim: agree on a universal definition of the crime of piracy, enforcement measures, penalties, and liability and compensation provisions.

For some U.N. member states, there has been progress in the effort to thwart piracy and maritime crime at large. However, for those member states that lack piracy legislation, the problem of maritime attacks is fluid and ever-present. States further plagued

with enforcement problems are faced with dynamic attackers. Maritime pirates and criminals recognize that there is a constant shift of open and unpoliced waters, requiring deference for those vessels that have introduced protective measures and the nations with enforcement capabilities.

Analysts charged with the responsibility of tracking reported threats and trends of piracy and maritime crime may become confused with the differences in term characterization. A U.S. couple on a sailing vacation could be easily categorized victims of piracy or maritime crime if their exact location at the time of the incident is unknown. For those victims, the effort to pinpoint their location to properly report the incident is often neglected. Unfortunately, a minor difference in location means a different designation.

### **Analysis of Reported Piracy**

Historically, piracy has occurred all over the world. According to the International Chamber of Commerce’s International Maritime Bureau Piracy Reporting Centre, 266 attacks were recorded in the first six months of 2011, up from 196 incidents in the same period last year. Recently the areas of West Africa, the Red Sea, and the Indian Ocean near East Africa have been prominently featured as areas of concern due to attacks on commercial shipping vessels. These areas are known for their hijackings, with incidents occurring in coastal waters and as far as 1,000 nautical miles offshore.

In East African waters, organized groups of pirates employ advanced tactics and use “mother ships” to launch one or two small skiffs that may be armed with machine guns or rocket-propelled grenades. These groups are known to either fire upon a targeted



vessel and then board, or wait until the vessel is undermanned and vulnerable. Frequently, attacks take place when a vessel is either at anchor or involved in a ship-to-ship transfer.

These groups of pirates are usually well funded by their activities or from additional ties to criminal organizations. Although many of these hijackings have resulted in large ransom demands, major shipping companies have responded by adding protective measures to their vessels, such as employing onboard armed security teams, vessel citadels, various water-deployed propeller-entanglement devices, barbed wire on the deck, and vessel escorts.

Pirates are finding more challenging circumstances, due to the hardening of their targets, and are now reportedly taking more risks like attacking in rough seas and difficult conditions. As a result, pirates have shifted their attack methods from their historical method of boarding and threatening, to firing upon the vessel to determine if there is a security team aboard. Although commercial shipping vessels are not the lone targets, (there have been instances of attacks on cruise ships, private yachts, and sailing vessels) attacks on commercial vessels are predominant.

#### **Analysis of Reported Maritime Crime**

Reported incidents in East and West Africa are normally associated with maritime piracy due to the location, but it can also be associated with maritime crime. Reports from the Gulf of Guinea indicate that cargo vessels are a favorite target for criminal attacks—these attacks have a higher rate of violence than others in the region. The waters near Togo and the Congo are particularly known for criminal attacks, but the tactics and targets are similar to the rest of the region. Targets are predominately chemical tankers with the aim of hijacking the vessel for ransom. Reportedly, multiple skiffs carrying groups of 20 or more attackers are common.

Southeast Asia is also known for multiple areas of concern. The Straits of Malacca, residing between Indonesia and Malaysia, has historically been consid-



## **Defining Piracy and Maritime Crime**

Maritime piracy, defined by Article 101 of the 1982 United Nations Convention on the Law of the Sea and adopted by the International Maritime Organization is described as any of the following acts:

“Any illegal acts of violence or detention, or any act of depredation, committed for private ends by the crew or the passengers of a private ship or a private aircraft, and directed: (i) on the high seas, against another ship or aircraft, or against persons or property on board such ship or aircraft; (ii) against a ship, aircraft, persons or property in a place outside the jurisdiction of any State;”

“Any act of voluntary participation in the operation of a ship or of an aircraft with knowledge of facts making it a pirate ship or aircraft;”

“Any act inciting or of intentionally facilitating an act described in subparagraph (a) or (b).”

[www.un.org/depts/los/convention\\_agreements/texts/unclos/closindx.htm](http://www.un.org/depts/los/convention_agreements/texts/unclos/closindx.htm)

ered one of the most hazardous areas for maritime criminal attacks. Therefore, protective measures have been improved and local law enforcement and military have also increased their guard.

Vessels in the waters near Singapore and Bangladesh are also reporting maritime criminal events. Although vessel targets are similar to those in African waters, the attackers are not as advanced. Their groups are smaller, they rarely employ multiple vessels during attacks, and the attacks usually result in robbery rather than hijackings. Attacks are largely focused on targets docked in port or in berthing. In this region, vessel protective measures and an alert crew significantly lessen or deter attacks.

Incidents near South and Central America, particularly in areas of the Caribbean, most often meet the definition of maritime crime, although the area is historically known for harvesting pirates. The popular targets in this region are often yachts, sailing vessels, and commercial vessels. The attack methods are often crude, and rarely employ more than a few criminals armed with small arms and machetes. Criminal attacks can be deadly, despite the attackers lack in funding and advanced methods. Violent beatings are



## Pirate Attacks, Summer 2011

### West Africa

**Benin:** Product tanker hijacked during transfer operations, September 14.

**Benin:** Chemical tanker hijacked, during ship-to-ship (STS) transfer, August 20.

**Nigeria:** Passenger ship boarding, August 27.

**Gulf of Guinea:** Tanker attempted boarding, July 30.

### Red Sea

Tanker boarded, September 10.

LPG tanker fired upon, August 12.

Bulk carrier boarded, August 11.

### Indian Ocean-East Africa

**Gulf of Aden:** Sailing vessel hijacked, September 8.

**Gulf of Aden:** Container ship rocket-propelled grenade attack, August 23.

**Gulf of Aden:** Chemical tanker fired upon, August 21.

**Gulf of Aden:** Cargo ship fired upon, August 9.

**Arabian Sea:** Chemical tanker hijacked, August 20.

## Maritime Crimes, Summer 2011

### West Africa

**Togo:** Chemical Tanker attempted boarding, September 14.

**Congo:** Container Ship boarded, August 7.

**Congo:** Container Ship boarded, August 1.

### Southeast Asia

**Indonesia:** Chemical tanker boarded and robbed, September 9.

**Indonesia:** Tanker robbed, August 27.

**Indonesia:** Bulk carrier robbed, August 20.

**Indonesia:** Chemical tanker boarded, August 12.

**Singapore:** Tanker boarded and robbed during STS transfer, September 8.

**Singapore:** Petroleum tanker robbed, August 26.

**South China Sea:** Tug boarded and robbed, August 6.

**Malaysia:** Tug and barge boarded and robbed, August 11.

**Bangladesh:** Cargo ship boarded and robbed, July 29.

### South and Central America

**Ecuador:** Chemical tanker robbed, August 19.

**Colombia:** Chemical tanker attempted boarding, August 4.

---

All statistics from the Office of Naval Intelligence "Worldwide Threats to Shipping Report," which contains a summary of recent piracy acts and hostile actions against commercial shipping worldwide, organized by geographic region.

common and criminal tactics can include shootings and/or machete attacks, which can result in death or severe injury.

The IMO and the U.N. have made great strides since the United Nations Convention on the Law of the Sea (UNCLOS) in 1982. Currently, there is more reporting on acts of piracy in the maritime domain, and efforts to assist member states continues to strengthen the laws associated with the criminalization of piracy and maritime crimes. Unfortunately, nations that are unable to patrol their waters or prosecute criminals are often subject to the growth or shift of pirate and criminal networks to their respective regions. For those entities tracking these events, changes in the funding or strength of member state governments are often signals of new vulnerabilities in regions already dealing with reported incidents.

Regardless of organization, funding, or modus operandi, the difference between a pirate and a criminal is not their ties, but the location of each attack. Therefore, not all pirates are well-funded and organized. Maritime criminals, however, could fit the description as easily as pirates. Globally, piracy and maritime crime must be viewed through a similar lens, but the small differences can be vexing. Each incident must be viewed individually to accurately attribute the action to either piracy or maritime crime, because each label carries different methods of prosecution and sentencing.

#### **About the author:**

*Mrs. Geisert serves with the U.S. Coast Guard as a member of the Department of Homeland Security's Office of Intelligence and Analysis. She had received the Secretary's Award for Exemplary Service for her work in analysis. Previously, she has worked for the Environmental Protection Agency and members of the U.S. Congress.*

#### **Bibliography:**

"United Nations Convention on the Law of the Sea," <http://www.un.org>  
IMO conventions, <http://www.imo.org>  
National Geospatial-Intelligence Agency "Worldwide Threats to Shipping Reports," <http://msi.nga.mil>  
<http://www.icc-ccs.org/piracy-reporting-centre>

# The Maritime Security Interagency Policy Committee

*Working to eliminate piracy.*

by MR. MICHAEL D. CALLAHAN (USCG-RET)  
*Program Analyst*  
 U.S. Coast Guard Office of Emerging Policy

U.S. merchant mariners operating near the coastal waters of Somalia are all at risk as long as piracy continues there, and those charged with protecting them must be proactive in the efforts to eradicate it.

The Bush administration formed the Maritime Security Interagency Policy Committee (MSIPC), following the terrorist attacks of September 11, 2001. The MSIPC consists of representatives from U.S. government agencies, departments, and offices and coordinates U.S. government policy and recommendations relative to maritime security under the auspices of the National Security Staff.

While not its sole focus, the Maritime Security Interagency Policy Committee and other groups have played a part in the efforts to abolish piracy.

## A Whole-of-Government Approach

For example, the MSIPC produced the 2005 National Strategy for Maritime Security, which identifies pirates and criminals as threats to international maritime security. In June 2007, the U.S. published the "Policy for the Repression of Piracy and other Criminal Acts of Violence at Sea." And, in December 2008, the National Security Council issued the "Countering Piracy off the Horn of Africa: Partnership and Action Plan."

Additionally, the Maritime Security Working Group was formed under the Maritime Security Interagency Policy Committee, as an action-officer working group that addresses MSIPC issues and recommends policy and program initiatives. The Counter Piracy Steering Group is an executive-level body co-chaired by the Departments of State and Defense, with representation from the Departments of Homeland Security, Justice, Treasury, Transportation, and the U.S. Agency for International Development that is singularly focused on piracy.

## Interagency Coordination Team

Coast Guard headquarters staff host a weekly piracy coordination conference call attended by representatives from:

- Department of State
- U.S. Africa Command
- Office of Naval Intelligence
- Department of Justice
- U.S. Central Command
- Military Sealift Command
- Department of Commerce
- Coast Guard Atlantic Area
- Joint Chiefs of Staff
- Office of the Secretary of Defense
- Department of Transportation/MARAD
- U.S. Transportation Command
- Naval Criminal Investigation Service
- Customs and Border Protection
- Overseas Security Advisory Council
- Transportation Security Administration
- Bureau of Alcohol, Tobacco, Firearms and Explosives
- United States Agency for International Development

## Spotlight on Piracy



On April 8, 2009, the U.S.-flagged *Maersk Alabama* was boarded by pirates off the coast of Somalia. This attack thrust the subject of modern piracy into American living rooms.

Well before then, agencies and departments of the U.S. government were working diligently on various aspects of the threat of piracy:

- ✓ The **Maritime Administration**, working under the Department of Transportation, was advocating for the security of the U.S. merchant fleet by issuing warnings to mariners, including a warning sent just one day before the *Maersk Alabama* attack.
- ✓ The **Coast Guard**, working under the Department of Homeland Security, was addressing law enforcement and regulatory issues for the safety and security of mariners; and, in April 2008, issued guidelines for U.S. vessels operating in high-risk waters.
- ✓ The **Department of Defense** was focused on naval operations, including international efforts to stop pirates, by creating a combined task force to counter piracy.
- ✓ The **Department of State** was working through international organizations and governments to develop diplomatic consensus on what governments should do about piracy.
- ✓ The **Department of Justice** worked with international entities to provide guidance on case presentation and prosecution.

### **After *Maersk Alabama***

These early efforts laid the groundwork for an unprecedented whole-of-nation response to piracy. Immediately following the hijacking of the *Maersk Alabama*, government and the military agencies engaged in numerous discussions through the maritime operational threat response process. This process leveraged an existing program used extensively for counter-drug and migrant interdiction operations and expanded it to include virtually all maritime threats.

Predetermined participants have used the maritime operational threat response process to discuss and weigh options to develop courses of action to address threats within the maritime environment.

### **Interagency Coordination**

The *Maersk Alabama* was the first U.S.-flagged commercial vessel to be taken by pirates in recent history, but the attack on the *Liberty Sun* on April 15, 2008 proved this was not going to be an isolated incident.<sup>1</sup>

The Coast Guard answered to this incident by hosting an Interagency Piracy Coordination Meeting, later called the Coast Guard Maritime Security Coordination Call, with representatives from the Department of State, Office of the Secretary of Defense, Joint Chiefs of Staff, Department of Transportation, Maritime Administration, Office of Naval Intelligence, Department of Justice, Department of Commerce, Military Sealift Command, Customs and Border Protection, and Global Maritime Situational Awareness to discuss and agree upon means to make U.S. ships and crews more secure. Representatives from these agencies met three times a week.



**Best management practices.** Photo courtesy of Shipboard Defense Systems Inc.

Eventually the team was joined by the Overseas Security Advisory Council, U.S. Agency for International Development, Naval Criminal Investigative Service, as well as combatant commanders representing African Command, Transportation Command, and Central Command. The addition of these vital stakeholders meant all of the government entities with equities in countering piracy were all talking to each other at least once a week.

The next step was to get input from industry; engaging the maritime industry was a vital focus for U.S. government anti-piracy efforts.

Finally, as an ongoing effort to ensure the safety and security of mariners everywhere, the interagency continues to discuss adoption of best management practices as an international standard. Until piracy is no longer a threat to mariners, the interagency will continue to work together to identify the best course of action.

**About the author:**

Mr. Michael Callahan is a program analyst for the Office of Emerging Policy at U.S. Coast Guard headquarters. He is a retired commander with an extensive background spanning 29 years in Coast Guard operations, including command of Coast Guard ships. In his current assignment, he coordinates with interagency partners to develop and publish national strategy and policy documents.

## Contact Group on Piracy off the Coast of Somalia

On January 14, 2009, the U.S. and other nations created the Contact Group on Piracy off the Coast of Somalia pursuant to United Nations Security Council Resolution 1851. This contact group is an *ad hoc* international body that brings together multiple strands of expertise at the governmental and intergovernmental level. The contact group is comprised of five working groups:

- ✓ **Working Group 1:** Military and Operational Coordination, Information Sharing, and Capacity Building is chaired by the United Kingdom and focuses on force generation, operational coordination, and capacity-building.
- ✓ **Working Group 2:** Judicial Issues, chaired by Denmark, focuses on judicial mechanisms for deterring piracy.
- ✓ **Working Group 3:** Strengthening Shipping Self-Awareness and Other Capabilities. Co-chairs United States Coast Guard and Maritime Administration work closely with the commercial shipping industry to enhance awareness and improve capabilities.
- ✓ **Working Group 4:** Public Information, chaired by Egypt, publicizes pirate damage.
- ✓ **Working Group 5:** Disrupting the Pirate Enterprise Ashore, chaired by Italy, focuses on pirate networks and financial information associated with piracy.

**Endnote:**

<sup>1</sup> The U.S.-flag vessel *Liberty Sun* was attacked by pirates off the coast of Somalia on April 14, 2009. The vessel was hit by four rocket-propelled grenades and automatic weapons. There were no injuries. Information is provided by MARAD on its website at [www.marad.dot.gov](http://www.marad.dot.gov).





U.S. Navy photo  
by Petty Officer  
Brandon Raile.

# Anti-Piracy Education and Training

by CAPTAIN JON S. HELMICK, PH.D., USMS  
 Director, Maritime Logistics and Security Program  
 U.S. Merchant Marine Academy

Midshipmen at the U.S. Merchant Marine Academy (USMMA) receive anti-piracy, maritime security, and anti-terrorism training during their senior bridge resource management course. During this time, they learn how to develop security and anti-piracy plans for a prospective voyage. USMMA midshipmen also take maritime security awareness training prior to their first “sea year” period as cadets aboard operating commercial vessels.

## USMMA Industry Research

Midshipmen in the USMMA maritime security research seminar and in the logistics and intermodal transportation program capstone course conduct applied research projects for outside organizations on maritime security issues, including counter-piracy strategies and tactics. One of these agencies, the National Nuclear Security Administration, requested a project focus on counter-piracy beginning in 2009.

In subsequent iterations, midshipmen—many of whom have transited areas at high risk for piracy—undertook research on other aspects of piracy. Most recently, midshipmen investigated the supply chain implications of Somali pirate attacks and analyzed the use of alternative ship routing to avoid the threat.

## State Maritime Academies

Several of the state maritime academies are active in anti-piracy education and training at the undergraduate and professional education levels.

For example, Maine Maritime Academy operates an anti-piracy defense course at the continuing education level, which is designed to inform merchant vessel officers and crew about the motivation and tactics



Training, drills, and exercises promote vigilance and awareness that help crews prevent, detect, and deter piracy. All photos courtesy of Captain Jon S. Helmick.

## The History

International requirements for merchant mariner security training are delineated in the International Ship and Port Facility Security (ISPS) Code, which primarily focuses on prevention of terrorist acts involving the marine transportation system. Where anti-piracy matters are concerned, the ISPS Code addresses the threat generically, stating the requirements for training of vessel security personnel under such headings as "Recognition of characteristics and behavioral patterns of persons who are likely to threaten security," "Knowledge of current security threats and patterns," and "Techniques used to circumvent security measures."

In the United States, training merchant mariners in maritime security matters is specified in the regulations contained in 33 CFR Subchapter H—Maritime Security, which implement the Maritime Transportation Security Act (MTSA). Much of the language found in Subchapter H pertaining to training requirements is identical, or very similar, to that contained in the ISPS Code.

### U.S. and International Training Standards and Curricula

MTSA Section 109 required the U.S. Secretary of Transportation to develop standards and curricula for maritime security personnel training. This charge was delegated by the Maritime Administration to the U.S. Merchant Marine Academy, which then developed model maritime security courses for vessel, facility, and other personnel.

The academy's work on the MTSA project led to responsibility for developing International Maritime Organization (IMO) model courses:

- ship security officer,
- company security officer,
- port facility security officer.

The IMO published these model courses for use by training providers, carriers, and others worldwide.

In 2003, the joint MARAD/USCG MTSA Section 109 Committee was formed to develop and oversee a national course certification program. In May 2008, the U.S. Coast Guard issued regulations mandating approved training for vessel security officers based on the MTSA model curriculum.

In early 2011, at the request of the Coast Guard, the U.S. Merchant Marine Academy reviewed the mandates contained in the 2010 amendments to the IMO STCW Convention and Code and revised the IMO maritime security curriculum to provide increased anti-piracy competencies for merchant vessel personnel worldwide.

Of the courses involved, those that are focused on vessel personnel and that address piracy topics include:

- ship security officer, 2011 edition;
- seafarers with designated security duties;
- security awareness.

of various pirate groups, ship vulnerabilities, and available defensive measures. This course also includes practical sections on how to be a hostage or deal with a rescue team and provides hands-on training in anti-piracy defensive tactics.

The California Maritime Academy offers undergraduate courses that address piracy in the context of maritime security, maritime history, and international law.

### Union School Courses

The nation's maritime labor unions operate their own schools to provide professional maritime training for their members and others. Anti-piracy training at many of these institutions is embedded in courses that deal with vessel security officer training or maritime security awareness.



Commandos aboard the U.S. Merchant Marine Academy Training Vessel *Kings Pointer* participate in an anti-piracy exercise.

However, some union schools provide stand-alone anti-piracy courses. The STAR Center, for example, operated by the American Maritime Officers organization, offers a one-day anti-piracy seminar that focuses on:

- ➡ current pirate activity, weaponry, and practices;
- ➡ U.S. Coast Guard MARSEC Directive 104-6 (concerning measures to deter, detect, or disrupt piracy);



- ➡ related Coast Guard port security advisories;
- ➡ International Maritime Organization piracy guidance.

The Seafarers International Union, in concert with carrier management, other labor organizations, government agencies, and the military has developed an anti-piracy awareness course that includes information on:

- ➡ protective measures for high-risk areas,
- ➡ evasive maneuvers,
- ➡ individual mariner assignments,
- ➡ communications,
- ➡ responses to small-boat attacks and hostage situations.

### Industry Training Providers

Private-sector providers also offer anti-piracy training courses for merchant mariners and for the security teams that are sometimes embarked to protect ships transiting high-risk waters.

As is the case with the union schools, these providers often embed anti-piracy training in other courses, such as those intended for vessel security officers. Additionally, it is possible to take an anti-piracy course entirely by distance learning, without any in-residence requirement.

Focused education and training can develop and enhance mariner vigilance, awareness, threat recognition and support competencies such as taking proper security actions, the use of evasive maneuvers, and interfacing with rescuers.

These capabilities can indeed be effective in detecting, preventing, and deterring attacks by pirates, and—in the worst case—surviving a hostile takeover/hostage situation and contending with its aftermath. The maritime nations of the world increasingly recognize the importance of education and training in this context, and



Bridge resource management training. Important anti-piracy elements include route planning to minimize exposure to high-risk areas, evasive maneuvers, and contingency planning.

## U.S.-Philippines Counter-Piracy Education and Training Memorandum of Cooperation

In 2009, U.S. Secretary of Transportation Ray LaHood and Philippine Secretary of Foreign Affairs Alberto Romulo signed a memorandum of cooperation that emphasizes the importance of appropriate mariner education and training to prevent, detect, deter, and survive pirate attacks.

The signatory countries are collaborating to enhance marine transportation safety. Efforts include:

- exchanging personnel to help develop a robust seafarer labor force;
- organizing joint conferences, seminars, workshops, meetings, training sessions, and outreach and education programs;
- supporting collaborative projects and demonstrations, including joint research projects, studies, and reports;
- facilitating linkages among representatives from academia, industry, and government to promote best practices and maritime transport information exchange;
- sharing information regarding national programs subject to the respective government's laws and regulations.

**For more INFORMATION:**

To learn more about the schools and educational organizations in this article, go to:

**U.S. Merchant Marine Academy**  
300 Steamboat Road  
Kings Point, NY 11024  
Telephone: 516-726-5800  
<http://www.usmma.edu/default.htm>

**Maine Maritime Academy**  
5 Pleasant St.  
Castine, ME 04420-0001  
Telephone: 800-227-8465  
<http://www.mainemaritime.edu/>

**California Maritime Academy**  
200 Maritime Academy Drive  
Vallejo, CA 94590  
Telephone: 707- 654-1000  
<https://www.csum.edu/web/mycampus/home>

**The STAR Center in Dania, Florida,**  
operated by the American Maritime Officers  
organization  
2 West Dixie Highway  
Dania Beach, FL 33004-4312  
Telephone: 954- 920-3222  
<http://www.star-center.com/>

**The Seafarers International Union**  
635 4th Avenue, Brooklyn, NY 11232-1001  
Telephone: 718-499-6600  
<http://www.seafarers.org/>

**Paul Hall Center for Maritime Training  
and Education**  
P.O. Box 75  
Piney Point, MD 20674-0075  
Telephone: 877-235-3275.  
<http://www.seafarers.org/paulhallcenter/phc.asp>

**MARAD's Ship Operations  
Cooperative Program, Inc.**  
12021 Open Run Road  
Ellicott City, MD 21042  
Telephone: 301-LET-SOCP (538-7627)

## Anti-Piracy DVD

The U.S. Department of Transportation's Maritime Administration, in partnership with the Ship Operations Cooperative Program, produced a DVD to help train merchant mariners regarding best practices to reduce the risks associated with piracy, theft, and armed robbery at sea.

The DVD is divided into two sections:

1. onboard anti-piracy measures for mariners,
2. crew hostage situation awareness and response.

The final product is intended to prepare merchant mariners to undertake sensible anti-piracy actions, and, in the event of capture, to survive hostage situations.

To order the DVD, go to: [www.socp.us](http://www.socp.us).

international conventions and national regulations increasingly reflect this awareness.

**Acknowledgements:**

The author thanks Dr. Evelyn Hively, Mr. Dennis Compton, Mr. Owen Doherty, Captain Bob Ford, Mr. Greg Hall, and Mr. Todd Ripley for their kind assistance.

**About the author:**

Captain Helmick led the development of U.S. maritime security education and training standards and curricula under the Maritime Transportation Security Act of 2002. He serves as author and co-author of model maritime security courses for the International Maritime Organization. He also chairs the MARAD/USCG committee that developed the national course approval program for maritime security training providers.

# Defending Against Piracy

*Private armed security teams.*

by MR. OWEN DOHERTY  
Director, Office of Security  
U.S. Maritime Administration

The practice of using privately contracted armed security personnel on merchant vessels is relatively new and on the rise. To date, there has not been a single successful pirate attack against a vessel with an armed security team, according to Andrew J. Shapiro, assistant secretary, Bureau of Political-Military Affairs, U.S. Department of State.

A number of flag states are permitting ocean carriers to use armed security teams and more vessels are starting to employ them. Most often, the teams are ex-military personnel, highly trained, and familiar with the maritime environment. However, ship operators must perform due diligence to select a service provider, and many operators worry that, as more teams are established, there could be a drop in their quality.

## The Challenges

Operational challenges include moving weapons to and from vessels and securing weapons during a port call. There are individual port-state control restriction issues that continue to be addressed by government and the private sector. For example, several port states restrict either port calls with weapons aboard and/or do not allow for weapons transfer to and from a vessel.

The International Maritime Organization Facilitation Committee is working to address port state and flag state restrictions. U.S. Customs and Border Protection enforces International Traffic in Arms Regulations, which provide options to ship weapon packages applicable for U.S.-flagged vessels and U.S. ports. Additionally, the U.S. Maritime Administration (MARAD), U.S. Department of State, U.S. Coast Guard, and U.S. Department of Defense work with U.S.-flagged carriers to facilitate weapons movement.

## Vulnerability Assessments

The Maritime Administration has teamed with experts from the Naval Criminal Investigative Service (NCIS), U.S. Transportation Command, and Military Sealift Command to conduct anti-piracy assessments for U.S.-flagged vessels. These assessments provide an opportunity for the vessel master and company security officer to learn from the assessment team and to share their knowledge and innovations, to better protect the vessel.

MARAD/NCIS anti-piracy assistance teams have conducted more than 40 visits aboard U.S.-flagged vessels since April 2009. The program has been so successful that the U.S. Coast Guard, which reviews vessel security plans for all U.S. documented vessels, recommends that vessels participate annually.



Anti-piracy assistance team assessment. Photo courtesy of the Maritime Administration.

## Deterrents

The Maritime Security Centre-Horn of Africa, United Kingdom Maritime Trade Office, Maritime Liaison Office in Bahrain, Northern Alliance Treaty Organization, and the International Maritime Bureau all provide ship masters current information to defend against piracy.

It's also important that this communication goes both ways. A prudent ship master reports in to the Maritime Security Centre-Horn of Africa when entering those waters. While it's impossible to know how many attacks have been avoided due to this information sharing, it is a key element in a layered defense.

Vigilance is another important practice. A vigilant crew is prepared to avoid, evade, and defend against piracy, whether or not armed security is aboard.

Finally, ship characteristics act as a key deterrent. Vessels with low freeboard and slow speeds are much more vulnerable to a pirate skiff.

### Who Commands the Security Teams?

The master of the vessel is ultimately responsible for the safety and security of the vessel and crew, including any private security team. The command issue can be complex if the security team is a military/uniformed team.

Thus, it's important that there is a strong bond between the master and private armed security teams, and the master, crew, and security team must be familiar with each other's terminology, communication equipment, and procedures. The security team and vessel crew should drill together and must be coordinated in the event of an incident. This is critical, particularly if a situation escalates and the crew needs to muster in a safe area.

### Looking Forward

In view of the current trends, private armed security teams will continue to increase as more countries elect to allow for privately contracted armed security personnel employment. The maritime industry looks to international maritime entities to provide armed security team employment guidance as this becomes more prevalent and to ultimately create a standard by which their tasks can be measured.

#### *About the author:*

*Mr. Doherty is the director of the Maritime Administration Office of Security at the U.S. Maritime Administration. Previously he served as the special assistant to the Maritime Administrator. He is a captain in the U.S. Navy Reserves and holds an M.A. from the Naval War College.*

### For more INFORMATION

MARAD lists its piracy advisories on its website: [www.marad.dot.gov](http://www.marad.dot.gov).

Find additional guidance on the "Operational Solutions" tile, "Horn of Africa Piracy" link.

# Locate, Disrupt, Detain

*Collaborative efforts thwart a pirate attack.*

by LCDR TYSON WEINERT  
Senior Aviator  
U.S. Coast Guard

In April 2009, the U.S. Coast Guard Cutter *Boutwell* deployed to high-risk waters in the Gulf of Aden to conduct anti-piracy patrols.



As a result, the cutter successfully disrupted a pirate attack just weeks after the pirate takeover of the container ship *M/V Maersk Alabama*.

The following, drawn from USCG Senior Aviator Tyson Weinert's journal, provides a first-hand account.

## Tuesday, 28 APR 09

The flight brief was uneventful and we departed in our HH-65C Dolphin helicopter and proceeded east to our patrol area. The U.S. Coast Guard Cutter *Boutwell* departed her position south of Yemen to the internationally recommended transit corridor in the Gulf of Aden.

Within the first 10 minutes of the patrol we received a report of a pirate attack on a Gibraltar-flagged cargo ship, located approximately 35 nautical miles away. The crew immediately diverted to render assistance. I was able to contact the captain during our transit, and he informed us that the pirates were closing in rapidly in an open skiff and were firing semi-automatic weapons at his vessel.

The Dolphin approached the distress position from the northwest at a distance of nearly four nautical miles and visually confirmed the initial report. From our position, we could see that the pirate skiff was closing fast on the defenseless ship. I contacted the vessel's captain to inform him we had visual contact, and would be there momentarily to assist.

### Rendering Assistance

Our crew started documenting the attack from an altitude of 1,000 feet as we planned our assistance. We knew from the vessel master's communication that the pirates were armed with semi-automatic weapons, but we didn't know if they had any rocket-propelled grenades—the "weapons of choice" for many pirates in the region.

Our previous research and briefings indicated that, from a certain altitude, we could maneuver away from a rocket-propelled grenade and have a reasonable chance of dodging bullets. We hoped it wouldn't come to that.

As we approached, the imperiled vessel turned hard to port. The course change pointed the vessel straight at us and increased our rate of closure. The pirates' skiff turned to follow until it appeared they saw our helicopter and made a hard turn to starboard, away from their target vessel. Since our first priority was to ensure the safety of the crew, we confirmed with the captain that there were no crew casualties or vessel damage, and then proceeded to follow the skiff.

The aviation detachment supporting CGC *Boutwell* consisted of 10 personnel from five USCG air stations—Los Angeles, San Francisco, North Bend, Barbers Point, and HITRON (helicopter interdiction tactical squadron)—so we dubbed our "unit" LOSBARBSANBENDRON.

The pirate skiff made best speed back toward Somalia, nearly 60 nautical miles away. We followed, vectoring *Boutwell* to close in for the boarding. Two coalition aircraft, a fixed-wing French P-3 and a U.S. Navy SH-60 Seahawk, joined our pursuit. We assumed on-scene commander duties and assigned aircraft separation altitudes, with the P-3 staying above 1,500 feet, the Seahawk below 1,000 feet, and we stayed in between.

### Documenting the Case

Our first challenge was to provide *Boutwell* usable images of the skiff to determine the number of pirates aboard, verify the types of weapons they were carrying, and to help build a case package for prosecution. However, our images were not very clear from 1,000 feet above. Also, the Seahawk couldn't help out with images, since it had no cameras.

While our first priority was to offer the boarding team as much information as possible to complete a safe boarding, we also knew images would be stronger evidence than aircrew testimony alone to establish proof for prosecution. While developing our plan to assist our boarding team, we realized endurance would become an issue for us as well as the Seahawk.

### Divide and Conquer

The Dolphin was more fuel-critical than the Seahawk, so, we positioned ourselves nearly one mile off of the skiff's port bow and descended to 500 feet. The relative position and closure rate provided good escape options and allowed us to close on the skiff at varying speeds, headings, and altitudes to minimize the pirates' ability to aim and fire any weapons in our direction.

The Seahawk circled overhead with weapons trained on the pirate's skiff and monitored our approach. During a pre-brief with the Seahawk crew we had all agreed if there was any danger or shots fired from the skiff, we would break left—away from the skiff—to give them a clear shot. If it was safe to continue, we would break right, capture the highly sought-after photographs, and return to *Boutwell* for our much-needed fuel.

The plan worked, and we were able to capture several images in a reconnaissance pass. These images showed there were seven pirates aboard the skiff. We then departed the scene and returned to *Boutwell* to process the images and refuel.

*continued on page 49*

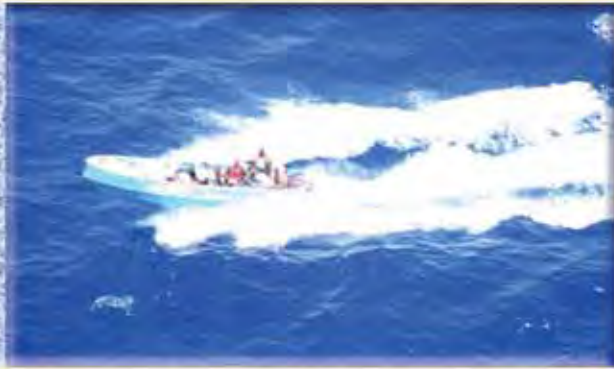


### Departure

The HH-65C Dolphin lifts off from USCGC *Boutwell* to begin its patrol.  
U.S. Coast Guard photo by Petty Officer Erik Walters.

### Recon 1

The first approach to capture images of the pirates.



### Recon 2

With no shots from the pirates, we continued to “break right” and capture more images.

### Recon 3

Final image to capture starboard side of skiff. Seven confirmed aboard.

Recon photos by USCG Petty Officer Jon Trammell.



## Surrender

Pirates waved a white tee-shirt “surrender flag” as they came to a stop, indicating the chase was over.



## Busted

USCGC *Boutwell* boarding team surveys the scene.

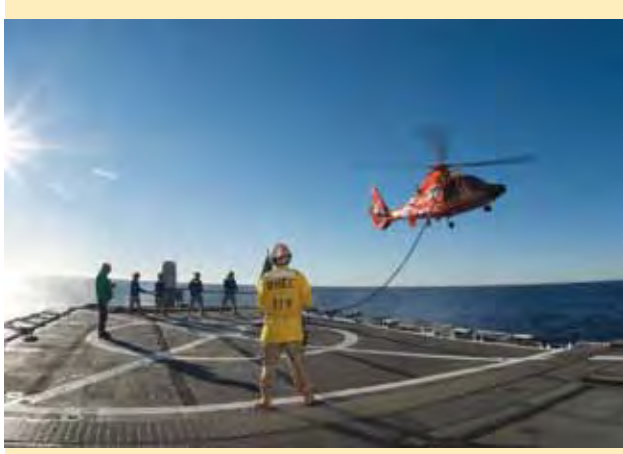
Photos by USCG Petty Officer Dave Marin.





### Meanwhile, Aboard *Boutwell*

As we rendezvoused with our vessel, we briefed a plan that would allow the cutter to continue to close in on the skiff during helicopter refueling. As planned, we hoisted down the cameras for analysis, carried out a helicopter in-flight refueling evolution, and hoisted up new cameras. We then departed to relieve the Seahawk to allow it to refuel.



However, while en route back to the pirate skiff, a report came in from *Boutwell* regarding a problem with the fuel we had just received, and we were forced to break off and land back on the flight deck. At this time, the Seahawk, too, was running low on fuel, and recovered back to its “mother” ship. The French P-3 crew kept their eyes on the pirate skiff, while the helicopters dealt with their respective fuel issues, and *Boutwell* continued pursuit.

### The Capture

By noon, the cutter caught up with the skiff and the boarding team detained all those aboard. The U.S. Coast Guard, along with coalition partners, successfully disrupted the attack on the cargo ship, preserved her multi-million-dollar cargo, and saved her crew from harm. Mission accomplished.

### About the author:

*LCDR Tyson Weinert is a graduate of the Coast Guard Academy and has served in the U.S. Coast Guard as a scuba diver, deck watch officer, and helicopter pilot. His tours include assignments in California, Hawaii, and Washington, DC, as well as an exchange tour flying with the British Royal Air Force’s search and rescue force.*





Photo courtesy of the U.S. Department of Transportation  
Maritime Administration. Photo by Mr. James Kim.

# Global Enforcers

## *Coast Guard law enforcement detachments tackle piracy at its source.*

by LT JAMES MCLAY  
Executive Officer  
U.S. Coast Guard Station New York

LCDR HANS STAFFELBACH  
Tactical Law Enforcement Team Force Manager  
USCG Deployable Operations Group

### **The Modern Threat**

The world has witnessed a dramatic increase in piracy for the past 20 years in the Straits of Malacca in the South China Sea; off the coast of Brazil; in the Caribbean; and, most notably, in the Gulf of Aden and Horn of Africa near the Arabian Peninsula.

The land encompassing the Horn of Africa is divided among five countries: Eritrea, Somalia, Ethiopia, Djibouti, and Kenya. The strategic importance of this area can be attributed to the oil and gas production of the region, and the sea lanes that connect major trading ports in India, Asia, and East Africa. However, the lack of a centralized government in Somalia, rampant poverty, and high unemployment has fueled the rise of piracy in this region, as demonstrated by the approximately 640 ships that have been attacked and the 3,150 hostages taken since 2007.<sup>1</sup>

For years, Coast Guard law enforcement detachments (LEDETs) have helped stem the flow of illegal narcotics through the Caribbean and Eastern Pacific corridors. These small teams—eight or nine members each—are endowed with federal law enforcement authority, and the tactics, techniques, and procedures they have developed from three decades of chasing drug bandits are proving particularly useful in supporting the counter-piracy mission in the Gulf of Aden/Horn of Africa region.

### **Combined Task Force 151**

In January 2009, Combined Maritime Forces, a joint fleet of assets from more than a dozen countries,

established Combined Task Force (CTF) 151 to conduct counter-piracy operations in the Horn of Africa and Gulf of Aden region. CTF 151's charter is to protect global maritime security and ensure the freedom of navigation for the benefit of all nations. This multi-national task force manages its daily operations aboard ships such as the U.S. Navy guided missile cruiser USS *Anzio*, and is comprised of personnel from numerous coalition nations. The task force has been commanded by U.S., Turkish, and Korean naval representatives, exemplifying the unity of effort to defend against piracy aggression.<sup>2</sup>

The show of force on the waters near the Horn of Africa and Gulf of Aden region has been impressive, however, it has not entirely eliminated pirate activity. Brazen acts of hostility toward ocean freighters, pleasure craft, and military warships continue, especially during the months between monsoon seasons where temperate weather conditions and calm sea states create ideal pirating conditions.

CTF 151 continues to produce tangible results, in spite of the relentless determination of the pirates. In 2008, roughly 40 percent of pirate attacks were successful. With the standup of CTF 151, the following year saw successful attacks decrease to 22 percent.<sup>3</sup>

### **Coast Guard Contributions**

Coast Guard LEDETs have participated in CTF 151 operations from its inception. These full-time federal

*continued on page 53*

## Assistance



A VBSS team and U.S. Coast Guardsmen assist crewmembers aboard a dhow adrift at sea due to engine problems. DoD photo by Mass Communication Specialist Eric L. Beauregard, U.S. Navy.

## Surveillance



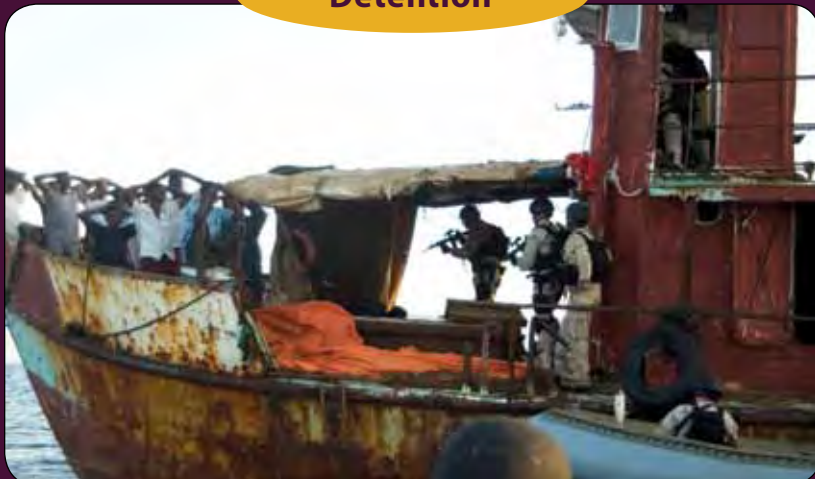
Members of a VBSS team investigate a dhow. U.S. Navy photo by Petty Officer Cassandra Thompson.

## Boarding



Boarding a suspicious dhow. U.S. Navy photo by Petty Officer Cassandra Thompson.

## Detention



Detaining suspected pirates. DoD photo by Mass Communication Specialist Eric L. Beauregard, U.S. Navy.

## Deterrence



The teams head back to the guided missile destroyer USS *Farragut* after disabling a pirate skiff. U.S. Navy photo by Petty Officer Cassandra Thompson.

## Recognition



Adm. Mike Mullen, left, chairman of the Joint Chiefs of Staff, congratulates USCG LT Aaron Renschler upon receiving the National Defense Industrial Association achievement medal. U.S. Coast Guard photo by Petty Officer Michael Anderson.

maritime law enforcement officers are proficient in close-quarters combat, counter drug, maritime interdiction operations boardings, and aerial use of force.

Their specific expertise includes:

- gaining at-sea space accountability (a term that describes the intrusive, stem-to-stern search of a vessel at sea);
- collecting evidence;
- preparing case packages;
- handling detainees.

These officers are also trained to cue in on signs of smuggling and criminal activity, and apply that same acumen to Somali pirates who secrete themselves within the local fishing populace.

In May 2010, a LEDET participated in a particularly noteworthy counter-piracy boarding after a dhow crew failed to answer commands from radio or loud hailer. Upon approach, 17 people exited the pilot house. The boarding team identified 12 Somalis, five Yemeni crewmembers, and a master who made claims of being pirated earlier that morning. A search of the vessel uncovered 13 suspected pirates and a cache of weapons that included AK-47 and G-3 assault rifles, a rocket-propelled grenade launcher with four rocket-propelled grenades, a fragmentation grenade, and more than 200 rounds of ammunition. Upon claims of a Yemeni flag state, the suspected pirates were transferred to the Yemeni government for prosecution.<sup>4</sup>

This same law enforcement detachment, operating in a five-month counter-piracy deployment aboard the USS *San Jacinto* and USS *Farragut*, conducted high-risk boardings of other suspected pirate vessels. The results:

- thwarted pirate attacks,
- detention of 50 suspected pirates,
- seizure of a large weapons and explosives cache,
- liberation of five Yemeni hostages.

For their efforts, three of the members received individual commendations and the officer in charge was awarded the National Defense Industrial Association's award for distinguished service (see photo essay and related article).<sup>5</sup>

Beyond their renowned tactical prowess, LEDETs can also prepare case packages that are critically important to the successful prosecution of these jurisdic-

tionally complex piracy cases. For example, in September 2008, a marine expeditionary unit, a Coast Guard LEDET and a Navy visit, board, search, and seizure (VBSS) team responded to the pirated motor-vessel *Magellan Star*. After seizing back control of the ship and rescuing 11 crew members, the LEDET conducted a detailed security sweep and helped collect evidence for the case package. The case was then turned over to Kenyan authorities for prosecution.<sup>6</sup>

### The Future of Counter Piracy Missions

Coast Guard LEDETs have worked in the counter-piracy mission alongside every U.S. military branch and with numerous coalition navies. In addition, various other specialized Coast Guard teams (maritime safety and security teams and the maritime security response team) have also deployed in support of the counter-piracy mission and have been similarly praised for their contributions.

While these force-multipliers have contributed to successful anti-piracy efforts, the question of how far offshore "homeland security" extends continues to be a topic of debate among Coast Guard stakeholders. Budgetary constraints and competing demands from Congress, the maritime industry, and the American public will likely have the service closely analyzing the appropriate allocation of forces for this mission in the coming decade.

#### About the authors:

*LT James McLay is the executive officer of Coast Guard Station New York. His prior assignments include the Deployable Operations Group, MSST San Diego, and District 11 Office of Law Enforcement. LT McLay received a B.A. in political science from James Madison University, and a M.S. in business administration and management from Boston University.*

*LCDR Hans Staffelbach is the TACLET force manager for the USCG Deployable Operations Group. His prior assignments include Port Security Unit 301, Maritime Intelligence Fusion Center Pacific, and USCGC Walnut. LCDR Staffelbach received a B.A. from Oregon State University and a M.A. in security management from American Military University.*

#### Endnotes:

- <sup>1</sup> U.S. Government Accountability Office, "Maritime Security: Updating U.S. counter piracy action plan gains urgency as piracy escalates off the Horn of Africa," 2011.
- <sup>2</sup> U.S. 5th Fleet Public Affairs, "Combined Task Force 151." Press release, 2011. Retrieved from: <http://www.cusnc.navy.mil/>.
- <sup>3</sup> U.S. Government Accountability Office, "Maritime Security: Actions needed to assess and update plan and enhance collaboration among partners involved in counter piracy off the Horn Of Africa," 2010. (GAO 10-856).
- <sup>4</sup> See related article in this edition.
- <sup>5</sup> "Strength in training: Counter-piracy," <http://coastguard.dodlive.mil/>
- <sup>6</sup> Martin, Capt. A., U.S. Naval Institute, "The Magellan Star: Pirate Take-down, Force Recon Style," September 2010. Retrieved from: <http://blog.usni.org/2010/09/10/the-magellan-star/>



# LEDET 406

*A personal journey in pirate defense.*

by LT AARON RENSCHLER  
Law Enforcement Duty Officer  
U.S. Coast Guard District 7 Command Center

From 2008 to 2011, LT Aaron Renschler served as officer in charge of USCG Law Enforcement Detachment (LEDET) 406. He completed six counter-drug deployments aboard U.S. Navy and allied naval vessels; and, from February to July 2010, he deployed to the *USS Farragut*, *USS San Jacinto*, and *USS Carney* in support of CTF 151 counter-piracy operations. His observations follow.

## LEDET 406

My team, an eight-man advanced interdiction boarding team, held qualifications in:

- combat marksmanship,
- close-quarters combat,
- vertical insertion,
- hook and climb,
- emergency medical technician,
- tactical combat casualty care.

Additionally, each team member trained rigorously for months prior to the deployment, completing a month-long U.S. Central Command pre-deployment training program.

From the beginning of our deployment, it became very evident that, as counter-piracy patrols have increased, pirate attacks were becoming bolder and occurring further out to sea. My team received eight Mayday calls and successfully stopped five of the attacks during our four-month deployment.

## May Days

In May 2010, the *USS San Jacinto* encountered a dhow that failed to answer the order to stop. LEDET 406 and *San Jacinto's* visit, board, search and seizure (VBSS)

team embarked the small boats and forced the dhow to stop. The master informed the boarding team that his vessel was pirated that morning and the pirates and their weapons were still aboard.

We seized 13 pirates and their weapons cache, freeing the Yemeni mariners and their vessel. The boarding team maintained custody of the vessel, pirates, and evidence until they were transferred to the Yemen Navy.

Later that month, we received a Mayday call from a merchant vessel. *San Jacinto's* deployed helicopter

## USCG LEDETS

Since Operation Desert Shield and Desert Storm, Coast Guard law enforcement detachments (LEDETS) have deployed overseas in support of U.S. Central Command operations. In 2009, LEDETS were deployed aboard U.S. naval vessels and had instant success interdicting pirate attack vessels and transferring the pirates to appropriate authorities for prosecution.

USCG LEDETS train and operate with U.S. Navy visit, board, search and seizure teams conducting boardings on suspected pirate vessels and mother ships. They patrol the internationally recommended transit corridor, Gulf of Aden, and the Somali Basin to protect merchant traffic from pirate attacks.

forced the pirates to stop their attack. The pirates then fled in their skiff toward the Somali coast with the helicopter in pursuit. When the helicopter fired warning shots, the pirates stopped.

My team and *San Jacinto's* VBSS team boarded the vessel, but the pirates had dumped all their weapons during the chase. Unfortunately, the only remaining evidence of the incident was the pirates' ladder, which was still attached to the side of the vessel they attacked.

### Best Practices

During our deployment there were several successful attacks, and in most cases the vessel crews were unaware of the attack until the pirates were aboard the vessel.

We found that the best defense against piracy is a vigilant lookout. The crews that were able to detect approaching pirates and employed active defensive measures typically escaped attack. Additionally, merchant vessels that traveled in convoys, placed running fire hoses over the side, emplaced barbed wire on the rails, or transited at high speeds also avoided attack.

### About the author:

*LT Aaron Renschler is currently a law enforcement duty officer at USCG District 7 Command Center.*



Photo courtesy of Oil Companies International Marine Forum and Witherby Publishing Group Ltd.

## High-Risk Seas

### The Gulf of Aden

The gulf runs along the north coast of Somalia and is relatively narrow, which allows pirate attack groups to operate with small high-speed skiffs. These attack skiffs are typically 20 to 30 feet long, equipped with one or two outboard motors. Their high speed combined with their low profile make them nearly undetectable to ship-based radar systems.

From the internationally recommended transit corridor, Yemen or Somalia is only a four-hour transit, and these pirate skiffs are able to carry enough supplies to last a few days at sea, yet remain fast enough to chase down commercial traffic. The pirates also use these small skiffs to blend in with the fishing vessels in the area to remain undetected until they attack.

### The Somali Basin

East of Somalia is a large area of the Indian Ocean, and even though it has significantly less traffic than the Gulf of Aden, pirate attacks in this area are still common.

The attack tactics are similar to those in the Gulf of Aden, but these pirates must typically remain at sea for weeks to cover hundreds of miles, since, as the attacks increased closer to the Somalia coast, the merchant marine community began to travel farther offshore.

The manner in which the pirates survive at sea is crude, but they have successfully pirated vessels more than 500 nautical miles offshore, using a 30- to 40-foot whaling type boat to tow their attack skiffs. These whalers do not provide any protection from heavy weather, so activity in the Somali Basin is reliant on dry weather. Most pirates move to the calmer Gulf of Aden when the monsoon season arrives.

# The Maritime Operational Threat Response Plan

*The unified U.S. response to maritime piracy.*

by MR. SCOTT GENOVESE  
Senior Coordinator  
Global MOTR Coordination Center

## *Maersk Alabama*

In April 2009, a container ship with a company of 20 U.S. citizens was en route to Mombasa, Kenya, with a shipment of food aid and other cargo. At around 6 a.m., on April 8, 2009, the United Kingdom's Maritime Trade Organization in Dubai received a report from the vessel's master that a small boat with armed men was approaching. In high seas, the ship was many miles from any naval or coast guard assets.

The *Maersk Alabama* had been fired upon, and despite the efforts of the ship's company, Somali pirates armed with AK-47 rifles and other small arms boarded the ship. The ship's company retreated to the steering gear room and a cargo control room. The chief engineer executed an emergency shutdown of the engine room machinery, cutting off all internal lighting and ventilation and denying the pirates the ability to navigate the ship. The master remained outside of the safe room and was taken hostage.



In a still frame from video taken by a P-3C Orion aircraft, the U.S.-flagged container ship *Maersk Alabama* is seen Thursday, April 9, 2009, in the Indian Ocean. U.S. Navy photo.

U.S. federal agencies received the first indication of trouble via the signal from the ship's security alert system alarm when the pirates boarded the ship. In less than five minutes, the U.S. Coast Guard's Pacific Area Command Center acknowledged the distress signal and contacted the company's chief security officer, who confirmed that the signal was not a false alarm.

Approximately five hours after the first pirate boarded the vessel and throughout the time the master was held captive, the national-level Maritime Operational Threat Response (MOTR) coordination activity took place.

## **MOTR and *Maersk Alabama***

The MOTR plan and its associated protocols were used during the video feeds that linked federal agency watch centers with senior-level officials and subject matter experts on three continents. Experts and representatives from the Departments of State, Justice, Defense, Transportation, Homeland Security, the intelligence community, and other government agencies participated in the coordinated response.

However, national-level response discussions ended on Sunday, April 12, when one of the pirates pointed an AK-47 at the vessel's captain. The USS *Bainbridge* commanding officer determined the situation had changed and that the captain was in imminent danger. The military snipers aboard *Bainbridge* shot and killed the person holding the AK-47, along with two other Somali pirates who were positioned near an open hatch on the lifeboat.



# The Maritime Operational Threat Response Plan

## The Future of Interagency Coordination

This incident and the successful use of the MOTR plan and associated protocols sparked efforts to create a permanent federal government office to support the MOTR process. The Global MOTR Coordination Center, established in February 2010, now serves as the MOTR plan's executive secretariat for the Department of Homeland Security and the national coordinator for the maritime response to piracy attacks.

The Department of State and Department of Defense continue to collaborate with international partners, and the U.S. Coast Guard and Maritime Administration continue to work closely with maritime and shipping industry representatives to share and institute seafarer training and best management practices for the maritime industry to thwart maritime attacks.

Formal interagency coordination mechanisms are being examined by other countries to formalize *ad hoc* interpersonal maritime coordination. These changes, along with the emergence of more interagency operations and fusion centers, will ensure coordinating each agency's authorities, capacities, and capabilities.

### About the author:

Mr. Scott Genovese is the senior coordinator at the Global MOTR Coordination Center. He served 30 years in the U.S. Coast Guard. He was a co-author of the Maritime Operational Response Plan.

### Bibliography:

U.S. Government Accountability Office, GAO-11-449T, "Maritime Security: Updating U.S. Counterpiracy Action Plan Gains Urgency as Piracy Escalates off the Horn of Africa," March 15, 2011. Available at: <http://www.gao.gov/new.items/d11449t.pdf>.

Mr. Brad Kieserman, Presentation of *Maersk Alabama* case for the 13th Annual CIAG Conference, "Navigating a Sea of Uncertainty."

CNN, "Hostage captain rescued; Navy snipers kill 3 pirates," April 12, 2009. Available at: [http://articles.cnn.com/2009-04-12/world/somalia.pirates\\_1\\_navy-snipers-three-pirates-bill-gortney?\\_s=PM:WORLD](http://articles.cnn.com/2009-04-12/world/somalia.pirates_1_navy-snipers-three-pirates-bill-gortney?_s=PM:WORLD).

The Maritime Operational Threat Response plan (MOTR) is one of several maritime security plans drafted to address post-9/11 port and waterway vulnerability.

Representatives from the Departments of Homeland Security, Justice, and Defense drafted the original plan, (then called the Maritime Threat Response Plan). The initial drafts were rooted in standard military or search and rescue response terms. As such, the oceans were divided into various areas of responsibility, and maritime response agencies were assigned a designated lead based on those areas.

These lead agencies would then have to jockey for the necessary resources under a command and control construct as they took on terrorism or any other maritime threat. Unfortunately, this concept only worked well on paper, or when the response agency had the full authority, capacity, and capa-

bility to handle the threat from initial notification to final disposition of people, vessels, or cargo. But, the newest evolving maritime threats faced by the United States, including piracy and terrorism, did not easily fit into this construct.

Discussions and debates continued regarding jurisdictional authority, areas of responsibility, and lead agencies. Eventually, the experts agreed that a unified effort and a whole-of-government approach would be the best solution.

The MOTR plan and process addressed legal issues, response capabilities, asset availability, and federal agency authorities in addition to identifying lead and supporting agencies. Under the plan, timely information is disseminated, desired outcomes are decided, and agencies move forward to implement the agreed-upon courses of action in accordance with their own procedures.

## Not All Responses Achieve the Desired Outcome

In February 2011, Somali pirates hijacked the *S/V Quest* off the coast of Oman. Four American citizens were aboard.

U.S. Navy ships in the vicinity responded to the distress calls, but arrived too late to prevent the taking of American hostages. MOTR coordination was quick and interagency coordination of the U.S. government's response was swift.

Unfortunately, the four U.S. citizens were killed by their captors despite the best efforts of the U.S. forces involved.<sup>1</sup>

### Endnote:

<sup>1</sup> Brock Vergakis, Associated Press, "Two more get life sentences for yacht hijacking," *Navy Times*, October 4, 2011. Available at: [www.navytimes.com/news/2011/10/ap-piracy-life-sentences-quest-yacht-hijacking-100411/](http://www.navytimes.com/news/2011/10/ap-piracy-life-sentences-quest-yacht-hijacking-100411/)

# An Evolving Target

*The challenge of fighting piracy at sea.*

by LCDR PAUL KAPFER  
JAGC  
U.S. Navy

The internationally recognized transit corridor (IRTC) in the Gulf of Aden runs parallel with hundreds of miles of Somali coastline and reaches a 10-mile-wide choke point at the entrance to the Red Sea. Its ship-

ping destinations are prime targets of opportunity for Somali pirates with small boats and few options. It not only provides transport to Saudi oil terminals but is also the shortest route to Europe via the Suez Canal.

Recent pirate tactics have evolved. Pirates are now using “mother ships” as support vessels to supply and launch the skiffs used to board a merchant ship. Some pirates have converted captured vessels into mother ships—keeping the crews hostage while hunting for other victims. With their greater seaworthiness, these vessels expand the piracy threat outward as far as the waters off India’s west coast.

## The Expanding Threat

The distance from the west end of the IRTC to Mumbai, India, is similar in length to the entire eastern seaboard of the United States. The threat area also extends south into the Indian Ocean nearly that same distance, which is a vast space to protect for the 20 to 30 warships patrolling at any given time.<sup>1</sup>

Deployed warships respond quickly to pirate attacks (embarked helicopters help shorten response times), but help can be hours away when an incident occurs. Naval forces capture pirates in the process of boarding a merchant vessel, or, in some cases, fight their way aboard after the vessel has been hijacked.

Once captured, the authorizing United Nations Security Council Resolutions require that pirates be tried by presenting evidence in a court of law.<sup>2</sup> However, naval forces on



Courtesy of U.S. Naval Forces Central Command/U.S. Fifth Fleet.



A team from the USS *San Jacinto* searches a skiff suspected of recent pirate activity. U.S. Navy photo by Mass Communication Specialist Ja'lon A. Rhinehart.



Ships captured by pirates lie at anchor off Somalia, April 2011. U.S. Navy photo.

scene may lack personnel trained in evidence gathering, which can hinder prosecutions.

### Seeking Justice

Although piracy is a crime of universal jurisdiction, the ungoverned nature of Somalia creates a concern that pirates may request asylum when brought to a warship's home country for trial. The courts of Kenya and the Seychelles have agreed to receive captured pirates, and the U.S. has delivered groups of pirates for trial to Kenya.

Unfortunately, this approach can be time-consuming and expensive, and may require Navy and merchant mariner witnesses to make multiple trips ashore to provide testimony. Additionally, outcomes have been mixed, due to uncertain evidentiary standards. Given these difficulties, some nations opt to destroy pirate vessels they capture and put the pirates ashore.

One thing is certain: The problem of Somali piracy is too large for any single nation to address. Protection and law enforcement pose huge operational challenges, and many mariners find their lives and livelihood threatened by piracy. Perhaps the only positive outcome of this shared threat has been the chance to strengthen ties among maritime nations by working with one another in a real-world, operational environment.

#### **About the author:**

*LCDR Paul Kapfer, JAGC, USN, has developed counter-piracy evidence collection training for the U.S. Navy and has presented it in seminars with Indian naval officers. He works at the Center for Law and Military Operations with the Judge Advocate General's Legal Center and School. The views expressed are his own.*

#### **Endnotes:**

- <sup>1</sup> "Somali Pirates Grow More Daring," *The Media Line/Gant Daily*, August 30, 2011.
- <sup>2</sup> See, e.g., S.C. Resolution 1950, para. 12, U.N. Doc. S/RES/1950, November 23, 2010.



# Caring for Seafarers Affected by Piracy

by MR. DOUGLAS B. STEVENSON  
*Director, Center for Seafarers' Rights  
 The Seamen's Church Institute of NY & NJ*

Pirates have threatened seafarers in many parts of the world for centuries. However, a particularly inhumane form of piracy has emerged within the past two decades in the waters off the coast of Somalia. In 2007, pirates gained world-wide attention when they attacked and captured ships transporting U.N. World Food Program food and supplies to Somalia. Not only did the pirates prevent vital supplies from reaching Somalia, but they also held seafarers hostage until ransoms were paid.<sup>1</sup>

## Uncovering a Dark Secret

In the early 1990s, the Seamen's Church Institute of NY & NJ (SCI) Center for Seafarers' Rights began receiving increasing numbers of reports from port chaplains about seafarers who suffered pirate attacks,

primarily in Asian waters of the Straits of Malacca and the South China Sea. Back then, piracy seemed a surprisingly new problem to us. But, the more we learned about the occurrence of piracy, the more we discovered that it was merchant shipping's dark secret.

In response, in 1995, we, along with the Maritime Law Association of the United States, organized a round-table discussion on piracy. We brought together a broad group of interests including ship owners, government authorities, seafarers, trade unions, security experts, legal scholars, and representatives from countries where piracy was prevalent to exchange views on the then growing piracy phenomenon.

One of the round-table's conclusions was that the full extent of the piracy problem was unknown because piracy incidents were under-reported, and no one kept records on the seafarers who had been attacked by pirates or knew what happened to them afterward.

## Pirate Attacks Intensify

The dramatic increase of pirate attacks off the coast of Somalia in 2007 and 2008, rekindled international attention to piracy. In 2007, we spoke at a maritime security conference focusing on piracy, and we raised piracy concerns that had been troubling us since the 1990s:

- What happened to the seafarers who had been attacked by pirates?
- Did they continue their seafaring careers?
- Were they still fit to work on ships?
- Did they need continuing medical care, and if so, did they receive it?
- Did they get any help in dealing with the aftermath of surviving a pirate attack?



Douglas Stevenson listens to a former hostage. Photos courtesy of Seamen's Church Institute's Center for Seafarers' Rights.

We then proposed, among other things, that the maritime industry should conduct a comprehensive study of the effects of piracy on seafarers, and prepare guidelines for ship owners on caring for seafarers who have experienced pirate attacks.

### The Industry Responds

In 2008, the United Nations Security Council adopted several resolutions addressing piracy off the coast of Somalia. The Contact Group on Piracy off the Coast of Somalia, then comprised of 24 nations, several international organizations, and maritime industry representatives, was established to facilitate and coordinate efforts implementing Security Council Resolution 1851.

Additionally, a coalition of maritime industry organizations developed “Best Management Practices to Deter Piracy in the Gulf of Aden and off the Coast of Somalia,” and more than 25 countries have sent naval units to waters off Somalia to support anti-piracy measures. The International Maritime Organization (IMO) also updated its guidelines for flag states and ship operators on preventing and suppressing acts of piracy.

### Care for Mariners

While this industry-wide response has been robust, scant attention was given to providing for those seafarers and their families who had been affected by the scourge of piracy. We responded by presenting a resolution to the International Christian Maritime Association (ICMA), a world-wide ecumenical organization of church-based seafarers’ agencies. In October 2008, the ICMA adopted a resolution that pledged its members’ cooperation in accomplishing the piracy initiatives, including our proposals to provide support to the seafarers and their families affected by piracy.

We then prepared a paper for ICMA to present to the International Maritime Organization’s Marine Safety Committee containing the ICMA resolution and noting that nations, international organizations, and the maritime industry must continue their efforts to prevent and suppress acts of piracy. In addition, the ICMA asked governments, international organizations, non-governmental organizations, and the maritime industry to devote more attention to the effects of piracy on seafarers and their families—specifically to study the effects of piracy on survivors and to prepare guidelines on caring for seafarers from a health perspective.



Dr. Michael Garfinkle interviews seafarers for SCI’s clinical study.

### Focusing on Piracy-Specific Trauma

Although many studies have examined the effects of traumatic events on police, firefighters, the military, and others, nothing had been published on the specific effects of piracy on seafarers. There was an obvious need to complete a clinical study of the psychological impact of pirate attacks on seafarers that takes into account the unique nature of seafaring, including its multicultural nature. The results of such a study would help determine how best to care for seafarers who survived a pirate attack.

The Marine Safety Committee considered the paper in May 2009, and the IMO put seafarer issues on the front burner of the piracy agenda. Governments and the maritime industry also began a number of new initiatives directed at caring for seafarers.

SCI responded in August 2009, by launching, in conjunction with the Disaster Psychiatry Outreach at the Mount Sinai School of Medicine and the New York Psychoanalytic Society and Institute, a multi-year clinical study. Dr. Michael Garfinkle is leading this study, which is exploring the clinical assessment and treatment of seafarers affected by piracy.

This clinical study seeks to identify unique stressors of piracy hostage situations, along with immediate and ongoing medical evaluation strategies for crewmembers and their families. Study outcomes include plans for clinically assessing seafarers after piracy incidents, assisting families during prolonged piracy episodes, and triaging short- and long-term mental





Post-Piracy Care for Seafarers, Version 3.0

health treatment. The scope of the study goes beyond examining how pirate attacks and hostage-taking affect seafarers, however. It also looks at the stress of simply traveling through pirate-infested waters.

When we began the clinical study, there was no resource available that provided mental health care advice for seafarers affected by piracy. Furthermore, there was no consensus on how to anticipate the mental healthcare needs of seafarers, how to determine whether contact with pirates generated psychological trauma in seafarers, and if intervention was indicated, how an intervention should be carried out.

## Post-Piracy Guidelines

To fill this void, Dr. Michael Garfinkle prepared our first draft of guidelines for the post-piracy care of seafarers, which were developed using methods including an exhaustive review of medical literature on trauma care, as well as using insights from his own clinical experience and training. The draft guidelines also took into account experience gained from the clinical study. They were distributed to an international group of advisors recruited to lend experience and diversity to the effort.

Representatives of the Uniformed Services University in Bethesda, Md., the U.S. Veterans Affairs Healthcare System, the U.S. Coast Guard, the World Health Organization, and the mental healthcare communities of the Ukraine, the Philippines, and Australia contributed to the review process. The guidelines also took into account suggestions from various stakeholders in the maritime industry, including shipowners, P&I clubs, flag states, crewing agencies, unions, and seafarers.

The first version of the guidelines recommended ways to:

- help prepare seafarers for the potentially traumatic experience of transiting zones of piracy,
- establish debriefing procedures to incorporate assessment methods that can determine the need for intervention,
- design and implement follow-up care.

## Industry-wide Acceptance

A second version of the guidelines introduced in September, 2010, reflected knowledge gained from our clinical study and input from maritime stakeholders. Flag states, international organizations, and maritime industry groups circulated these guidelines, and we are very gratified with their broad acceptance. But, even more significant is the wide international attention now being given to piracy's effects on seafarers and their families.

The United Nations, the IMO, and the contact group have placed seafarers' welfare firmly on their piracy agendas. Several maritime industry groups have added procedures for caring for seafarers and their families to their own guidelines and best management procedures, and a coalition of maritime industry stakeholders has established a maritime piracy humanitarian response program to assist seafarers and their families with the humanitarian aspects of piracy.<sup>2</sup>

### Version 3.0

In 2011, we introduced version 3.0 of SCI's Guidelines for Post-Piracy Care for Seafarers. Two significant improvements in this version relate to medical privacy concerns and an appendix containing symptoms commonly experienced by persons who have experienced a traumatic event. These guidelines are deliberately narrow in scope, focusing on seafarers' mental health needs. Our guidelines do not address all of the factors involved in responding to piracy nor do they contain any mandatory elements. Rather, they are intended to provide a useful resource regarding seafarers' mental healthcare considerations.

Shipowners need to know the medical conditions of persons they place on their ships, at the same time, seafarers need to be encouraged to seek effective treatment without fear of losing their jobs. We therefore recommend that the medical professionals who provide therapy and treatment be separate from the company doctor who certifies medical fitness.

The Seamen's Church Institute will continue to improve the guidelines based on recommendations from maritime stakeholders and mental healthcare communities worldwide as well as from knowledge gained in its clinical study of the effects of piracy on seafarers. We continue to ask for comments and recommendations on improving the guidelines.

#### *About the author:*

*Mr. Douglas B. Stevenson directs the Seamen's Church Institute's Center for Seafarers' Rights, an international legal aid and advocacy program for seafarers. He is a lawyer and a retired U.S. Coast Guard officer. He is a graduate of the U.S. Coast Guard Academy and the University of Miami School of Law.*

#### Endnotes:

<sup>1</sup> <http://www.wfp.org/>

<sup>2</sup> <http://www.mphrp.org/>

### **For more INFORMATION**

#### **Mariner Participation**

The study depends upon our medical researchers having access to seafarers who have been affected by piracy, including those who were attacked, held hostage, or simply sailed through waters where pirate attacks occur.

The study is being conducted in conformity with the highest ethical and scientific standards of Mt. Sinai School of Medicine; the interviews are strictly confidential and voluntary.

To participate, contact our lead investigator, Dr. Michael Garfinkle, at [mgarfinkle@seamenschurch.org](mailto:mgarfinkle@seamenschurch.org).



Photo courtesy  
of Maersk Line,  
Limited.







# Enhancing International Efforts to Prosecute Suspected Pirates

by Ms. JENNIFER LANDSIDLE  
*Attorney-Adviser*  
*Office of the Legal Adviser*  
*U.S. Department of State*

## The U.S. Government's Approach

Since the conception of the U.S. strategy to combat piracy off the coast of Somalia, the United States has recognized that any effective counter-piracy strategy must include a plan to ensure that individuals who commit acts of piracy will be held accountable for their actions. The United States has sought to accomplish this by:

-  advocating for all states to criminalize piracy under their domestic law and for states parties to implement their relevant obligations under the Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation and other applicable international conventions;
-  urging states to use these laws to prosecute suspects when they are directly victimized by a pirate attack, e.g., the flag state or state of nationality of the crew or owner of the vessel;
-  seeking to conclude arrangements or agreements with regional states and common victim states outside the region to facilitate the transfer of suspected pirates for prosecution in their national courts;
-  working with the international community to enhance the capacity of these states to prosecute suspected pirates and imprison those convicted.<sup>1</sup>

## International Efforts

The Contact Group on Piracy off the Coast of Somalia (CGPCS), an *ad-hoc* international mechanism of more than 50 participating countries and inter-

national organizations, has provided the primary forum to coordinate the international community's counter-piracy strategy. Legal issues related to the prosecution and imprisonment of pirates have been addressed primarily by its Legal Working Group, Working Group 2 (WG2), chaired by Denmark. WG2 brings together CGPCS participants and legal experts to develop practical legal guidance for states wrestling with the challenges associated with apprehending, transferring, and prosecuting suspected pirates.

The Legal Working Group also provides a forum to exchange information and lessons learned—every meeting begins with an opportunity for states to update the group on any changes to domestic piracy-related legislation, national prosecutions, or other relevant developments. Finally, the Legal Working Group has provided an outlet for a robust discussion among states about whether some prosecution mechanism, beyond national prosecutions, would enhance the international community's ability to deliver judicial consequences for piracy, or what other creative solutions might be brought to bear.

## Successes to Date and Persistent Challenges

Presently, more than 1,000 Somali pirates in 20 states worldwide are either on trial for or have been convicted of acts of piracy, according to the United Nations Office on Drugs and Crime (UNODC). Among these, 28 have been transferred back to the United States to stand trial for attacks on U.S. vessels, nationals, or interests. These national prosecutions demonstrate that, just as piracy has been successfully prosecuted in national courts for hundreds of years,



modern Somali piracy can be successfully prosecuted in ordinary national courts by any willing state with the basic judicial capacity to do so.

At the same time, despite the sheer number of prosecutions worldwide, there is little evidence that these prosecutions are having a deterrent effect. In addition, the international community continues to face a number of challenges that hinder states' ability to bring pirates to justice. For example, following the pirate attack on the S/V *Quest*, and the murder of the four Americans aboard the yacht, Secretary of State Hillary Rodham Clinton called for a comprehensive review of the department's counter-piracy strategy. Enhancing the international community's ability to prosecute and incarcerate pirates has been one key aspect of that policy review.

One of the primary challenges is that many states, to varying degrees, have not demonstrated sustained political will to criminalize piracy and prosecute suspected pirates who attack their interests. Many are understandably daunted by the prospect of prosecuting their first piracy case in modern memory, and still others have expressed concerns that it would be difficult to remove Somali national suspects from their territory in the event they are acquitted; or, if convicted, after they conclude any prison sentence. Finally, states have become increasingly reluctant to accept suspects (for prosecution, because of limited prison capacity and the long-term costs of post-conviction imprisonment), especially in the Horn of Africa region.

### Strategies to Enhance Efforts to Prosecute Suspected Pirates

There are a number of ways the international community can enhance its approach to ensure that pirates are held accountable for their crimes. First, all states must ensure that they have the necessary domestic laws and procedures in place to prosecute suspected pirates. International law provides a robust framework for dealing with piracy, but states must implement this framework to be effective. Law enforcement and/or naval authorities must have the necessary domestic legal authorities to carry out counter-piracy operations, including apprehending and transferring captured suspects. Also, states must have criminal statutes in place that provide a basis for prosecuting these suspects and those who finance or otherwise facilitate acts of maritime piracy.

The definition of piracy under customary international law, reflected in Article 101 of the 1982 U.N. Convention on the Law of the Sea, clearly covers those who knowingly incite or intentionally facilitate an act of piracy by, for example, providing the financing for the skiffs, engines, weapons, and other gear used to pirate a ship.<sup>2</sup> However, even states that have criminalized piracy might not have criminalized it to the full extent of the Article 101 definition. States should examine whether the definition of piracy under their domestic law needs to be expanded to encompass the full definition under international law and/or whether there are other criminal charges that could be brought against an individual who finances or otherwise facilitates an act of piracy.

Second, the international community should support expanding prison capacity in the region, especially in Somalia, and implement a prisoner transfer framework for Somali pirates convicted outside of Somalia. The Legal Working Group has been working with UNODC to develop such a framework, with the full support of the CGPCS. The hope is that increasing prison capacity throughout the region and developing such a framework to allow the controlled transfer of convicted pirates back to Somalia will encourage more states to prosecute suspected pirates in the first place.

Third, while no one state or prosecution mechanism can or should shoulder the entire burden of prosecuting the number of piracy suspects captured every year by the international naval forces operating at

*continued on page 68*

## U.S. Prosecutions of Suspected Pirates

Article I, Section 8, Clause 10 of the U.S. Constitution expressly authorizes Congress to “define and punish piracies and felonies committed on the high seas, and offenses against the Law of Nations.” Piracy is a felony offense codified in U.S. law at 18 U.S.C. §1651, which provides that “whoever, on the high seas, commits the crime of piracy as defined by the law of nations, and is afterwards brought into or found in the United States, shall be imprisoned for life.” Of the more than 1,000 Somali pirates convicted of, or on trial for, acts of piracy around the world, 28 suspected pirates have faced prosecution in the United States for attacks against U.S. vessels and interests.

**United States v. Muse.** The sole surviving pirate from the *Maersk Alabama* attack in early 2009 was prosecuted in New York. He pled guilty to two felony counts of hijacking maritime vessels, two felony counts of kidnapping, and two felony counts of hostage taking, and was sentenced to 34 years in prison.

**United States v. Hasan, et al.** Five defendants were convicted of the crime of piracy under the law of nations, and other assault and firearms-related charges, as a result of an attack on the USS *Nicholas* in 2010. The five convicted pirates were sentenced to life plus 80 years in prison.

**United States v. Said et al.** The six defendants in this case are alleged to be Somali pirates who, on April 10, 2010, mistook the USS *Ashland* for a merchant ves-

sel and attacked the navy ship. One defendant was sentenced by the U.S. District Court for the Eastern District of Virginia to 30 years in prison after he pled guilty to charges of attacking to plunder a vessel, committing an act of violence against persons on a vessel, and the use of a firearm in the commission of a crime of violence. He also pled guilty in the District of Columbia relating to a vessel attack in 2008. The case against the remaining defendants is currently on appeal.

**United States v. Ali:** The defendant was arrested at Washington Dulles International Airport and indicted on federal charges, including conspiracy to commit piracy, piracy under the law of nations, attack to plunder a vessel, and aiding and abetting in the crimes in connection with a 2008 pirate takeover of a Danish merchant ship off the coast of Somalia, and alleged involvement in negotiating a ransom payment.

**S/V Quest prosecutions.** The pirate attack on the *S/V Quest* resulted in the murder of United States citizens Scott Underwood Adam, Jean Savage Adam, Phyllis Patricia Macay, and Robert Campbell Riggle. “The pirates’ greed for tens of thousands in ransom money ultimately led to the cold-blooded murder of the four U.S. hostages off the coast of East Africa. Modern-day pirates are dangerous criminals, not the swash-buckling rogues portrayed in Hollywood movies, and this latest guilty plea shows that attacks against American vessels

will be met with swift justice in an American courtroom,” said U.S. Attorney Neil H. MacBride. Eleven defendants have pled guilty and will receive mandatory life sentences. Three remaining defendants face capital charges and could receive the death penalty if convicted.

**United States v. Shibin.** The defendant is alleged to be the person in Somalia responsible for negotiating the ransom for the four U.S. citizens held hostage on the *S/V Quest*. He was apprehended in Somalia and transferred to the United States to face charges and was indicted for his role in the attack. This marked the first time that the U.S. government has captured and charged an alleged pirate in a leadership role—a hostage negotiator who operated in Somalia.

**U.S. v. Ibrahim.** The defendant was sentenced to 25 years in prison for a violent act of piracy in the Gulf of Aden against a merchant vessel. The defendant pled guilty to conspiracy to commit piracy under the law of nations and conspiracy to use a firearm during and in relation to a crime of violence. The pirates held the vessel, cargo, and 13 crew members captive off the Somalia coast until a ransom of \$1.7 million was paid to the pirates.

---

Information compiled by LCDR John Reardon, the principal legal advisor on piracy issues to the U.S. Coast Guard Director of Prevention Policy.

sea, there may be some advantages to establishing a specialized piracy chamber or court in the region, operating under the national system of the state in which it sits. For example, the Republic of Seychelles, which has prosecuted more than 60 suspected pirates to date, has volunteered to be a “regional prosecution center” on the condition that convicted pirates could then be transferred back to Somalia to serve their sentences, highlighting in concrete terms why prison capacity and a functioning prisoner transfer framework are so important.<sup>3</sup>

Such a specialized court or chamber could help to address many of the challenges that the international community faces by providing a reliable venue in the region where naval forces could transfer cases with relative logistical ease. Such a chamber or court could also provide a focal point for international assistance.

Fourth, the international community should focus more strategic attention on going after the leaders, organizers, and financiers of piracy operations. Over the past few years, it has become evident that Somali piracy functions as an increasingly organized criminal network. To accomplish this, the international community must dedicate sufficient law enforcement resources to tracking and locating the shore-based masterminds. As pirate leaders are identified, the international community must encourage local authorities to apprehend and prosecute these suspects and/or turn them over to other interested states for prosecution.

Finally, the international community (including the private shipping industry) must commit sufficient financial resources to fund these efforts. The CGPCS established the Trust Fund to Support Initiatives of States Countering Piracy off the Coast of Somalia to

help defray the expenses associated with the prosecution and incarceration of pirates, and to support other initiatives of the CGPCS. As such, the fund can accept contributions from states and from the maritime industry.

### **What Lies Ahead**

Piracy off the coast of Somalia is a phenomenon that will likely persist until some measure of governance and stability is achieved in that region, and there are tremendous parallel efforts underway to address that larger issue. From a legal perspective, the challenge of prosecuting suspected pirates benefits from robust and well-established international law on the subject. The key to success: States must implement this international legal framework, which will require sustained dedication of political will.

### **About the author:**

*Ms. Jennifer Landsidle is an attorney-adviser in the Office of the Legal Adviser for the U.S. Department of State. Her portfolio at the time of authorship addressed a range of international law enforcement issues, including legal issues related to Somali piracy. She received her law degree from the University of California-Berkeley School of Law in 2006. This essay will also be published in a forthcoming issue of the Case Western Reserve Journal of International Law. The views expressed in this article do not necessarily represent the views of the Department of State or the U.S. government.*

### **Endnotes:**

- <sup>1</sup> “Countering Piracy off the Horn of Africa: Partnership and Action Plan,” The United States of America National Security Council, December 2008.
- <sup>2</sup> The definition is as follows: “Piracy consists of any of the following acts: (1) Any illegal acts of violence or detention, or any act of depredation, committed for private ends by the crew or the passengers of a private ship or a private aircraft, and directed: (a) On the high seas, against another ship or aircraft, or against persons or property on board such ship or aircraft; (b) Against a ship, aircraft, persons or property in a place outside the jurisdiction of any State; (2) Any act of voluntary participation in the operation of a ship or of an aircraft with knowledge of facts making it a pirate ship or aircraft; (3) Any act of inciting or of intentionally facilitating an act described in subparagraph 1 or subparagraph 2 of this article.”
- <sup>3</sup> “Piracy off the Horn of Africa,” Congressional Research Service, April 2011.

# Lessons Learned

*from* **USCG Casualty  
Investigations**



*Katmai*

***A regular feature in Proceedings:  
“Lessons Learned From USCG  
Casualty Investigations.”***

*In this ongoing feature, we take a close look at recent marine casualties. We explore how these incidents occurred, including any environmental, vessel design, or human error factors that contributed to each event.*

*We outline the U.S. Coast Guard marine casualty investigations that followed, describe in detail the lessons learned through them, and indicate any changes in maritime regulations that occurred as a result of those investigations.*

*Unless otherwise noted, all information, statistics, graphics, and quotes come from the investigative report. All conclusions are based on information taken from the report.*

# Lessons Learned

from **USCG Casualty Investigations**

# Their Last Catch

*The Bering Sea claims another fishing vessel.*

by Ms. KRISTA REDDINGTON  
Technical Writer

In the morning hours of October 22, 2008, the F/V *Katmai* sank into the icy-cold waters of the Bering Sea, claiming the lives of seven crew members aboard. This tragedy may have been avoided if the captain and crew had practiced sound judgment, communicated more clearly with one another, and followed safety protocol.

## The Incident > > > > > > > > > > >

During the evening hours of October 21, the fishing vessel was making its way to Dutch Harbor, Alaska, to offload its catch of 120,000 lbs. of Pacific Cod. Crew members were enjoying some much-needed sleep, unaware that a deadly storm was fast approaching.

The vessel was transiting the Amchitka Pass, located between the Rat and Andreanof Islands, in the Aleutian Islands. It was the engineer's turn to take watch. Prior to retiring to his bunk, the captain informed the engineer that they had to make about 7.5 knots to avoid an oncoming storm.

Six hours had passed when the engineer woke the captain to relieve him from his watch. By the time the engineer informed him that they had only been making between 3.5 and 4 knots, winds were blowing at 45 to 50 knots. It was too late to outrun the impending storm. The captain altered the vessel's course and headed for deeper water so they could better handle the worsening weather.

### Nightmare in Stormy Seas

On October 22, at 1201 Zulu (Z) time, (a term often used by emergency personnel and military to coordinate mission times across several time zones), the

captain sent an email to the F/V *Blue Ballard* explaining he had missed his chance to avoid the storm and his vessel was suffering a beating from the weather. He reported that they were okay, but the weather was deteriorating and the vessel was beginning to list to port.

The captain asked the engineer to try to transfer fuel from port to starboard in an attempt to correct the list, but the engineer found the fuel transfer pump was not working properly. According to the captain, although there was a cross-connect between the fuel tanks, a transfer was only possible by using the fuel transfer pump. A later review of the vessel's fuel piping schematic showed that four valves would have had to be manually opened to allow fuel to pass from one tank to the other.

### Failed Calls for Help

Approximately eight hours after the failed fuel transfer, the captain realized he had lost steering. He sent the deckhand to investigate the steering system while he attempted to notify Coast Guard Communications Station (COMSTA) Kodiak via a single side band (SSB) radio.

When the communications attempt yielded no response, the captain used a second SSB and the vessel's very high frequency (VHF) radio to try to contact COMSTA Kodiak—again, with no response. After the failed attempts to contact the Coast Guard, the captain used the vessel monitoring system to send a second email to the *Blue Ballard* to advise he had lost steering capabilities.

When the engineer returned to the pilothouse, he reported that the door to the lazarette was open, causing flooding. He secured the lazarette door before proceeding to the engine room and began pumping out the water. The vessel's watertight doors were not visible from the pilothouse, nor were they equipped with audible or visual alarms or indicators that would have alerted the captain to their status. Because the vessel's propulsion system remained operable, the captain attempted to use the engines to maintain the vessel's heading.

Another email sent to the *Blue Ballard* explained that the lazarette was flooded. The engineer woke up the crew, directing them to report to the pilothouse and put on their immersion suits. When the engineer reported back to the captain that the water level in the lazarette was falling, the captain told the crew that they could remove their immersion suits, but advised them to remain on the bridge until the situation was under control.

Shortly thereafter, however, the vessel's list began to shift from port to starboard. The captain sent another deckhand to the engine room to check on the

engineer, and discovered that the engine room was flooded with water approximately two feet above the deck plates and about four feet above the keel at the centerline of the vessel. Though the captain stated in later testimony that the source of the water was unknown, the deckhand testified he had heard a conversation between the captain and the engineer stating that the aft deck was submerged, and that water was entering the vessel's processing space. The deck boss stated that he saw the aft door to the processing space open prior to abandoning the vessel.

#### **Abandon Ship!**

The captain again ordered the crew to put on their immersion suits and make preparations to abandon the vessel as he sent a Mayday call on both SSB radios. As the deckhands dropped the life rafts from the top of the pilothouse to the deck, the 10-person life raft fell to the starboard deck and the 15-person life raft got stuck between a freezer basket and the port rail. Several crewmembers dislodged the 15-person life raft and deployed it over the port side of the vessel, while the 10-person life raft was lowered over the starboard side.



The *Katmai* in Hawaii, in 2006. U.S. Coast Guard photo.





Testimony by two of the surviving crewmembers indicated that the 10-person life raft inflated, while the other two testified that they had not seen the raft inflate. An inspection of the life raft in question later on suggested that it had not properly inflated.

Seven crewmembers mustered on the bow, entered the water, and boarded the 15-person life raft. The captain, who had boarded the craft with six crewmembers, had activated the emergency position-indicating radio beacon (EPIRB) approximately 10 minutes prior to abandoning the foundering vessel.

The engineer was last seen moving toward the engine room without an immersion suit. No one was able to say whether he had eventually donned an immersion suit or had abandoned the vessel. Testimony indicated that the engineer may have put the engines in forward gear, causing the vessel to turn to port and to begin rolling over to its starboard side. The captain stated that the vessel was listing on the starboard side and going down by the stern prior to sinking.

The crewmembers in the 15-person life raft were tossed about in the rough waters, and the seas and wind began to lift the life raft's canopy from the hull. The processor foreman removed the gloves of his immersion suit in an attempt to secure the canopy, but a wave washed over the life raft, causing it to overturn and throw the crewmembers—as well as the EPIRB—into the water. Four crewmembers were able to swim back to the torn raft and remain with it, despite being tossed into the water several times during the course of the night and the following day.

### Search and Rescue > > > > > > > >

The alert from the EPIRB was received by the Coast Guard's North Pacific Search and Rescue Area Coordinator (NPSC) at 0907Z on October 22, at the same time it was received by Coast Guard District 13, who then contacted the vessel operations manager to confirm the last known location of the fishing vessel as well as the crew count.

#### Coordinating the Rescue

The NPSC prepared to launch an HC-130 Hercules extended-range surveillance search and rescue transport aircraft, along with a Sikorsky HH-60 Jayhawk helicopter, out of Cold Bay, Alaska, to aid in the rescue. However, the transport and helicopter's crew members had to wait a mandated period of rest time upon arrival to Adak, having reached their maximum permissible work hours.

The NPSC also requested relief crews be flown to Adak Island in a separate C-130H aircraft. Adak Island, an island located near the western extent of the Andreanof Islands, was the land location closest to the vessel.

The first to depart from Air Station Kodiak was the C-130H with the relief crew. Also, another C-130H aircraft was launched from Kulis Air National Guard Base, in Anchorage, and a HC-130H was launched from Kodiak. The HH-60J blew an O-ring while fueling, resulting in a one-hour delay with no additional helicopter support available. The NPSC directed the Coast Guard Cutter *Acushnet* to depart Beaver Inlet and make its way toward the last known position of the fated vessel to assist in the efforts.

While the Coast Guard Cutter *Acushnet* prepared to get underway from Beaver Inlet, the Coast Guard continued to work to coordinate rescue efforts; the fishing vessels *Blue Ballard* and *Courageous* advised that they would aid the search. They were joined by the *Patricia Lee*.

#### Recovery

At the location of the casualty, crew members aboard the surveillance aircraft located two strobes in the water and dropped a life raft near them. The HH-60J located the downed vessel's EPIRB, an empty survival suit with an active strobe, two Coast Guard life rafts, and a partially inflated life raft that was reported to be in poor condition. Approximately 90 minutes later, they recovered the body of a deceased crew member in an immersion suit.

The *Courageous's* crew retrieved several bits of debris including a torn life raft, a life ring in a storage bag, several buoys, fishing boxes, a fishing tote, and two empty survival suits. They later located a second body wearing an immersion suit. Crew aboard the *Patricia Lee* recovered more debris and three additional deceased crew members, whom they transferred to the *Courageous*. This vessel transported the deceased, the debris, and the recovered EPIRB to Adak Island.

Four survivors were located by the HH-60J personnel 16 hours after they had abandoned their struggling vessel, and were transported to the clinic in Adak, Alaska. Following the rescue of the survivors, rescue operations were suspended.

Out of the eleven crewmembers aboard, four were ultimately rescued, five deceased mariners were

*continued on page 74*



# Recommendations

**Following this incident, the Marine Board of Investigations made several recommendations. Of note:**

**Recommendation:** The Coast Guard should initiate a legislative change proposal to amend 46 USC 2101 (11b), detailing the activities that would exempt a vessel from qualifying as a fish processing vessel, including identifying safety concerns resulting from the vessel being classified as “uninspected.” The definition of fish processing vessels should also be changed to include “head and gut” operations on vessels employing more than six crewmembers. The Coast Guard is using information from commercial fishing vessels, as reported in the National Marine Fisheries Service Product and Delivery Codes published in Table 1 to 50 CFR 679, to determine the types of preparation activities being conducted on vessels to assess whether they meet the definition of a fish processing vessel.

**Recommendation:** A regulation should be developed requiring that all watertight doors be alarmed and equipped with an audible and visual alarm system in the pilothouse, indicating the position of the doors. The Coast Guard noted that existing requirements on inspected cargo vessels already exist for watertight doors and visual indicator lights; however, there are no such requirements for audible alarms. The Coast Guard is considering implementing the same standards for fishing vessels as part of a fishing vessel rulemaking project currently underway.

**Recommendation:** A regulation should be developed requiring all fishing vessels to document required drills found in 46 CFR 28.270. The 2010 Coast Guard Authorization Act amended Section 4502 (f) of 46 United States Code to require individuals in charge of a vessel to keep a record of required instruction and drills.

**Recommendation:** A legislative change proposal should be considered to require masters of commercial fishing vessels 30 feet or longer to hold operators licenses for the position based on specific route and tonnage of the vessel. Requiring masters of vessels to hold operator licenses would allow the Coast Guard the ability to set minimum competency and training levels by setting them as a requirement to obtain the license. The 2010 Coast Guard Authorization Act requires competency training for operators.

**Recommendation:** A risk-based analysis of fishing vessel casualties should be conducted to determine the appropriate parameters under which the requirements of 46 CFR Part 28, Subpart E should apply in lieu of the current 79 feet length-based standard. New recommendations (to change the stability applicability standard) in accordance with the recommendations from the study should be developed at least to include vessels that have a dedicated fish processing space, use traps or pots, or employ additional crew to perform any type of processing duties. An Advanced Notice of Proposed Rulemaking discussed the results of two major casualty studies involving fishing vessels and describes a comprehensive review of all previous commercial fishing vessel safety recommendations. These studies are being used to develop proposed amendments to the fishing industry regulations and no substantial benefit would come from conducting an additional risk based analysis.

**Recommendation:** The Coast Guard should seek legislation to require owners and masters of commercial fishing vessels to have stability training to minimize the chances of preventive vessel losses from improper loading and operation. This was also addressed in the 2010 Coast Guard Authorization Act.

**Recommendation:** Legislation should be sought to require that all fishing vessels be inspected regularly to verify compliance with the requirements detailed in 46 CFR Part 28; inspections should be performed by appropriate Coast Guard personnel or a Coast Guard-recognized third-party surveyor. Congress has passed legislation requiring dockside examinations of uninspected commercial fishing vessels at least once every two years.

**Recommendation:** The Coast Guard should review and revise requirements of 46 CFR Part 28 as soon as possible to ensure commercial fishing vessel safety concerns are all adequately addressed and have been identified in previous commercial fishing vessel marine casualties. A review of the requirements in 46 CFR Part 28 is being conducted that includes analysis of past fishing vessel causality reports. A rulemaking project is in development.

**Recommendation:** The current requirements in 46 CFR 160.151-53 should be changed to require that the servicing of Coast Guard-approved life rafts be witnessed by a Coast Guard marine inspector or an accepted third-party inspector. Though it was not agreed to be necessary to witness all approved life raft servicing, it was found that a more consistent oversight is needed. A risk-based guidance for such oversight is being developed in the form of a policy letter.

**Recommendation:** 46 CFR 160.171 should be amended to include that the minimum equipment, as recommended by NVIC 1-92, be carried on each immersion suit to facilitate personnel location. This issue is being considered as part of the fishing vessel safety rulemaking project. It should be noted that not all immersion suits have the means to carry additional locating equipment as recommended by the NVIC.



recovered, and two remain missing and are presumed dead. The engineer is believed to have gone down with the vessel.

## The Investigation >>>>>>>>>>

### The Flooded Engine Room

Testimony indicated there were no problems with machinery or flooding in the engine room prior to the casualty. While it's possible that one source of the flooding may have been from the drain pipe that went from the lazarette into the engine room, most likely the flooding was due to a failure in the hull or in the sea water supply system attached to the vessel's sea chest, according to the Marine Board of Investigation.

The hull may have been severely stressed due to the amount of cargo aboard, the heading of the vessel as a result of the loss of steering, or the severe weather. Any combination of these could have caused a hull fracture or damaged the sea water cooling system for the generators and main engines. As none of the survivors witnessed the source of the flooding in the engine room, the exact cause remains unknown.

### Vessel Stability

At the time of the casualty, the vessel was carrying twice the amount of cargo that was reviewed in the loading conditions examined in the most recent stability report. The increased weight combined with the extreme weather would have increased the possibility that water could have collected and remained trapped on the aft deck, leading to flooding in the processing space.

There were no operational recommendations made in the stability report that would limit the total amount of frozen cargo that could be carried. This left it to the operator to assume that the cargo hold could be completely filled.

Witness testimony indicated that high water had a tendency to accumulate on the aft deck in rough weather. The aft deck was reported to have been underwater at the time of the casualty—a condition that would have reduced the stability of the vessel and increased the possibility that the processing space could have become flooded.

Crew testimony indicated that the flooding began in the lazarette and that the engine room had two feet of water above the deck plates. There was a two- to three-foot crack in a horizontal seam weld of the starboard bulkhead in the processing space. The crack had been temporarily repaired with silicone, with

no evidence suggesting that a permanent repair had been made. Stability analysis (based on a calm water situation and not including the dynamic effects from the heavy winds and seas reducing the vessel's survivability) indicated that the flooding of the lazarette and engine room alone should not have resulted in capsize or sinking.

Some crew members witnessed the processing space taking on water prior to the vessel sinking. The analysis indicated that the vessel would not have been able to remain afloat in the event of unrestrained flooding in the processing space.

### Examinations of the Vessel

Two professional surveys were conducted on the vessel between 1993 and 2008. A marine surveyor examined the vessel while in drydock in August 1996 and evaluated all equipment and machinery, as well as the internal and external coating systems. The interior plating and framing were sealed and not examined. It was concluded that the vessel was in satisfactory condition and suitable for its intended operations. The same surveyor again examined the vessel in November 2007. The scope of the survey was identical to that performed 11 years prior with the same outcome—no recommendations were issued.

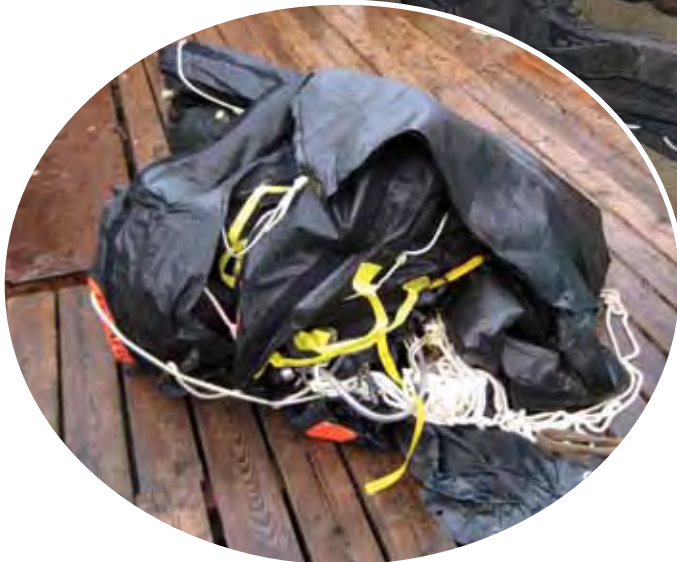
On December 7, 2007, a commercial fishing vessel safety examination was conducted by a Coast Guard fishing vessel examiner. Following the examination, the vessel was issued a requirement to conduct drills for the U.S. Coast Guard Marine Safety Detachment before departing Dutch Harbor for the fishing grounds. No associated activity in the Marine Information for Safety and Law Enforcement database indicates that this requirement was cleared.

### Life Rafts

Two Coast Guard-approved inflatable life rafts were stored on top of the pilothouse: one 15-person craft, manufactured in April 1980, and one 10-person craft, manufactured in February 1994.

The 10-person life raft was a modular craft, with the canopy, canopy floor, canopy support, floor pads, any boarding ramps, and at least one ballast bag detachable from the hull and floor assembly. Upon recovery, the following pieces of the lift raft were salvaged: hull with boarding ramp and inflation hose assembly, floor pads, canopy support attached to the hull with the inflation tube, and painter. The ballast bag, canopy, equipment pack, and compressed gas cylinder were not recovered.

CDR Malcolm R. McLellan (right) and LCDR Scott White, members of the Marine Board of Investigation for the sinking of the fishing vessel *Katmai*, view the debris recovered from the sea as well as the survival suits of the victims. U.S. Coast Guard photo by Petty Officer Allyson E.T. Conroy.



An inspection of the pieces revealed that the canopy, canopy support, and floor pads were detachable from the craft. The primary means of attaching the canopy to the hull was a fabric hook and loop fastener. An inspection of the canopy support indicated that it had ripped away from the floor connections, causing a seam in the support to separate. Further examination of the life raft indicated that the ballast bags were missing.

The heavy seas from the storm may have caused the bags to tear away from the floor, but there were minimal signs of tearing. The stitching was intact, but an assessment of the remaining bag material did not indicate whether the other bags were torn from the raft or if they had been manually cut. A check-

list used to service the raft in 2007 failed to indicate whether the servicing technician inspected or verified the proper installation of the ballast bags.

Several other systems that may have contributed to the failure of the life raft were also found to be questionable:

- The compressed gas cylinder that should have been attached to the life raft by means of a cylinder harness was missing, though the harness was intact. The cylinder could have only fallen out of the harness if it was improperly installed or became disconnected from the inflation hose, allowing it to slide out of the harness. An initial inspection of the hose showed that it was significantly stretched beyond its original length and crushed near the end that would have connected to the inflation valve assembly.
- The 90-degree swivel elbow that threads onto the inflation valve assembly appeared to have signs of corrosion on the threads of the stainless steel connector and on the seating surface. The inflation hose was replaced following the servicing in December 2007, but the 90-degree swivel



elbow was reused after the five-year inflation test. Though the threads were undamaged, the corrosion revealed microscopic stainless steel particles were likely a result of friction between the stainless steel connector and the inflation valve assembly when the fitting was removed or reattached during each servicing.

The hull of the life raft did not appear to have inflated properly when it was deployed from the sinking vessel. A review of video from the Coast Guard search and rescue helicopter showed both hull chambers of the life raft had been at least partially inflated when it was deployed. It is likely that the condition of the recovered craft was a result of being tossed in heavy seas.

Inflation tests showed that the lower hull chamber inflated properly, but the upper hull chamber did not inflate at all when the inflation test commenced, and it was discovered that the check valve, which permitted pressurized gas to enter the craft, was fixed in a closed position. The life raft could have only inflated if the compressed air cylinder had been attached to the inflation hose when it was deployed. It is likely that the cylinder disconnected from the inflation hose because of improper installation during the last servicing, manual disconnection, or by the force of the sea.

The 15-person life raft was deployed and properly inflated. Soon after deployment, however, the canopy began to detach from the hull despite being glued to the upper inflation tube. The crew members attempted to tie the canopy to the hull, but experienced great difficulty due to decreased dexterity because of the restrictive nature of the gloves on their immersion suits. A short time later, the canopy permanently detached when the raft overturned.

Testimony indicated that the raft did not have ballast bags installed, which would have minimized the raft's potential for capsizing. It's possible that the crew did not notice the ballast bags because of their size and color, or because they were missing. During the hours preceding their rescue, the survivors were thrown into the water numerous times and the floor of the raft began to separate, allowing water to enter. Despite exposure to heavy winds, heavy seas and multiple capsizes, the hull remained fully inflated.

#### **Immersion Suits**

At least 12 approved immersion suits were aboard the vessel. Most were stored in a wooden box located

directly aft of the pilothouse, but the captain and deck boss stored theirs in their berthing areas. All immersion suits had been inspected in December 2007 by the Sector Seattle commercial fishing vessel examiner. Of the five suits recovered from the deceased crewmembers, four were between 16 and 19 years old. The fifth was only four years old. All were in good condition.

Several of the suits were outfitted with five-finger gloves attached to the sleeves with glue; others had three-finger mitts that were built into the suit. The gloves increased the dexterity of the wearer, but became detached from the suit easily due to degradation of the glue from either extended exposure to the cold or from age. All materials on the suits are subject to deterioration over time, and Neoprene can degrade from exposure to sunlight, chemicals, and improper storage.

Though there are no current age limits or expiration dates for immersion suits, Navigation and Vessel Investigation Circular (NVIC) 01-08 provides guidance for shipboard inspection and testing of the suits. For example, it requires that each suit should be subjected to an air pressure test at intervals not exceeding three years, or more frequently for suits over 10 years old. Those found to be unsatisfactory should be removed from service.

Three of the survivors testified that their suits worked well, only permitting a small amount of water to enter despite the continued exposure. One survivor stated that water had leaked into his suit and filled the legs and arms. It is feasible that the suit had small holes, or that it was the wrong size. It was noted that one deceased crewmember was wearing a suit that was too large, which likely decreased its efficiency in protecting him from the cold water.

Immersion suits were not specifically assigned to crewmembers. Testimony indicated that immersion suit drills consisted of only one suit used to train the entire crew, which may have prevented them from learning which size suit would best fit them in case of an emergency. It is essential that fishing crews know the correct size for their bodies and understand that different manufacturers have different size specifications.

#### **Vessel Communications**

The fishing vessel had three VHF radios, two SSB radios, and a vessel monitoring system used for ship-to-shore and ship-to-ship communications. At the time of the casualty, the vessel was more than

100 nautical miles from Coast Guard COMSTA Kodiak and the closest communication Hi-Sites were located in Cold Bay, a city in Aleutian Islands East Borough, Alaska, and Attu Island, the largest and westernmost island in the Near Islands group of the Aleutian Islands.

The captain's testimony indicated that one of the vessel's small radio antennas may have been damaged by a bird strike, and it was unknown to what extent the damage affected communications. However, he was able to communicate with other vessels via VHF radio earlier in the day on October 21.

As required by 46 CFR Part 28.245(a)(4), the fishing vessel had a radiotelephone that broadcasted in the high frequency range of 2 to 27.5 MHz. Prior to the vessel sinking, distress calls had been sent on two different frequencies. Due to the vessel's remote location while transiting the Amchitka Pass in the Aleutian Islands, several calls for help failed and the vessel was left floundering in the frigid seas.

The casualty occurred at night, which effectively decreased the range of the SSB transmissions. Coast Guard COMSTA Kodiak had received one unidentified Mayday at the approximate time the vessel sank that the captain confirmed was his voice. He sent distress calls using two frequencies, the first of which had an estimated range of 1,000 miles and may not have successfully reached COMSTA Kodiak. The latter, with an estimated range of 1,500 miles, was likely the call heard by the Coast Guard, but failed to include the vessel's name, location, or the nature of the distress.

## Lessons Learned >>>>>>>>>>

Upon the conclusion of the review of the record and report of the casualty, it was determined that the primary casual factors leading to the casualty were:

- irresponsible voyage planning considering the forecasted weather conditions,
- failure to maintain watertight boundaries,
- overloading of the vessel's cargo hold,
- exposure to heavy wind and high seas.

Unfortunately, commercial fishing continues to rank as one of the most dangerous occupations in the United States.

While the Coast Guard and its fishing industry partners continue in their efforts to improve fishing vessel safety, records show that fishing vessel casualties account for more than 40 percent of the most serious incidents of major marine casualties. It is hoped that through promulgation of vessel casualty reports and via continuing efforts, this number will decrease.

### **Acknowledgments:**

*Proceedings* gratefully acknowledges Marine Board of Investigation members CDR Malcolm McLellan, LCDR Scott White, and LT Michael Benson, and appreciates support from CAPT David Fish, Mr. Tim Farley, and Mr. Ken Olsen, U.S. Coast Guard Office of Investigations and Casualty Analysis; and Mr. Jack Kemerer, chief, Fishing Vessel Safety Division.

### **About the author:**

*Ms. Krista Reddington most recently worked as a technical writer in the Office of Standards and Evaluation at U.S. Coast Guard headquarters. Before writing for the Coast Guard, she was a government affairs associate for the American Waterways Operators.*



# Understanding Sulfur

by MR. THOMAS FELLEISEN  
*Lead Chemical Engineer for Bulk Liquids  
U.S. Coast Guard, Hazardous Materials Standards Division*

## What is it?

Sulfur is an element that appears below oxygen and above selenium in the periodic table. Its use can be traced back to ancient civilization, where it was used to create the color “yellow” in cave paintings. Sulfur is a component of gunpowder and fertilizers, has applications as a fungicide and fumigant, and is used to make sulfuric acid.

Today, the substance is removed from crude oil, natural gas, and tar sands to produce less pollution.

## How is it shipped?

Sulfur is shipped as a bulk liquid or solid.

As a bulk liquid, the element is shipped on tank ships in its molten state. The tanks are heated from 260 to 275 degrees Fahrenheit.

There are two protocols for shipping sulfur in solid form. Formed sulfur produced in petroleum refineries is treated to inhibit dust formation, and is sprayed with water or a surfactant during loading, as sulfur dust can be explosive.

The other shippable form of the solid is called crushed-lump/coarse-grained sulfur. This typically comes from desulfurizing fuel or is found near volcanic sites. This type is more prone to generating sulfur dust. Note: Fine-grained sulfur may not be shipped since it is prone to catching fire.

## What are the hazards?

In its molten state, sulfur is a grade E combustible liquid and category Z pollutant; the solid state has no categorization.<sup>1</sup>

Sulfur is easily ignited by friction; sulfur dust confined in a ship’s hold is dangerous and can explode. Also, sulfur dioxide and other oxides are considered air pollutants and are toxic when airborne.

Sulfur can generate two other dangerous gases—hydrogen sulfide and carbon disulfide.

Hydrogen sulfide can cause brain hemorrhages in small quantities. Ironically, a person can lose the ability to smell the chemical after initial exposure, heightening the exposure risk. Further, hydrogen sulfide can react with rust in low-oxygen environments to form pyrophoric iron sulfide. These sulfides revert to rust when oxygen is subsequently introduced—a reaction that generates considerable heat.

Carbon disulfide spontaneously combusts at the carriage temperature of molten sulfur. Although this tendency decreases with increasing hydrogen sulfide concentrations, this is cold comfort, given the dangers of hydrogen sulfide.

## What is the Coast Guard doing about it?

Sulfur tank vessels must follow special rules for barges in 46 CFR Part 151. For self-propelled tankers, the rules are in 46 CFR 153 and the International Maritime Organization’s bulk chemical codes.

## About the author

*Mr. Thomas Felleisen is the lead chemical engineer for bulk liquids and gases in the Hazardous Materials Standards Division at U.S. Coast Guard headquarters. He served on the International Maritime Organization’s subcommittee on bulk liquids and gases, and is the delegate to its working group on evaluation of safety and pollution hazards of chemicals. He also represents the Coast Guard on the National Fire Protection Association technical committee for liquefied natural gas.*

## Endnote:

<sup>1</sup> International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code), 2007 edition.

**In arguably the most notable ship casualty attributable to sulfur, the SS *Marine Sulphur Queen* disappeared, in February 1963, on its way from Beaumont, Texas, to Norfolk, Va. All 39 crewmembers were lost.**

**Although the hull has never been found, debris from the vessel was found off the Dry Tortugas. A Coast Guard Marine Board examined cargo records and ship design information and determined that the ship was almost always overloaded and very frequently experienced sulfur fires.**

**It is assumed the vessel caught fire and sank.**

# Nautical Engineering Queries

Prepared by NMC Engineering Examination Team



1. If the field excitation is increased to one of two alternators operating in parallel and decreased on the other, what will be the result on the alternator with the field excitation increased?
  - A. The power factor will change in the lagging direction
  - B. The power factor will change in the leading direction
  - C. The kilowatt load will be greatly increased
  - D. The kilowatt load will be greatly decreased

---
2. Generally, where should you expect to find the greatest amount of wear on a cylinder liner?
  - A. Adjacent to the piston skirt when the crank is on TDC.
  - B. Along the lower part of the liner wall opposite the control ring.
  - C. Opposite the top ring shortly after piston travel has ended on the compression stroke.
  - D. Opposite the oil control ring when the crank is on bottom dead center.

---
3. A ship travels 234.02 nautical miles in 24 hours at an average propeller speed of 60 rpm. If the propeller pitch is 20.07 feet, what is the propeller slip during this passage?
  - A. 18 percent
  - B. 20.46 percent
  - C. 22.10 percent
  - D. 26.20 percent

---
4. Coast Guard Regulations (46 CFR Part 56) require that screw joints shall not be used in piping systems where severe erosion, crevice corrosion, shock, or vibration is expected to occur, nor at temperatures over \_\_\_\_\_.
  - A. 450° Fahrenheit
  - B. 650° Fahrenheit
  - C. 825° Fahrenheit
  - D. 925° Fahrenheit



1. A. The power factor will change in the lagging direction **Correct Answer.** Transfer of reactive load is accomplished by changing the individual alternator field excitation currents in opposite directions. Increasing the reactive load requires increasing the voltage setting of the alternator assuming more reactive load, which will cause the alternator power factor to change in the lagging direction.
- B. The power factor will change in the leading direction **Incorrect Answer.** As stated in choice "A," transfer of reactive load is accomplished by changing the individual alternator field excitation currents in opposite directions. Decreasing the reactive load requires decreasing the voltage setting of the alternator giving up reactive load, which will cause the alternator power factor to change in the leading direction.
- C. The kilowatt load will be greatly increased **Incorrect Answer.** Transfer of kilowatt load is accomplished by changing the individual governor speed settings in opposite directions. Increasing the kilowatt load requires raising the speed setting of the alternator assuming the additional load.
- D. The kilowatt load will be greatly decreased **Incorrect Answer.** As stated in choice "C," transfer of kilowatt load is accomplished by changing the individual governor speed settings in opposite directions. Decreasing the kilowatt load requires lowering the speed setting of the alternator giving up the load.

2. A. Adjacent to the piston skirt when the crank is on TDC. **Incorrect Answer.** The skirt exerts relatively low thrust upon the cylinder wall. The associated cylinder wall temperatures are relatively low and lubrication of the effected region is relatively easy to achieve. The result is relatively low wear.
- B. Along the lower part of the liner wall opposite the control ring. **Incorrect Answer.** The oil control ring exerts relatively low thrust upon the cylinder wall. The associated cylinder wall temperatures are lower than the region associated with the compression rings, and lubrication of the effected region is easier to achieve as compared to the compression rings. The result is relatively low wear.
- C. Opposite the top ring shortly after piston travel has ended on the compression stroke. **Correct Answer.** The top compression ring exerts the greatest thrust against the cylinder wall. The thrust is maximum when the piston is beginning to move downward on the power stroke. The temperature of the cylinder wall is at its highest and lubrication of the effected region is difficult to achieve as compared to the other compression rings. This results in the region of greatest wear under normal operating conditions. The wear in this region results in the formation of the characteristic "ridge" associated with the top of the cylinder liner.
- D. Opposite the oil control ring when the crank is on bottom dead center. **Incorrect Answer.** Choice "D" is similar to Choice "B" above, except that the lowest part of the liner wall opposite the oil control ring is specified. Due to position and ease of lubrication, this translates into relatively low wear.

3. A. 18 percent **Correct Answer.**  

$$\text{Slip Ratio} = \frac{E - A}{E} (100)$$

<p>E = Propeller Speed × Pitch = engine distance per minute                  E = (60 revolutions/minute)                  (20.07 feet/revolution)                  E = 1204.2 feet/minute</p>	<p>A = actual distance advanced per minute                  A = 234.02 nautical miles (6076 feet/mile) ÷ (24 hours) (60 minutes/hour)                  A = 1,421,905.5 feet ÷ 1440 minutes                  A = 987.4 feet/minute</p>
---	---

$$\text{Slip Ratio} = \frac{1204.2 - 987.4}{1204.2} (100)$$

$$= 18 \%$$
- B. 20.46 percent **Incorrect Answer.** Choice "A" is the only correct answer.
- C. 22.10 percent **Incorrect Answer.** Choice "A" is the only correct answer.
- D. 26.20 percent **Incorrect Answer.** Choice "A" is the only correct answer.

4. *Note: The question makes reference to 46 CFR Part 56, within Subchapter F, Marine Engineering. "Threaded joints" cites are found in part §56.30-20.*
- A. 450° Fahrenheit **Incorrect Answer:** Choice "D" is the only correct answer.
- B. 650° Fahrenheit **Incorrect Answer:** Choice "D" is the only correct answer.
- C. 825° Fahrenheit **Incorrect Answer:** Choice "D" is the only correct answer.
- D. 925° Fahrenheit **Correct Answer:** 46 CFR 56.30-20(c) states: " Threaded joints may not be used where severe erosion, crevice corrosion, shock, or vibration is expected to occur; or at temperatures over 925° Fahrenheit."



# Nautical Deck Queries

Prepared by NMC Deck Examination Team

# Q

uestions

1. **BOTH INTERNATIONAL AND INLAND: When do the rules require both vessels to change course?**
  - A. Any time the danger signal is sounded
  - B. When two power driven vessels are crossing and it is apparent to the stand-on vessel that the give-way vessel is not taking appropriate action
  - C. When two power-driven vessels are meeting head-on
  - D. All of the above

---
2. **You are on watch at night in clear visibility and the vessel has just been anchored. What is the first thing you should do after the anchor has been let go?**
  - A. Stop the engines
  - B. Take bearings to obtain the ships position
  - C. Turn off the running lights and turn on the anchor lights
  - D. Lower and illuminate the accommodation ladder

---
3. **What is the period of time from around 1008 DST (ZD +4) at Canapitsit Channel, MA, on 7 August 1983, in which the current does not exceed 0.4 knot?**
  - A. 0945 to 1031
  - B. 0950 to 1026
  - C. 0955 to 1021
  - D. 1000 to 1024

---
4. **On every vessel, where must distress signals be stowed?**
  - A. On or near the navigating bridge
  - B. On the flying bridge not closer than 15 feet to any bulkhead
  - C. Above the freeboard deck away from heat
  - D. In an enclosed space below the freeboard deck away from heat



1. A. Any time the danger signal is sounded      Incorrect Answer.  
 B. When two power driven vessels are crossing and it is apparent to the stand-on vessel that the give-way vessel is not taking appropriate action      Incorrect Answer.  
 C. When two power-driven vessels are meeting head-on      **Correct Answer.** International & Inland Rule 14 defines "Head-on Situation" as follows: When two power-driven vessels are meeting on reciprocal or nearly reciprocal courses so as to involve risk of collision each shall alter her course to starboard so that each shall pass on the port side of the other.  
 D. All of the above      Incorrect Answer

2. A. Stop the engines      Incorrect Answer  
 B. Take bearings to obtain the ships position      **Correct Answer:** The Merchant Marine Officers Handbook states: "Take bearings as soon as anchored, turn out running lights, turn on deck lights, and be sure the anchor lights are burning. Check your anchor bearings frequently." It is important to immediately establish your position so that you will be able to recognize if your anchor is dragging and appropriate action can be taken.  
 C. Turn off the running lights and turn on the anchor lights      Incorrect Answer  
 D. Lower and illuminate the accommodation ladder      Incorrect Answer

3. *Note: Using COMDTPUB P16721.46 Reprints from the Tide Tables and Tidal Current Tables, use Table 2 to determine Canapitsit Channel, MA is a subordinate station to the Cape Cod Canal. From the daily pages, for the date in question for Cape Cod Canal, look for the time period near to the desired time and add one hour to account for DST, then apply Table 2 time correction.*  
 A. 0945 to 1031      Incorrect Answer  
 B. 0950 to 1026      Incorrect Answer  
 C. 0955 to 1021      **Correct Answer: See solution below.**  
 D. 1000 to 1024      Incorrect Answer

Slack Water @ 0806 + 1 hour = 0906 + 1 hour 2 minute correction from Table 2 = 1008

Ebb @ 1051 + 1 hour = 1151 + 26 minute correction from Table 2 = 1217

From Table 4 -Duration of Slack Table B

Enter across the top with the desired current given in the question of 0.4 knots

Enter down the left column with the max velocity of 2.0. This value is the closest value to the speed of the Ebb at 1217,  $(4.4) \times (.4) = 1.76\text{kts}$

Where the two columns intersect we determine the value of 28 minutes is to be used. Half of that value is subtracted, and half is added to the corrected slack water time. This is the range of when the current will be weak and will not exceed 0.4 knots.  $1008 - 14 \text{ minutes} = 0954$  and  $1008 + 14 \text{ minutes} = 1022$

4. A. On or near the navigating bridge      **Correct Answer:** 46 CFR 199.60 states:  
     (c) Distress signals. Each vessel must—  
     (1) Carry not less than 12 rocket parachute flares approved under approval series 160.136; and  
     (2) Stow the flares on or near the vessel's navigating bridge.  
 B. On the flying bridge not closer than 15 feet to any bulkhead      Incorrect Answer  
 C. Above the freeboard deck away from heat      Incorrect Answer  
 D. In an enclosed space below the freeboard deck away from heat      Incorrect Answer

Upcoming in

- ***100 Years of Marine Safety***
- ***Marine Casualty Investigation Process***
- ***The Arctic***

If your command is interested in "Championing" a *Proceedings* edition, contact the executive editor at 202-372-2315. Champion's Guidelines are available on the *Proceedings* website, [www.uscg.mil/proceedings](http://www.uscg.mil/proceedings).

Mailing Address:  
U.S. Coast Guard,  
*Proceedings Magazine*,  
2100 2nd St. S.W.  
Mail Stop 7681  
Washington, DC 20593

Phone:  
202-372-2316

Email:  
[HQS-DG-NMCPceedings@uscg.mil](mailto:HQS-DG-NMCPceedings@uscg.mil)

Website:  
[www.uscg.mil/proceedings](http://www.uscg.mil/proceedings)

**Allen, Sr., Mr. Craig H.**

Vol. 68, No. 1; Waterways Management; Spring 2011; "How Narrow is 'Narrow'? NAVSAC recommends the Coast Guard develop navigation criteria." p. 16

**Arroyo, Mr. Jorge**

Vol. 68, No. 1; Waterways Management; Spring 2011; "The Automatic Identification System: Then, now, and in the future." p. 51

**Barone, Mr. Anthony.**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The Secure Chain: Interactions among supply chain members can ensure security." p. 6

**Bergan, LTJG Bradley Patrick**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Revolutionizing MTS Recovery: The Common Assessment and Reporting Tool." p. 60

**Berkson, Dr. Jonathan**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Coast Guard Cooperation in the Arctic: USCGC *Healy's* continental shelf mission." p. 58

**Bright, LCDR Charles**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Abandoned and Derelict Vessel Removal." p. 28

**Brohl, Ms. Helen A.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The U.S. Committee on the Marine Transportation System: Enabling a federal agency partnership in support of the U.S. marine transportation system." p. 11

**Burgess, LCDR Channing**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Mass Rescue Operations: Passenger vessel safety specialists prepare ferry and cruise industries for catastrophe." p. 34

**Burns, CDR William**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Vessel Traffic Services as Informational Managers: Improving how information is shared with stakeholders." p. 42

**Cairns, Mr. Bill**

Vol. 68, No. 1; Waterways Management; Spring 2011; "e-Navigation: Revolution and evolution." p. 48

**Callahan, Mr. Michael**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The National Strategy for Global Supply Chain Security: The path to an intermodal security program." p. 16

**Cardona, Mrs. Jeanne L.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The Ship's Agent: The maritime principal's eyes, ears, and hands in the port." p. 40

**Carmel, Mr. Stephen M.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Maritime Pathways of Commerce: Ocean shipping and the U.S. flag merchant marine." p. 29

**Chambers, Mr. Matthew**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Marine Transportation System Statistical Knowledge: Closing data gaps through a wide range of data products and publications." p. 71

**Climenhaga, Ms. Jen**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The Coast Guard and Customs and Border Protection Partnership: Securing an evolving maritime supply chain." p. 11

**Cook, CAPT Pauline**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Champion's Point of View." p. 5

**Cullather, Mr. John;**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Congressional Support of the Marine Transportation System: Helping the MTS expand and adapt to its growing needs." p. 21

**Culver, Mr. Paul**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Mass Rescue Operations: Optimizing success." p. 22

**Cummings, Mr. George**

USCG Ret.; Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Los Angeles Port Police: Using advanced technology to reduce the risk of terrorism." p. 55

**Detweiler, Jr., Mr. George**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Collaborating to Mitigate Risk: The tools that guide the process." p. 22

Vol. 68, No. 1; Waterways Management; Spring 2011; "Offshore Renewable Energy Installations: Impact on navigation and marine safety." p. 19

**Edwards, Mr. David L.**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Search and Rescue International Engagement: Positive relationships leverage SAR power." p. 6

**Farr, LT Scott**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "A Smartphone to the Rescue: Only one thing was clear: 'Call the Coast Guard!'" p. 48

**Frost, Mr. Peter E.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Fair, Efficient Dispute Resolution: The U.S. Department of Justice keeps the marine transportation system moving." p. 65

**Goward, Mr. Dana**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Director's Perspective." p. 4

**Green, Ms. Louritha**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Trade Recovery: A complement to risk management." p. 69

**Grisoli, Major General William T.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The U.S. Army Corps of Engineers: Delivering innovative, sustainable solutions to the nation's engineering challenges." p. 57

**Hayes, LT Byron**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Helping You Safely Help: Good Samaritan search and rescue support." p. 51

**Hunt, Mr. Harold**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Raising the Ante: Mass rescue operations in the Arctic." p. 25

**Janelle, Mr. Rick**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "10 Mass Rescue Operation Realities." p. 28

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Accident Prevention. Best Practices: Safety the way it ought to be done." p. 55

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Helping You Safely Help: Good Samaritan search and rescue support." p. 51

**Johnson, Jr., Mr. Collister**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The St. Lawrence Seaway: A vital transportation treasure." p. 42

**Johnson, Mr. Mark**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Securing Certain Dangerous Cargoes." p. 49

**Jones, LT Sharmine**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Notice of Arrival and Departure: A link to maritime domain awareness and safety." p. 39

**Jordan, Mr. Thomas B.**

Vol. 68, No. 1; Waterways Management; Spring 2011; Chemical of the Quarter; "Understanding Muds." p. 83

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Chemical of the Quarter; "Understanding Urea." p. 98

**Junemann, Dr. Carolyn E.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Establishing Ballast Water Test Facilities—Success! A "win" for the environment and the marine transportation system." p. 63

**Khalifa, Ms. Daisy R.**

Vol. 68, No. 3; Search and Rescue; Fall 2011; Lessons Learned; "Instant Instability; A sturdy dragger succumbs to deadly ice build-up." p. 60

**Khandpur, Mr. Rajiv**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The U.S. Marine Transportation System: Federal responsibilities, funding, and coordination." p. 6

**Kiefer, CAPT Kevin**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "International Maritime Organization User Guide: Managing risks to enhance maritime security." p. 27

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The DHS Secure Supply Chain Initiative: Engaging the global community." p. 21

**Knox, Mr. Allan**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Space-Based Search and Rescue." p. 19

**Krause, LCDR Michael**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Coast Guard Cooperation in the Arctic: USCGC Healy's continental shelf mission." p. 58

**Lahn, Mr. Burt**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Collaborating to Mitigate Risk: The tools that guide the process." p. 22

**LaHood, Mr. Ray**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "CMTS Chairman's Perspective." p. 4

**LaRue, Jr., Mr. Edward J.**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Developing Navigation Standards: The IMO Subcommittee on Safety of Navigation." p. 45

**Lee, Mr. George "Rob"**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "10 Mass Rescue Operation Realities." p. 28

**Lidinsky, Jr., Mr. Richard**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The Federal Maritime Commission: Celebrating 50 years of developing efficient intermodal practice development and leadership." p. 33

**Little, Mr. Stephen D.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Inland Waterways Infrastructure Revitalization: The Inland Waterways Capital Development Plan." p. 50

**Long, Mr. David**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Our Marine Transportation System. The Competitiveness Context: A competitive U.S. supply chain infrastructure." p. 36

**Lundstrom, Ms. Joan**

Vol. 68, No. 1; Waterways Management; Spring 2011; "The San Francisco Bay Region's Harbor Safety Committee: Communication and collaboration fuel success." p. 32

**Lynn, LCDR Kevin**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Multi-Agency Strike Force Operations: Combining forces extends capabilities." p. 52

**Mack, CDR Lisa**

Vol. 68, No. 1; Waterways Management; Spring 2011; "International Ice Patrol: Guardians on the Grand Banks." p. 61

**Maffia, LCDR Tony**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Collaborating to Mitigate Risk: The tools that guide the process." p. 22

**McBride, CAPT David**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Champion's Point of View." p. 5

**McGregor, Mr. Brian M.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Infrastructure Moves Agriculture: Reliable waterways provide resiliency and enhance recovery after disruptions." p. 54

**Mehta, Mr. Ajay**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "The International Cospas-Sarsat Programme: Taking the 'search' out of search and rescue." p. 12

**Merkle, Mr. Edward**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Keeping Cargo Moving: How marine terminals process supply chain data." p. 42

**Mes, Mr. Marc**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "International Maritime Organization User Guide: Managing risks to enhance maritime security." p. 27

**Moon, Mr. Sean K.**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The Asia-Pacific Economic Cooperation: Regional efforts that support global solutions." p. 29

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The DHS Secure Supply Chain Initiative: Engaging the global community." p. 21

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The National Strategy for Global Supply Chain Security: The path to an intermodal security program." p. 16

**Moose, LCDR Ellis H.**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Improving the Marine Event Program." p. 25

**Morgan, LT Benjamin**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Domestic Icebreaking Operations." p. 39

**Mutschler, Ms. Pat**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The Harbor Maintenance Fund: Collecting funds necessary to maintain our waterways." p. 46

**Nagle, Mr. Kurt**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "America's Seaports Promote Prosperity: A strong infrastructure supports a strong economy." p. 24

**Newton, LT Elizabeth**

Vol. 68, No. 3; Search and Rescue; Fall 2011; Chemical of the Quarter; "Understanding Phenol." p. 74

**Orchard, LT Dan**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "International Port Security: A global challenge." p. 34

**Owens, Mr. Ryan F.**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Trade Recovery Protocols: Making the supply chain more resilient." p. 63

**Peterson, LT Sean**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; Chemical of the Quarter; "Understanding Methyl Ethyl Ketone." p. 86

**Reddington, Ms. Krista**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Lessons Learned; "The Point of No Return: Loss of propulsion leads to allision." p. 90

**Reimann, Mr. Robert**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Securing Certain Dangerous Cargoes." p. 49

**Robinson, Dr. Larry**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Science, Service, and Stewardship: Protecting our resources, strengthening our economy." p. 59

**Smith, Mr. Michael P.**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Area Maritime Security Plans: Securing the global supply chain." p. 58

**Sokol, Mr. Joseph Jr.**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Catastrophic Event Search and Rescue: NORTHCOM coordinates and standardizes SAR efforts." p. 44

**Somma, LCDR Dan**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The Coast Guard and Customs and Border Protection Partnership: Securing an evolving maritime supply chain." p. 11

**Sorrells, Ms. Maranda**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The National Strategy for Global Supply Chain Security: The path to an intermodal security program." p. 16

**Spring, Ms. Margaret**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Champion's Point of View." p. 5

**Steele, Ms. Carolyn**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; Lessons Learned; "Lethal Lifesaver: Carbon dioxide saves a ship but claims two lives." p. 78

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; Lessons Learned; "Night Shift: A broken autopilot and sudden loss of stability leave a fishing vessel's crew fatally short-handed." p. 74

Vol. 68, No. 1; Waterways Management; Spring 2011; Lessons Learned; "Against the Flow: Strong currents, high water overwhelm a tow." p. 64

Vol. 68, No. 1; Waterways Management; Spring 2011; Lessons Learned; "Flying Blind: Thick fog, faulty communications, and inexperience lead to disaster on the Mississippi." p. 73

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Lessons Learned; "The Weak Link: Tragic consequences for a diver despite a host of safety protocols." p. 82

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Lessons Learned; "Catamaran Catastrophes: Two die in tragic dismastings." p. 74

Vol. 68, No. 3; Search and Rescue; Fall 2011; Lessons Learned; "No Way Out: A mariner perishes while trapped inside a confined space." p. 68

**Strong, Mr. Benjamin M.**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Amver in Action: Extending the SAR safety blanket." p. 9

**Sykes, Captain Jeremy**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Keeping Cargo Moving: How marine terminals process supply chain data." p. 42

**Thomas, RDML Cari B.**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Assistant Commandant's Perspective." p. 4

**Thomas, CAPT Paul**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Champion's Point of View." p. 5

**Tieman, Mr. Jason**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "AIS in Action: Enhancing maritime domain awareness in America's waterways, ports, and terminals." p. 45

**Tlapa, CDR Gregory**

Vol. 68, No. 1; Waterways Management; Spring 2011; "The "Black Hull" Fleet: Multi-function assets for multi-mission duty." p. 10

**Tomko, Lt. Col. Charles A.**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "International Search and Rescue: An air perspective." p. 40

**Torres, CDR Carlos A.**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Protecting the Supply Chain: The marine transportation system recovery unit." p. 67

**Trainor, Mr. Robert**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Visual Aids to Navigation. Dispelling the myths." p. 6

**Turner, CDR Mark**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Maritime Distress Radio Beacon: The silent communicator." p. 16

**Walden, Ms. Kemba Eneas**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The DHS Secure Supply Chain Initiative: Engaging the global community." p. 21

**Warner, LCDR Jon Trent**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "U.S. Department of State: Supporting the Arctic marine transportation system." p. 68

**Watson, Captain Michael R.**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Pilotage: One of the oldest yet least-understood maritime professions." p. 36

**Watson, RADM James A.**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Assistant Commandant's Perspective." p. 4

**Webb, Mr. Paul**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Helping You Safely Help: Good Samaritan search and rescue support." p. 51

**Zelasney, Mr. Joe**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Keeping America's Commerce Flowing: Federal support of the marine transportation system." p. 15

**ASSISTANT COMMANDANT'S PERSPECTIVE**

**Thomas, RDML Cari B.**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Assistant Commandant's Perspective." p. 4

**Watson, RADM James A.**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Assistant Commandant's Perspective." p. 4

**BARGES**

**Little, Mr. Stephen D.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Inland Waterways Infrastructure Revitalization: The Inland Waterways Capital Development Plan." p. 50

**McGregor, Mr. Brian M.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Infrastructure Moves Agriculture: Reliable waterways provide resiliency and enhance recovery after disruptions." p. 54

**BULK CARRIERS**

**McGregor, Mr. Brian M.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Infrastructure Moves Agriculture: Reliable waterways provide resiliency and enhance recovery after disruptions." p. 54

**Mutschler, Ms. Pat**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The Harbor Maintenance Fund: Collecting funds necessary to maintain our waterways." p. 46

**CARGO HANDLING**

**Barone, Mr. Anthony.**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The Secure Chain: Interactions among supply chain members can ensure security." p. 6

**Merkle, Mr. Edward**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Keeping Cargo Moving: How marine terminals process supply chain data." p. 42

**Sykes, Captain Jeremy**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Keeping Cargo Moving: How marine terminals process supply chain data." p. 42

**CHAMPION'S POINT OF VIEW**

**Cook, CAPT Pauline**

Vol.68, No. 1; Waterways Management; Spring 2011; "Champion's Point of View." p.5

**McBride, CAPT David**

Vol.68, No. 3; Search and Rescue; Fall 2011; "Champion's Point of View." p. 5

**Spring, Ms. Margaret**

Vol.68, No. 2; The Marine Transportation System; Summer 2011; "Champion's Point of View." p. 5

**Thomas, CAPT Paul**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Champion's Point of View." p. 5

**CHEMICAL OF THE QUARTER**

**Jordan, Mr. Thomas B.**

Vol. 68, No. 1; Waterways Management; Spring 2011; Chemical of the Quarter; "Understanding Muds." p. 83

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Chemical of the Quarter; "Understanding Urea." p. 98

**Newton, LT Elizabeth**

Vol. 68, No. 3; Search and Rescue; Fall 2011; Chemical of the Quarter; "Understanding Phenol." p. 74

**Peterson, LT Sean**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; Chemical of the Quarter; "Understanding Methyl Ethyl Ketone." p. 86

**COLREGS**

**Detweiler, Jr., Mr. George**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Offshore Renewable Energy Installations: Impact on navigation and marine safety." p. 19

Vol. 68, No. 1; Waterways Management; Spring 2011; "Collaborating to Mitigate Risk: The tools that guide the process." p. 22

**CONTAINER SHIPS**

**Cardona, Mrs. Jeanne L.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The Ship's Agent: The maritime principal's eyes, ears, and hands in the port." p. 40

**Johnson, Jr., Mr. Collister**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The St. Lawrence Seaway: A vital transportation treasure." p. 42

**McGregor, Mr. Brian M.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Infrastructure Moves Agriculture: Reliable waterways provide resiliency and enhance recovery after disruptions." p. 54

**Merkle, Mr. Edward**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Keeping Cargo Moving: How marine terminals process supply chain data." p. 42

**Mutschler, Ms. Pat**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The Harbor Maintenance Fund: Collecting funds necessary to maintain our waterways." p. 46

**DIRECTOR'S PERSPECTIVE**

**Goward, Mr. Dana**

Vol.68, No. 1; Waterways Management; Spring 2011; "Director's Perspective." p. 4

**DOMESTIC ICEBREAKING**

**Krause, LCDR Michael**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Coast Guard Cooperation in the Arctic: USCGC *Healy's* continental shelf mission." p. 58

**Morgan, LT Benjamin**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Domestic Icebreaking Operations." p. 39

**EDUCATION**

**Detweiler, Jr., Mr. George**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Offshore Renewable Energy Installations: Impact on navigation and marine safety." p. 19

Vol. 68, No. 1; Waterways Management; Spring 2011; "Collaborating to Mitigate Risk: The tools that guide the process." p. 22

**ENHANCING GLOBAL SUPPLY CHAIN SECURITY**

**Barone, Mr. Anthony.**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The Secure Chain: Interactions among supply chain members can ensure security." p. 6



**Bergan, LTJG Bradley Patrick**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Revolutionizing MTS Recovery: The Common Assessment and Reporting Tool." p. 60

**Burns, CDR William**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Vessel Traffic Services as Informational Managers: Improving how information is shared with stakeholders." p. 42

**Callahan, Mr. Michael**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The National Strategy for Global Supply Chain Security: The path to an intermodal security program." p. 16

**Climenhaga, Ms. Jennifer**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The Coast Guard and Customs and Border Protection Partnership: Securing an evolving maritime supply chain." p. 11

**Cummings, Mr. George**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Los Angeles Port Police: Using advanced technology to reduce the risk of terrorism." p. 55

**Green, Ms. Louritha**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Trade Recovery: A complement to risk management." p. 69

**Johnson, Mr. Mark**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Securing Certain Dangerous Cargoes." p. 49

**Jones, LT Sharmine**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Notice of Arrival and Departure: A link to maritime domain awareness and safety." p. 39

**Kiefer, CAPT Kevin**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "International Maritime Organization User Guide: Managing risks enhancing maritime security." p. 27

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The DHS Secure Supply Chain Initiative: Engaging the global community." p. 21

**Lynn, LCDR Kevin**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Multi-Agency Strike Force Operations: Combining forces extends capabilities." p. 52

**Merkle, Mr. Edward**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Keeping Cargo Moving: How marine terminals process supply chain data." p. 42

**Mes, Mr. Marc**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "International Maritime Organization User Guide: Managing risks enhancing maritime security." p. 27

**Moon, Mr. Sean K.**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The Asia-Pacific Economic Cooperation: Regional efforts that support global solutions." p. 29

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The DHS Secure Supply Chain Initiative: Engaging the global community." p. 21

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The National Strategy for Global Supply Chain Security: The path to an intermodal security program." p. 16

**Orchard, LT Daniel**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "International Port Security: A global challenge." p. 34

**Owens, Mr. Ryan F.**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Trade Recovery Protocols: Making the supply chain more resilient." p. 63

**Peterson, LT Sean**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; Chemical of the Quarter; "Understanding Methyl Ethyl Ketone." p. 86

**Reimann, Mr. Robert**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Securing Certain Dangerous Cargoes." p. 49

**Smith, Mr. Michael P.**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Area Maritime Security Plans: Securing the global supply chain." p. 58

**Somma, LCDR Daniel**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The Coast Guard and Customs and Border Protection Partnership: Securing an evolving maritime supply chain." p. 11

**Sorrells, Ms. Maranda**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The National Strategy for Global Supply Chain Security: The path to an intermodal security program." p. 16

**Steele, Ms. Carolyn**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; Lessons Learned; "Night Shift: A broken autopilot and sudden loss of stability leave a fishing vessel's crew fatally short-handed." p. 74

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; Lessons Learned; "Lethal Lifesaver: Carbon dioxide saves a ship but claims two lives." p. 78

**Sykes, Captain Jeremy**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Keeping Cargo Moving: How marine terminals process supply chain data." p. 42

**Thomas, CAPT Paul**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Champion's Point of View." p. 5

**Tieman, Mr. Jason**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "AIS in Action: Enhancing maritime domain awareness in America's waterways, ports, and terminals." p. 45

**Torres, CDR Carlos A.**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Protecting the Supply Chain: The marine transportation system recovery unit." p. 67

**Walden, Ms. Kemba Eneas**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The DHS Secure Supply Chain Initiative: Engaging the global community." p. 21

**Watson, RADM James A.**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Assistant Commandant's Perspective." p. 4



**ENVIRONMENTAL PROTECTION**

**Bright, LCDR Charles**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Abandoned and Derelict Vessel Removal." p. 28

**Brohl, Ms. Helen A.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The U.S. Committee on the Marine Transportation System: Enabling a federal agency partnership in support of the U.S. marine transportation system." p. 11

**Johnson, Jr., Mr. Collister**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The St. Lawrence Seaway: A vital transportation treasure." p. 42

**Junemann, Dr. Carolyn E.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Establishing Ballast Water Test Facilities—Success! A "win" for the environment and the marine transportation system." p. 63

**Nagle, Mr. Kurt**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "America's Seaports Promote Prosperity: A strong infrastructure supports a strong economy." p. 24

**Robinson, Dr. Larry**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Science, Service, and Stewardship: Protecting our resources, strengthening our economy." p. 59

**Watson, Captain Michael R.**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Pilotage: One of the oldest yet least-understood maritime professions." p. 36

**FERRIES**

**Chambers, Mr. Matthew**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Marine Transportation System Statistical Knowledge: Closing data gaps through a wide range of data products and publications." p. 71

**FISHING VESSELS**

**Edwards, Mr. David.**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Search and Rescue International Engagement: Positive relationships leverage SAR power." p. 6

**Khalifa, Ms. Daisy**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Instant Instability: A sturdy dragger succumbs to deadly ice build-up." p. 60

**INFORMATION TECHNOLOGY**

**Cairns, Mr. Bill**

Vol. 68, No. 1; Waterways Management; Spring 2011; "e-Navigation; Revolution and evolution." p. 48

**INFORMATION TECHNOLOGY INFRASTRUCTURE**

**Brohl, Ms. Helen A.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The U.S. Committee on the Marine Transportation System: Enabling a federal agency partnership in support of the U.S. marine transportation system." p. 11

**Johnson, Jr., Mr. Collister**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The St. Lawrence Seaway: A vital transportation treasure." p. 42

**Little, Mr. Stephen D.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Inland Waterways Infrastructure Revitalization: The Inland Waterways Capital Development Plan." p. 50

**Long, Mr. David**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Our Marine Transportation System The Competitiveness Context: A competitive U.S. supply chain infrastructure." p. 36

**Zelasney, Mr. Joe**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Keeping America's Commerce Flowing: Federal support of the marine transportation system." p. 15

**INTERAGENCY COORDINATION**

**Brohl, Ms. Helen A.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The U.S. Committee on the Marine Transportation System; Enabling a federal agency partnership in support of the U.S. marine transportation system." p. 11

**INTERMODEL**

**Brohl, Ms. Helen A.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The U.S. Committee on the Marine Transportation System: Enabling a federal agency partnership in support of the U.S. marine transportation system." p. 11

**McGregor, Mr. Brian M.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Infrastructure Moves Agriculture: Reliable waterways provide resiliency and enhance recovery after disruptions." p. 54

**Moon, Mr. Sean K.**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The National Strategy for Global Supply Chain Security: The path to an intermodal security program." p. 16

**Smith, Mr. Michael P.**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Area Maritime Security Plans: Securing the global supply chain." p. 58

**INTERNATIONAL MARINE ORGANIZATION (IMO)**

**Cairns, Mr. Bill**

Vol. 68, No. 1; Waterways Management; Spring 2011; "e-Navigation: Revolution and evolution." p. 48

**LaRue, Jr., Mr. Edward J.**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Developing Navigation Standards: The IMO Subcommittee on Safety of Navigation." p. 45

**Moon, Mr. Sean K.**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "The National Strategy for Global Supply Chain Security: The path to an intermodal security program." p. 16

**LEGISLATION**

**Cullather, Mr. John**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Congressional Support of the Marine Transportation System: Helping the MTS expand and adapt to its growing needs." p. 21

**Little, Mr. Stephen D.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Inland Waterways Infrastructure Revitalization: The Inland Waterways Capital Development Plan." p. 50

**Mutschler, Ms. Pat**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The Harbor Maintenance Fund: Collecting funds necessary to maintain our waterways." p. 46

**Nagle, Mr. Kurt**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "America's Seaports Promote Prosperity: A strong infrastructure supports a strong economy." p. 24

**Reddington, Ms. Krista**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Lessons Learned; "The Point of No Return." p. 90

**Steele, Ms. Carolyn**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Lessons Learned; "Catamaran Catastrophes." p. 74

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Lessons Learned; "The Weak Link." p. 82

**Warner, LCDR Jon Trent**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "U.S. Department of State: Supporting the Arctic marine transportation system." p. 68

**Zelasney, Mr. Joe**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Keeping America's Commerce Flowing: Federal support of the marine transportation system." p. 15

**LESSONS LEARNED****Khalifa, Ms. Daisy**

Vol. 68, No. 3; Search and Rescue; Fall 2011; Lessons Learned; "Instant Instability: A sturdy dragger succumbs to deadly ice build-up." p. 60

**Reddington, Ms. Krista**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Lessons Learned; "The Point of No Return." p. 90

**Steele, Ms. Carolyn**

Vol. 68, No. 1; Waterways Management; Spring 2011; Lessons Learned; "Against the Flow: Strong currents, high water overwhelm a tow." p. 64

Vol. 68, No. 1; Waterways Management; Spring 2011; Lessons Learned; "Flying Blind: Thick fog, faulty communications, and inexperience lead to disaster on the Mississippi." p. 73

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Lessons Learned; "Catamaran Catastrophes." p. 74

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Lessons Learned; "The Weak Link." p. 82

Vol. 68, No. 3; Search and Rescue; Fall 2011; Lessons Learned; "No Way Out: A mariner perishes while trapped inside a confined space." p. 68

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; Lessons Learned; "Night Shift: A broken autopilot and sudden loss of stability leave a fishing vessel's crew fatally short-handed." p. 74

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; Lessons Learned; "Lethal Lifesaver: Carbon dioxide saves a ship but claims two lives." p. 78

**MARINE TRANSPORTATION SYSTEM****Bright, LCDR Charles**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Abandoned and Derelict Vessel Removal." p. 28

**Brohl, Ms. Helen A.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The U.S. Committee on the Marine Transportation System: Enabling a federal agency partnership in support of the U.S. marine transportation system." p. 11

**Cairns, Mr. Bill**

Vol. 68, No. 1; Waterways Management; Spring 2011; "e-Navigation: Revolution and evolution." p. 48

**Chambers, Mr. Matthew**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Marine Transportation System Statistical Knowledge: Closing data gaps through a wide range of data products and publications." p. 71

**Cummings, Mr. George**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Los Angeles Port Police: Using advanced technology to reduce the risk of terrorism." p. 55

**Frost, Mr. Peter E.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Fair, Efficient Dispute Resolution: The U.S. Department of Justice keeps the marine transportation system moving." p. 65

**Johnson, Jr., Mr. Collister**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The St. Lawrence Seaway: A vital transportation treasure." p. 42

**Jordan, Mr. Thomas B.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Chemical of the Quarter; "Understanding Urea." p. 98

**Junemann, Dr. Carolyn E.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Establishing Ballast Water Test Facilities—Success! A "win" for the environment and the marine transportation system." p. 63

**Khandpur, Mr. Rajiv**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; The U.S. Marine Transportation System: Federal responsibilities, funding, and coordination." p. 6

**LaHood, Mr. Ray**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "CMTS Chairman's Perspective." p. 4

**Little, Mr. Stephen D.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Inland Waterways Infrastructure Revitalization: The Inland Waterways Capital Development Plan." p. 50

**Mack, CDR Lisa**

Vol. 68, No. 1; Waterways Management; Spring 2011; "International Ice Patrol: Guardians on the Grand Banks." p. 61

**Moose, LCDR Ellis H.**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Improving the Marine Event Program." p. 25

**Morgan, LT Benjamin**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Domestic Icebreaking Operations." p. 39

**Mutschler, Ms. Pat**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The Harbor Maintenance Fund: Collecting funds necessary to maintain our waterways." p. 46

**Smith, Mr. Michael P.**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Area Maritime Security Plans: Securing the global supply chain." p. 58

**Spring, Ms. Margaret**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Champion's Point of View." p. 5



**Torres, CDR Carlos A.**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Protecting the Supply Chain: The marine transportation system recovery unit." p. 67

**Zelasney, Mr. Joe**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Keeping America's Commerce Flowing: Federal support of the marine transportation system." p. 15

**NAVIGATION**

**Bright, LCDR Charles**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Abandoned and Derelict Vessel Removal." p. 28

**Cairns, Mr. Bill**

Vol. 68, No. 1; Waterways Management; Spring 2011; "e-Navigation: Revolution and evolution." p. 48

**Detweiler, Jr., Mr. George**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Offshore Renewable Energy Installations: Impact on navigation and marine safety." p. 19

Vol. 68, No. 1; Waterways Management; Spring 2011; "Collaborating to Mitigate Risk: The tools that guide the process." p. 22

**LaRue, Jr., Mr. Edward J.**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Developing Navigation Standards: The IMO Subcommittee on Safety of Navigation." p. 45

**Little, Mr. Stephen D.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Inland Waterways Infrastructure Revitalization: The Inland Waterways Capital Development Plan." p. 50

**Lundstrom, Ms. Joan**

Vol. 68, No. 1; Waterways Management; Spring 2011; "The San Francisco Bay Region's Harbor Safety Committee: Communication and collaboration fuel success." p. 32

**Nagle, Mr. Kurt**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "America's Seaports Promote Prosperity: A strong infrastructure supports a strong economy." p. 24

**Watson, Captain Michael R.**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Pilotage: One of the oldest yet least-understood maritime professions." p. 36

**PASSENGER VESSELS**

**Burgess, LCDR Chaning;**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Mass Rescue Operations." p. 34

**Culver, Mr. Paul**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Mass Rescue Operations: Optimizing success." p. 22

**Edwards, Mr. David.**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Search and Rescue International Engagement: Positive relationships leverage SAR power." P. 6

**Hunt, Mr. Harold**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Raising the Ante: Mass rescue operations in the Arctic." p. 25

**Janelle, Mr. Rick**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "10 Mass Rescue Realities." p. 28

**Lee, Mr. George "Rob"**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "10 Mass Rescue Realities." p. 28

**PILOTAGE**

**Watson, Captain Michael R.**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Pilotage: One of the oldest yet least-understood maritime professions." p. 36

**PORT OPERATIONS**

**Carmel, Mr. Stephen M.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Maritime Pathways of Commerce: Ocean shipping and the U.S. flag merchant marine." p. 29

**Chambers, Mr. Matthew**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Marine Transportation System Statistical Knowledge: Closing data gaps through a wide range of data products and publications." p. 71

**Merkle, Mr. Edward**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Keeping Cargo Moving: How marine terminals process supply chain data." p. 42

**Nagle, Mr. Kurt**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "America's Seaports Promote Prosperity: A strong infrastructure supports a strong economy." p. 24

**Sykes, Captain Jeremy**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Keeping Cargo Moving: How marine terminals process supply chain data." p. 42

**REGULATIONS**

**Culver, Mr. Paul**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Mass Rescue Operations: Optimizing success." p. 22

**Edwards, Mr. David.**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Search and Rescue International Engagement: Positive relationships leverage SAR power." p. 6

**Janelle, Mr. Rick**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Accident Prevention. Best Practices: Safety the way it ought to be done." p. 55

**Khalifa, Ms. Daisy**

Vol. 68, No. 3; Search and Rescue; Fall 2011; Lessons Learned; "Instant Instability: A sturdy dragger succumbs to deadly ice build-up." p. 60

**Moose, LCDR Ellis H.**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Improving the Marine Event Program." p. 25

**Steele, Ms. Carolyn**

Vol. 68, No. 3; Search and Rescue; Fall 2011; Lessons Learned; "No Way Out: A mariner perishes while trapped inside a confined space." p. 68

**RESEARCH & DEVELOPMENT**

**Brohl, Ms. Helen A.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The U.S. Committee on the Marine Transportation System: Enabling a federal agency partnership in support of the U.S. marine transportation system." p. 11

**Grisoli, Major General William T.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The U.S. Army Corps of Engineers: Delivering innovative, sustainable solutions to the nation's engineering challenges." p. 57

**Reddington, Ms. Krista**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Lessons Learned; "The Point of No Return." p. 90

**Steele, Ms. Carolyn**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Lessons Learned; "Catamaran Catastrophes." p. 74

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Lessons Learned; "The Weak Link." p. 82

**RESPONSE****Bright, LCDR Charles**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Abandoned and Derelict Vessel Removal." p. 28

**RISK****Detweiler, Jr., Mr. George**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Offshore Renewable Energy Installations: Impact on navigation and marine safety." p. 19

Vol. 68, No. 1; Waterways Management; Spring 2011; "Collaborating to Mitigate Risk: The tools that guide the process." p. 22

**Green, Ms. Louritha**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "Trade Recovery: A complement to risk management." p. 69

**Khalifa, Ms. Daisy**

Vol. 68, No. 3; Search and Rescue; Fall 2011; Lessons Learned "Instant Instability: A sturdy dragger succumbs to deadly ice build-up." p. 60.

**Lahn, Mr. Burt**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Collaborating to Mitigate Risk: The tools that guide the process." p. 22

**Mack, CDR Lisa**

Vol. 68, No. 1; Waterways Management; Spring 2011; "International Ice Patrol: Guardians on the Grand Banks." p. 61

**Maffia, LCDR Tony**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Collaborating to Mitigate Risk: The tools that guide the process." p. 22

**Mes, Mr. Marc**

Vol. 68, No. 4; Enhancing Global Supply Chain Security; Winter 2011-2012; "International Maritime Organization User Guide: Managing risks enhancing maritime security." p. 27

**Moose, LCDR Ellis H.**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Improving the Marine Event Program." p. 25

**Steele, Ms. Carolyn**

Vol. 68, No. 3; Search and Rescue; Fall 2011; Lessons Learned; "No Way Out: A mariner perishes while trapped inside a confined space." p. 68

**SAFETY****Brohl, Ms. Helen A.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The U.S. Committee on the Marine Transportation System: Enabling a federal agency partnership in support of the U.S. marine transportation system." p. 11

**Detweiler, Jr., Mr. George**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Offshore Renewable Energy Installations: Impact on navigation and marine safety." p. 19

Vol. 68, No. 1; Waterways Management; Spring 2011; "Collaborating to Mitigate Risk: The tools that guide the process." p. 22

**Frost, Mr. Peter E.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Fair, Efficient Dispute Resolution: The U.S. Department of Justice keeps the marine transportation system moving." p. 65

**Jordan, Mr. Thomas B.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Chemical of the Quarter; "Understanding Urea." p. 78

**LaRue, Jr., Mr. Edward J.**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Developing Navigation Standards: The IMO Subcommittee on Safety of Navigation." p. 45

**Lundstrom, Ms. Joan**

Vol. 68, No. 1; Waterways Management; Spring 2011; "The San Francisco Bay Region's Harbor Safety Committee: Communication and collaboration fuel success." p. 32

**Moose, LCDR Ellis H.**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Improving the Marine Event Program." p. 25

**Morgan, LT Benjamin**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Domestic Icebreaking Operations." p. 39

**Reddington, Ms. Krista**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Lessons Learned; "The Point of No Return." p. 90

**Steele, Ms. Carolyn**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Lessons Learned; "Catamaran Catastrophes." p. 74

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; Lessons Learned; "The Weak Link." p. 82

**Watson, Captain Michael R.**

Vol. 68, No. 2; Waterways Management; Spring 2011; "Pilotage: One of the oldest yet least-understood maritime professions." p. 36

**SAFETY EQUIPMENT****Culver, Mr. Paul**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Mass Rescue Operations: Optimizing success." p. 22.

**Hunt, Mr. Harold**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Raising the Ante: Mass rescue operations in the Arctic." p. 25

**Janelle, Mr. Rick**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Accident Prevention. Best Practices: Safety the way it ought to be done." p. 55

**Knox, Mr. Allan**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Space-Based Search and Rescue." p. 19

**Mehta, Mr. Ajay**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "The International Cospas-Sarsat Programme: Taking the "search" out of search and rescue." p. 12

**Strong, Mr. Benjamin M.**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Amver in Action: Extending the SAR safety blanket." p. 9

**Turner, CDR Mark**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Maritime Distress Radio Beacon: The silent communicator." p. 16

**SAFETY OF LIFE AT SEA (SOLAS)**

**Culver, Mr. Paul**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Mass Rescue Operations: Optimizing success." p. 22

**Edwards, Mr. David**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Search and Rescue International Engagement: Positive relationships leverage SAR power." p. 6

**LaRue, Jr., Mr. Edward J.**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Developing Navigation Standards: The IMO Subcommittee on Safety of Navigation." p. 45

**Mack, CDR Lisa**

Vol. 68, No. 1; Waterways Management; Spring 2011; "International Ice Patrol: Guardians on the Grand Banks." p. 61

**SEARCH AND RESCUE**

**Burgess, LCDR Channing**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Mass Rescue Operations." p. 34

**Culver, Mr. Paul**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Mass Rescue Operations: Optimizing success." p. 22

**Edwards, Mr. David.**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Search and Rescue International Engagement: Positive relationships leverage SAR power." p. 6

**Farr, LT. Scott**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "A Smartphone to the Rescue: Only one thing was clear: 'Call the Coast Guard!'" p. 48

**Frost, Mr. Peter E.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Fair, Efficient Dispute Resolution: The U.S. Department of Justice keeps the marine transportation system moving." p. 65

**Hayes, LT Byron**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Helping You Safely Help: Good Samaritan search and rescue support." p. 51

**Hunt, Mr. Harold**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Raising the Ante: Mass rescue operations in the Arctic." p. 25

**Janelle, Mr. Rick**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "10 Mass Rescue Realities." p. 28

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Helping You Safely Help: Good Samaritan search and rescue support." p. 51

**Knox, Mr. Allan**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Space-Based Search and Rescue." p. 19

**Lee, Mr. George "Rob"**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "10 Mass Rescue Realities." p. 28

**Mehta, Mr. Ajay**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "The International Cospas-Sarsat Programme: Taking the "search" out of search and rescue." p. 12

**McBride, CAPT David**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Champion's Point of View." p. 5

**Newton, LT Elizabeth**

Vol. 68, No. 3; Search and Rescue; Fall 2011; Chemical of the Quarter; "Understanding Phenol." p. 74

**Sokol, Jr., Mr. Joseph**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Catastrophic Event Search and Rescue: NORTHCOM coordinates and standardizes SAR efforts." p. 44

**Strong, Mr. Benjamin M.**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Amver in Action: Extending the SAR safety blanket." p. 9

**Thomas, RDML Cari B.**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Assistant Commandant's Perspective." p. 4

**Tomko, Lt. Col. Charles A.**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "International Search and Rescue: An air perspective." p. 40

**Turner, CDR Mark**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Maritime Distress Radio Beacon: The silent communicator." p. 16

**Warner, LCDR Jon Trent**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "U.S. Department of State: Supporting the Arctic marine transportation system." p. 68

**Webb, Mr. Paul**

Vol. 68, No. 3; Search and Rescue; Fall 2011; "Helping You Safely Help: Good Samaritan search and rescue support." p. 51

**SECRETARY OF TRANSPORTATION'S PERSPECTIVE**

**LaHood, Mr. Ray**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "CMTS Chairman's Perspective." p. 4

**SECURITY**

**Brohl, Ms. Helen A.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The U.S. Committee on the Marine Transportation System: Enabling a federal agency partnership in support of the U.S. marine transportation system." p. 11

**Cardona, Mrs. Jeanne L.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The Ship's Agent: The maritime principal's eyes, ears, and hands in the port." p. 40

**Nagle, Mr. Kurt**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "America's Seaports Promote Prosperity: A strong infrastructure supports a strong economy." p. 24

**STRATEGIC PLANNING**

**Lidinsky, Jr., Mr. Richard**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The federal maritime Commission: Federal responsibilities, funding, and coordination." p. 33

**TANK SHIPS****Cardona, Mrs. Jeanne L.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The Ship's Agent: The maritime principal's eyes, ears, and hands in the port." p. 40

**TONNAGE****Johnson, Jr., Mr. Collister**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "The St. Lawrence Seaway: A vital transportation treasure." p. 42

**Little, Mr. Stephen D.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Inland Waterways Infrastructure Revitalization: The Inland Waterways Capital Development Plan." p. 50

**McGregor, Mr. Brian M.**

Vol. 68, No. 2; The Marine Transportation System; Summer 2011; "Infrastructure Moves Agriculture: Reliable waterways provide resiliency and enhance recovery after disruptions." p. 54

**WATERWAYS MANAGEMENT****Allen, Sr., Mr. Craig H.**

Vol. 68, No. 1; Waterways Management; Spring 2011; "How Narrow is 'Narrow?'" NAVSAC recommends the Coast Guard develop navigation criteria." p. 16

**Arroyo, Mr. Jorge**

Vol. 68, No. 1; Waterways Management; Spring 2011; "The Automatic Identification System: Then, now, and in the future." p. 51

**Berkson, Dr. Jonathan**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Coast Guard Cooperation in the Arctic: USCGC Healy's continental shelf mission." p. 58

**Bright, LCDR Charles**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Abandoned and Derelict Vessel Removal." p. 28

**Cairns, Mr. Bill**

Vol. 68, No. 1; Waterways Management; Spring 2011; "e-Navigation: Revolution and evolution." p. 48

**Cook, CAPT Pauline**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Champion's Point of View." p. 5

**Detweiler, Jr., Mr. George**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Offshore Renewable Energy Installations: Impact on navigation and marine safety." p. 19

Vol. 68, No. 1; Waterways Management; Spring 2011; "Collaborating to Mitigate Risk: The tools that guide the process." p. 22

**Goward, Mr. Dana**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Director's Perspective." p. 4

**Jordan, Mr. Thomas**

Vol. 68, No. 1; Waterways Management; Spring 2011; Chemical of the Quarter; "Understanding Muds." p. 83

**Krause, LCDR Michael**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Coast Guard Cooperation in the Arctic: USCGC Healy's continental shelf mission." p. 58

**Lahn, Mr. Burt**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Collaborating to Mitigate Risk: The tools that guide the process." p. 22

**LaRue, Jr., Mr. Edward J.**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Developing Navigation Standards: The IMO Subcommittee on Safety of Navigation." p. 45

**Lundstrom, Ms. Joan**

Vol. 68, No. 1; Waterways Management; Spring 2011; "The San Francisco Bay Region's Harbor Safety Committee: Communication and collaboration fuel success." p. 32

**Mack, CDR Lisa**

Vol. 68, No. 1; Waterways Management; Spring 2011; "International Ice Patrol: Guardians on the Grand Banks." p. 61

**Maffia, LCDR Tony**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Collaborating to Mitigate Risk: The tools that guide the process." p. 22

**Moose, LCDR Ellis H.**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Improving the Marine Event Program." p. 25

**Morgan, LT Benjamin**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Domestic Icebreaking Operations." p. 39

**Steele, Ms. Carolyn**

Vol. 68, No. 1; Waterways Management; Spring 2011; Lessons Learned; "Against the Flow: Strong currents, high water overwhelm a tow." p. 64

Vol. 68, No. 1; Waterways Management; Spring 2011; Lessons Learned; "Flying Blind: Thick fog, faulty communications, and inexperience lead to disaster on the Mississippi." p. 73

**Tlapa, CDR Gregory**

Vol. 68, No. 1; Waterways Management; Spring 2011; "The "Black Hull" Fleet: Multi-function assets for multi-mission duty." p. 10

**Trainor, Mr. Robert**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Visual Aids to Navigation: Dispelling the myths." p. 6

**Watson, Captain Michael R.**

Vol. 68, No. 1; Waterways Management; Spring 2011; "Pilotage: One of the oldest yet least-understood maritime professions." p. 36

**COMMANDANT (DCO-84)  
ATTN PROCEEDINGS  
US COAST GUARD  
2100 2ND STREET SW STOP 7681  
WASHINGTON DC 20593-7681**

PRSR STD
POSTAGE & FEES PAID
U.S. COAST GUARD
PERMIT NO.G-157

Official Business  
Penalty for Private Use, \$300

FORWARDING SERVICE REQUESTED

