COMPLIANCE WITH REQUIREMENTS OF THE COAST GUARD'S DEEP-WATER CONTRACT

(110–27)

HEARING

BEFORE THE

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

APRIL 18, 2007

Printed for the use of the
Committee on Transportation and Infrastructure

COMPLIANCE WITH REQUIREMENTS OF THE COAST GUARD'S DEEPWATER CONTRACT

COMPLIANCE WITH REQUIREMENTS OF THE COAST GUARD'S DEEPWATER CONTRACT

COMPLIANCE WITH REQUIREMENTS OF THE COAST GUARD'S DEEPWATER CONTRACT

COMPLIANCE WITH REQUIREMENTS OF THE COAST GUARD'S DEEPWATER CONTRACT

COMPLIANCE WITH REQUIREMENTS OF THE COAST GUARD'S DEEPWATER CONTRACT

COMPLIANCE WITH REQUIREMENTS OF THE COAST GUARD'S DEEPWATER CONTRACT

COMPLIANCE WITH REQUIREMENTS OF THE COAST GUARD'S DEEP-WATER CONTRACT

(110–27)

HEARING

BEFORE THE

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

APRIL 18, 2007

Printed for the use of the
Committee on Transportation and Infrastructure

U.S. GOVERNMENT PRINTING OFFICE

34–798 PDF WASHINGTON : 2007

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
Fax: (202) 512–2250 Mail: Stop SSOP, Washington, DC 20402–0001

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

JAMES L. OBERSTAR, Minnesota, *Chairman*

NICK J. RAHALL, II, West Virginia
PETER A. DEFAZIO, Oregon
JERRY F. COSTELLO, Illinois
ELEANOR HOLMES NORTON, District of Columbia
JERROLD NADLER, New York
CORRINE BROWN, Florida
BOB FILNER, California
EDDIE BERNICE JOHNSON, Texas
GENE TAYLOR, Mississippi
JUANITA MILLENDER-MCDONALD, California
ELIJAH E. CUMMINGS, Maryland
ELLEN O. TAUSCHER, California
LEONARD L. BOSWELL, Iowa
TIM HOLDEN, Pennsylvania
BRIAN BAIRD, Washington
RICK LARSEN, Washington
MICHAEL E. CAPUANO, Massachusetts
JULIA CARSON, Indiana
TIMOTHY H. BISHOP, New York
MICHAEL H. MICHAUD, Maine
BRIAN HIGGINS, New York
RUSS CARNAHAN, Missouri
JOHN T. SALAZAR, Colorado
GRACE F. NAPOLITANO, California
DANIEL LIPINSKI, Illinois
DORIS O. MATSUI, California
NICK LAMPSON, Texas
ZACHARY T. SPACE, Ohio
MAZIE K. HIRONO, Hawaii
BRUCE L. BRALEY, Iowa
JASON ALTMIRE, Pennsylvania
TIMOTHY J. WALZ, Minnesota
HEATH SHULER, North Carolina
MICHAEL A. ACURI, New York
HARRY E. MITCHELL, Arizona
CHRISTOPHER P. CARNEY, Pennsylvania
JOHN J. HALL, New York
STEVE KAGEN, Wisconsin
STEVE COHEN, Tennessee
JERRY MCNERNEY, California

JOHN L. MICA, Florida
DON YOUNG, Alaska
THOMAS E. PETRI, Wisconsin
HOWARD COBLE, North Carolina
JOHN J. DUNCAN, JR., Tennessee
WAYNE T. GILCHREST, Maryland
VERNON J. EHLERS, Michigan
STEVEN C. LATOURETTE, Ohio
RICHARD H. BAKER, Louisiana
FRANK A. LOBIONDO, New Jersey
JERRY MORAN, Kansas
GARY G. MILLER, California
ROBIN HAYES, North Carolina
HENRY E. BROWN, JR., South Carolina
TIMOTHY V. JOHNSON, Illinois
TODD RUSSELL PLATTS, Pennsylvania
SAM GRAVES, Missouri
BILL SHUSTER, Pennsylvania
JOHN BOOZMAN, Arkansas
SHELLEY MOORE CAPITO, West Virginia
JIM GERLACH, Pennsylvania
MARIO DIAZ-BALART, Florida
CHARLES W. DENT, Pennsylvania
TED POE, Texas
DAVID G. REICHERT, Washington
CONNIE MACK, Florida
JOHN R. 'RANDY' KUHL, JR., New York
LYNN A WESTMORELAND, Georgia
CHARLES W. BOUSTANY, JR., Louisiana
JEAN SCHMIDT, Ohio
CANDICE S. MILLER, Michigan
THELMA D. DRAKE, Virginia
MARY FALLIN, Oklahoma
VERN BUCHANAN, Florida

CONTENTS

	Page
Summary of Subject Matter	v
C4ISR Overview	xv
Background Paper on the 110/123 Hull Cracking Issue	xxv

TESTIMONY

Anton, James E., Executive Vice President of Integrated Coast Guard Systems and Vice President of the Deepwater Program, Northrop Grumman Ship Systems	57
Atkinson, James, President and Senior Engineer, Granite Island Group.	10
Blore, Rear Admiral Gary T., Program Executive Officer, Coast Guard Integrated Deepwater System	117
Braden, Robert, Senior Technical Staff, Processor and Systems Design, Lockheed Martin	10
DeKort, Michael, Former Project Management Specialist for 123 Systems, Lockheed Martin	10
Ghosh, Debu, Naval Architect, Branch Chief, U.S. Coast Guard Boat Engineering Branch	88
Jacoby, Lieutenant Commander Chad, Program Manager, Scaleable Composite Vessel Prototype Program Science and Technology Directorate, Department Of Homeland Security	88
Lavan, Maryanne, Vice President for Ethics and Business Conduct, Lockheed Martin	57
Mackay, Leo, Vice President and General Manager, Integrated Coast Guard Systems	57
Martindale, Cathy, Contracting Office Chief, Coast Guard Engineering and Logistics Center	88
Michel, Joe, Assistant Deputy for Systems Implementation, U.S. Coast Guard Nationwide Automatic Identification System Project	88
Rodgers, Thomas, Vice President, Technical Operations, Lockheed Martin Maritime Systems and Sensors	57
Sampson, Scott, Section Chief of the Development Section, U.S. Coast Guard Maintenance and Logistics Command Atlantic in the Vessel Specifications Branch	10
Stanley, Marc, Executive Vice President of Government Affairs, Bollinger Shipyards, Inc.	57
Sullivan, Vice Admiral Paul E., Commander, Naval Sea Systems Command, U.S. Navy	117
Winterstine, Bruce, Principal Project Analyst, Lockheed Martin Maritime Systems and Sensors	57

PREPARED STATEMENTS SUBMITTED BY MEMBERS OF CONGRESS

Cohen, Hon. Steve, of Tennessee	134
Costello, Hon. Jerry F., of Illinois	135
Mica, Hon. John L., of Florida	137
Mitchell, Hon. Harry E., of Arizona	141
Oberstar, Hon. James L.	143

PREPARED STATEMENTS SUBMITTED BY WITNESSES

Anton, James E.	146
Atkinson, James M.	151
Blore, Rear Admiral Gary T.	319
Braden, Robert K.	337
DeKort, Michael	340
Ghosh, Debu	400
Jacoby, Lieutenant Commander Chad	405

Page

Mackay, Leo 407
Martindale, Cathy 412
Michel, Joe 414
Sampson, Scott 416

SUBMISSIONS FOR THE RECORD

Blore, Rear Admiral Gary T., Program Executive Officer, Coast Guard Integrated Deepwater System:
Responses to questions from Rep. LaTourette 125
Responses to questions from Rep. Oberstar 326
Ghosh, Debu, Naval Architect, Branch Chief, U.S. Coast Guard Boat Engineering Branch, response to question from Rep. Kagan 106
Jacoby, Lieutenant Commander Chad, Program Manager, Scaleable Composite Vessel Prototype Program Science and Technology Directorate, Department Of Homeland Security, response to question from Rep. Cummings 112

ADDITION TO THE RECORD

U.S. Coast Guard, Pamela K. Bible, Contracting Officer, letter of revocation of acceptance 421

U.S. House of Representatives
Committee on Transportation and Infrastructure

James L. Oberstar
Chairman

David Heymsfeld, Chief of Staff
Ward W. McCarragher, Chief Counsel

Washington, DC 20515

John L. Mica
Ranking Republican Member

James W. Coon II, Republican Chief of Staff

April 16, 2007

SUMMARY OF SUBJECT MATTER

TO: Members of the Committee on Transportation and Infrastructure

FROM: Committee on Transportation and Infrastructure Oversight and Investigations Staff

SUBJECT: Hearing on Compliance with Requirements of the Coast Guard's Deepwater Contract

PURPOSE OF HEARING

The Committee on Transportation and Infrastructure will meet on Wednesday, April 18, 2007, at 2:00 p.m. to review evidence developed through a staff investigation of the $24 billion Deepwater acquisitions program. The staff investigation examined in depth the contract management and decision-making processes within the Coast Guard (CG) and it contractor partner, Integrated Coast Guard Systems (ICGS) (comprised of Lockheed Martin Corporation and Northrop Grumman Corporation). The Committee will hear from representatives from the above-named ICGS partners, as well as independent technical experts regarding the extent to which the requirements of the Deepwater contract have not been met -- particularly on the lengthening of the 110-foot patrol boats to 123 feet.

BACKGROUND

Executive Summary

It is now well-documented that the 123 program was critically flawed in significant areas of initial design, contract execution, construction, and testing. Independent reviews and Congressional hearings have established that very rigid adherence to an aggressive schedule, which was commonly referred to within the CG as "ruthless execution", generated bad decisions, design compromises, equipage of ships with below-standard materials, and rushed deliveries that led to the production and acceptance of eight unusable vessels, all of which have been taken out of service. An analysis is underway by the CG on how the equipment on these boats might be salvaged and reused on other vessels.

What has not been previously documented is the extent to which most of the more serious flaws were well-known within both the CG and ICGS early in the Deepwater program, and the extent to which these issues were raised by key personnel within the program to the highest levels of contractor management. The warnings were consistently rejected by senior contractor management, and the program continued to progress. Equipment that did not meet contract specifications appears to have been knowingly installed, possibly as part of an effort to keep costs down. For example, documents uncovered in this investigation revealed that the Command, Control, Communication, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) contractor did not appear to be following its own guidelines for installation of these systems and did not appear to be following approved TEMPEST certification standards[1] as set forth by the National Security Agency (NSA) for transmission of classified information. It is clear that all eight 123s were initially delivered without being TEMPEST certified.

In addition, the CG was warned of the design flaws by the U.S. Navy long before the design that guided extension of the 110-foot patrol boat to 123 feet was finalized. Offers by the Navy to assist in the evaluation of the initial conversion design or in the investigation and resolution of cracks that occurred in the ships after they were converted were not accepted by the CG.

There is also a disturbing suggestion of contractor cover-ups – and evidence that installation flaws were accepted by the CG and that the ships were "self-certified" by the CG. In any event, vessels were delivered that did not meet the performance specifications stipulated in the Deepwater contract. Further, it appears that these ships operated for some period of time without being properly TEMPEST certified and that national security could have been compromised as a result. The blame lies both within the CG and the ICGS contractor consortium. However, that point is now moot regarding the 123s as these ships are to be stripped of items that can be re-used and then scrapped because of their extensive hull flaws.

The DHS Inspector General recently released a report (DHS OIG-07-27) of an investigation of some of these allegations raised by a "whistleblower", but that investigation did not dig deeply enough to fully expose the severity of the problems raised by the whistleblower. The design compromises that occurred on the 123s raise questions as to whether a better process will be followed in future projects, such as on the first National Security Cutter (NSC) (the *Bertholf*) and potentially other NSCs now under construction at the Ingalls Shipyard.

Overview of Deepwater

The Deepwater program is a series of procurements intended to be create a "system of systems" – meaning a suite of assets that are fully integrated and feature inter-compatible command/control/communication systems called C4ISR. The program, which is currently expected to cost $24 billion and to require 25 years to complete, encompasses 91 cutters, 124 small surface craft, and 244 new or converted aircraft, including both helicopters and fixed-wing airplanes.

[1] TEMPEST certification refers to approved methods set forth by the NSA to assure that communications systems dealing with classified national security information do not leak electronic emanations that can be picked up over the airwaves through various eavesdropping methods and then deciphered. Without a proper TEMPEST certification, communications systems are not allowed to be linked to secure communications systems because they may compromise national security.

The Deepwater program began its initial planning stages in the 1990s. On June 25, 2002, the Coast Guard awarded the Deepwater program to a consortium comprised of Lockheed Martin and Northrop Grumman and now identified as the Integrated Coast Guard Systems (ICGS). This team is serving as the lead systems integrator – meaning that its role is to oversee the acquisition of all planned systems and to ensure that they are integrated in the "system of systems" to support the Coast Guard's missions. The ICGS team has broad powers to determine the best way of acquiring assets required for the Deepwater program, including making decisions about whether ICGS itself will build assets using the members of their own teams or whether it will openly compete acquisitions.

The contract awarded in 2002 was an indefinite delivery, indefinite quantity contract with a five-year baseline ending in 2007. The contract included five potential additional award terms of up to five years each (in other words, the contract could be extended for as long as 25 years). On May 19, 2006, the Coast Guard announced that it planned to award a 43-month contract extension to the consortium, which extended the contract through January 2011.

Importantly, the original plan for Deepwater was submitted prior to 9/11/2001 and was expected to cost $17 billion. After 9/11, the Coast Guard's mission was revised to encompass significant new homeland security functions and its asset needs were re-analyzed – yielding a new plan for Deepwater (submitted to Congress on March 25, 2005) that increased its costs to the current $24 billion and increased its procurement period from 20 years to the current 25 years.

<u>Cutter Acquisitions Under Deepwater</u>

A brief overview of the main cutter acquisitions to be completed under Deepwater is provided below:

- **National Security Cutter (NSC):** At more than 400 feet, the NSC is the largest ship to be acquired through Deepwater. A total of eight cutters are to be produced. The first two keels have been laid – and the Coast Guard reports that NSC 1, the *Bertholf*, successfully powered its consoles on March 1, 2007. The NSC is a significant part of the total Deepwater acquisition – and is expected to cost as much as 12 percent of the entire Deepwater budget.
- **Fast Response Cutter (FRC):** The FRC will be the smallest of the three cutters proposed for acquisition under Deepwater, but the final length has not been determined (it is likely to be between 120 and 160 feet). The development of this cutter has been troubled by failures of the initial design effort – which was expected to involve the use of a composite hull. As a result of these design problems, the Coast Guard has split the FRC into two series (A and B) and has announced that the B series will be acquired first, will be competitively bid by the Coast Guard (not using the ICGS team), and will rely on an off-the-shelf design. A total of 58 FRCs are expected to be built.
- **Offshore Patrol Cutter (OPC):** Work on the design of the OPC will not begin until fiscal year 2009. At the present time, the OPC is expected to be 360 feet long and 25 total OPCs are expected to be acquired.

Legacy Cutter Upgrades: In addition to the new cutter acquisitions planned under Deepwater, a number of cutters already in service – called "legacy cutters" – are planned to be

rehabilitated as part of Deepwater to extend their service lives. Among these was a group of 49 110-foot patrol boats which were to be lengthened to 123 feet and then retained in service until replaced by the 58 new FRCs.

In the early years of the Deepwater contract, a total of eight 110-foot patrol boats were lengthened to 123 feet and placed back into active service. Soon after re-entering service, the lengthened hulls began to experience cracks and were placed on restricted duty. As the cracks grew larger, the boats were deemed to present a safety hazard and were removed from service. The removal of the eight failed, 123-foot patrol boats from service has left a service-hour gap in the Florida/Caribbean service area.

123 Hull Cracks: There is documented evidence that the effort to lengthen the 110-foot patrol boats was ill-advised from an engineering standpoint. The Navy's Combatant Craft Department (CCD) advised the lead technical Coast Guard naval architect on the Deepwater project in August and September 2002 that there were problems with the proposed design for the lengthened 123-foot patrol boat. This was long before the design was finalized. These warnings were based on issues that the Navy identified in lengthening a 170-foot cutter (which was a sister ship series to the 110-foot cutter utilized by the Coast Guard) to 179 feet. The Navy overcame these problems by significantly strengthening the hull girder sections, but this was a costly modification. The Navy advised the CG to add the same strengthening measures to any 110-foot vessels lengthened to 123 feet – especially in light of the fact that the Navy extension represented only 5 percent of the overall vessel length, while the CG extension was 12 percent of hull length. The Navy believed the extra length on the 110-foot cutter would subject the CG design to far greater stresses than on the Navy boat. These Navy warnings went unheeded by the CG or the contractors. Further, after the first lengthened 123-foot patrol boat – the *Matagorda* – failed, the Coast Guard attempted design modifications (using thicker hull plating) but was again warned by Navy CCD that this solution would be insufficient to produce seaworthy ships unless the hull girder sections were significantly strengthened. As warned by the Navy, the thicker hull plating solution attempted by the CG also failed. All eight 123-foot ships are planned for salvage.

C4ISR: In addition to procurements of cutters (and planes), a central part of the Deepwater program involves the implementation of major upgrades and improvements to the Coast Guard's command, control, communications, computers, intelligence, surveillance, and reconnaissance systems, known as C4ISR. Deepwater is expected to produce C4ISR systems are fully compatible across all assets. Such an interoperable system is expected to improve the ability of the Coast Guard to share and integrate information from all sources about the maritime domain, creating an operating picture of the domain that will now be common to all assets. For this reason, the enhanced C4ISR capabilities are expected to improve the ability of the Coast Guard to mobilize and control assets directed to respond to specific threats.

Problems with the Deepwater Contract

A number of different reports have been issued by a variety of sources detailing the problems with the Deepwater contract. A brief overview of these reports and their findings is presented below.

DHS IG Report on Information Technology Systems in Deepwater: The Department of Homeland Security Inspector General's Office (DHS IG) issued a report in August 2006 entitled

"Improvements Needed in the U.S. Coast Guard's Acquisition and Implementation of Deepwater Information Technology Systems". In part, this report examined tests that were performed on the C4ISR system (which is a combination of hardware and software) to assess its functionality. Under federal regulations, agencies must prove that new IT systems function properly in a "production-like" test environment and that they contain needed safeguards. The report indicates that there were problems with the simulator equipment used at the Lockheed Martin facility to test the C4ISR systems and to identify vulnerabilities in the system. Specifically, the report found that the simulator had "difficulty calculating how C4ISR systems work in real situations on cutters or at shore sites; the simulators therefore may produce inaccurate results." DHS IG also found the following: "... because the contractor has not compared simulator performance to that of real C4ISR systems, discrepancies may result when the C4ISR systems are deployed to new assets or shore sites." Importantly, DHS IG found that the simulator system being used to test the functionality of the C4ISR was not itself certified or accredited. The Coast Guard recognized the value of certifying and accrediting the simulators – but the contractor has refused to obtain the certification and accreditation, asserting that it would cost too much to obtain.

The DHS IG report also discussed problems found with the actual functionality of the C4ISR systems. DHS IG states that a version of the C4ISR on the 123s received authorization to operate while the contractor worked to address vulnerabilities identified with it (this implies interim authorization to operate). In April 2006, the Coast Guard's SIPRNET Management Office informed the managers of Deepwater that if the vulnerabilities with the C4ISR system on the 123s were not resolved in 45 days, the system would be denied authorization to access SIPRNET (the government's classified internet system). After the Coast Guard provided information on best practices in software development, the vulnerabilities were apparently resolved by May 2006.

Finally, this report found that although Coast Guard officials were involved in high-level Deepwater IT requirements definitions processes; they had limited influence over contractor decisions made to meet these requirements under the Deepwater contract.

DHS IG Report on the NSC: The DHS IG issued a report on the NSC entitled "Acquisition of the National Security Cutter" dated January 2007. In this report, the DHS IG indicated that the Deepwater contract requires that the NSC be built to be underway at least 230 days per year for 30 years; the Coast Guard disagrees with the DHS IG's claims and argues that the Deepwater contract requires that the ship be built to be underway only for 185 days. The DHS IG report further claims that weaknesses in the first two NSC hulls will lead the hulls to crack – and argues that the failures in the design of the NSC are due to the Coast Guard's failure to properly oversee the NSC contract. Presently, the Coast Guard is working to determine how to strengthen these hulls so that NSC 1 and NSC 2 can achieve what it claims is the required number of days underway each year (185 days). Negotiations are on-going regarding the specific repairs that must be made to the hulls, the cost of these repairs, and how and when the repairs will be completed and by whom.

Defense Acquisition University Report on the Deepwater Program: The Defense Acquisition University (DAU) issued a report dated February 2007 studying the problems that have occurred in the Deepwater contract. This report finds that a need to quickly recapitalize the Coast Guard with a broad portfolio of new and complex assets led the Coast Guard to use the "system of systems" strategy.

However, this is a complicated strategy to implement and the DAU finds that the Coast Guard's implementation of the strategy has been challenged by the following factors:

- The scope and complexity of design changes that were necessary to respond to the threats presented by the events of 9/11 and that were added after many key engineering milestones had already been crossed;
- Funding provided at levels below those negotiated in the ICGS contract;
- Use of a contract structure inappropriate to the changing missions and requirements of the program and to the major systems integration tasks that were required;
- Industry emphasis on work sharing among joint venture partners that minimized the use of other U.S. industry and existing Coast Guard infrastructure;
- Insufficient numbers of Coast Guard acquisition personnel and insufficient experience in major systems acquisition; and
- Lack of a management model and processes sufficient for the management and oversight of the major systems acquisitions to be made under Deepwater.

The DAU report indicates that these factors threaten to prevent the Coast Guard from being able to complete all of the acquisitions planned under Deepwater within the planned $24 billion budget and suggests that changes in acquisitions requirements or adjustments to the budget may be needed. The DAU study also recommends specific changes in the Coast Guard's acquisition strategy and the structure and management of the Deepwater contract.

DHS IG Report on the 123-Foot Patrol Boats: Following the receipt of a whistleblower complaint on its Hotline, the DHS IG launched an investigation to determine whether the 123-foot patrol boat and the smaller, 24.6-foot Prosecutor crafts designed to be launched from the 123-foot cutter and other larger cutters contained safety and security vulnerabilities due to the failure of contractors to meet the requirements of the Deepwater contract. The specific complaints investigated by the DHS IG are detailed below.

- **Non Low-Smoke Cabling:** The whistleblower alleged that the 123-foot cutters had been outfitted with non low-smoke cabling – in direct contravention of the requirements of the Deepwater contract. In the event of an on-board fire, the use of non-low smoke cabling could have exposed the crew to excessive toxic smoke. The DHS IG confirmed that the whistleblower's accusations were correct. Indeed, non low-smoke cabling had been used – in contravention of contractual requirements. Further, the DHS IG found that the Coast Guard had accepted the delivery of the 123-foot patrol boats with the non low-smoke cabling without documenting the potential hazards that this cabling posed to crew members in the event of an on-board fire.

- **Topside Equipment:** The whistleblower alleged that the ICGS team installed "topside" (meaning on the top/outside of the ship) equipment for the C4ISR on the 123-foot patrol boat and on the Prosecutor that did not meet Deepwater contract specifications and that may not have been operational in all weather conditions that the 123 and the prosecutor was expected to face. The DHS IG confirmed that 30 items on each 123 and 12 on the Prosecutors do not meet the contractual requirements on environmental survivability. The DHS IG report further states that the contractor knowingly, and in violation of the contract,

indicated on the self-certification documents that requirements for the boats to survive and operate in extreme weather are "not really beneficial".

- **TEMPEST Test Problems:** The whistleblower alleged that the ICGS team installed cabling in the C4ISR hardware system that could pose a TEMPEST hazard – meaning that it could "leak" classified information. The DHS IG found that the cabling used in the 123-foot cutter (called aluminum/mylar shielded cable) met the minimum contract specifications but was not as durable as cabling that is braided, metallic, and shielded. The DHS IG report states that while braided, shielded cables are the best option under TEMPEST certification requirements, the contractor was not bound to use them and that the aluminum/mylar cables they did use passed instrumented TEMPEST testing, as claimed by the CG. However, the Committee's investigation has found that the C4ISR configuration failed the visual TEMPEST tests – which are less rigorous than the instrumented tests – which calls into question how the equipment could have passed an instrumented TEMPEST test. Coast Guard records indicate that an instrumented TEMPEST test was performed on the first 123, MATAGORDA, in February 2004, and this test noted deficiencies. According to the Coast Guard, another instrumented TEMPEST test was not performed on a 123 until the USGC PADRE was sent for a test in July 2006. Visual TEMPEST discrepancies remained in the 123s; a class waiver was granted for some of these problems in July 2005 and individual waivers were granted for deficiencies on each of the 123s during 2005 and 2006. Numerous problems plagued the ability of the C4ISR systems to handle classified information – and it appears that Authority to Operate (ATO) these systems may have been granted before all of the problems were resolved. Thus, according to Coast Guard records, MATAGORDA received ATO for its system in January 2005, although in an evaluation assessment of the entire C4ISR system conducted in March-April 2005 by the Navy, the C4ISR system is still identified as "high risk." An independent TEMPEST testing expert (retained by the Committee) has extensively reviewed all C4ISR/TEMPEST testing records supplied by the CG and has confirmed that several of the deficiencies that were granted waivers should have been repaired rather than waivered.

- **360-Degree Topside Cameras:** The whistleblower alleged that the video surveillance system installed on the 123 cutter does not provide a 360-degree field of view. The DHS IG report confirms that the video surveillance systems provide less than 360-degree coverage, but concludes that such coverage is not stipulated in the contract. However, although the contract is ambiguous, this appears to be incorrect. Northrop Grumman's contract specifies 2 cameras were to be mast-mounted, remotely controllable, and with pan-tilt and zoom functions. Other Coast Guard vessels had camera systems that provide 360-degree coverage, which makes it difficult to conclude that the requirement would be different for the 123s.

  - Importantly, Lockheed Martin submitted a waiver request to allow for less than 360 degree coverage, and the CG accepted it. The DHS IG report states that it is disturbing that Lockheed Martin would knowingly install a system with blind spots and that the Coast Guard would accept it.
  - The DHS IG report also mentions that investigators are concerned that the vague specifications of the Deepwater contract could lead to the installation of camera

surveillance systems on other assets – including the NSCs – that do not provided 360-degree coverage.

- The DHS IG report further states that the CG should clarify the contract requirement for future CG vessels. It is a serious concern that a shipboard surveillance system would contain gaps in coverage.

Beyond the individual facts of each accusation made by the whistleblower and examined by the DHS IG, the whistleblower appears to have raised the instances of non-compliance with the Deepwater contract's requirements on the 123-foot patrol boat to the ICGS team. It further appears that the senior management of ICGS partner, Lockheed Martin, may have chosen to ignore these warnings.

While the 123-foot patrol boats are no longer in service (due to cracks in the hulls), the number and type of contract violations alleged to have occurred in the equipment installed on the 123-foot cutters is deeply troubling. This hearing will also examine whether some or all of systems on the 123s may have been installed on the NSC.

PREVIOUS COMMITTEE ACTION

The Subcommittee on Coast Guard and Maritime Transportation has held two hearings on the Deepwater acquisition during the 110th Congress. The first hearing was held on January 30, 2007, and considered the entire Deepwater contract, with a focus on problems involving the NSC. A second hearing was held on March 8, 2007, on the Coast Guard's fiscal year 2008 budget; that hearing received testimony on Deepwater from both the DHS IG and the Government Accountability Office.

WITNESSES

PANEL I

Mr. Michael DeKort
Former Project Management Specialist for 123 Systems
Lockheed Martin
Louisville, KY

Mr. Robert Braden
Senior Technical Staff, Processor and Systems Design
Lockheed Martin
Moorestown, NJ

Mr. Scott Sampson
Section Chief of the Development Section
U.S. Coast Guard Maintenance and Logistics Command Atlantic in the Vessel Specifications Branch
Norfolk, VA

Mr. James Atkinson
President and Senior Engineer
Granite Island Group
Gloucester, MA

PANEL II

Mr. Thomas Rodgers
Vice President Technical Operations
Lockheed Martin Maritime Systems & Sensors
Eagan, MN

Mr. Bruce Winterstine
Principal Project Analyst
Lockheed Martin Maritime Systems & Sensors
Moorestown, NJ

Ms. Maryanne Lavan
Vice President for Ethics and Business Conduct
Lockheed Martin
Bethesda, MD

Dr. Leo Mackay
Vice President and General Manager
Integrated Coast Guard Systems
Arlington, VA

Mr. James E. Anton
Executive Vice President
Arlington, VA

Mr. T.R. Hamblin
Vice President of Government Affairs
Bollinger Shipyards, Inc.
Pascagoula, MS

Mr. Marc Stanley
Executive Vice President of Government Affairs
Bollinger Shipyards, Inc.
Pascagoula, MS

PANEL III

Mr. Debu Ghosh
Naval Architect, Branch Chief
U.S. Coast Guard Boat Engineering Branch
Washington, DC

Mr. Joe Michel
Assistant Deputy for Systems Implementation
U.S. Coast Guard Nationwide Automatic Identification System Project
Washington, DC

LCDR Chad Jacoby
Program Manager, Scaleable Composite Vessel Prototype Program Science & Technology
Directorate Department of Homeland Security
Washington, DC

Ms. Cathy Martindale
Contracting Office Chief
Coast Guard Engineering and Logistics Center
Baltimore, MD

PANEL IV

Rear Admiral Gary T. Blore
Program Executive Officer
Coast Guard Integrated Deepwater System
Washington, DC

Vice Admiral Paul E. Sullivan
Commander
Naval Sea Systems Command, U.S. Navy
Washington, DC

C4ISR Overview

A central part of the Deepwater program involves the implementation of major upgrades to the Coast Guard's command, control, communications, computers, intelligence, surveillance, and reconnaissance systems, known as C4ISR.

Lockheed Martin bears primary responsibility for developing the new C4ISR system, which will be installed on all Coast Guard cutters, helicopters, airplanes, and shore facilities. By ensuring that the C4ISR systems are fully compatible across all assets, the Deepwater program is intended to improve the ability of the Coast Guard to share and integrate information from all sources about the maritime domain, creating an operating picture of the domain that will now be common to all assets (in other words, if a plane or ship is tracking a go-fast – other ships, planes, and shore stations can now see the same go-fast on their common C4ISR system). For this reason, the enhanced C4ISR capabilities is expected to improve the ability of the Coast Guard to mobilize and control assets directed to respond to specific threats.

Increments of C4ISR Upgrades

The C4ISR upgrades were planned to be implemented in four increments, as described below:

- **Increment One:** To be implemented from 2002 to 2005, increment one involved the upgrading of satellite voice and data communications capabilities and command and control systems – and the addition of law enforcement radios to surface and shore assets.
- **Increment Two:** To be implemented from 2004 to 2007, increment two involves the addition of C4ISR equipment, radios, and radar to multi-mission cutter helicopters, the unveiling of the first maritime patrol aircraft, and the addition of command and control systems to ice patrol shore assets.
- **Increment Three:** To be implemented beginning in 2007; increment three involves the implementation of additional command and control systems and planning for a hardware technology refresh.
- **Increment Four:** To be implemented from 2009 to 2012, increment four will include strategic and operational planning for Coast Guard command and control systems, high frequency surface wave radar integration, mission support, and data query capabilities.

Hardware and Software

C4ISR involves both hardware and software. Importantly, each has different certification processes – and each process is important to ensure the security of communications received by and made from C4ISR equipment.

Hardware receives certification through the TEMPEST process. TEMPEST is the official acronym for "Telecommunications Electronics Material Protected From Emanating Spurious Transmissions" and includes technical security countermeasures, standards, and instrumentation that prevent (or minimize) the exploitation of security vulnerabilities by technical means. TEMPEST is nothing more then a fancy name for protecting against technical surveillance or eavesdropping of UNMODIFIED equipment. TEMPEST and its associated disciplines involve designing circuits to minimize the amount of "compromising emanations" and applying appropriate shielding,

grounding, and bonding. These disciplines also include methods of radiation screening, alarms, isolation circuits and devices, and similar areas of equipment engineering.

Accreditation and Certification of the Entire C4ISR System: Aside from TEMPEST testing of the C4ISR hardware, the totality of the C4ISR system (hardware and software working together) is put through a number of function tests to ensure that the system can operate properly. The system as a whole must be certified and accredited; as part of the certification and accreditation process, the reviewer must ensure that there are no vulnerabilities in system functionality as a whole. Three types of accreditation decisions can be made at the end of the testing process: authorization to operate, interim authorization to operate, denial of authorization to operate. Under Deepwater, ICGS is required to build systems that achieve authorization to operate.

Problems with the Deepwater C4ISR System

Problems with the C4ISR installed on Coast Guard assets are detailed in three reports:

- A report issued by the Navy's COMOPTEVFOR on its evaluation of the 123-foot patrol boats called "123-Foot Patrol Boat Upgrade Operational Assessment Analysis (OAA);"
- A report issued by the Department of Homeland Security Office of Inspector General (DHS OIG) dated August 2006 entitled "Improvements Needed in the U.S. Coast Guard's Acquisition and Implementation of Deepwater Information Technology Systems;" and
- A report issued by the DHS OIG dated the "110'/123' Maritime Patrol Boat Modernization Project."

The findings of these reports are discussed below by issue. Importantly, according to the DHS OIG, the C4ISR "on the 123-foot patrol boats constitutes the baseline for the core C4ISR system currently being deployed at Coast Guard shore facilities." DHS OIG further states, "This core C4ISR system, in turn, constitutes part of a larger C4ISR system, which will be installed on other Deepwater assets, such as the NSC." For these reasons – and because it has been studied so extensively – the C4ISR systems on the 123s constitute a central point of consideration.

History of TEMPEST certification of C4ISR on the 123s:

- **ICGS Guidebook on TEMPEST:** The ICGS team developed a guidebook in February 2003 explaining the requirements that had to be met to ensure the C4ISR on the 123s would pass the TEMPEST testing. Michael DeKort indicates that this book was not followed in its entirety. Wiring flaws were extensive – and Lockheed refused to correct them when they were discovered because it would have been a cost to Lockheed.

- **MATAGORDA (the first 123) was TEMPEST Tested:** The USCG MATAGORDA was sent for a VISUAL TEMPEST test and an INSTRUMENTED TEMPEST test in February 2004. The visual test was performed by the Coast Guard. The instrumented test was performed by the Navy's SPAWAR unit. Both tests produced a list of discrepancies. The visual discrepancies were turned over by the Coast Guard in the first set of documents delivered to the Committee. The results of the instrumented test are classified.

- **Coast Guard Accepted Delivery of all the 123s before they Achieved TEMPEST Certification:** For example, the Coast Guard accepted delivery of the MATAGORDA on March 1, 2004. The DD-250 provides a special attachment instructing the contractor to complete a series of steps to resolve both visual and instrumented TEMPEST discrepancies. These steps were to be completed by June 24, 2004. The steps involved "support of a SPAWAR Instrumented TEMPEST survey to validate corrections." The DD-250 indicated that this survey could be performed on any ship in the 123 class – and that if the survey did not yield discrepancies, the MATAGORDA would not need to be retested if the corrections had been installed in MATAGORDA and its configuration was the same as the 123 that received the survey. Importantly, it is unclear why the Coast Guard accepted delivery of the ships without them having achieved TEMPEST certification. Further, there is no evidence that the instrumented corrections either on MATAGORDA or in the 123 class were validated by a SPAWAR instrumented survey until July 2006, more than two years after the MATAGORDA was tested and long after the ships had received Authority to Operate (ATO). It is disturbing to note that these ships were likely handling classified data without ever being properly TEMPEST certified.

- **123 Sent to Navy for Evaluation:** The Coast Guard sent at least one 123 (*Matagorda*) to the Navy unit that examines new ships called Operational Test and Evaluation Force (OPTEVFOR) in Norfolk, Virginia, as part of an examination process being conducted by OPTEVFOR on the 123s. The 123s were to be assessed on a number of criteria. One of the criteria was connectivity. The report written, signed by the Commanding Officer (COMOPTEVFOR) of OPTEVFOR, entitled "123-Foot Patrol Boat Upgrade Operational Assessment Analysis" and dated 29 September 2004 notes that the 123s still do not have TEMPEST certification. The Navy reports: "Accordingly, the majority of the new C4ISR upgrades, including hardware and software, were not able to be completely assessed."
    - In the section of its report dealing specifically with connectivity, OPTEVOR reports the following findings:
        - The 123' WPB did not have the capability to exchange COP [common operational picture] information with the IDS [Integrated Deepwater System]. (In English, this means that it cannot function as an integrated part of what is supposed to be the single, holistic Deepwater C4ISR program.)
        - The 123' WPB did not demonstrate the capabilities to support effective data exchange or to preclude mutual interference in support of mission accomplishment.
        - The 123' WPB C4ISR suite did not demonstrate effective interior communications integration and control.
        - The 123' WPB architecture did not demonstrate the capability to support over-the-horizon capabilities.
        - The LANs [local area networks] were adequate to accommodate the information currently being managed on the 123' WPB. Not all designed functionality was installed to completely validate the capability of the individual LANs to accommodate all requirements.
        - The 123' WPB has not passed TEMPEST/COMSEC requirements validating that it is secure to unauthorized access.

- The radio communication system did not demonstrate the capability to support US Coast Guard, US Navy, and other agency doctrinal nets and mission requirements.
- The 123' WPB did not demonstrate enhanced communications architecture of increased connectivity.
- The 123' WPB did not demonstrate the capability to provide adequate command and control facilities for embarked teams.
- There are other similar findings spread throughout the report (such as "The 123' WPB did not demonstrated the capability to defend information and information systems. The 123' WPB did not demonstrate protection, detection, and reaction capabilities") in sections that do not deal explicitly or exclusively with evaluation of the connectivity criterion.

- It is completely unclear why the Coast Guard sent the ships to the Navy for evaluation when it was clear that they could not be evaluated on connectivity – or on a variety of other criteria (such as availability, maintainability, reliability – which are criteria that measure whether the ship can be underway for the required 2,500 hours per year and still be maintainable). As an aside, the evaluation of availability, maintainability, and reliability is very important – because we know that the ships cracked shortly after entering service (and can therefore be presumed to be unreliable, unavailable, and "un-maintainable"). Regarding this evaluation, COMOPTEVFOR wrote: "Reliability is assessed red [meaning high risk] due to the lack of quantifiable data which should be available for collection and the unanimous concerns expressed during formal interviews with crew and cutter support activities." Similar concerns were identified about maintainability. Navy writes: "Maintainability is assessed Yellow [risk – but not the red risk] due to the lack of quantifiable data available for collection and the unanimous concerns expressed during the formal interview with crew and cutter support activities." Shortfalls in specific maintenance preparations are also cited.
- The COMOPTEVFOR report describes ships highly deficient in many ways (in fact, the picture is so bad that it would hardly be believable that the world's largest defense contractor could fail so badly were it not that the report comes from a highly reputable source). Many little things that seem completely incomparable are cited. For example, "Labels throughout the cutter were incorrect and not photo luminescent." Larger problems are cited also. "The 123' WPB modifications do not interface with pre-existing cutter structure and systems without adverse effect." Another troubling finding: "The 123' WPB was more susceptible and vulnerable to personnel injury and equipment damage as a result of the modification." Cited problems are extensive and highly troubling.
- Did the Coast Guard not realize how bad the ships were (which would imply that the Coast Guard oversight was highly deficient)? Did the Coast Guard know that the ships were so bad – which would imply that the Coast Guard was trying to document the problems – except that it was not in anyone's interest to have these problems recorded, and it is unclear that the Coast Guard took (or was prepared to take or afford…) corrective action after receiving the report.

- **Extent of Navy Access to the 123 is Unclear:** The DHS OIG reports in its August 2006 report that although OPTEVFOR was to play a significant role in completing C4ISR testing

its participation in the testing was limited. Though OPTEVFOR should have participated in the early stages of the development of C4ISR to help identify faults, the contractor provided Navy with access to the C4ISR systems only after they were installed on the completed 123-foot patrol boat. It is unclear why this occurred. DHS OIG does not discuss the significance of this occurrence.

- **What Happened Next:** The Coast Guard reports that the Matagorda received its INTERIM Authority to Operate (IATO) on October 14, 2004. Under IATO, a system may be loaded with classified data but cannot transmit the data because it is not certified to be protected against leaking classified secrets through those transmissions. According to the Coast Guard, the Matagorda received another visual TEMPEST inspection on December 19, 2004. According to documents provided by the Coast Guard, Matagorda received its ATO on January 19, 2005. The 123s received a class waiver for visual TEMPEST discrepancies on July 12, 2005. The Matagorda then went for another TEMPEST visual inspection on October 28, 2005. This inspection yielded an update of remaining deficiencies, many of which had been waivered. The TEMPEST expert (Mr. Atkinson) indicates that several of the items for which waivers were issued were serious in nature and should have been corrected rather than issued waivers. Mr. Atkinson further notes that the October 28, 2005, VISUAL Tempest inspection Memo cites several different references for the standards that are being applied in the decisions to waiver or accept certain issues as "acceptable risks." It is also unclear why Matagorda was given its ATO before (1) the 123 class waiver was issued and (2) it went for the October 2005 visual TEMPEST review. In fact, it is also unclear why Matagorda went for the TEMPEST review in October 2005.

- **Navy Conducts An Update on the OAA:** From March 11 through April 5, 2005, the Navy conducted an update on its original OAA. According to an email provided by the Navy this week in response to questions about the second OAA, they Navy found the following:

    - "The Navy's SPAWARSYSCOM evaluates whether Naval/Coast Guard systems meet the minimum requirements to connect to DOD classified networks. The USCG designated authority then uses that information in determining whether to issue an Interim Authority to Operate (IATO). An IATO is granted when sufficient measures have been taken to prevent unauthorized access to a C4 system. This is based on the cumulative result of physical equipment installations, required inspections (e.g., TEMPEST, Communications Security (COMSEC), etc.). At the time of the update, several positive events were noted. TEMPEST discrepancies (bonding and cabling) and COMSEC discrepancies (classified space physical access) were corrected in USCG MATAGORDA. In addition, the requisite software had been loaded. However, there were unresolved installation discrepancies which precluded a SPAWARSYSCOM recommendation for USCG (CG-62) to release an IATO. Without the IATO, cutters were not authorized to transmit and receive classified information, significantly limiting their participation in USCG tactical operations."

The Navy also noted the following in their email:

- "The comments made in paragraph 1.10 pertain to the Connectivity Critical Operational issue (COI) (the ability to send data to/from the cutter). The cutter's ability to obtain satisfactory TEMPEST inspection reports and COMSEC certification was a significant milestone. A satisfactory TEMPEST report is granted by an accredited TEMPEST inspector when sufficient physical measures (equipment positioning and protection) are taken to prevent unauthorized electronic emanations.

  The corrections made in MATAGORDA were reported as installed in follow-on cutters (PADRE and METOMPKIN) via USCG message traffic and email, leading COMOPTEVFOR to observe that the remaining cutters should be capable of meeting the standards. In spite of this progress, physical connectivity was still assessed as high risk, based upon the inability to establish and maintain classified two-way data exchanges with other USCG and Naval vessels."

Based on this email, it appears that the Navy SPAWARSYSCOM did not believe in March/April 2005 that the MATAGORDA should have an IATO. Further, the C4ISR system's physical connectivity is still designated at this time (March – April 2005) as "high risk."

- **DHS OIG Examines the Hardware on the 123s In Response to the Complaints Lodged on the DHS OIG Hotline by a Whistleblower:** In response to a whistleblower's complaints, the DHS OIG examined the C4ISR hardware on the 123s. The DHS OIG report finds that the contractor used aluminum/mylar shielded cable as part of the cutter upgrade. According to DHS OIG, this cabling met the Deepwater contract requirements, but does not have the mechanical durability of braided, metallic, shielded cables. Further, the aluminum/mylar shielded cabling is not as good as braided, metallic, shielded cabling for applications that are required to meet TEMPEST testing.

- The DHS OIG reports that the Coast Guard noted during visual inspect of the 123s that the cabling on the 123s (aluminum/mylar cabling) "might pose a TEMPEST hazard." DHS OIG further reports "However, the Coast Guard elected to accept the risk associated with this type of shielded cable."
  - Importantly, the author of the DHS OIG report on the 123s claims not to have had access to the Navy's "bad news bears" reports – indicating that he arrived at his conclusions independent of any influence from the Navy's findings.

- **PADRE Sent for a SPAWAR Instrumented TEMPEST Test:** The USCG PADRE (123-3) was sent for a SPAWAR Instrumented TEMPEST test from 15-19 July 2006. In a letter to Chairman Cummings (dated April 13, 2007), Admiral Allen writes that "The second test conducted on PADRE was an anomaly in the normal TEMPEST testing process."

  In his letter, Admiral Allen also wrote, "Normal procedures are to conduct an instrumented test on the first vessel in a class, with visual inspections conducted on subsequent vessels to ensure compliance with the approved configuration." In some cases (MONHEGAN [123-7], METOMPKIN [123-2], ATTU [123-4], MANITOU (123-8]), according to the entirety of the set of records provided by the Coast Guard, some ships appear to have had Visual

TEMPEST inspections after they received ATO – and no evidence of a VISUAL inspection is provided prior to the date cited by the Coast Guard when ATO was granted.

DHS OIG Reports on Problems with Deepwater C4ISR Systems:

In the report dated August 2006, the DHS OIG examined the development of the C4ISR system to date. The report calls attention to specific difficulties that the Coast Guard has had obtaining certification and accreditation of the functioning C4ISR system as a whole (hardware and software together).

- Under federal regulations, agencies must prove that new IT systems function properly in a "production-like" test environment and that they contain needed safeguards.
- The DHS OIG reports that the Deepwater program had a system for testing the functionality of C4ISR systems – but that it could "be improved." The system entails four testing methods:
  - Analysis, to determine if the system meets performance requirements;
  - Inspection, to verify the system has been assembled correctly;
  - Demonstration, to ensure that the system is working correctly; and
  - Final testing, to verify functionality with real-life data.
- According to DHS OIG, the contractor did not have to use all four testing methods on each system; the contractor had the authority to determine which combination of tests would be used. Testing was conducted at the Lockheed facility at Moorestown, New Jersey. It is unclear why the contractor would have such authority.
- DHS OIG identified problems with the testing facilities at Moorestown. Specifically, the simulator equipment used to test the C4ISR systems – and specifically to conduct vulnerability scans – has "difficulty calculating how C4ISR systems work in real situations on cutters or at shore sites; the simulators therefore may produce inaccurate results."
- DHS OIG also found the following: "… because the contractor has not compared simulator performance to that of real C4ISR systems, discrepancies may result when the C4ISR systems are deployed to new assets or shore sites."
- Importantly, DHS OIG found that the simulator system being used to test the functionality of the C4ISR was not itself certified or accredited.
- DHS OIG reports that the Coast Guard recognizes the value of certifying and accrediting the simulators – but the contractor has refused, asserting that it would cost too much to obtain that certification and accreditation.
- What does this mean? The TEMPEST expert advising us explains it like this. If we were talking about a car, the first functionality tests merely determine if the car will turn on and move; they are basic tests about whether, once you put the parts together, they function in the manner expected (the lights come on, the windshield wipers function etc.). The next tests should put the car on the race track and see if it can really function in a high-stress situation. In other words, the C4ISR should be tested with false data or interference etc. to determine that it still works. In this case, the contractor cannot perform these stress tests to really determine whether the equipment works. It is unclear why Coast Guard tolerated a situation in which the contractor's simulator equipment cannot apparently conduct a thorough test of C4ISR functionality.

- We know that there were (apparently subsequent) problems with the functionality of the system. DHS OIG states that a version of the C4ISR on the 123s received authorization to operate while the contractor worked to address vulnerabilities identified with it (this implies interim authorization to operate).
- DHS OIG reports that the contractor created additional system versions to mitigate the vulnerabilities – but these versions failed.
- In April 2006, the Coast Guard's SIPRNET Management Office informed the managers of Deepwater that if the vulnerabilities with the C4ISR system on the 123s were not resolved in 45 days, the system would be denied authorization to access SIPRNET. SIPRNET is the government's classified internet system.
- At this point, the Coast Guard provided the contractor with "best practice" software development process information.
- DHS OIG reports that the contractor aligned its software development process to these best practices – and by May 2006 received authorization to operate a new version of the C4ISR system on the 123s.
- This finding raises several questions. DHS OIG does not identify a specific 123 on which the SIPRNET access problem was identified – however, by 2006 (the time frame here), the Coast Guard has had the first 123 for approximately 2 years (and the first 123s have already cracked their hulls…). Why would it still have had SIPRNET vulnerabilities in 2006? Why would the Coast Guard have to provide best practice information to a firm that has ostensibly been hired for its C4ISR expertise?
- Most importantly, are the same uncertified, unaccredited simulators being used to test the C4ISR functionality on the NSC – which by all accounts has a more complicated C4ISR system (additional routers, servers, and computer equipment etc.)?

- **Problems with Shore Site C4ISR:** In addition to the problems identified with the C4ISR on the 123s, DHS OIG reports that the C4ISR systems installed at the District 7 Miami Coast Guard station failed several vulnerability scans because it was apparently not built according to the DOD information technology certification and accreditation process. As a result, as of the August 2006 report, the shore site system in Miami had not been connected to the SIPRNET. DHS OIG reports that this delay had a "ripple effect, delaying system implementation at other shore sites and on assets."

How Have All These C4ISR Problems Occurred?

- **Coast Guard's Involvement in the Development of IT Products is Lacking:** The DHS OIG report from August 2006 indicates that Coast Guard officials are involved in high-level discussions about the definition of its IT requirements, but have limited influence over the decisions made by the contractor (ICGS) to develop systems that meet these requirements.
    - The DHS OIG reported in the August 2006 report that many IT-related documents do not require the direct approval of the Coast Guard. DHS OIG indicates that the contractor does provide many documents to the Coast Guard for review; upon receipt, the Coast Guard has 30 days to review the documents presented to it. After 30 days have passed, if the Coast Guard has not made any comment, the contractor can (and apparently generally does) proceed with the plans laid out in the documents.

If the Coast Guard requires a change from these implemented plans, they may be required to pay for a change order.

- According to the DHS OIG report, the contractor presented C4ISR increment one testing documents to the Coast Guard for the 30-day review. The Coast Guard identified deficiencies – including inadequate explanation of increment one testing procedures, lack of a testing schedule, and inadequate requirements traceability to the test events – and refused to accept the plan. The contractor submitted the test and evaluation plan a second time and the Coast Guard was required to accept the document due to schedule pressures – even though the Coast Guard felt that improvements and corrections were still needed.
- The Defense Acquisition University study on Deepwater produced in February 2007 states "It is not clear that C4(ISR) acquisition efforts within the DW program and elsewhere in the US Coast Guard are guided by a common USCG enterprise architecture. Without a common architecture and integrated support planning, interoperability and total ownership costs objectives will be at risk." It is highly disturbing that such a finding should be made in 2007 – when ICGS has already been granted an extension of the Deepwater contract.

Additional Points Speaking to Motivation

- Understanding how things got so bad – when being implemented by a firm chosen for its supposed technical expertise with maritime IT systems – is a difficult task.
- Mr. DeKort indicates that one problem was Lockheed's decision to base this work in the Moorestown, NJ facility instead the Lockheed Eagan, MN facility which specialized in this type of work. DeKort indicates that this facility was mostly a software facility (that had worked on the Navy AEGIS program). Originally, Lockheed had intended to bid the work from its hardware facility (Eagan, MN) but switched to try to capitalize on the reputation of the AEGIS facility.
- DeKort also indicates that many of the people working on this program were not competent in hardware because they did not come from the Lockheed facility that specialized in hardware.
- DeKort claims that the hardware (including the wires) installed on another legacy cutter in the yard for an upgrade (the 270) received the higher quality wiring (braided, shielded cables) and systems. One of the other witnesses on Panel I (Robert Braden) is the manager of the 270 program. He indicates that he did use the higher quality cables and systems – but that he was ABLE to do so only because the Lockheed Martin managers were not closely observing his program; their attention was focused on the 123s. This is a very odd situation – but it implies that Lockheed managers were aware of the problems on the 123 and were intentionally ordering the use of the cheaper cables on C4ISR (and of the non low-smoke cables). It also implies that the on-the-ground people knew the other cables were better and wanted to provide a good product – and in the case of the 123s, did not because of directions from higher authorities.
- On the 123s, DeKort seems to describe a situation that snowballed from bad to worse. The technicians did not really know hardware – and installed the wrong wires. When this was discovered, Lockheed Martin refused to rewire the vessel – and instead tried to "get it through." DeKort has produced a significant paper trail that seems to show the Lockheed Martin people were confused about TEMPEST and how to install systems that met that

requirement; the emails seem to present some of the rambling discussions inside the bad news bear camp.

Regarding the problems with C4ISR and the other systems (cameras, topside equipment, other problems identified in the Navy report), it is still unclear what the full motivation was.

DeKort describes a situation in which the contract was underbid, the wrong people were selected to work on it, and Lockheed assumed that since they had done AEGIS they could do anything. Clearly, Lockheed was met by a Coast Guard that had written a poor and vague contract and by Coast Guard members that did not fully understand all that they were acquiring and did not always know what to look for when examining assets.
Together, they were apparently focused on keeping to the schedule (again, Coast Guard personnel wanted to prove that they could manage this major procurement and apparently the perception was that meeting the schedule exhibited that ability – even if what was delivered was unsatisfactory). Lockheed Martin became interested in covering up evidence of their incompetence – and again, delivering on time seems to have been accepted as evidence of performance ability. Many sources refer to the Commandant's use of the term "ruthless execution" and the emphasis on sticking to the schedule.

It is also possible that at least in some circumstances, Lockheed was motivated by the additional money that came from change orders. If they delivered exactly what the contract asked for – even if they knew the specifications would produce a poor product – they complied with the contract (or if the 30-day document review period passed and the Coast Guard said nothing). Lockheed could then be hired to do the change orders and fix what either did not have the proper design to work correctly or, in some cases, what was originally built poorly. We have asked Coast Guard to produce the contracting officer to try to understand the extent of the change orders and the amount of money involved.

Background Paper on the 110/123 Hull Cracking Issue

Committee on Transportation and Infrastructure
April 18, 2007 Deepwater Hearing

Mr. Scott Sampson is a civilian Coast Guard (CG) employee who is currently Vessel Specifications Section Chief, Maintenance and Logistics Command, Atlantic (MLCA), based in Norfolk, VA. He has been in this current assignment since 2004. Prior to this, between 2001 and 2004, Mr. Sampson was a Naval Architecture Project Manager, with the Navy Combatant Craft Division (CCD, a division of Navy Carderock), which was then located in Suffolk, VA. From 1996-2001, Mr. Sampson was a CG employee with his current organization (MLCA) and was a specialist in ship repair specifications, overhauls, and damage repair. His background qualifies him as an expert in the 110/123 hull cracking problem.

Mr. Sampson has phone records indicating that in August 2002, he became aware of the preliminary 110/123 CG design, and after reviewing it, he had immediate concerns about the structural integrity of the design as proposed. As a result, he contacted Mr. Debu Ghosh, who was the lead Naval Architect for the CG Boat Branch, which had primary responsibility for designing the 110/123 modification. During this conversation, Mr. Sampson expressed his concerns, and invited Mr. Ghosh to a meeting at CCD.

Mr. Sampson's concerns stemmed from the Navy's experiences with modifications performed to Patrol Craft (PC) Cyclone Class 170' vessels, which were given a 9-foot extension to 179' in the 1990s. The Navy experienced a structural problem with hull integrity associated with the extension, which required a major design change that successfully resolved the problem. These issues included:

- Longitudinal strength (no increase planned – Navy had problems and corrected).
- Length of extension (possible heeling issue during turning) – Navy performed model tests and determined 5% increase in length was optimum for the 170, and was concerned about 12% increase planned for 110.
- Extension of buttocks lines straight back rather than the inclusion of rocker to maintain running trim. (CG had to relocate potable water tanks in 123 to extreme stern to achieve similar trim as 110.)
- Lack of engineering expertise by Bollinger Ship Yard. During the 170/179 extension, the Navy's CCD provided engineering documents and designs to guide the extension and Bollinger performed <u>construction</u> <u>only</u>. By contrast, for the 110/123 project, Bollinger was to provide all <u>engineering</u> and <u>construction</u> even though they do not appear to have extensive expertise in naval <u>engineering</u>.

On September 3, 2002, Mr. Ghosh visited the CCD facility in Suffolk, VA and met with Mac Whiford (Section Chief at CCD), and Carl Casamassina, a naval architect. At this meeting,

CCD shared all the Navy analyses and reports on the 170/179 program, as well as the proposed Navy design solutions to the flaws identified in the 123 design.

Sometime after this meeting, Mr. Ghosh requested an estimate from CCD to provide a revised design as well as technical and engineering support at the Bollinger shipyard. A "ballpark" estimate of $50-60K was communicated verbally to Mr. Ghosh for CCD to do this work. Mr. Ghosh later communicated back to CCD that the Deepwater program would not pay for this work. Mr. Sampson was not involved in any discussions after this occurrence.

In late March 2005, after Mr. Sampson had rejoined the Coast Guard, he was advised of the hull cracking issues on at least 6 of the converted 123s (Drummond, Nantucket, Nunivak, Matagorda, Metompkin, and Padre). He joined a damage assessment team consisting of LCDR Chad Jacoby, Rich Wharton (ICGS), T.R. Hamblin (Bollinger), Debu Ghosh, and LTJG Jeff Payne to perform inspections and analyses of the failures on the 6 vessels.

Mr. Sampson's analysis of the damage is summarized below:

"There appear to be four distinct areas of concern that appear on all the cutters to a certain degree, representing to me a pattern of damage.

1) Damage P&S at FR 33. – The hull is buckling from the sheer line down, in many cases to just above the water line.

2) The deck forward of the boat well. This deck is buckling so that ripples are being created in the fore and aft directions.

3) Distortions around the P&S generator insert plates either are developing or existing distortions are getting bigger.

4) Buckling/tripping of the longitudinal stiffener under the deck just aft of BHD 22 on the Starboard side.

<u>Probable cause for Issue 1:</u>

Upon review of the construction of the cutter class, FR 33 has many significant structural details which result in the buckling of the side shell plate and if left to continue potentially the bottom plate. It is my opinion that this area is significantly weak as this is where the old hull and the new hull were joined. The seam between the deck and the side shell are within 9" which does not provide for a good separation. The structural stiffness between the aft portion (new) and the fwd portion is significantly different. The taft rail, boat well sides and structural construction of the new addition creates an extremely stiff section of the hull. The problem is there is no continuous longitudinal in the deck because the deta couple is also in this same area. The aft section of the boat is weighted down with water tanks and the SRP. The increased loading on this section creates a significant stress on the joint of the old to new section. In effect the back of the cutter is being pushed down, causing the sides of the hull to buckle.

If left unresolved, this issue could result in a weakening of the hull and ultimate hull failure. The side shell will buckle that would most likely result in worst case a crack above the waterline. If the bottom plating experiences tension and compression, it could also result in a crack resulting in the flooding of the battery

space. I think this would be less likely as the bottom longitudinals are continuous in this area resulting in the hull bottom bending rather than buckling. The longitudinal stiffness in the deck must be increased in this area.

Probable cause for issue 2:

The deck distortions and cracking I believe are also caused by the stiffness issue raised in number 1 above. If the aft section is bent down, then the deck becomes in tension. The problem however is that the aft section cannot bend straight down because the boat well sides. The boat well sides because they are at an angle (not parallel to centerline) in addition to the structural differences between the port and starboard side causes the aft section to bend at an angle, causing the slight torsion in the deck. If the aft section bends up, the deck becomes in compression and creates the ripples. This is what I believe is causing the increased deformation and cracks in the deck.

If left unresolved, the deck will continue to crack. Risk of losing the cutter is minimal, as the stress is running fore & aft, not transversely. Worse impact is water intrusion into the electronics space.

Longitudinal stiffening of the connection will help reduce the impact of this problem. Thicker insert plates may also help prevent this problem.

Probable cause for issue 3:

It is unclear without detailed analysis if the structural stiffness difference is the cause of the deformation up forward, however it could be aggravating it. There could also be an issue of the insert plates just being a hard spot in the hull. It didn't show up before because the shorter length did not create the same pressure in this area. With the additional length of the hull, the insert plate is now closer to the middle of the cutter and due to the increase stress, the insert plate is causing a hard point in the hull and the plate is buckling.

If left unresolved, it is my opinion that eventually cracks will develop around the insert plates. This could result in the flooding of the engine room.
A solution is tough to determine unless we know for sure what the root cause is. A potential solution is the local stiffening of this area to help distribute the load better.

Probable cause for issue 4:

It is unclear why this stiffener is tripping and deforming as much as it is. The decks on all the 123's show deformation. It is hard to determine why this is happening as there does not appear to be any other damage to the house in this area. This requires further analysis.

No significant impact if left unresolved. Additional structure will assume the load. No risk of flooding or water intrusion.

A solution is tough to determine unless we know for sure what the root cause is. A potential solution is to increase the size of this stiffener."

SUMMARY

Translated into lay terms, the conclusions of the failure investigation and the discussions between the Navy and CG prior to the modification program's start can be summarized as follows:

1) The CG was clearly warned by Navy CCD that the 123 design was likely to experience hull cracking and/or failure issues.
2) The CG was apparently not persuaded enough by the Navy analyses of the 123 design and the Navy's experience on their own 179 program to change the design or reimburse the Navy for design change work. This is despite the fact that the 110 (Island Class) and 170 (Cyclone class) were sister ship designs by the same builder.
3) One major design shortcoming included a failure to properly strengthen the areas of the hull adjacent to the extension, and these problems were previously identified by the Navy, and the design was fixed on their similar ships.
4) The other major design flaw was the shape of the extension, which proceeded as a "flat bottom" toward the aft-most section, ostensibly to accommodate easy launching of the Predator pursuit craft. The Navy design involved a tapered, raised design. However the CG-designed, flat-bottom shape changed the center-of-gravity of the vessel, making it tail-heavy, subject to damage as result of wave slapping, and substantially increased drag, effectively reducing the range of the vessel by up to one-half.
5) All 6 vessels described in the report above, suffered the <u>same pattern</u> of damage, in <u>exactly the same areas predicted</u> by the Navy CCD analysis given to the CG in 9/02.
6) The hull cracking was NOT a "fatigue" problem, but was induced by a <u>single</u> load. In other words, one incident of exposure to a moderate load (wave action) was sufficient to cause hull failure.
7) The design flaw is so severe that the only probable fix now would be to take all 8 ships entirely apart and add a completely redesigned extension, as well as the appropriate doubling and stiffening at the extension point. At this time, it is highly unlikely that would be cost-effective solution.

DEPARTMENT OF DEFENSE
INFORMATION PAPER

SERVICE/AGENCY: U.S. Navy
SUBJECT: 110' TO 123' PATROL BOAT CONVERSION

1. QUESTION/REQUEST: Respond to questions regarding subject matter from House Committee on Transportation and Infrastructure investigator Clay Foushee stemming from an April 4, 2007, telephone conversation between Mr. Foushee and Mr. Malcolm Whitford, Combatant Craft Division (Code 23), Naval Surface Warfare Center, Carderock Division (NSWCCD); Captain Mark W. Thomas, Carderock Division Commander; and Lieutenant Commander Nicole Shue, Navy's Office of Legislative Affairs.

2. RESPONSE: The following background is provided:

a. Scott Sampson was an employee of Combatant Craft Division Code 23 in the Naval Architecture Branch, Code 231, from October 2001 to August 2004. From 2002 to 2004, he was the Code 23 single point of contact for Coast Guard work. After Scott's departure to work for the Coast Guard at the MLCA, Jason Marshall became the Code 23 single point of contact for Coast Guard work. Jason Marshall was reassigned in February 2006, and Keith Steinhouse became the Code 23 single point of contact for Coast Guard work. Bill Moss is the NSWCCD Customer Advocate for the United States Coast Guard.

b. Malcolm (Mack) Whitford was the Branch Head for the Naval Architecture Branch, Code 231, until he was named as acting SEA 05 Technical Warrant Holder for Combatant Craft and Boats in April 2004. After that time, the Branch Head position was filled by others, including Carl Casamassina and Will Sokol, on a temporary rotating basis until July 2005, when Will Sokol was selected for that position.

c. Relative to the 110' Patrol Boat (PB) to 123' PB conversion program:

Q1. When did discussions commence with the Coast Guard and Code 23 personnel regarding the 110 to 123 conversion? (Foushee indicated interest from 2002 forward)

A1. On Aug. 9, 2002, a telephone conference was held between Naval Surface Warfare Center Carderock Division (NSWCCD) Code 23 engineers Scott Sampson and Carl Casamassina, and United States Coast Guard Engineering Logistics Center (USCG ELC) engineers Debu Ghosh and Chris Barry. Mr. Ghosh described the modifications being proposed to 110' Island Class Patrol Boats (PB). Carl Casamassina described the experience of Code 23 with a similar hull extension on the 170' Patrol Coastal (PC) Class ships.

Q2. What types of technical discussions occurred between Code 23 and USCG personnel?

A2.
Aug. 9, 2002 – General discussion of the scope of modifications to the 110' PB and discussion of lessons learned from the PC Class 170' to 179' hull extension.
Aug. 19, 2002 – Discussion of possible tasking from USCG to Code 23 to review Bollinger Shipyards' engineering for the 110' PB extension.
Aug. 22, 2002 – Discussed possible role of Code 23 with Deepwater program in relation to the 110'/123' PB modification and problems with the Bollinger design.

In or around the May 2003 time frame – Carl Casamassina recalls three undocumented phone conversations:

First Call – The call was between Carl Casamassina and Dennis Fanguy, Head of Bollinger Shipyards Engineering. Carl recalls, "I contacted him relative to HSV 2 Swift and the integration of the MK96 gun system. After we completed our discussion about the MK96 gun system integration on PC Cyclone Class and HSV 2 Swift, we discussed briefly the USCG 123' extension. I inquired about their role in the design of its integration and if they were using ABS to review or certify it. Dennis mentioned that ABS was not reviewing the design however they had/were used/using the ABS High Speed Craft Commercial Rules for structural adequacy. I reminded him of the problems we had on the PC Cyclone Class with the errors in those particular rules, and that we used a first principle approach to address the dynamic bending moment and structural adequacy to fix the PC's and to integrate their extension which was accomplished with success."

Second Call - A short time (approximately two weeks) following the first phone conversation, Carl recalls, "Dennis Fanguy (Bollinger) and one of his engineers (I believe Robert Rivere??) called me back to discuss further the USCG 123' extension. They asked me about the types of engineering checks and validations which were accomplished on the PC Cylcone Class extensions. I began by first cautioning against the use of the ABS High Speed Craft Commercial rules because of the errors we found in it, and mentioned that ABS has a new guide out, ABS HSNC (maybe draft at the time) which fixed the previous errors. I followed this caution by providing a verbal summary of what types of model testing, Finite Element Analysis modeling and associated calculations CCD executed on the PC Cyclone Class extension."

Third Call - Following the phone conversations with Dennis Fanguy (Bollinger), approximately two weeks or so, Carl recalls he had a phone conversation with Glen Ashe and Dereck Novak from ABS relative to HSV 2 Swift matters. Carl recalls, "During the conversation I expressed my concerns to them that they need to either update their ABS High Speed Craft Commercial Rules to fix the errors or somehow discontinue its use, because it is still being used in error out in the industry, and I described my conversation with Bollinger using it for the USCG 123' extension. There was no resolution."

In the Dec 2004/Early 2005 time frame – Carl Casamassina recalls two phone conversations with Debu Ghosh (USCG ELC) relative to the 123' extension and the structural problems they were experiencing. Within the two conversations Carl recalls the following:

> "I asked him if the primary hull girder strength was increased by the design. He said no, and because the contract doesn't call out the new ABS HSNC, they really don't have a leg to stand on. I stated to Debu that I believe (based on lessons learned from the PC Cyclone Class extension) they are going to have serious problems with putting such a large extension on the 110' without increasing the primary hull girder strength. Debu said that he was trying to pursue a critical strength panel approach in order to get the designers to remedy the problem because that is the only contractual leverage they have. I cautioned him that the problem is very serious and very simple to understand and that it needs to be fixed right away before they lose a ship. Other parts of the conversation included talking about how the ABS High Speed Craft Commercial Rules result in using a still water bending moment versus a dynamic bending moment which would be required by other class society rules like DNV."

Q3. Who was involved in those discussions? (be specific as to dates and personnel related to specific dates)

A3.
Aug. 9, 2002 – Scott Sampson (Code 23), Carl Casamassina (Code 23), Debu Ghosh (USCG ELC), and Chris Barry (USCG ELC)
Aug. 18, 2002 – Scott Sampson (Code 23) and Debu Ghosh (USCG ELC)
Aug. 22, 2002 – Scott Sampson (Code 23), LCDR Brian Emerck (USCG SEN), and CDR Roder (USCG)

See also the telephone conversations listed under question 2.

Q4. What recommendations did NSWCCD make to the Coast Guard? (include data provided, issues addressed)

A4.
Aug. 9, 2002 – During a telephone conference the proposed 110' to 123' conversion was described to Code 23 personnel. There were many similarities to the hull extension that Code 23 had engineered on the 170' PC Class ships. One of the key differences was that the 110'/123' extension was more significant (12% increase in length) than the 170' to 179' conversion (5% increase in length). The implication was that longitudinal bending loads would increase even more on the 110'/123' conversion than they did with the 170'/179/ conversion. Code 23 developed Ship Alteration (SHIPALT) 59K for PCs to strengthen the primary longitudinal hull girder and it was a prerequisite to accomplishment of SHIPALT 32K (hull extension for boat launch and retrieval system) due to the increased longitudinal bending loads that result from lengthening the hull. This was conveyed to the Coast Guard during this phone conference. The following topics were presented by Code 23 to provide the full scope of background that was available to assist the Coast Guard in the 110'/123' conversion project:

Testing of extension buttocks line options from -10 deg to +10 deg. Emphasized the significant impact the choice of buttock line shape for the extension would have on fuel consumption/range and speed.
Powering/Resistance calculations
Strength Calculations – Finite Element Analysis (FEA)/global and local – with discussion of dynamic loads being the limiting factor
Rudder sizing calculations and location
Anchoring
Mast excitation
Longitudinal Center Gravity should be 5 1/2% of the Length between Perpendiculars aft of amidships
New house should be designed for 15 psi
Recommended adding forward bulwark
Recommended installing ballast tanks and additional watertight bulkheads in extension
That the modification added increased stability by raising the margin line.
Propeller design – the problems experienced with commercial designs in terms of cavitation/erosion/noise and improved results with the Carderock Division designed propeller
Ramp design - Depth of water/angle/doors
Existing tow tank models – Carderock Division has models of the 110' PB in two sizes

Debu Ghosh had indicated to Scott Sampson that he was already working on getting funding to us. As part of funded support for this project Carl Casamassina offered to provide the following (when funding did not materialize this data was not transferred):

Load analysis/application/development write up
Tech manual for launch and recovery of Rigid Hull Inflatable Boat (RHIB)
Cost for modification
Reports or summaries of reports and findings
Sources for model construction

On or about Aug. 19, 2002 – Scott Sampson discussed with Debu Ghosh providing engineering support to review the proposed design for lengthening the 110' PB to 123 feet. On Aug. 19, 2002, Scott Sampson provided a cost estimate to Debu Ghosh for engineering support as follows:

"Our estimate for supporting you on this effort is $42,000.00. This would include:

- 2 Naval Architects at $744.80 per person/per day for 14 days.
- Travel/Rental car/Per Diem
- Sea Keeping analysis at $10K for a simple comparison between the original and modified hull
- 8 Man days of additional support"
-

Aug. 22, 2002 – Scott Sampson discussed options for supporting the Coast Guard relative to the 110'/123' conversion with LCDR Brian Emerck and CDR Roder. The options ranged from briefing the potential pitfalls of the current 110' extension approach to working in concert with the Coast Guard Engineering Logistics Center (ELC) to provide a complete design to the shipyard.

Q5. What was the resolution of those recommendations/discussions?

A5. None. No tasking or funding was received from the Coast Guard for Code 23 technical support.

Q6. What actions were taken?

A6. Code 23 provided background information on lessons learned on the PC Class, discussed areas where particular caution was warranted, and proposed direct engineering support as described in the answers to questions 1 through 4.

Q7. Were there any follow up actions?

A7.
On or about June 28, 2005 – Carderock Division learned that the converted 123' WPB was having structural problems. Debu Ghosh contacted Carderock Division Code 65 via Tom Brady regarding structural testing on the 123' WPB. Bill Moss (NSWCCD Customer Advocate for USCG) provided Code 23 with initial information on the request from Debu Ghosh. Internal discussion began on how to respond and what technical efforts would be appropriate.

June 29, 2005 – Mack Whitford expressed concern to Brooks Darden, CF Snyder, Bill Moss, Tom Brady, Denny Woolaver, and Carl Casamassina that the Coast Guard was not on the right technical path in trying to resolve the 123' WPB structural problems. Whitford cautioned that the testing being proposed by the Coast Guard was not adequately supported by preliminary analysis and that Carderock Division should not get involved unless the scope could be properly defined to yield meaningful results.

June 30, 2005 – Telephone conference between Bill Moss, Carl Casamassina, Jim Lewis, Tom Brady and Debu Ghosh to discuss USCG proposed testing. Code 23's position was that poorly planned testing without the necessary analysis to correctly target it would be a waste of time. Carl Casamassina suggested that straightforward calculations might suffice to confirm the problem and identify an approach to correcting it.

June 30, 2005 – In a telephone conversation with Mack Whitford, Debu Ghosh agreed to provide technical data on the 123' WPB to allow preliminary calculations to be run that would help clarify the nature of the structural problems that were being experienced. It was Code 23's position that the problem was longitudinal bending and inadequate section modulus to resist those loads. The testing being proposed seemed to indicate a focus on secondary issues such as critical buckling in the plating. Without a basic agreement on the nature of the problem, agreement on an appropriate approach to testing and analysis would not be possible.

June 30, 2005 – Debu Ghosh provided a proposed statement of work to Code 23 for structural testing of a 123' WPB.

July 8, 2005 – Meeting in Norfolk between Debu Ghosh, Carl Casamassina, Scott Sampson, and Mack Whitford. Code 23 presented the results of their calculations based on the data provided

by Debu Ghosh. The calculations were to class society requirements for longitudinal bending with some modifications that Code 23 has validated by full scale measurements on the PC Class ships. When actual accelerations from earlier 110' PB testing were applied, the calculations showed that the existing 110' PB structure was adequate but that the extension to 123 feet increased the dynamic longitudinal bending loads to the point of failure. The solution recommended by Code 23 was to develop structural modifications that would increase the hull girder section modulus to at least the minimum standard. At this point the original modifications to the converted 123' WPB by Bollinger had failed, and a fix that added doubler plates on the side and deck at the sheer had also failed. Debu Ghosh indicated that the ELC was looking at increasing plating thickness in certain areas that were experiencing plate buckling as a third fix. Code 23 advised that unlike PC, which had a larger section modulus to the keel than it did to the deck, the converted 123' WPB had more or less equal section modulus in both directions. Increasing the deck structure only, without increasing the bottom structure, would move the problem to the bottom structure. Failure of the bottom structure is potentially more dangerous because it is less readily observed by the crew and could result in flooding. Debu Ghosh disagreed with Code 23's analysis and maintained that the problem was localized critical buckling. Code 23 recommended that if testing was going to be done that it be done on an unmodified and undamaged craft to avoid the confusion created by the fixes and so as not to take on the additional risk of bottom structure failure. No agreement was reached and the meeting ended without resolution.

July 11-13, 2005 – At the request of the USCG Maintenance Logistics Center Atlantic (MLCA), Mack Whitford accompanied USCG personnel to Savannah, Georgia to inspect structural damage to Coast Guard Cutter (CGC) Nunivak. Invitational travel orders were provided by MLCA. Damage was completely consistent with Code 23's conclusion that the source of the problem was inadequate hull girder section modulus to resist longitudinal bending. Shortly after this trip, Mack Whitford discussed his observations with CAPT Blackall and some of his staff at MLCA.

July 15, 2005 – Carderock Division provided Debu Ghosh a detailed proposal and cost estimate to fully analyze, test, evaluate, and recommend solutions for the 123' WPB structural problems. Debu Ghosh responded that he would get back to Carderock Division after discussing it with the Program Office.

July 27, 2005 – Bill Moss inquired of Debu Ghosh what his intentions were relative to the July 15 proposal.

July 29, 2005 – Debu Ghosh informed us that "After discussing with the Program Office, we have decided to go with a NA [naval architecture] firm to just do the testing as identified in the SOW." This was a substantially more limited effort than proposed by Carderock Division on July 15. Carderock Division believed the approach described in the Coast Guard SOW to be inadequate to resolve the structural problems with the 123' WPB.

July 29, 2005 – As the SEA 05 Technical Warrant Holder for Combatant Craft and Boats, Mack Whitford informed RADM Paul E. Sullivan (then Head of Ship Design, Integration and

Engineering, SEA 05) that the actions the Coast Guard was taking to resolve 123' WPB structural problems were technically incorrect.

Aug. 31, 2005 – At the request of Scott Sampson, Code 23 provided the calculations and conclusions developed for the July 8 meeting to MLCA. Scott Sampson indicated he was going to a meeting at ELC the next day to discuss these conclusions with Debu Ghosh and his staff.

Oct. 19, 2005 – Scott Sampson, MLCA, requested assistance from Code 23 in conducting structural trials on an instrumented 123' WPB.

Oct. 26, 2005 – Code 23 provided a statement of work and cost estimate to MLCA to support structural trials. Scope was limited to "provide input to test guidance document to advise on necessary trial events to capture all pertinent data" and to provide "wavebuoy, and GPS to capture data that characterizes sea surface information and ships speed and course-over-ground". Estimate total was $41,400. The statement of work contained the disclaimer, "CCD does not believe the scope of current testing will achieve the desired results for the USCG. Our participation in these trials is limited to measuring and reporting sea surface condition data present at the time of trials and proving[sic] input to overall trials coordination."

Oct. 31, 2005 – Code 23 provided comments to MLCA on a test plan provided by Scott Sampson. The comments included the following disclaimer: "The following general comments, along with the embedded comments in the attached word document are provided as our top level review comments of the subject test plan. I would like to make it clear that our involvement in this trial is very limited in scope, and that we still recommend our initial NSWC Carderock proposal sent July 15, 2005 to accomplish this task. In no way should our comments provided here, nor our involvement in obtaining ship speed and wave height (iaw our SOW Task) be misconstrued as endorsement of this subject test plan."

Nov. 4, 2005 – NSWCCD received MIPR HSCG80-06-X-3FAG07 from USCG for $41,400.[1]

Jan. 14, 2006 – Code 23 personnel supporting structural trials reported, "While testing in a sea state with average significant wave heights of eight to ten feet and average periods of five to six seconds on January 14, 2006, the Padre [a 123' WPB] sustained significant cracks and structural deformities." Testing was suspended. MLCA indicated they would request additional testing support in March 2006.

Jan. 31, 2006 – Code 23 provided MLCA a statement of work and cost estimate to support additional structural trials on CGC Padre. The scope was very similar to the January 2006 testing; "provide wave buoy, ship speed and course-over-ground data, and test consultation for additional full-scale trials". Estimated cost was $42,038.

Mar. 22, 2006 – NSWCCD received MIPR HSCG80-06-X-3FAG07 from USCG for $42, 038.

Apr. 6-20, 2006 – Provided limited support for follow-on structural trials on CGC Padre.

April 9, 2007

Q8. What discussions took place with the USCG relative to funding technical efforts by Code 23?

A8.
Sep. 9, 2002 – Scott Sampson reported to Bill Moss and Ron Warwick that, in a phone conversation the same day, Debu Ghosh had expressed frustration with his inability to fund Code 23 for the support he needed and that he was trying to push the issue up his chain of command.

On or about Sep. 10, 2002 – Bill Moss made several contacts to discuss tasking and funding from the Coast Guard. A question had arisen relative to the Carderock Division having tasking from both the contractor for Deepwater and the program office at the same time. Bill Moss was able to provide examples of how this had been handled in the past with appropriate internal firewalls to isolate the work being done for the two parties. Captain Kevin Jarvis, Chief, Office of Systems Deepwater Integration, and Larry Wilkerson, Head, ELC IDS seemed positive about potential Code 23 and Carderock Division support of Deepwater. He also identified to Larry Wilkerson the general support statement of work and funding that was in place between the ELC Cutter Branch, Rubin Sheinberg, and Carderock Division that would allow ELC to access Carderock Division easily and quickly.

Jul. 15, 2005 – A detailed proposal and cost estimate to fully analyze, test, evaluate, and recommend solutions for the 123' WPB structural problems was provided to the USCG ELC by Tom Brady (Code 65) in cooperation with Code 23.

Jul. 27, 2005 – Bill Moss sent a follow-up e-mail to Debu Ghosh to determine whether ELC intended to fund the proposed structural testing.

Jul. 29, 2005 – Debu Ghosh (ELC) responded that after discussing with the Program Office they decided to pursue a reduced scope task with a private naval architecture firm.

Oct. 26, 2005 – Code 23 provided a statement of work and cost estimate to MLCA to provide limited support for their structural trials on a 123' WPB. This was funded on Nov. 4, 2005. See the disclaimer that was included with this item under question 7.

Jan. 31, 2006 – Code 23 provided a statement of work and cost estimate to MLCA to provide limited support for their additional structural trials on CGC Padre. This was funded on Mar, 22, 2006.

OVERSIGHT HEARING ON COMPLIANCE WITH REQUIREMENTS OF THE COAST GUARD'S DEEPWATER CONTRACT

Wednesday, April 18, 2007

HOUSE OF REPRESENTATIVES,
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
Washington, DC.

The subcommittee met, pursuant to call, at 2:40 p.m., in Room 2167, Rayburn House Office Building, the Honorable James L. Oberstar [chairman of the committee] presiding.

Mr. OBERSTAR. The Committee on Investigations and Oversight will come to order.

We meet today in full Committee to inquire into compliance of the Coast Guard with the Deepwater Contract.

When I was elected to the chairmanship of the Committee, I said at the very outset, that we would have a strong emphasis of oversight and investigations into the programs within the jurisdiction of our Committee.

It has long been a role of this Committee going back to 1959 when the Special Investigating Committee and the Federal-Aid Highway Program was established by then Speaker Rayburn and my predecessor, John Botnick, whose portrait is over there in the corner was designated chair of that Committee. It was the very first deep investigative work of the House in the post-World War II era that resulted in conversion of all State and Federal highway programs from no internal audit and review procedures to every State having internal audit, review and accountability for their Federal highway funds.

It also resulted in 36 people going to Federal and State prison for their illegal activities in misuse and abuse of public funds in the Federal-Aid Highway Program.

The Committee continued its work into other areas of jurisdiction of the full Committee doing enormous good service to the public. We continue that work in the spirit of inquiring into the whys, the best and most effective use of public funds and ensuring that there is not failure on the part of Federal agencies carrying out their public trust.

Of all the issues that have come before our Committee—we have had a lot since the beginning of this session of Congress—the failures of the Coast Guard Deepwater Acquisition Program are the most disturbing. The Investigations and Oversight bipartisan staff has conducted an in-depth investigation over the last three months of the conversion of 110 foot patrol boats to 123 foot boats, which

is a 12 percent extension, and to modernize their electronics in the new era of security and the additional mission of the Coast Guard in homeland security.

The investigation uncovered factors far more disturbing than we anticipated at the outset, more than other committees that have looked into this have uncovered. Major problems in the program, some of the major problems, have already been disclosed in hearings of other committees and by news reports. But four years after the Coast Guard began the Deepwater program to replace or upgrade all of its ships, fixed wing aircraft and helicopters, we know that 8 of the 110 foot patrol boats have been found unseaworthy and rendered essentially useless by a poorly designed hull extension.

It has already on public record that plans to produce a new class of 147 foot ships have been shelved after a new hull design was found to be flawed.

It has already been published that serious questions have been raised about the structural integrity of the new National Security Cutter and whether it can be expected to meet its projected lifetime in service.

There are problems that have increased the cost of the Fleet Renewal Program from $17 billion to more than $24 billion.

We know that the Coast Guard's ability to fulfill its mission has been compromised, that critically needed assets are not going to be available or certainly not available in the timeframe within which the Coast Guard needs them. The Coast Guard, consequently, has been forced to cut back on patrols. At times, it has had to ignore tips from other Federal agencies about drug smugglers.

We are concerned these difficulties will only grow and become more acute in the years ahead as older vessels fail and replacements are not available.

What we have learned in our investigation, though, is even more disturbing, serious management failings which are structural internal to the Coast Guard. We are not going to pass final judgment on those charges or allegations until we have had the response of the Coast Guard and its contractors.

I should point out that the testimony we will hear today raises serious problems that were known early in the program by the Coast Guard and that warnings delivered by very courageous persons involved in the program from the earliest days were delivered, and many of the warnings consciously rejected by various levels of Coast Guard management.

I commend those who are witnesses here before us today, who have helped us in understanding what happened and have put their jobs, their careers on the line in order to do the right thing and assure that the truth is out, in particular, Michael DeKort, Robert Braden and Scott Sampson. Mr. Atkinson is not a Coast Guard employee, but he is a similarly public spirited person who has proffered an extensive analysis of the internal problems.

Now the Coast Guard has taken a lessons learned approach to the tragedies, the failures that have occurred in the conversion program, and we hope that today's hearing will make a major contribution to improving, changing not only the way the Coast Guard does this but the culture, the very culture within the culture. Time

will tell, but one thing is certain. We are going to stay on top of it.

Mr. OBERSTAR. The Chair recognizes the gentleman from Florida, the Ranking Member, Mr. Mica.

Mr. MICA. Thank you, Mr. Chairman. I have some comments.

I am a little bit concerned. This is the first of our investigative hearings, and by going forward today under some terms that I thought were a little bit different than what I had anticipated, I do have some issues that I do want to raise.

The Committee is continuing today in what I was led to believe was the oversight of the Coast Guard's very important Deepwater program. Unfortunately, after reviewing the materials for this hearing, most of what we are going to hear or go through in a series of panels appears to be matters that we have already reviewed.

I guess some of it may be redundant because I have not only participated in at least two hearings on this Committee but also the Government Reform Committee on which I serve which has also looked into this. This is, I believe, the sixth hearing held this year, and number seven is next week in the Senate.

I do want to say that I have been impressed with the conduct of the Chairman of the Subcommittee, Mr. Cummings, and the Ranking Member, Mr. LaTourette. They stated that they would continue to pursue this matter and have subsequent testimony from the DHS IG and the General Accountability Office just last month. In the January hearing, Mr. Cummings, Chair of the Subcommittee, and Commandant Allen agreed that there would be a hearing 120 days later in which the Coast Guard would report also on changes in the program and progress that has been made. I think it is very important that we review that.

I come from the State of Florida. We have these eight cutters that now I am told they have been brought up here to the Northeast from Florida. They are not usable.

These cutters are critical to safety, to national security, to questions and problems we face on illegal immigration. Last week, we had, I believe, over 100 Haitians just come in, in one batch, and warm weather hasn't started. The Coast Guard has a mission dealing with illegal narcotics which is critical, and I don't have those assets there.

There are 40 of these cutters. These are eight. A large percentage of these cutters are out of service. I know there are some plans in place, and it is critical that we deal with these issues I mentioned, not to mention the possibility of some change in the regime with Castro and critical needs without the vessels in place.

No one is more deeply troubled than I am about the problems associated with the 110 foot cutters to 123 foot cutters which was the effort underway. However, I am afraid again that this hearing merely rehashes some of the issues the IG has gone through and reviewed and testified about at our Coast Guard Budget Hearing last week.

I do have the questions that were raised, I would like to submit for the record, and then the responses which are some of the same questions again today, if I could have that included.

Mr. OBERSTAR. Without objection, they will be included.

Mr. MICA. In addition, I must point out again this is very important that this is the first of our investigative hearings, and both Mr. Oberstar and I are committed to strong investigations and oversight. We think that is an important part of our responsibility.

However, the minority was not included in the selection of the interviewing of these witnesses. Given the traditional bipartisan nature of the work on Coast Guard and maritime transportation, this causes me great concern. In Government Reform, for example, we don't interview a witness or depose a witness without notification and the opportunity to have bipartisan participation. That does concern me, and I hope that is not the way we proceed in the future.

I also understand that one of today's witnesses, as staff has told me, is being paid by the Committee, the taxpayers, as a consultant, and I think that is Mr. Atkinson. Is that correct?

Mr. OBERSTAR. Only his travel and expenses are covered.

Mr. MICA. So he is being paid.

Mr. OBERSTAR. As in the tradition of the Committee.

Mr. MICA. Again, I have concerns about the selection of witnesses and particularly those, well, we are going to hear from a whistleblower, and I think he has some important information to share with the Committee. I am not certain, because again our staff was not permitted to interview him at the same time, that he is actually in position to be able to comment on some of the issues relating to certification, et cetera, that he may be testifying on. So that raises a question.

Secondly, with Mr. Atkinson, I am just totally at a loss with why he was permitted to be a witness. Now I did not see this until yesterday, and staff provided me with this yesterday, but anyone can go on to www.tscm.com. That is his web site.

In 15 years of having witnesses before numerous subcommittees, some of which I chaired or participating on different committees, I have never had a witness who set forth a mission statement or qualifications. Let me read from his, and you all pull this up and see it.

These are quotes from his web site: "I will not have anything to do with someone I know to be a criminal, and if I have seen the slightest reason to believe that they have a criminal history, I will back away from them the second I find out about it. In fact, not only will I start backing away from them, but they will hear me reloading the shot gun as I do it."

Second paragraph: "If someone choose to be an eavesdropper, I will hunt them to the ends of the Earth. If they are a felon or a crook using electronics in their work, I will relentlessly stalk them until they are rendered impotent."

Third paragraph: "When the eavesdropper lies on his death bed and the angel of death comes to take him away, I want death to be holding a scanlock instead of a scythe. I want them constantly looking over their shoulder and expecting TSCM specialists to pounce on them and start beating them with an NLJD. Let them fear black boxes and weird looking antennas. Let them eat Xanax by the handful and spend their days in pain."

Fourth paragraph: "Let them be afraid. Let them be very afraid, for I am hunting them. If I am not hunting them, then someone

who I trained will be. Let them be afraid. I perform bug sweeps like a contact sport. I don't play fair."

I have never heard a witness give those kind of qualifications. Again, the rest of it is troubling to me. The staff pointed this out. So I do have concerns about the witnesses and particularly that witness.

The Deepwater program, as I said, is critically important, and we need to have the best witnesses and access to the best information and resources to make certain that we have enhanced vessels and aircraft in place as quickly as possible at the lowest cost to the taxpayer.

In January, Admiral Allen appeared before the Committee and committed himself and the Coast Guard to improving the oversight which is very important.

Finally, I do have concerns about two things. One, it is also the custom that we investigate and then we make a determination, and I am prepared to do that and work with the Chairman and the Ranking Member before calling the Department of Justice to look if we find in this hearing or subsequent hearings criminal and civil misconduct that warrants an investigation, not to announce that to the media before the hearing.

Then the second concern that I have is that the Coast Guard has now made an announcement prompted by some of these inquiries, and I am not sure that it is the wisest announcement, to go forward with in-house actually control and management of these contracts which I don't know they have the capability of doing and which testimony we have heard previously and in other committees indicated their inability to pay, their inability to retain personnel, attract personnel or put a program like this into place for oversight. They may not have that oversight capability or ability even to maintain that capability.

In the meantime, I am pledged to continue to work with the majority. This is a very important issue, and I am sorry that we did get off with some unacceptable terms in both procedures and witnesses for this first hearing.

I yield back.

Mr. OBERSTAR. I read the same comments on the web site, and I took them in a different vein. But, Mr. Atkinson, after he is sworn in, will have an opportunity to respond to the Ranking Member's comments.

As to witnesses, I directed the majority staff to share with the minority, the names of witnesses, and they are free to call and inquire and interrogate them as they wish, and they had all the names.

As for redundancy, I can't control what other committees do, I will say to my good friend. If they want to have hearings, that is their business, but we are conducting our business. We did have a preliminary hearing earlier this year on Deepwater. It set the stage for what I felt was necessary and what you and I both discussed was a necessary, more intensive discussion and inquiry into these matters.

As for the Justice Department, we make no judgment. Justice is conducting its own inquiry into this matter. After the conclusion of

our hearings and in consultation with the Ranking Member, we will decide what next steps to take.

The gentleman from Maryland, the Chairman of the Subcommittee, Mr. Cummings, at the outset, I want to say conducted a very thorough inquiry and has given an enormous amount of his personal time and been actually on board defective vessels.

I recognize the gentleman for his statement.

Mr. CUMMINGS. I want to thank the gentleman for yielding, and I want to thank you, Mr. Oberstar, for your dedication and effective oversight and for convening this hearing today to continue requiring accountability, and I emphasize accountability on the part of the Coast Guard as well as its contractor-partner for implementation of a Deepwater Acquisition Program.

I must say that as I listened to Mr. Mica, I think we have to be very careful that we don't assassinate witnesses before they even testify. These witnesses come to us, some of them I am sure, with some fear, but they have stepped forward bravely. I am very, very familiar with their testimony, and I know that they have the concerns of the American people and the Coast Guard and Coast Guard personnel, by the way, in mind.

Deepwater is a $24 billion, and I emphasizes billion dollar, procurement effort through which the Coast Guard is acquiring 91 cutters, more than 100 small surface craft and 244 new or converted aircraft including helicopters and fixed wing airplanes.

Americans trust the Coast Guard to protect them from emerging threats approaching our homeland from the sea, to rescue them when they are in danger and to protect the natural resources of our marine environments. That trust is well placed.

However, Americans also need to know that they can trust the Coast Guard's leaders to manage the taxpayers' hard earned dollars effectively and efficiently and to provide the tools that the men and women of the Coast Guard need to succeed. Further, Americans need to know that when a multibillion dollar contract is signed, the parties to that contract will accomplish its objectives to the best of their abilities.

Our expectations for the Deepwater program are not unreasonable. We expect it to produce boats that float, planes that fly and information technology systems that work, meaning that they allow for identification of threats in the maritime domain while protecting sensitive and classified communications and allowing effective control of deployed assets.

What is remarkable and completely unacceptable is that a program costing on the order of $100 million intended to upgrade 110 foot legacy cutters, lengthen them to 123 feet and extend their service lives has produced eight cracking hulks that are now tied up within a few miles of my house in Baltimore, unable to return to service and waiting for the scrap heap.

And guess who paid for them. The American people.

What is unconscionable is that the simple and straightforward expectations of Congress and, more importantly, the American taxpayers have not been met because of a combination of poor oversight by the United States Coast Guard and poor performance by two of the world's largest defense contracts, Lockheed Martin and Northrop Grumman.

I applaud the action taken yesterday by Admiral Thad Allen, the Commandant of the United States Coast Guard to begin to right what has become a floundering acquisitions effort veering far, far off course. I believe that this decisive leadership will put this program on a path to success.

However, though the Commandant has taken bold steps to bring the systems integration functions back in-house, to rebid parts of the Deepwater contract and to ensure that assets are independently certified against highest industry standards, it is essential that we learn the lessons of the past five years of Deepwater implementation so that past errors are never repeated.

I have said it before, and I will say it again. This is a Country that is able to send folks to the moon. We ought to be able to build ships that float.

Today, therefore, we examine the 123 program. We will take a close look at all of the actions of the Coast Guard and its partner, the integrated Coast Guard systems team that contributed to the colossal failure of the program. We want to know why the Coast Guard and its partners went ahead with a design to lengthen the 110 foot cutters despite warnings from the United States Navy that the hulls should have been strengthened before they were lengthened, warnings based on the Navy's own experience lengthening the 170 foot Cyclone Class ships to 179 feet.

We will also closely examine whether the equipment installed inside the converted 123 foot boats met all contractual requirements and was designed to ensure safety of the crews, and I emphasize that, safety of the crews. We want to make sure that Coast Guard personnel are safe.

Further, we want to examine whether the C4ISR Command and Control System was properly certified to ensure the protection of national security data.

I applaud the willingness of the dedicated individuals, who worked in various capacities in the Deepwater program, to come forward today to share their concerns about what they experienced on that program and about the actions taken by managers leading the program.

The Committee's investigation also received critical assistance from an outside expert on TEMPEST process who has dedicated countless hours of his own personal time to analyzing TEMPEST certification process on the 123s.

I thank Michael DeKort, Robert Braden, Scott Sampson and James Atkinson for their dedication to excellence.

Our Committee shares their dedication. Therefore, while we examine what must be done to ensure the success of Deepwater, we also will be examining what must be done to build acquisitions systems and develop experienced management personnel within the Coast Guard who can assure that a single dollar is never, ever wasted in the procurement of a ship or plane for the Coast Guard fleet.

With that, Mr. Chairman, I yield back.

Mr. OBERSTAR. I thank the gentleman for his very strong statement and again for his very diligent work.

I yield now to the gentleman from Ohio, the Ranking Member of the Subcommittee, Mr. LaTourette.

Mr. LATOURETTE. I thank you very much, Mr. Chairman, and I will try to move along expeditiously. I want to thank you and Chairman Cummings for holding this hearing.

I have to say that I come to this hearing with a deep concern over the future success of the Deepwater program. As I indicated at the Subcommittee hearing in January, there is no more important issue facing the Coast Guard now than the delays and setbacks that are jeopardizing this program.

This hearing today is going to focus on the conversion of the 110 foot patrol boat fleet, and I believe that we will use this hearing to examine the roots of the problems that resulted in this failure, and I hope that what we look at is how the Coast Guard can apply the lessons learned to future acquisition projects.

The original Deepwater contract, which has now run a number of years, established performance requirements for each asset and component system. It appears that in too many cases, the responsibilities to oversee, test and certify the construction and performance of these assets and systems was invested in the contractors and not the Coast Guard.

The Coast Guard has addressed these issues under Commandant Allen's direction that was announced just yesterday, and I have confidence that the Coast Guard will take much more active role in reviewing and ultimately approving or disapproving asset designs, performance testing and compliance with contract requirements.

While I appreciate the Commandant's new directives and willingness to address past problems, I remained concern by the number and nature of problems that seem to come to light every time this Committee holds a hearing. It appears that there were several opportunities to make significant changes to the design and the structure of the 123 foot patrol boat hull and that the Coast Guard chose not to take those corrective actions.

As a result, the Coast Guard took possession of eight vessels that can't be used for any mission by the Coast Guard and are now scheduled to be scrapped. The loss of these eight vessels and the impending delay in requiring more capable vessels hurts the Coast Guard's ability to safeguard and secure our Nation's waters and jeopardizes the safety of Coast Guardsmen that serve aboard increasingly aged and deteriorating vessels.

I am further concerned by the apparent lack of control procedures that allow a contractor to install and self-certify component systems that have not been tested against industry or military standards. The Coast Guard is responsible for ensuring that the assets and systems that it accepts meet all terms and conditions of the contract and all relevant performance specifications.

Under the Commandant's new directions, the Coast Guard will take on additional responsibilities to verify compliance. I can't emphasize enough how critical these new responsibilities are for the future of the service.

The Deepwater program and the assets that will acquired under Deepwater are critical to the Coast Guard's future mission success. The men and women of the Coast Guard carry out brave and selfless service to our Nation each and every day, and we need to make sure that the Deepwater program is carried out in a way that the

best, most capable equipment is acquired to allow these Coast Guardsmen to carry out their important missions.

I want to thank the witnesses for appearing today.

Mr. Chairman, on the way over from my last series of votes, I mentioned some matters to Subcommittee Chairman Cummings, and I am not going to bring those up at this moment, but they do relate to issues that Mr. Mica was addressing. I hope that maybe the four of us could have a conversation in the future about some of those things.

I thank you for your courtesy and yield back the balance of my time.

Mr. OBERSTAR. I thank the gentleman for his statement, for his ever public spirited concern about the work of this Committee.

We have had some difficulties in proceeding with this hearing because we requested on March 20th documents from the Coast Guard. We did not get what we were requesting until April 6th and not until Subcommittee Chairman Cummings met with the Commandant did we get at 5:00 p.m., on Friday, April 13th, the full set of documents that we requested much earlier. That hampered and made difficult the task of structuring this hearing and getting the information we needed. So there have been some difficulties along the way.

We made our best effort to include the Republican side in this process and gave to staff the names of witnesses right at the outset and how to contact and invited minority staff to conduct their own individual inquiry.

Mr. LATOURETTE. Will the Chairman just yield?

Mr. OBERSTAR. Yes, I will yield.

Mr. LATOURETTE. I think the Chairman and the full Committee know that there is no member of Congress that I have greater respect for and even affection for than the Chairman. My invitation was that maybe as we move forward we can do a little bit better in talking to each other.

Mr. OBERSTAR. Always, we always can do better, and we will.

Mr. LATOURETTE. Thank you.

Mr. OBERSTAR. Now I ask all witnesses to rise.

Do you solemnly swear to tell the truth, the whole truth and nothing but the truth, so help you, God?

[Witnesses respond in the affirmative.]

Mr. OBERSTAR. Thank you.

Mr. DeKort, we will begin with you. We welcome your statement. Again, I say that you have provided enormous service to the public and to the Committee, and I think in the long run, the Coast Guard, by the work that you have done.

Please proceed.

TESTIMONY OF MICHAEL DEKORT, FORMER PROJECT MANAGEMENT SPECIALIST FOR 123 SYSTEMS, LOCKHEED MARTIN; ROBERT BRADEN, SENIOR TECHNICAL STAFF, PROCESSOR AND SYSTEMS DESIGN, LOCKHEED MARTIN; SCOTT SAMPSON, SECTION CHIEF OF THE DEVELOPMENT SECTION, U.S. COAST GUARD MAINTENANCE AND LOGISTICS COMMAND ATLANTIC IN THE VESSEL SPECIFICATIONS BRANCH; JAMES ATKINSON, PRESIDENT AND SENIOR ENGINEER, GRANITE ISLAND GROUP.

Mr. DEKORT. Thank you, Mr. Chairman, for that comment.

Good afternoon, Mr. Chairman and members of the Committee. I deeply appreciate your taking the time to hear testimony on the C4ISR problems relating to the Deepwater effort.

While I will be highlighting the C4ISR issues, I am sure you realize that they are only examples of the systemic engineering and management problems associated with this effort. The problems I will be describing are not simply mistakes. They were informed, deliberate acts.

As I will show, I have been trying to resolve these problems for almost four years after not being able to convince every level of management of every relevant organization in Lockheed Martin through to the CEO and board of directors, and I believe there is a timeline up that shows some of that information. As well as working with integrated Coast Guard systems, I turned to the appropriate Government agencies, public officials, whistleblower organizations and when all else failed, the internet and the press for help.

What needs to be understood here is that every one of these problems was easily resolved with off the shelf products well before any of the assets were delivered. Additionally, as the contract mandates system commonality, every one of these problems is a candidate for inclusion on every other maritime asset that ICGS delivers for the lifetime of the contract. This plan, if allowed to come to fruition, will literally cripple the entire maritime fleet of the U.S. Coast Guard for decades.

Before delving into the issues, I would like to tell you a little bit about my background. I was an electronics technician in the U.S. Navy for six years. I specialized in communications systems. After my enlistment ended, I spent a brief time in the private sector before I joined the U.S. State Department as a communications engineer for embassy and consular duties as well as for the counterterrorism group.

After leaving that organization, I became a systems engineer in Lockheed Martin. Through the years, I was promoted to project, program and engineering manager. During my last five years, I was a software project manager for Aegis Baseline 6/3, the lead systems engineer of C4ISR for the Deepwater effort and the software engineering manger for the NORAD efforts. It is the period where I held the C4ISR lead systems engineer position that is the focus of this testimony.

At the point I joined the effort in the summer of 2003, the final design review had been completed, and most of the equipment had been purchased for the first several boats. In addition to creating a master schedule, I was tasked with identifying final deliverable

requirements and planning integration of the first boats. It was during this period that several critical safety and security issues came to my attention.

The first problem was that we had purchased non-weatherproof radios for the Short Range Prosecutors or SRPs. The boats are small open aircraft that are constantly exposed to the environment. Upon first hearing about this issue, I have to admit I found it too incredible to believe. Who would put a non-weatherproof radio, the primary means of communication for the crew, on a boat with no protection from the elements?

The individual who brought this to my attention strongly suggested I look into it no matter how incredible it sounded. I called the supplier of the radio who informed me it was true. We had purchased four radios for the first SRPs, and they were not weatherproof. As a matter of fact, the vendor asked me to not use the radios on any of the SRPs which would eventually total 91 in all.

Upon informing Lockheed management that the radios needed to be replaced, I was told that there was a design of record. This meant the customer had accepted our design at the conclusion of the critical design review and that we would make no changes that would cause cost or schedule impacts. As a matter of fact, we ordered five more radios after I went to management about the problem in order to prepare for the next set of boats we were contracted to modify.

I tried for several months to get the radios replaced.

Just before delivery of the first 123 and its associated SRP, the customer asked to test the system. Coincidentally, it rained on test day. During the testing, several radios shorted out. It should be noted that had we not tested the boats in the rain on that day, we would have delivered that system, and it would have failed the very first time it was used.

After this, I was told we would go back to the radio that originally came with the SRPs.

I believe that this example more than any other demonstrates the lengths the ICGS parties were willing to go to hold to schedule and budget while sacrificing the safety and security of the crew.

The next problem uncovered involved the video surveillance system. The Coast Guard wanted a system that would permit watching the boats when in a Coast Guard port without someone having to be physically on the boats. Our solution was to provide a video surveillance system that had significant blind spots leaving the bridge or pilot house vulnerable to penetration.

The most frustrating part about this issue is that the simple purchase and installation of a fifth camera would have resolved the problem. Bear in mind, we knew about the need for the extra camera several months before the first 123 was delivered.

Another problem we discovered involved low smoke cables. There was a requirement to install low smoke cables so that in case of a fire, flames do not spread quickly, equipment is not overly exposed to corrosive smoke and the crew is not exposed to a large amount of toxic fumes. In a recent report, the Inspector General for the Department of Homeland Security confirmed that over 80 of these cables are the wrong type and that the waiver the Coast

Guard gave to the contractor so they could avoid having to provide these cables was invalid.

The next issue involved communications security and the standards necessary to ensure those communications are safeguarded from the eavesdropping or inadvertent transmission of crosstalk. These standards are known as TEMPEST. We installed non-shielded cables, 101 in all, on all of the 123s, cables that did not meet standard TEMPEST safety and security requirements as borne out by their failing of the visual inspection which was carried out by the appropriate testing authority.

This situation could lead to serious compromise of secure communications not only for the Coast Guard but for other Government organizations such as DOD, FBI and DEA. I was informed that we had included these cables in the design because we had not bid the TEMPEST requirement and, as such, we decided we did not have the money to include them.

The final significant problem was that of the survivability of the external mounted equipment. I saved this one for last because of how serious the repercussions are for the Coast Guard and the Nation, the fact that the DHS IG agreed completely with my allegation relative to this issue, the incredible position Lockheed Martin has taken on this issue and the fact that the Coast Guard seems willing to allow them to get away with it.

Shortly before the first 123 was delivered, we finally received the environmental requirements. During the late review of the requirements --I am sorry --of the equipment for compliance, well after the design review and purchase of the equipment, we found the very first item we looked into would not meet environmental requirements. Given this failure, we feared the rest of the equipment may not meet environmental requirements.

Let me state this in simple terms. This meant the Coast Guard ships that utilized this equipment would not operate in conditions that could include heavy rain, heavy seas, high winds and extreme temperatures.

When I brought this information to Lockheed management, they directed me and my team to stop looking in to whether or not the rest of the equipment met these requirements. This meant that all of the externally mounted equipment being used for the critical communication, command and control and navigation systems might fail in harsh environments. Since that time, we have learned through the DHS IG report on the 123s that 30 items on the 123s and at least a dozen items installed on the SRPs did not meet environmental requirements.

In addition to their technical and contractual findings, the IG also made some of Lockheed Martin's responses on this issue known in that report. Incredibly, the IG states that Lockheed Martin incorrectly stated in their self-certification documents that there were no applicable requirements stipulating what the environmental requirements were in regard to weather, and they actually stated that they viewed the certification of those requirements as "not really beneficial."

In addition, the IG states that the Coast Guard did not know the boats were non-compliant until July of 2005, one and a half years after the first 123 was delivered. The report also states that none

of these problems were fixed, not on any of the delivered boats. That, along with this issue not being called out in the DD-250 acceptance documents, supports my supposition that Lockheed Martin purposefully withheld this information from the Coast Guard.

Finally, the IG states that Lockheed's position on them passing the self-certification without testing these items was the right thing to do because they thought the tests would be "time consuming, expensive and of limited value." Bear in mind that the contractors have stated time and time again in front of this and other oversight committees that they do not practice self-certification.

Where does this situation leave us? Had the hulls not cracked or the cracks not appeared for some time, ICGS would have delivered 49 123s and 91 SRPs with the problems I described.

In addition to that, the Deepwater Project is a system of systems effort. What this means is that the contractor is directed to deliver solutions that would provide common equipment sets for all C4ISR systems. Said differently, all the equipment for like systems need to match unless there is an overwhelming reason not to.

This means that every faulty system I have described here will be installed on every other maritime asset delivered over the lifetime of the effort. This includes the FRCs, the OPCs and the NSCs. If we don't stop this from happening, ICGS will deliver assets with these and other problems. I believe this could cripple the effectiveness of the Coast Guard and their ability to perform their missions for decades to come.

How have the ICGS parties reacted to the totality of these allegations? At first, Lockheed and the U.S. Coast Guard, as stated by the ICGS organization, responded to my allegations by saying they were baseless, had no merit or that all of the issues were handled contractually. That evolved after the IG report came out to them, stating that the requirements had gray areas and later by actually deciding, after the systems were accepted and the problems were found, that in some cases the Coast Guard exaggerated their needs as was their comment regarding the environmental survivability problems.

Up until the announcement yesterday, I have heard a lot of discussion about the changing of the ICGS contract structure, the fixing of the requirement, reorganizing the Coast Guard and adding more oversight. While all of those things are beneficial, they in no way solve the root problem. Had the ICGS organization listened to the Engineering Logistics Center or ELC and my recommendations, there would be no problems on these boats. We wouldn't be talking about more oversight or making sweeping changes. Instead, we would be discussing what a model program Deepwater is.

I guarantee you that had the changes that were made up until yesterday, yesterday's announcement, been made four or five years ago, it wouldn't have mattered. Even with the incestuous ICGS arrangement, the less than perfect requirements and minimal oversight, there was plenty of structure in place and information available to do the right thing. It is not practical to think that one can provide an ironclad set of requirements and an associated contract that will avoid all problems.

All that was needed were leaders who were competent and ethical in any one of the key contractor or Coast Guard positions. Any one of dozens of people could have simply done the right thing on this effort and changed the course of events that have followed. It is because of that that I strongly suggest you shift, suggest you focus, your focus shift to one of accountability in an effort to provide a deterrent.

No matter what structure these parties put in place, no matter what spin they come up with or promises they make, no matter how many people you spend taxpayer dollars to employ to provide more oversight, it still comes down to people. We wouldn't need more oversight if the ICGS parties would have done as they promised when they bid the effort.

They told the Coast Guard: We know you have a lack of personnel with the right skills. Let us help you. Let us be your trusted agent. Let us help write the requirements so we can provide you cutting edge solutions. Let us write the test procedures and self-certify so we can meet the challenges we all face in a post-9/11 world.

In the end, people have to do the right thing and know that when they don't, the consequences will be swift and appropriate. I strongly believe that especially in a time of war the conduct of these organizations has been appalling.

As such, I would hope that this Committee and other relevant agencies with jurisdiction will do the right thing and hold people in these organizations accountable. All defense contractors and employees of the Government need to know that the high ethical standards, high ethical standards are not matters of convenience. If you do not hold these people and organizations accountable, you will simply be repackaging the same problems and have no way of ensuring the problems don't happen again on this or any other effort.

In closing, I am offering to help you, help in any way I can to remedy these issues. As I told the Commandant, Commandant Allen's staff and Lockheed Martin before my employment was terminated, I want to be part of the fix. With the right people in place in the right positions, this project can be put back on track rapidly.

I would like to thank you again for the opportunity to testify and look forward to answering your questions.

Mr. OBERSTAR. Thank you very much for a very thorough, thoughtful and well structured statement.

Mr. Braden, would you identify yourself and then proceed with your statement?

Mr. BRADEN. Yes. Thank you, Mr. Chairman and members of the Committee.

My name is Robert Braden, and I have over 40 years of engineering experience including nearly 30 years of service with Lockheed Martin Corporation. I am currently employed by Lockheed as a senior technical staff at Moorestown, New Jersey. In this position, I am often expected to provide program and project leadership for a variety of programs.

In early 2003, I was requested to join the U.S. Coast Guard Deepwater program as a lead system engineer for the Communication Area Master Stations or CAMS and Legacy Cutter program.

That program was to do upgrades of three different classes of cutters that did not include the 123s. Program objectives were to provide enhanced satellite communications and modern C4ISR systems for these existing Legacy assets.

This included installations, upgrades and new capabilities for 39 existing Legacy Cutters. We provided significantly improved satellite bandwidth, improved shipboard networks, new law-marine radios, new Automatic Identification Systems and expanded secret internet protocol router networks, or SIPRNET, communications capabilities. These improved SIPRNET capabilities provide the Legacy fleet with the ability to significantly improve coordination with law enforcement and homeland security actions with the U.S. Navy and within the Coast Guard.

After completing the total replan of the program, we submitted an aggressive fixed price proposal to the Coast Guard. Unfortunately, the Coast Guard contracting office continued to extend negotiations all the way to the end of the fiscal year. This required Lockheed Martin to either stop work or independently fund the continued engineering and procurement of our long lead material. Lockheed elected to support the aggressive Deepwater deployment objectives of Admiral Stillman and provided several million dollars of internal risk funding to allow my team to obtain the material, integrate the system and prepare for the first installations.

During this same period of development and design, I was engaged in intensive dialogue with my Coast Guard contracts technical representative, with the Coast Guard's ships integration personnel and with the Coast Guard's top communications security organization known as TISCOM.

The purpose was to determine and negotiate all requirements for the CAMS/Legacy installations. Our key objective was to provide a communications installation that would immediately achieve a SIPRNET Interim Authority to Operate followed shortly thereafter by a full Authority to Operate. The reason that was important was that these ships were in port for a limited period of time. When those ships left port, our installation needed to allow the crew to immediately use the new secure capabilities.

I was also fully engaged in weekly program integration meetings involving all Moorestown management of the Deepwater program. These PIT meetings were mandatory every week and covered all aspects of the program and included at every meeting, U.S. Coast Guard representatives and generally included representatives from the ICGS or Integrated Coast Guard Systems organization. The purposes of the meetings were to ensure coordination among the various programs and maintain commonality among all the assets. Topics included status of the system of systems activities, the CAMS/Legacy Cutter upgrades, the 123 foot cutter conversion program and the other various assets.

Approximately once each month, the PIT meetings, Program Integration Team meetings, would expand to a full Deepwater program review with all management present, and that usually included the ICGS, the different subcontractors as well as the Coast Guard officers.

On numerous occasions, I presented the design, installation and security briefings appropriate to my cutter class to ensure coordina-

tion of our CAMS and Legacy plans. During these PIT meetings, the various LSEs or Lead System Engineers would become aware of the problems and issues faced by their counterparts. So part of the purpose of the meeting was to make sure we compared notes and make sure that we all met a common design. We would occasionally compare notes to see if a common resolution to our problems were possible.

Often, the aggressive pace of my own project and the structure of the Deepwater program required that my team maintain focus on our own design issues. However, whenever I found an issue that concerned me and I was unable to influence a change, I would advise upper management of the problem.

In August, 2003, my team began upgrades of the CAMSLANT or master station Atlantic facility and installation of the first Deepwater sea-based asset, the U.S. Coast Guard Cutter, Northland. We completed these installations within one month, thereby establishing the milestone of the first successful asset delivery to the Coast Guard Deepwater program. By year end, we followed this achievement with a successful installation of the Deepwater C4ISR suite aboard the cutter Tampa.

The subsequent string of successful installations has been a continuing source of personal satisfaction for my design and installation team, and I personally take great pride in expeditiously and cost effectively completing the first successful and compliant Deepwater installations in the history of the program.

I continued to manage and guide the installation of the first nine 270 foot Legacy Cutters and developed the design and installation procedures for the remaining 210 and 378 foot cutters. In March, 2004, I was removed from the Deepwater program and transferred to another program.

This concludes my testimony. I would be pleased to answer any questions the Committee may have.

Mr. OBERSTAR. Thank you, Mr. Braden.

Mr. Sampson, please identify yourself and proceed with your testimony.

Mr. SAMPSON. Good afternoon, Congressman Oberstar, Congressman Cummings and distinguished Committee and Subcommittee members.

My name is Scott Sampson. I have been requested to come before you today to discuss my involvement with the 123 program as associated with the Deepwater program.

I have a unique perspective of this program in that I work for the DOD agency which expressed grave concern about a potential extension of a 110 foot patrol boat to 123 feet, then changed jobs to work for a Coast Guard office which supports these modified cutters. Today, I will tell you about the people I communicated my concerns to that were unfortunately realized.

If I may request, Mr. Chairman, I would like my written statement entered into the record.

Mr. OBERSTAR. Without objection, so ordered. Your statement will be included in the record.

Mr. SAMPSON. Thank you, sir.

The DOD agency I worked for was the Combatant Craft Division, a detachment of the Naval Surface Warfare Center Carderock Divi-

sion, otherwise known as CCD. CCD had designed a similar extension on a similar platform and felt, based on lessons learned, that the proposed method of modification of the 110 was at a high risk for failure.

While I was with CCD, three key contacts were made to express concerns over the proposed design modification. The first was Debu Ghosh of the Coast Guard's Engineering Logistics Center. Mr. Ghosh was the Branch Chief of the Boat Engineering Branch. Second was Diane Burton of the Coast Guard's Deepwater Program Office. Ms. Burton was the Deepwater Surface Technical Director. The third person that was contacted was Dennis Fanguy of Bollinger Shipyard. The Fanguy was the head of their engineering department.

These conversations were conducted in the August to September, 2002 timeframe with the exception of Mr. Fanguy who was contacted shortly thereafter.

It was explained to each of these individuals not only concerns associated with the proposed modification of the 110 but where those concerns stem from as they pertain to a similar experience with a Navy craft. These concerns centered around several items but specifically included longitudinal strength, running trim and engineering experience.

Mr. Ghosh appeared to share our concerns and attempted to hire Combatant Craft to assist with oversight. Specifically, Mr. Ghosh requested and I provided a statement of work and an estimate to provide 14 days of on site support at Bollinger shipyard, assisting the two naval architects and also to supply a sea keeping analysis comparing the 110 to the 123. The estimate for this level of support was $42,000.

Mr. Ghosh told me shortly thereafter that the Deepwater Program Office would not supply the funding.

Conversations with the other two contacts, Ms. Burton and Mr. Fanguy were short and with little discussion.

The Matagorda was inducted into Bollinger Shipyard on the 2nd of February, 2003. On the 5th of March, 2004, the MATAGORDA was delivered back to the Coast Guard and on the 10th of May, 2004, entered a Post Delivery Maintenance Availability. Within days of leaving this availability in the early part of September, 2004, Matagorda suffered damage in the middle of the cutter, buckling the side shell and deck.

This is the type of longitudinal failure that the Combatant Craft Division anticipated seeing and had warned the Coast Guard and Bollinger Shipyard about. This predicted failure occurred not as a result of fatigue or corrosion but rather from one short period of operation in a sea reported to be four to six feet in height. This longitudinal bending failure was acknowledge in a report issued by ELC entitled Matagorda Buckling Incident Analysis dated 24 September, 2004, and verified our concerns expressed in August of 2002.

After two attempts to make the 123s usable for service, the Coast Guard made the decision to lay the vessels up until a final decision could be made as to whether or not they could be repaired. The Coast Guard made this decision after extensive inspection of the

cutters. All eight cutters are currently located at the Coast Guard Yard.

Mr. Chairman, this concludes my statement. I will be more than happy to answer any questions you may have.

Mr. OBERSTAR. Thank you very much, Mr. Sampson. That is very critical testimony for the inquiry of the Committee.

I have heard a couple of cell phones or other devices going off. Under the Committee rules, all communication devices must be inaudible. Turn them off or put them on vibrate.

Mr. Atkinson, you may feel free in your remarks to respond to the issues raised by Mr. Mica earlier.

Mr. ATKINSON. Thank you, sir.

My name is James Atkinson. I am the President and Senior Engineer of Granite Island Group located in Gloucester, Massachusetts.

We specialize in electronics engineering. We perform bug sweeps. We perform wiretap detection. We stop technical espionage. We plug leaks both in classified and unclassified communications systems. Essentially, we hunt spies.

I am considered to be one of the top international experts on the subject matter of TSCM, TEMPEST and technical security. I have attended private and Government-sponsored TSCM, TEMPEST, cryptograph, technical intelligence, electronics and security training both in the United States and abroad. I have been involved in many hundreds of TSCM, TEMPEST inspections over the last 25 years of Government service and private sector assignments.

My clients include major heads of major corporations, heads of state, diplomats, Government agencies, defense contractors, hospitals, courthouses, political leaders, ministers, small business, large ministers in virtually walk of our Country.

Due to the nature of my, of the services I render to my clients, it would not be prudent to disclose precisely who they are. However, I have been to Washington, D.C. many times on business to render such services.

I am one of the few people who can clearly explain the highly technical and highly classified subject matters such as TEMPEST and TSCM to this Committee in an unclassified way so that a nontechnical layman can understand it, and I can provide a voice of reason.

The documents in this matter are highly technical, and it takes a TEMPEST and TSCM expert to fully understand what is really in those documents, what it really represents and what they really mean and to bring forth the gravity of what is really going on.

The core message here is that TEMPEST is a rigorous series of Government standards which have been developed by the National Security Agency. The purpose is to protect classified equipment, signals and information from eavesdropping. TEMPEST focuses on securing classified equipment and systems in order to keep electronics from leaking secrets.

Our foreign adversaries know about TEMPEST and the related fields and know how to steal our electronic secrets from equipment that does not comply with these rigorous standards. For example, the nations of Cuba, Iran, India, China, Colombia, France, North Korea and many other countries have become quite adept at eaves-

dropping on our improperly protected classified equipment. While most countries are our allies, the United States has designated over 30 nations to be openly hostile to the United States, and there is strong evidence that these countries not only do have the equipment to eavesdrop on our leaking equipment but do so on a regular basis.

Gentleman, it is my unpleasant duty to inform you that the Coast Guard, ICGS and Lockheed Martin have been highly negligent in their oversight of the Deepwater program, that many millions of dollars has been wasted on ships that don't float and electronics, classified electronics which leak national security secrets.

During my review of the technical documents in this matter, I discovered that the United States Coast Guard was not being forthcoming with information to this Committee and that the Department of Homeland Security Office of Inspector General had previously requested in regards to C4ISR and TEMPEST issues. I found that instead they were hiding malfeasance within these documents and a deeply flawed procurement process.

Further review determined that there was significant lack of oversight on the part of the United States Coast Guard and that they were using doublespeak in their answers to this Committee and evading politically uncomfortable questions put before them.

Based on the analysis of the numerous documents to include detailed TEMPEST reports which the Coast Guard eventually, albeit begrudgingly, provided to the Committee, I was able to determine the following:

From the very beginning, the very first day of the program, the Coast Guard did not clearly define the technical specifications and standards that these ships had to comply with in order to protect the classified information. The contractor, in turn, delivered substandard and highly defective assets as there was little or no Coast Guard oversight on the project even though the Government was paying the contractor to provide oversight as the integrator.

The Coast Guard accepted delivery of these defective ships and, instead of correcting many of the defects, merely covered them up with waivers or used substandard parts to create the illusion of a repair. An example is unclassified and classified local area network connection boxes were supposed to be separated from each other. The Coast Guard chose to resolve this problem merely by putting stickers on the equipment as opposed to fixing it. So they patched a leak with a Post-It note.

Not only has the contractor responsible for this waste butchered eight valuable ships and rendered them worthless, they have endangered national security in delivering ships that leak secrets, contain significant vulnerabilities and which provide a clear and present danger to our national security. The Coast Guard was and still is spending money like a drunken sailor on shore leave with minimal oversight. The Coast Guard lacks the core competencies and resources to protect this classified information through their TEMPEST program. ICGS has taken advantage of the United States after 9/11 and has taken advantage of the Coast Guard in particular. The Coast Guard put more priority on its public relations than it did with their TEMPEST program.

My recommendations is that this Committee pull the plug on the Coast Guard's access to classified information, that it revoke SIPRNET access and essentially revoke the Coast Guard's security clearance. This should be done by the end of business today.

Also, I recommend that you initiate an exhaustive top-down study of all COMSEC, Coast Guard COMSEC, TEMPEST, NONSTOP, TSCM, emission security and related technical security and engineering disciplines and focus on all assets of the Coast Guard not just the Deepwater ships.

I recommend that this Committee assume every Coast Guard asset is suspect until it can be scientifically proven secure through actual instrumented analysis and not just waivered as has been the case of late.

I recommend that all eight cutters be stripped of anything of value and that they be sold off as scrap metal, cancel or suspend all current or upcoming contracts with ICGS and Lockheed Martin until this matter can be fully resolved and consider issuing an interim debarment against Lockheed Martin and ICGS until their full management has been forthcoming with appropriate answers.

Also, refuse to allow the Coast Guard to possess, access, obtain materials or gain access to any classified networks until each asset has been subjected to a rigorous and independent, highly detailed technical inspection by somebody outside of the Coast Guard.

Refuse to allow the Coast Guard to purchase any further tactical or Deepwater assets unless other elements of the United States Government provide very close oversight over the specifications, designs and procurement of such systems. The natural agency to assist the Coast Guard with this would be the U.S. Navy who should handle the procurement and oversight of the Coast Guard assets until such time the Coast Guard is competent and can be trusted to do this themselves which they have not been able to of late.

Identify the command level officers within the Coast Guard who had the ultimate responsibility for the oversight of this program and then remove them from any further Government service.

Finally, we have to assume that the Department of Homeland Security is not competent in these matters and that their lack of oversight is widespread and institutionalized.

Patrick Henry stated years ago that we are apt to shut our eyes against a painful truth, but for my part I am willing to know the whole truth, to know the worst of it and to provide for it.

Gentleman, this project was doomed to fail from the very beginning. When modern electronics operate, they generate electromagnetic fields. Digital computers, radios, typewriters and so on generate tremendous amounts of electromagnetic energy. Compromising emanations is that electromagnetic energy. This can be conducted through the airwaves, over the power lines, over the phone lines, cable TV.

The TEMPEST standards are very rigid as to how these emanations are controlled. The Coast Guard completely disregarded all of these specifications except one, and the one which they chose to pay attention to, they evaded on it significantly.

Most of consumer market equipment leaks significantly. However, if somebody's computer leaks a little bit of information, they may have personal embarrassment. If a National Security Cutter

or a Coast Guard Cutter or a B2B Bomber or other tactical equipment leaks, national security is at risk.

This project was doomed to failure. It boils down to two core issues, a lack of oversight and malfeasance.

On the issue of my mission statement, the mission statement was actually published many years ago. It says that I hunt spies and I hunt bad people. That is what it says.

Lockheed Martin has a real problem with this because that issue was brought up repeatedly by Lockheed Martin previously after their security people were caught dealing with convicted felons to purchase illegal bugging equipment and to do moonlighting. This issue was brought up by Lockheed Martin and provided to the Coast Guard. I have a full audit trail from my web site logs of them doing this.

That concludes my statement.

Mr. OBERSTAR. Thank you very much, Mr. Atkinson.

Mr. Atkinson has used and throughout the testimony we hear the word, the acronym, TEMPEST, which stands for Telecommunications Electronics Material Protected from Emanating Spurious Transmission. A layman's definition might be unclassified signals that leak from improperly shields cables.

You can go to Radio Shack and buy a device that can tap into a model that is not properly shielded and get fax information and get computer information from your neighbor's home if you wish to do that.

NATO electronic spies in Germany in the 1950s discovered that they could break into classified information by using unclassified signals that allowed them to trace back into the heart of technology in use. That is why the issue of TEMPEST is so critically important here. We will come to that later.

We have a series of four votes on the floor. We have eight minutes remaining on the first vote. We will recess for the four votes and resume immediately thereafter with Mr. Cummings in the Chair.

The Committee stands in recess.

[Recess.]

Mr. CUMMINGS. [Presiding] Ladies and gentlemen, we are going to resume the hearing. We left off with Mr. Atkinson had finished testimony.

I want to thank our panelists for your remarks.

I am going to start off with a few questions.

Mr. DeKort, you mentioned in your testimony that you brought a number of matters to the attention of senior Lockheed management. How high did you take these issues and what responses did you receive?

Mr. DEKORT. I took the matters to the CEO, Robert Stevens, on at least two occasions and the board of directors, and the response I received was that the allegations were baseless or had no merit, and I believe that was based on Lockheed's contention that they had disclosed all the issues to the Coast Guard or resolved them and they were handled contractually.

Mr. CUMMINGS. Did you ever contact the Coast Guard directly?

Mr. DEKORT. Yes.

Mr. CUMMINGS. Since you did that, who did you contact?

Mr. DEKORT. I contacted a Commander Ciampaglio and Mr. Jacoby who is here. I contacted Lieutenant Commander Durr who was the, I believe on the Commandant's staff at the time. I contacted a group commander of the boats in Key West, and I think that is it.

Mr. CUMMINGS. What kind of responses did you receive?

Mr. DEKORT. Well, thank you was the response I got.

Mr. CUMMINGS. Thank you?

Mr. DEKORT. Yes, we will look into it.

Mr. CUMMINGS. But no thank you?

Mr. DEKORT. They didn't say the no thank you part. I understand your point.

Mr. CUMMINGS. As a Lockheed employee, had you ever been involved in another Lockheed project in which the company failed to meet contractual requirements in the way that you describe on the Deepwater program?

Had you worked on any other contracts?

Mr. DEKORT. Not of the same type or scale, no, sir.

Mr. CUMMINGS. What was your role in the installation of the TEMPEST hardware in the 123s?

Mr. DEKORT. I was the lead system engineer for the 123s for C4ISR which meant that the final design, the installation was my responsibility and basically the final design. Like I explained in my statement, I came on board after the final design review, and so everything was pretty much locked in concrete at that point, and they ordered all the materials.

The reason why the requirements were brought back up is because as I understand it, after the Rand study, the Coast Guard asserted a more aggressive posture in rolling out the programs because the Rand study had said, if you want 100 percent mission satisfaction, you have to pull back your schedule 5 or 10 years, and they actually recommended 10, and I believe that is what precipitated us rolling out the 123s differently than was originally proposed.

Originally, there was something called Increment 1. Increment 1 was the first set of requirements. When I took over the systems engineer role, they decided to deliver an Increment 0 which was a subset of Increment 1. So we were trying to decide what would that subset be and what were the requirements associated with it. Did we deliver them entirely, not at all, partially?

Part of my job was to figure out what Increment 0 was. And then, as I was figuring out what Increment 0 was, I was asking then well, what is our implementation? What is it we are doing to resolve that requirement and where are we in going down that road?

Mr. CUMMINGS. Did you all ever come to any conclusions as to what would be the standard?

You just talked about the conversations you may have had, and I am trying to determine whether or not there was clarity at some point with regard to what those standards would be.

Mr. DEKORT. Well, there was basically from the very beginning, sir, a difference of opinion.

When these issues were brought forward, the response was, and it occurred over and over again, we have a design of record, and

what that meant was we don't want to hear it. If what you are bringing to me is an issue that is going to cause any schedule or financial problems or cost problems, we are not going to change it. We are not going to do anything.

Mr. CUMMINGS. I take it you had some concerns about the way things were proceeding. Is that correct?

Mr. DEKORT. Oh, yes, sir.

Mr. CUMMINGS. What were your major concerns or fears?

Mr. DEKORT. Well, individually, I think the issues are pretty severe. I mean it is the Coast Guard. So if you are putting equipment on Coast Guard vessels—and I am talking about every Coast Guard vessel for the next 20 years, everything that Deepwater does—that won't survive the elements, okay, that is bad enough.

You can't use their classified systems without compromising and have somebody eavesdrop.

You have low smoke cables that if they catch on fire could cause someone to be overcome with smoke or make the fire spread faster.

The blind spots on the surveillance system, the blind spots were very, very large, and they led right up to the bridge.

So, individually, some of those issue are pretty significant. In total, I don't think it is an overstatement to say that if they continued, it would have crippled the Coast Guard. Had these boats not cracked or had they not cracked for some period of time, all 49 boats would have been delivered with these issues.

Mr. CUMMINGS. The ICGS team produced a document called Evaluation of TEMPEST Requirements to be Followed Aboard the Deepwater 123 Island Class Patrol Boat, and it was authored by a Jo Agat. Are you familiar with that document?

Mr. DEKORT. Yes, sir.

Mr. CUMMINGS. It is dated February 20th, 2003. Is that correct?

Mr. DEKORT. Yes, sir.

Mr. CUMMINGS. To your knowledge, were the procedures for installing the TEMPEST hardware spelled in this guide followed during the installation of the C4ISR hardware on the 123s?

Mr. DEKORT. No, sir, the majority were not followed.

Mr. CUMMINGS. This document, I guess this was the Bible as far as the guide is concerned, is that right, as to what you are supposed to be doing?

Mr. DEKORT. Yes, sir. If I could, a little bit of history: As I understand it, going back to the beginning, there was some disagreement or lack of understanding on Lockheed's part of what it meant to do TEMPEST and to have TEMPEST, and as such, as it was explained to me, it wasn't bid or at least not entirely.

Well, at some point, Lockheed realized that they had classified circuits. As soon as you put these classified circuits on a boat, you assume TEMPEST. It is part of the deal. It is what happens. So they asked an internal engineer to go tell them what they needed to do in order to satisfy those requirements, and keep in mind this is after the bid had been accepted and they had already started.

Mr. CUMMINGS. So what you are saying is that the bid had been accepted.

Mr. DEKORT. Yes.

Mr. CUMMINGS. The requirements were not online to be met with regard to TEMPEST.

Mr. DEKORT. They literally didn't know what needed to be done.

Mr. CUMMINGS. The Coast Guard did not know?

Mr. DEKORT. No, no, no, Lockheed.

Mr. CUMMINGS. Lockheed.

Mr. DEKORT. Lockheed did not know, at the time they asked for that report internally, exactly what they needed to do to satisfy the TEMPEST requirement.

Mr. CUMMINGS. That is a very strong statement you just made. You understand you are talking about Lockheed Martin, do you not?

Mr. DEKORT. Oh, yes, sir. You don't—I am sorry.

Mr. CUMMINGS. Let me finish.

You are talking about an organization that is known worldwide for producing all kinds of systems in this realm. You understand that?

Mr. DEKORT. Yes, sir. I am saying they weren't competent.

Mr. CUMMINGS. I am sorry.

Mr. DEKORT. I am saying they weren't competent, and I can explain how they got to that position.

Mr. CUMMINGS. Well, tell me.

Mr. DEKORT. And this was explained to me by Mr. Bruce Winterstine who is on one of the panels. I was actually on the proposal team for three days.

During that period when I came in, I had asked Mr. Winterstine how the bid was going to be structured, and they explained to me that the Moorestown group that primarily does Aegis was going to be the lead group and that previously to that there had been another group that was going to be involved or lead out of Eagan, Minnesota where the C4ISR engineers were.

And they said, well, we are going to bid it out of Moorestown so we can leverage Aegis which strategically is a great idea. Aegis is a fantastic system. I understand why you would want to leverage it.

But I told them. I said, look, you people are Aegis engineers, okay, and you have a software background. You need to go back to Eagan, Minnesota, get the C4ISR experts and have them as part of your team.

And I was told no, we don't need to do that.

And I asked why, and they said because Aegis is difficult. We have been doing it for 30 years. We know what we are doing. The C4ISR area is easy. We will figure it out, no problem. We don't need that other group.

Okay, that is literally how it happened. It is a perfect storm, sir.

So when you get into an aggressive bidding situation where you have to move out fast, you may have underbid and your staff and not in all cases.

Let me say here that there are some very dedicated people, lower level engineers, who worked extremely hard and some who did have the background required, but there weren't nearly enough of them, okay. So they literally shut out the C4ISR experts that they had in the company.

Of course, sir, Lockheed Martin is the world's largest defense contractor. They have over 100,000 employees. They have plenty of people, sir, who know how to do this well, and I recommended to

them that they go back to Minnesota and get those people, and they said no. I fought the issue for three days, and they removed me from the proposal team.

Mr. CUMMINGS. So, basically, what you are saying is that the contracted personnel and the Coast Guard personnel working on the C4ISR, the system, you are saying they weren't qualified to understand TEMPEST, TEMPEST requirements?

Mr. DEKORT. I am saying, sir, that the people who were involved at the time, who were working on the proposal at the time I was there, were not. What they were doing is since Aegis is a very large command and control system, a very complicated, large command and control system, I believe they were trying to leverage that expertise.

The ironic part is C4ISR in these areas since it is all off the shelf, compared to Aegis is actually much easier to figure out. There is not a lot of complicated engineering. However, you still need to know what you are doing.

Mr. CUMMINGS. Overall, why do you think the 123s had so much difficulty achieving TEMPEST certification?

Mr. DEKORT. Because when you have 100 cables that are not the right type, I mean you run into problems.

TEMPEST can be moderately difficult on a very small craft because of very tight space constraints. So a lot of engineering and thought has to be put into how do you co-locate systems that are red and black. Mr. Atkinson can explain later, but basically red and black are just classifications for the part of the system that is clear and unencrypted and the part of the system that is encrypted and not clear.

Well, it is very difficult to do on a small ship, but to go the extra degree to not actually purchase the equipment that is very, very basic to TEMPEST requirements just starts you off at a very bad place. In DOD and the State Department, sir, everybody used the proper shielded cable. It was the backbone or one of the backbone items that you always do, and they didn't do it because of cost.

Mr. CUMMINGS. The Department of Homeland Security IG indicates that the contractor on the 123, Mr. DeKort, used aluminum mylar shielded cable as part of the cutter upgrade. The IG indicates that these cables met minimum Deepwater contract requirements for the shielded cable but do not have the mechanical durability of the braided metallic shielded cable.

Do you know which type of cable the ICGS TEMPEST requirements document required?

Mr. DEKORT. Again, sir, this is going to get into an area where even I have a TEMPEST background relative to working on cryptographic equipment and systems, but you are getting into some particulars that are better left to Mr. Atkinson, but I can say that.

Mr. CUMMINGS. Well, let me ask you this. What type of cabling was installed on the 110s prior to their conversion?

Mr. DEKORT. I have been unable to determine that, sir. I was told that they had the braided shielded cable. Not only that but Mr. Braden can tell you that the braided shielded cable was used on his effort, not on mine or on the 123s, I should say.

Mr. CUMMINGS. Now you know Mr. Braden?

Mr. DEKORT. Yes, sir.

Mr. CUMMINGS. How did you come to know him?

Mr. DEKORT. We were both lead. We were both system engineer leads of our respective parts in the project.

Mr. CUMMINGS. So you worked with him.

Mr. DEKORT. There were occasions, sir, that we did. Mostly it was in program manager meetings. We actually didn't work side by side all the time.

Mr. CUMMINGS. Okay. Now did you raise the issue of noncompliance of the topside equipment on the 123s with senior Lockheed management?

Mr. DEKORT. All the way to the CEO and board of directors, sir.

Mr. CUMMINGS. All the way up to who?

Mr. DEKORT. The board of directors and the CEO of Lockheed Martin. I went up through my functional chain, the program management chain, the engineering chains and the ethics chains, all the way up to the CEO and board of directors.

Mr. CUMMINGS. When you say you went up to the CEO and board of directors, what do you mean by that? How did you do that?

Mr. DEKORT. I sent e-mails to Robert Stevens, at least two of them, and the board of directors, I sent a letter.

Mr. CUMMINGS. To the entire board.

Mr. DEKORT. Yes. Well, I sent it to a specific individual who I believe was the ethics officer on the board.

Mr. CUMMINGS. Did you discuss with anyone at Lockheed the need for noncompliance of the topside equipment with the Deepwater contract requirements to be noted on the DD-250s?

If so, what was the outcome of those discussions?

Mr. DEKORT. I was told before the 123s, the first one delivered, the Matagorda, that every item that I had brought forth would either be repaired or clearly called down to DD-250s as being a problem. The first time I actually saw the DD-250s or was told what they contained was recently, and I understand it, the DD-250 for the Matagorda, that item does not show.

Mr. CUMMINGS. Why was topside equipment so crucial?

Mr. DEKORT. The topside equipment is all of the externally mounted equipment that supports the C4ISR systems. So for the communication systems, it is everything on the outside of the boat that you would need for the systems, usually antennas. But for sensors like radar, it is the radar antenna, and there is other equipment up there like amplifiers.

For other vessels like the NSC and the FRC, there would be many, many more systems.

Basically, the 123s had communications systems, they had sensor systems and they had navigation systems. So for those systems it was anything that those systems required to operate that was attached to the outside of the boat.

Mr. CUMMINGS. Let me ask you something. You mentioned a moment ago the word, ethics. You said something about an ethics complaint or complaints. Did you file complaints?

Mr. DEKORT. Three, there were three separate ethics investigations internal to Lockheed Martin conducted.

Mr. CUMMINGS. Were those with regard to the issues that you have just mentioned here?

Mr. DEKORT. Yes, sir, all of them.

Mr. CUMMINGS. Could you just tell us in a sentence or two what those were now?

Mr. DEKORT. The external equipment being able to survive the environment, the blind spots for the cameras, the low smoke cables and TEMPEST.

The reason why the non-waterproof radio was not included is because, like I explain in my statement, they had actually swapped it out right before they delivered the Matagorda. So I did not include that in my ethics statement other than to say, look, any group who was willing to put a non-weatherproof radio in an exposed boat like that, something is wrong and something needs to be looked into and especially when they order more radios after you tell them it is a mistake. So it was an incidental item.

Mr. CUMMINGS. What happened with regard to those investigations?

Mr. DEKORT. The answer for the first one was literally the allegations all have no merit. They are all baseless, and we are not going to tell you why.

Mr. CUMMINGS. That was a response from the ethics officer?

Mr. DEKORT. It was from a John Shelton who was the ethics investigator for the Lockheed Martin organization out of Moorestown.

And then after that, there were two more investigations. Every time they came back to me and said that my allegations were baseless, I asked who their boss was.

Mr. CUMMINGS. Then you still tried to go a step higher?

Mr. DEKORT. Yes, sir.

Mr. CUMMINGS. Now would Mr. Braden or anybody else have known of those?

You said you worked with Mr. Braden. Would he have known about that?

We will get to him a little later.

Mr. DEKORT. Would he have known that I necessarily filed an ethics?

Mr. CUMMINGS. Right.

Mr. DEKORT. Not that I was aware of, no, sir.

Mr. CUMMINGS. Did you see any evidence at Lockheed?

You mentioned a little earlier something about underbidding. Is this a conclusion you came to?

Mr. DEKORT. Yes, sir. That is subjective on my part. It is an observation in being in DOD. It is aggressively bid. Projects are basically priced to win, and more often than not they turn out to be extremely aggressive which is usually a politically correct term for underbid.

Mr. CUMMINGS. Did anybody at Lockheed ever tell you to just get on with it?

Mr. DEKORT. Yes, sir.

Mr. CUMMINGS. Is that right?

Mr. DEKORT. Well, everybody I talked to. I mean my manager, my functional manager actually told me and so did some other people, but they said, you are doing the right thing here, but it is going to come back to bite you.

Mr. CUMMINGS. Say that again. I am sorry.

Mr. DEKORT. Several people including my manager at the time told me that I was doing the right thing, but it was going to come back to bite me.

Mr. CUMMINGS. Your immediate supervisor?

Mr. DEKORT. Yes, sir.

Mr. CUMMINGS. He knew you were doing the right thing, he told you.

Mr. DEKORT. That is what he told me, sir.

Several engineers and program managers on the effort said the same thing.

Mr. CUMMINGS. Now you said that you left the 123 program, is that right?

Mr. DEKORT. I was removed from the program, yes.

Mr. CUMMINGS. How did that come about and when?

Mr. DEKORT. Roughly, January or February. I had sent an e-mail or letter embedded in an e-mail at the time to the acting technical director for the engineering group, saying that I wanted to be removed from the project because they were going down a road that I just found intolerable.

However, later on, I met with the VP of the organization, a man named Carl Bannar, and he told me everything would be resolved, and I said at that point, well, then I would like to recall my letter to be removed. If you are going to do the right thing, then I want to be part of the right thing. I want to see this project to conclusion. But, after that, they removed me anyway.

Mr. CUMMINGS. My last question, Mr. DeKort, you understand that today you are under oath, do you not?

Mr. DEKORT. Yes, sir, I am completely aware of that.

Mr. CUMMINGS. You know what that means?

Mr. DEKORT. It means I should tell you the truth.

Mr. CUMMINGS. And that you are telling the truth.

Mr. DEKORT. Yes, sir.

Mr. CUMMINGS. You understand that all kinds of agencies will probably review this transcript and some are probably looking at this right now?

Mr. DEKORT. I would hope that they do.

Mr. CUMMINGS. Would you tell us why you have come forward? Did they term you a whistleblower? I guess you know that.

Mr. DEKORT. Well, at its essence, I did not want a crew to come into harm's way down the road and to know that I could have done something about it. It is just that simple.

My background is Navy, State Department, counterterrorism for a while. I have been in DOD programs since I was 18 years old in one capacity or another, okay. It is just real simple. I couldn't have that on my conscience.

Mr. CUMMINGS. Thank you very much.

Mr. LaTourette?

Mr. LATOURETTE. Thank you, Mr. Chairman, and thank you all for your testimony.

Mr. DeKort, I made a note during the latter part of your responses to the Chairman that it is your allegation that Lockheed Martin didn't do the braided shielded cables, the low smoke cables, the proper environmental work on the topside and 360 degree camera radius because of cost. Is that your observation?

Mr. DEKORT. I was told we didn't do the TEMPEST cables, the shielded cables, because of cost. The rest, to some degree, is an inference. Their response consistently was we are not going to slip schedule. We are not going to have more budget issues.

And, to some degree because there was a relationship with Northrop Grumman that was extremely contentious at the time, and I will refer to it as playing chicken, they didn't want to fix the issues for any one or all of those reasons.

Mr. LATOURETTE. I guess my question is this. My understanding, and we can quibble about the exact value of the contract, but this was about a $90 million contract to convert these 8 boats from 110s to 123s.

Mr. DEKORT. Yes, sir.

Mr. LATOURETTE. Not being in the boat business, I would think that the big chunk of change was probably in extending the hulls. That is not where the big money is?

Mr. DEKORT. I have been told that the C4ISR proportionally was a larger part of the budget. I could be wrong.

Mr. LATOURETTE. Okay, so let me get to that. Is it your understanding that low smoke cables were called for in the Deepwater contract that Lockheed Martin bid for?

Mr. DEKORT. Yes. Yes, sir.

Mr. LATOURETTE. But they were not installed?

Mr. DEKORT. Yes, sir.

Mr. LATOURETTE. Is it your understanding that they weren't installed because low smoke cables cost more than the cables that were installed?

Mr. DEKORT. Yes, sir.

Mr. LATOURETTE. Is that the same with the braided shielded cables?

Mr. DEKORT. Yes, sir.

Mr. LATOURETTE. And the weatherization or making sure that the antenna on the topside is the same as that?

Mr. DEKORT. It is more supposition because there wasn't. I don't know which one of those four issues was the overbearing reason for the environmental issue. What I am saying is in the others, somebody told me specifically cost. In that one, it was any one of the four or all four reasons.

Mr. LATOURETTE. Just so I am clear, it is your testimony and allegation that the reason that Lockheed Martin didn't comply with the specifications that were in the Deepwater contract is because they wanted to install cheaper stuff?

Mr. DEKORT. Yes, sir. That is part of it, yes.

Mr. LATOURETTE. You understand they say that is not so, right? So we are going to be stuck with a problem here sooner or later.

Mr. DEKORT. Objectively, sir, if you look at the equipment that they wound up delivering and the equipment that I wanted them to deliver, the equipment that I wanted them to deliver in every case is more expensive. So I don't think it is a leap.

Mr. LATOURETTE. I guess I am trying to get expensive. They put some cables in.

Mr. DEKORT. Right.

Mr. LATOURETTE. You are saying that the cables that the contract called for were more expensive. Are we talking on the scale of millions of dollars?

Mr. DEKORT. For the external equipment over, understand, sir, because it is system of systems, they were leveraging designs. So it very well could be millions of dollars. You know the 123 was establishing the pattern. So all the rest of the systems, they were contractually directed to make them common.

So while it appears like a small issue for the 123s, understand that it was 49 123s and then every other boat they delivered. So it is millions of dollars spread out, yes, sir.

Mr. LATOURETTE. Mr. Atkinson, to you, one, I want to thank you for your testimony and your charts because you truly did make the TEMPEST system understandable by people as dumb as I am, and I appreciate that. I now have an understanding. I thought that your explanation was a good one.

To you, how did you get involved in this project to the point where you wrote us 128 or 138 pages of stuff?

Mr. ATKINSON. Sir, I was contacted by the Committee and asked to provide expert guidance as to how to query properly the Coast Guard and Lockheed Martin because the documents which had been produced to date, this is dating a month ago, were not answering the questions that the Committee needed answers, and I was asked to assist the Committee in demanding from the Coast Guard the relevant documents which the Department of Homeland Security OIG had failed to pick up on.

TEMPEST is a very tricky matter. It is very easy for a defense contractor to ignore it. It is also very easy for them to conceal their ignorance of it or their ignoring of it.

And I was engaged by this Committee. I have donated my time to this Committee to assist this Committee in finding the truth and by helping the Committee identify the documents that the Committee needed to conduct its business.

Mr. LATOURETTE. Good, I appreciate that, and I think everybody on the Committee appreciates your willingness to donate and volunteer your time.

I found the questions in your amendments. I assume those are the questions you are talking about that people need to ask to get the answers that you think need to be answered.

Mr. ATKINSON. Yes, sir. This Committee needs to ask all of those questions on the responsible players.

Mr. LATOURETTE. Which brings me to the next part of my question, and that is the observations that you make in the first 36 odd pages of your testimony relative to the TEMPEST tests that were performed and how they were performed and how they weren't performed properly and things of that nature. That comes about not from an inspection of the systems on the 123. That comes about as a result of your examination of the documents that were obtained from the Coast Guard?

Mr. ATKINSON. Yes, sir. I advised the Committee on what documents to demand from the Coast Guard. The Coast Guard provided some of the documents, albeit reluctantly, to this Committee. I examined those documents. I found significant inconsistencies in

those documents which I brought to this Committee's attention in the form of my written report.

Mr. LATOURETTE. Right, and I saw that. But I guess my question to you is I don't know what people in the next panels are going to testify, but we have three more panels of people including the Coast Guard and people from Navy and so forth and so on.

Based upon your field of study, your expertise, what you do for a living, if people come forward and testify under oath that, in fact, the TEMPEST tests were performed properly and that this system passed, is there any way in your opinion that they could give such an answer?

Mr. ATKINSON. Could I get you to repeat the question, sir?

Mr. LATOURETTE. No. I don't remember the question.

[Laughter.]

Mr. LATOURETTE. The question is that as I read your testimony, you came to a conclusion that there is no way, but that this system wasn't properly tested, and you go to great lengths to tell us that.

I don't know who is coming next. I know who is coming next. I don't know what they are going to say until they say it. But based upon the documents that you reviewed, is there any way that you believe someone could sit before this Committee and say that this system, these systems that were installed on the 8 123s could pass the TEMPEST testing system?

Mr. ATKINSON. I will make the answer very straightforward.

Mr. LATOURETTE. I would appreciate that.

Mr. ATKINSON. If anybody comes before this Committee and indicates that these ships protect national defense information, they are committing perjury.

Mr. LATOURETTE. That is a very straightforward answer.

Not to be lawyerly with you but since I don't know the TEMPEST tests the way that you do and you went to great lengths to talk about how it is appropriate or proper to make the tests of the TEMPEST system.

What I am saying is if we have somebody who comes and says, you know what, I tested this TEMPEST system, and it meets the standard in the industry, the standard in the military, whatever the standard is. Can a person make such a claim based upon the knowledge that you have today?

Mr. ATKINSON. No, sir. All of the documents that were provided to the Committee stated in the Coast Guard's own documents that they failed the TEMPEST inspections and instead of correcting the deficiencies, they either ignored the deficiencies or they issue waivers to cover the deficiencies up.

Mr. LATOURETTE. Right.

Mr. Braden, to you, you have installed TEMPEST systems in other programs, have you?

Mr. BRADEN. Yes, on the 270 foot cutters, the Legacy Cutters and also the design for the 210s and the 383s.

Mr. LATOURETTE. To Mr. DeKort's observation, did you, in the installation of those systems, have a specification that called for these braided shielded cables?

Mr. BRADEN. The specification is actually a standard, a TEMPEST standard, and as was mentioned before, I initially relied on a report from a Ms. Jo Agog who was asked to put together a list

of criteria, if you will, for how a TEMPEST installation was to be done.

The reason that I met with her to go over that document, although it was listed as a document for the 123s, is that some years ago I was product manager for a line of TEMPEST terminals sold to several national security agencies, and as a result I was familiar with TEMPEST requirements in a very detailed fashion at that time. A number of years went by. I wanted to make sure that the requirements had not changed.

Mr. LATOURETTE. The requirement is braided shielded cables?

Mr. BRADEN. The requirement consists of recommendations. In some cases, those recommendations give alternatives. Braided shielded cable is the preferred alternative for ensuring security with the cabling.

Mr. LATOURETTE. Are you familiar with the cables that were installed on the 123 conversions?

Mr. BRADEN. No.

Mr. LATOURETTE. Do you know what they are called, Mr. DeKort?

Mr. DEKORT. The aluminum mylar cables.

Mr. LATOURETTE. Aluminum mylar?

Mr. DEKORT. Yes, sir.

Mr. LATOURETTE. Mr. Braden, is an aluminum mylar cable one of the alternatives that you had, do you know?

Mr. BRADEN. It could be an alternative as long as it was confirmed that the aluminum mylar was properly shielded and that it gave a full coverage under all conditions. As was already mentioned, aluminum mylar is not recommended because of durability issues. So it would be more appropriate in internal compartments or places where movement isn't used.

Mr. LATOURETTE. Let me ask you this. Do you know anything about what the difference is and how much 100 feet of braided shielded cable costs as opposed to how much the mylar aluminum cable costs?

Mr. BRADEN. No. I couldn't say what the price difference is. It certainly is more expensive, but I think the key issue is that it is much harder to get schedule-wise.

Mr. LATOURETTE. It is harder to get because of the manufacturer?

Mr. BRADEN. From a schedule, from a schedule standpoint, it is not the common ordinary cable that you can buy at CompUSA.

Mr. LATOURETTE. But you could buy mylar aluminum cable?

Mr. BRADEN. Oh, absolutely, you can get it at almost any outlet.

Mr. LATOURETTE. You worked for Lockheed Martin for 30 years?

Mr. BRADEN. Yes.

Mr. LATOURETTE. Have you experienced a situation where the company has made a determination on cable that has the ability to be detrimental to national security just based on how much it costs?

Mr. BRADEN. I have never seen that before.

Mr. LATOURETTE. What about scheduling?

Mr. BRADEN. I have seen a lot of pressure on schedule in many programs.

Mr. LATOURETTE. Well, I am sure you have seen pressures, but where a decision was made. The allegation that Mr. DeKort, I think, is making is his testimony is that part of it was cost and part of it was not wanting to get behind schedule. They were going to get behind schedule on the stuff.

Have you experienced the same experiences that Mr. DeKort has testified to in any of the work that you have done for the company?

Mr. BRADEN. On the Deepwater program, I did experience intense pressure on both schedule and cost as I stated in my opening statement. My project was a fixed price contract, and so there was a fair amount of scrutiny on every issue associated with cost.

Mr. LATOURETTE. Last question, not to be lawyerly with you, but did that pressure on cost and schedule cause you or others that you worked with to do something that you knew violated either the specs or created a situation on the TEMPEST system that was likely, as Mr. Atkinson has testified, to be vulnerable to leaking national secrets?

Mr. BRADEN. I didn't allow that to happen. I had a bit more oversight of my program than Mr. DeKort did, a little more independence in decision-making, and as a result we implemented our system totally correctly.

Mr. LATOURETTE. Were you ever asked to do what Mr. DeKort says he was asked to do?

Mr. BRADEN. No.

Mr. LATOURETTE. Okay, thank you very much, Mr. Chairman.

Mr. CUMMINGS. Thank you very much.

As we go to Mr. Oberstar, in fairness to Lockheed Martin and to the contract team, Mr. Atkinson, you said in the answer to a question about if someone were to say that TEMPEST certification was done here with these boats, that they would be committing perjury. Is that what you said?

Mr. ATKINSON. Yes, sir.

Mr. CUMMINGS. Could it be that maybe they just didn't know?

I just want to be fair.

Mr. ATKINSON. Well, let me be very precise on this. In the delivery task order that the Coast Guard issued to purchase these ships, they listed only one TEMPEST specification, one. There is book roughly that thick. It is called MIL Handbook 232A Red/Black Engineering. I have a copy of it in front of me. That was the only document that the United States Coast Guard provided to Lockheed Martin as part of the delivery order.

The United States Coast Guard did not ask for TEMPEST ships. They did not ask for these ships to pass classified information. I have it right in front of me, documents which this Committee has in their possession that irrefutably show these ships would not have complied with TEMPEST when they were delivered from the contract the Coast Guard gave Lockheed Martin.

Mr. CUMMINGS. Thank you.

Mr. Oberstar?

Mr. OBERSTAR. Mr. Braden, you knew Mr. DeKort during the Deepwater program?

Mr. BRADEN. Yes, I did.

Mr. OBERSTAR. Were you aware of the problems Mr. DeKort raised with 123s and how did you come to know about those problems?

Mr. BRADEN. Well, I was aware of them because of the weekly integration team meetings that we had. Many of the issues on all the assets were discussed openly, and presentations were given by the various lead members, and we would hear issues that were trying to be resolved across the entire program.

Mr. OBERSTAR. Did you discuss at length the issue of non-low smoke cabling, cameras that did not provide 360 degree coverage, problems with TEMPEST hardware?

For the record, Mr. Chairman, we have been using this term, but it is Telecom Electronics Material Protected from Emanating Spurious Transmissions. I may have said that earlier, but I think we need to get that on the record because it is a term frequently used and it has a very ominous sound to it.

And non-weatherproof topside equipment, did you discuss those matters?

Mr. BRADEN. I had occasion to speak on a couple of those matters with Mr. DeKort, and that was as a result of an integration team meeting we had where I had presented the approach that we were using for the Legacy Cutters for our certification and accreditation. I was approached after that meeting by Mr. DeKort who quizzed me on what we were doing on those issues.

We did not talk about the radios or environmental issues. We primarily talked about cabling and TEMPEST issues, that was the nature of the conversation, and I related to him what we were doing on my cutters.

Mr. OBERSTAR. Are you aware of the cabling issue on aircraft in the 1980s and 1990s where chafing occurred in the bundles of cables on aircraft?

Mr. BRADEN. Yes, I have read about it.

Mr. OBERSTAR. I am talking about commercial aircraft.

Mr. BRADEN. Yes, right.

Mr. OBERSTAR. You are aware of that?

Mr. BRADEN. Yes.

Mr. OBERSTAR. It was similar mylar aluminum non-shielded cable. Chafing that occurred inside aircraft resulted in wearing away of the shield, the protective mylar covering that then resulted in sparking with surge of very low voltage through those wires that then caused fire and caused aircraft damage and failure. Are you aware of all that?

Mr. BRADEN. Yes. Yes, I am.

Mr. OBERSTAR. So you understand what the Coast Guard was doing in this case when it did not install the proper cabling, right?

Mr. BRADEN. I believe that the analogy you gave is appropriate in a hazardous situation. In the implementation of network cabling, at least for the assets that I was responsible for, all that cabling was routed through benign areas where no hazard would occur if the cable had been chafed. But I do understand your point.

Mr. OBERSTAR. Making a leap from the hazard to a different kind of hazard of leakage of signal, that is the real issue here.

Mr. BRADEN. Yes, I believe so.

Mr. OBERSTAR. You knew about Mr. DeKort raising his concerns to Lockheed?

Mr. BRADEN. Well, I learned about them through his YouTube video which was widely viewed by many employees, and that is where I first learned of his allegations.

Mr. OBERSTAR. You said your program, the upgrade of the 270 foot cutters, was successful.

Mr. BRADEN. Yes.

Mr. OBERSTAR. What cabling did you install there?

Mr. BRADEN. We installed shielded braided cable. In some instances, we installed fiber optic cable in instances where we went from secure compartments to compartments, and we armor jacketed that cable to prevent intrusion in non-secured locations on the ship, and we also specified low smoke, zero halogen jackets on all the cabling.

Mr. OBERSTAR. Why were you able to install the more TEMPEST standard cabling on the 270 Legacy Cutters?

Mr. BRADEN. I can't say explicitly why that was, but I can say that the attention of most of the program and the management staff was attending to the 123 in terms of its schedule difficulties, and more or less I guess I was left alone to do it right.

Mr. OBERSTAR. Why would the more secure cabling go onto one class of vessel and not on the other?

Mr. BRADEN. I really can't answer that question. I don't know why that would be.

Mr. OBERSTAR. But you knew it was happening, and you saw the dangers?

Mr. BRADEN. Well, I had heard that it had. It was one of the items that had been raised, but I think, as Mr. DeKort has stated, these are, during the course of any project, there are problems. These problems are usually mitigated or removed as the course of the program goes on, and I, my team was very, very busy meeting our aggressive schedule. I did not have time to go investigate personally whether anyone had taken action on these or not.

Mr. OBERSTAR. Were you asked to use aluminum mylar cable, and if you had been, would you have used it on the 270s?

Mr. BRADEN. Where appropriate, I would have used it, yes.

Mr. OBERSTAR. Now I want to come to the testing. There are visual tests and instrument tests. Did the 270 cutters pass the visual and then, subsequently, the instrument tests?

Mr. BRADEN. We passed the visual on the second cutter.

The first cutter, we retrofit, and the reason for that is that the cabling that we had ordered for the fiber optic connections and some of the other connections was a custom cable that was being manufactured for us by a firm in Virginia. There was a hurricane that hit and pulled the roof off of that factory. That caused delays in that cable.

With the total agreement of the Coast Guard, we went ahead with a first installation and planned to retrofit it with the higher quality cable at a later date which was subsequently done. The visual inspection noted those discrepancies. They accepted them on the Interim Authority to Operate, and we did replace that cable.

On the second cutter, we fully passed all visual inspections and all subsequent.

Mr. OBERSTAR. Then subsequent should be the instrumented inspection and testing.

Mr. BRADEN. Yes, yes, and I left the program before that instrumented test had been performed on the first cutter.

Mr. OBERSTAR. Now the IG at the Department of Homeland Security has confirmed that the contractor failed to install non-low smoke cabling and failed to install topside equipment that would function in all weather conditions. How could that have happened?

Mr. BRADEN. I really can't explain how that would have taken place.

Mr. OBERSTAR. Did you raise your concerns about the cable installation with Lockheed management?

Mr. BRADEN. I had discussed with our technical director, some of the issues that had come up in the reviews regarding the 123, and I discussed them with him only in the sense that I was expressing my concern that they really needed to deal with them so that we wouldn't keep talking about them.

Mr. OBERSTAR. Did you feel that this rose to the level of an ethics question and did you file an ethics investigation?

Mr. BRADEN. I didn't feel it did at that time, no.

I subsequently did file an ethics investigation concern at a later date.

Mr. OBERSTAR. To whom or to which level did you file that?

Mr. BRADEN. The ethics office at Lockheed Martin, Moorestown.

Mr. OBERSTAR. What action was taken subsequent to the filing of that?

Mr. BRADEN. I received no response.

Mr. OBERSTAR. Nothing?

Mr. BRADEN. Nothing.

Mr. OBERSTAR. Do you know any outcome of any action taken later?

Mr. BRADEN. Only supposition on my part. One of the concerns I had had to do with an employee morale program that had not been followed through with, and I suggested that the ethics officer might want to contact our HR department to reinstate the employee award program, and about one month after that, the award program was reinstated. Now I don't know whether that was a result of my conversation or just a normal course of events.

Mr. OBERSTAR. To the best of your knowledge, that is the only follow-up that occurred.

Mr. BRADEN. That is the best guess I have, and that is it.

Mr. OBERSTAR. I will have further questions later. Thank you very much.

Mr. CUMMINGS. Mr. LoBiondo?

Mr. LOBIONDO. Thank you, Mr. Chairman, very much. I want to commend you for holding this hearing.

I think it is absolutely imperative that we try to get to the bottom of the situation. I am hoping that we are going to hear something about the buckling hulls. I may ask that in a couple of minutes.

But I wanted to say that while I think this hearing today is very important, I think it is equally important that we not lose sight of the fact that the Coast Guard currently operates the second oldest fleet of vessels and aircraft in the world, and that was the purpose

of operation Deepwater. Some of these assets are over 60 years old. They are rapidly failing. Operations tempo continues to increase. Service-wide readiness is now. Hundreds of patrol days are being lost annually.

Probably, most importantly, the safety of the men and women of the Coast Guard who operate these assets are more in danger, I think, every day. The success of the Coast Guard's many vital missions, I think, are in serious jeopardy.

As we move through this, I just hope that we can keep in sight that it is critically important that the service get these aging assets replaced with fully functioning and capable assets and as soon as possible.

I would hope that we remember the videos of the Gulf hurricanes of Katrina and Rita and the job that the Coast Guard did. However miserably the Federal Government failed, no one faulted the Coast Guard. Part of the ability of the Coast Guard to perform so admirably at that time was the result of the Deepwater program and the upgrade of communications. Thousands upon thousands of lives were saved in that whole process.

I am very pleased with Admiral Allen's decision yesterday. I think it was very proactive. I think it will help rein in control of this program, and it is a serious situation that needs to be fixed. I have a lot of confidence in Admiral Allen.

I have a very serious regret that Admiral Allen did not get his hands on the helm sooner than what he did. I will leave it at that.

I will say to my colleagues that I know this situation makes it pretty easy for us to throw our hands up and to walk away from Deepwater and to say that it is fatally flawed and it has got to be scrapped, but I plead with you not to turn your back on the men and women of the Coast Guard, those young men and women who are heroes every day, who are putting their lives on the line for us in so many different ways and are depending on us to come up with a solution that meets the challenges of the problems we are hearing about today but still finds a way to give them a replacement of the assets. So the safety and success of their missions depend on the replacement of these assets, and it is our job to make sure that we do the best possible.

Mr. Chairman, I once again commend you and Mr. Oberstar for really getting at the heart of this problem, and I hope we can get to a point where we can move forward. I thank you very much.

I will later on try to ask some questions about the buckling of the hulls. I don't know when that is an appropriate time.

Mr. CUMMINGS. It would probably be good when we have the Coast Guard up.

Let me just say, Mr. LoBiondo, there is not one syllable, not one syllable that you just stated that I disagree with. We all are trying to get and make sure that the Coast Guard has equipment so that they can do the great job like they did down in Katrina and the things that they do everyday, the largest seizure that they have ever had in their history just recently taken place.

This is all a part of making sure, and I agree with you, that we want them to have that equipment, but we want that equipment to be safe and we want it to be safe for our personnel, Again, as

I said a little earlier, we just want ships that float, planes that fly, just what we contracted for.

Before we get to Mr. DeFazio, I just have one quick question.

Mr. Braden, just in follow-up to Chairman Oberstar's question, he asked you whether you would use aluminum mylar shielded cable, and you said, in certain instances. Is that correct?

Mr. BRADEN. Yes.

Mr. CUMMINGS. Let me ask you this. Would you have used the in secure situations where we were trying to make sure that there was no eavesdropping, the very thing that Mr. DeKort complained about? I think that is the question.

If you had been asked to use that kind of cabling under the circumstances that Mr. DeKort complained about, would you have used it?

Mr. BRADEN. That is a difficult question to answer because the application of the cabling is also dependent on the type of compartment that you install it in and whether it is a totally shielded and contained and properly grounded compartment.

What I mean by that, and I am sure Mr. Atkinson can lend more detail to this, if I have a piece of equipment that is totally contained within a shielded enclosure and it is sharing that enclosure with other equipment of its same classification level and the same network connection and connectivity. Then if that cable is properly grounded, shielded, then yes, the mylar cable would be acceptable in that instance.

Mr. CUMMINGS. I see you shaking your head, Mr. Atkinson.

Mr. ATKINSON. Yes, sir. If you build a cabinet that contains classified equipment and the cabinet itself is TEMPEST certified, you can take an uncertified piece of equipment, put it inside this cabinet and it will provide some level of protection. A very common thing is to take a printer or a plotter or a certain type of computer that there is no TEMPEST equivalent of and to encapsulate it inside of a TEMPEST box or a TEMPEST shield which now renders it protected.

We can do the same thing with cables where we can use a non-TEMPEST involved cable to hook up something that is put into a box which is itself is protected, and we have to be very careful what we put into this box because some things we put in this box will cause TEMPEST hazards to occur.

Mr. CUMMINGS. From all the records that you have read, would you agree with Mr. DeKort?

Mr. ATKINSON. In what regard?

Mr. CUMMINGS. With regard to his complaints about the aluminum mylar shielded cable and that it should not have been used?

Mr. ATKINSON. Yes, sir. I have actually researched the cable that he is referring to and found Coast Guard records in regards to them and have identified that we are talking at a difference of about $20 for the cable.

Mr. CUMMINGS. Mr. DeFazio?

Mr. OBERSTAR. Would the gentleman yield before he gets to his questions?

Mr. DEFAZIO. I would certainly yield to the Chairman.

Mr. OBERSTAR. Thank you.

I just want to reassure the gentleman from New Jersey who served for a long time as the Chair of the Coast Guard Subcommittee that our purpose is not a public hanging. We are here to try to fix the underlying problems in the Coast Guard's management of its contractual responsibilities to deliver on the program that the gentleman played a large part in authorizing for the Coast Guard just as we have done over many years when I chaired the Aviation Subcommittee and the Investigations and Oversight Subcommittee to get FAA on the right track, learn how to manage multibillion contracts and then fund those programs.

I assure the gentleman that is the purpose of this hearing, to go to the core of the problems uncovered here, fix them and then report out a robust Coast Guard authorization program so they can fix those old ships and have the equipment they need to carry out the many responsibilities we have loaded upon them.

Mr. LOBIONDO. Would the gentleman yield for a moment?

Mr. OBERSTAR. I yield back.

Mr. LOBIONDO. Mr. Oberstar, I applaud your efforts. I in no way meant to intimate that that was the case, but my concern was from some other colleagues who are not on the Committee, who have just in casual conversation said to me, we ought to just scrap the program.

Mr. OBERSTAR. No.

Mr. LOBIONDO. I don't think they understand what scrapping the program would mean.

Mr. OBERSTAR. I just want to reassure the gentleman. We are on the same wave.

Mr. LOBIONDO. Okay, we are in synchronization. Thank you, Mr. Oberstar.

Mr. DEFAZIO. I would certainly second those comments. Ten years ago as Ranking Member on the Coast Guard Subcommittee, I became very well aware of and was a strong advocate for increased funding and new equipment for the Coast Guard. I had one of the antique ships in the Coast Guard serving my district for a while, and I am well aware of that problem. But it was only after 9/11 that Congress and this Administration began to recognize the need, and Katrina certainly highlighted the efficiency and valor of the Coast Guard.

None of that is in question here today, but there are extraordinary questions about how we got to this point.

I guess I am going to direct most of my questions to Mr. Sampson, and I will be questioning the buckling and the design on the 123s which the former Chairman hoped we would get to. I have been waiting to get to it too. I am not much of an electronics guy, but I am and have been a lifelong sailor and boat owner.

Mr. Sampson, these will be directed to you, but just keep this in mind as I ask you the questions. This is a statement that will come after you have left, and I want to give you an opportunity to respond to it in your responses to me.

Mr. James Anton, Vice President, Deepwater Program, Northrop Grumman Ship Systems, if you look at page two of his testimony, he says: HBJV added a 13 foot extension to the 110 which was similar to the 9 foot extension they had successfully added to the Cyclone Patrol Boats starting in 2000—no mention there of the

early problems with those extensions, but he does say they were successful.

He goes on further on that page to talk about hull deterioration.

He goes on page three to talk about the ships being operated in seas beyond their design capacity.

He goes on, on page four, to say that an outside engineering firm designers and planners engaged by the Coast Guard, analysis showed the overall hull structure design was adequate under all expected operating conditions up to the worst operating condition modeled.

Then in summary, he says it is premature to speculate on the final cause and final way forward.

I assume you probably don't agree too much with that analysis of those remarks.

Mr. SAMPSON. No, sir, I don't. There are several different perspectives that I would like to address. I haven't had the opportunity to read the comment that you are discussing. I wrote down some quick notes, so if there is something there that I missed, please remind me and I will feel free to discuss.

In regards to the Navy's experience with the PCs, I want to make sure it is very clear. CCD, Combatant Craft, emphasized to the Coast Guard as well as Bollinger Shipyard because this was kind of a misconception among many that Bollinger Shipyard built the 110. They built the 170. They did the extension.

What never appears to come to the surface is the fact that Combatant Craft Division was the one that did the entire design work for the extension. The failures that occurred were actually prior to the ones when the 170s were first built. When the PCs were first delivered, they started failing immediately.

That was a function of, after extensive investigation, Combatant Craft came to the position that the 1997 ABS rules, high speed craft rules with which the PCs were built to had underpredicted what they call a dynamic loading condition. The ABS later in their high speed naval craft code did correct this based on that experience. It was a known issue to ABS, to Combatant Craft, and we made that very clear to Bollinger Shipyard.

Mr. DEFAZIO. Is that what you discussed with Mr. Debu Ghosh on 9/3/02?

Mr. SAMPSON. That was one of the topics, yes, sir. Yes, sir.

Mr. DEFAZIO. Okay, go ahead.

Mr. SAMPSON. The Combatant Craft, when they did the design work, Bollinger is a great fabricator. However, they did not facilitate the engineering. Production details, things of that nature, but the actual first extension was not performed by Bollinger to my understanding. It was actually by another shipyard. So they did not perform the engineering. That expertise resided with CCD.

During that 9/3 meeting with Mr. Ghosh, we emphasized to him that this was not a simple evolution, that the design was very complex. The PC went from a 5 percent length increase of 9 feet as compared to the 123 or the 110 which added 13 feet to 12 percent increase. This is a substantial, substantial increase in length.

As a result of that, the rules that were being used or we were told were being used for the 110/123 conversion were these, what CCD felt were flawed rules of ABS, the 1997 high speed craft code.

Mr. DEFAZIO. So that was probably the point at which you or the Navy CCD offered to provide some design and engineering support to Bollinger, Northrop Grumman or the Coast Guard on the conversions?

Mr. SAMPSON. Yes, sir. Let me make it clear. CCD did not go out and necessary try. Combatant Craft is a capital-funded program. So, in essence, we are like a contractor. We have to go out and sell our services.

Mr. DEFAZIO. Right.

Mr. SAMPSON. So I can't voluntarily, but.

Mr. DEFAZIO. But you made an offer.

Mr. SAMPSON. We informed the parties involved, yes, sir.

Mr. DEFAZIO. I believe it was not particularly spending in terms of how much money has been wasted here. What would the costs have been?

Mr. SAMPSON. Just for oversight to determine if a problem existed would have been $42,000.

Mr. DEFAZIO. Forty-two thousand dollars?

Mr. SAMPSON. Yes, sir.

Mr. DEFAZIO. How much did we spend per ship conversion?

Mr. SAMPSON. A lot more than that, yes, sir. I am not aware of the exact number.

Mr. DEFAZIO. Okay. But that offer was declined.

Mr. SAMPSON. Yes, sir.

Mr. DEFAZIO. Okay. Was there any particular reason given for declining that offer?

Mr. SAMPSON. No, sir.

Mr. DEFAZIO. Okay. Then you went to the Coast Guard.

Mr. SAMPSON. Well, the order that we talked. We had talked with Mr. Ghosh first.

Mr. DEFAZIO. Right.

Mr. SAMPSON. Then we talked to the Deepwater Program Office up in Washington, D.C. Talked to Ms. Diane Burton and another gentleman. For the of me, I can't remember his name, but I remember him as a program manager. I don't recall if he was specific to the 123 or in total. Explained the situation to them.

Ms. Burton, being a former NAVC employee, I think, understood some of our concerns. However, the discussion was very short and thank you very much, and we never heard anything further from them.

Northrop Grumman, Combatant Craft did not contact directly. However, Bill Moss, who is our point of contact for the Carderock Division, did provide a capabilities brief to Northrop Grumman to explain what the Navy had to offer them, but specific to the 123, nothing was mentioned.

Mr. DEFAZIO. Do you think that there is any possibility that Mr. Anton who raises these other issues was aware of these concerns as a Northrop Grumman executive?

Mr. SAMPSON. I have no idea, sir.

Mr. DEFAZIO. Perhaps he will be asked that on the next panel under oath and why action wasn't taken.

I have got to jump ahead here because the time is valuable and we have been holding people on time.

This is, I think, a critical question because there was some concern raised earlier by Mr. Mica that we are plowing old ground and that, in fact, this has all come out before. Did Mr. Casamassina of Navy CCD warn the Coast Guard that it was in danger of losing a ship if the hull cracking problem was not corrected?

Mr. SAMPSON. I don't have firsthand knowledge of that specific conversation or those words were used. I do, however, know that Mr. Casamassina and myself talked at length to the Coast Guard and Bollinger and explained the severity of the situation, and we felt confident that they understood that.

Mr. DEFAZIO. Apparently, the Navy did give us that statement that they afforded that warning, but I thought you had knowledge of it.

Mr. SAMPSON. Not that specific phone call.

Mr. DEFAZIO. You had conversations similar to that with Mr. Casamassina.

Mr. SAMPSON. Yes, sir.

Mr. DEFAZIO. So the risk here was catastrophic failure, hull failure, loss of the ship, potentially loss of life?

Mr. SAMPSON. Potentially, yes, sir.

Mr. DEFAZIO. Then, finally, it is our understanding the Coast Guard made two efforts to fix the 123s after the problems with the decks appeared. Did the Coast Guard consult with CCD on these proposed fixes that you are aware of?

Mr. SAMPSON. I, as employed by the Coast Guard, did consult with CCD but purely on a professional peer level.

Mr. DEFAZIO. Right.

Mr. SAMPSON. Having worked with them, I consulted them and asked them their thoughts or to confirm what I was suspecting or believing which they provided to me as a personal interest that, yes, these fixes were not going to work. However, there was no direct involvement, to my knowledge, between CCD and parts.

Mr. DEFAZIO. Did you report that up the chain, that these proposed fixes were not likely to work according to your consultation with CCD?

Mr. SAMPSON. Absolutely. My command, the Maintenance and Logistics Command Atlantic voiced those concerns repeatedly.

Mr. DEFAZIO. But they went ahead anyway.

Mr. SAMPSON. Yes, sir.

Mr. DEFAZIO. And they didn't work.

Mr. SAMPSON. Correct.

Mr. DEFAZIO. Well, so none of the efforts to fix the 123s succeeded. Would you then disagree with Mr. Anton's statement that it is premature to speculate on the final cause and the way forward of the failure?

You think we know the cause?

Mr. SAMPSON. I think there is a strong case to be made that the cause is due to the hull strength or the hull girder issue. The localized failures that have occurred on deck and some other places were, in my opinion, a result of the modifications where they just moved stress from one location to another. The actual initial failure of the Matagorda was a clear classical failure due to bending.

Mr. DEFAZIO. Mr. Chairman, I want to thank you for the generous grant of time and for your leadership on this issue.

I do want to say in closing that Mr. DeKort in his testimony said that and he was referring to a number of things here, that these were actually informed and deliberate acts. I hope if through our investigation we find that any of these acts were informed and deliberate, that both defrauded the taxpayers and jeopardized national security and potentially jeopardized the health and safety of our Coast Guard crews, that we will be providing all of that to the Justice Department. I hope that maybe some of those responsible could enjoy Federal hospitality.

Mr. CUMMINGS. Thank you very much.

I take it, Mr. Sampson, that you did not believe.

I have seen the ships. I saw them last Thursday, and I can tell you they are a mess.

Mr. SAMPSON. Yes, sir.

Mr. CUMMINGS. Have you see them?

Mr. SAMPSON. Yes, sir. I have done extensive investigations and inspections on those craft.

Mr. CUMMINGS. The amazing thing is that I thought we were talking about a big ship. Some of these boats are not as big as some yachts.

Mr. SAMPSON. Yes, sir.

Mr. CUMMINGS. It is incredible, and they so happen to be in Baltimore where I live. So I happen to be there, and I wanted to go see them.

But, anyway, I am sorry, Mr. Gilchrest.

Mr. GILCHREST. Thank you very much, Mr. Chairman.

I too want to make sure that that Coastie who is today similar to Gene Taylor 30 years ago, whether they are breaking ice to McMurdo. Maybe 10 years ago, I don't know when Gene Taylor was in the Coast Guard. When those are Coasties are breaking ice to McMurdo Station in the Antarctic on that ship, when they are at Cape Disappointment rescuing people, when they are in the Gulf of Alaska because a crab boat is in trouble, or the Chesapeake Bay, or these guys are out there determining international standards at the IMO in London, it is an extraordinary service.

But I do remember a time 40 years ago when I was using an M-14 in Vietnam. It worked every time we pulled the trigger. Sadly, we had to pull the trigger occasionally. Rain, monsoons, heat, mud, you name it.

We were given an M16, about February of 1967, and it didn't work. Who was responsible for that?

In 1967, these young men, like we have now in Iraq and in Afghanistan, assume the chain of command is competent.

We are here to praise the stunning abilities of the Coast Guard people, and we also want to find out the chain of command that whomever and wherever it is that changed the basic physics. They changed the physics of the boat when they wanted to put in some add-ons which would have made it more serviceable under certain conditions. But they changed the physics of the boat.

So who was responsible for proving that chain up the chain of command including everybody and the contractors?

I am glad the Chairman is holding this hearing. We are not here to unfairly reprimand anybody, but we would like to know how this came about that we have eight boats now that don't work.

Mr. Sampson, did the Coast Guard consult with the Navy engineers when reviewing the proposed design of the 110 foot patrol boat conversion?

Mr. SAMPSON. No, sir, they didn't necessarily consult us. We at CCD did notify them of our experience with the PC and the lessons learned, and we shared that with the Coast Guard voluntarily.

Mr. GILCHREST. There was a basic consultation that took place.

Mr. SAMPSON. Yes, sir. On that 3rd of September with Mr. Ghosh in addition to the Deepwater Program Office, we shared that we had extensive knowledge and experience with this type of design and modification and that they were at very high risk of failure if they were to proceed.

Mr. GILCHREST. What were the specific concerns that would cause the high rate of failure if they proceeded?

Mr. SAMPSON. As I stated earlier, that ABS 1997 high speed craft rules, that uses two methods of prediction for the strength of the boat. One is a static-loading. One is a dynamic-loading. The 1997 rules underpredicted the dynamic loading. As a result, the static was a driving factor according to that rule set.

Combatant Craft, through investigation, realized that that was actually not the case, and they used another classification society's rules in conjunction with some additional calculations to determine the actual correct strength that the vessel had to be. Because of that, we cautioned the Coast Guard extensively because we knew they were going to use that, the old set of ABS rules.

Mr. GILCHREST. Did they take your caution seriously?

Mr. SAMPSON. I felt, we felt that they understood our concerns. I do not know what they did with our information. Mr. Ghosh certainly tried to, I think understood, and he tried to hire us to provide.

Mr. GILCHREST. But you don't know if those recommendations were followed through by anybody in the Coast Guard?

Mr. SAMPSON. Eventually, they weren't, sir, because the boats were built as proposed.

We also shared—real quick, sir—that when you lengthen a boat, those bending moments, that static bending and dynamic loading, those are affected primarily by the length of the vessel, and the dynamic also has a speed component. But the length of the vessel is a significant contributor to that bending force. And so, when you lengthen a boat by 12 percent, that is a tremendous length increase for that size craft, and so you have to add strength to the vessel, vessels that are high speed craft such as the 110.

Mr. GILCHREST. So strength was not added to the vessel?

Mr. SAMPSON. No, sir, not at all.

Mr. GILCHREST. Can you just tell us—I know my time is up, why wasn't strength added to the vessel if those recommendations were made?

Mr. SAMPSON. The only thing that I can speculate, sir, is that the static condition was a driving factor, and they felt they complied with that static condition. Other than that, I have no idea, sir.

Mr. GILCHREST. I see. Thank you very much.

Thank you, Mr. Chairman.

Mr. CUMMINGS. Thank you.

Mr. Taylor?

Mr. TAYLOR. Thank you, Mr. Chairman.

Mr. Sampson, I want to follow up on what you were just touching on because I have heard now three different explanations for the 110 problems.

First, I was told they never did hogging and sagging calculations. Then I was told, yeah, we did them, but we didn't figure in fatigue. Yeah, we figured in fatigue, but we misjudged the steel.

Apparently, the initial hull had some high tensile steel. Apparently, it got a Made in U.S.A. waiver. I am told it was from England, but I am told no one ever tested it on the initial building of the hull and that, like you said, when the hull is only 110 feet and you stress between two waves, you didn't have the hogging and sagging problem. You make it 123 feet, get between two waves, and you have substantial problems.

My question to you is since I am getting so many different stories from people who ought to hopefully be telling me the truth and since we have now got eight ruined ships, $40 million down the drain. To my knowledge, no one has been fired. To my knowledge, no one has claimed responsibility. I can assure you if this had happened in the private sector, a bunch of people would have been fired by now.

So what do you think happened?

Mr. SAMPSON. Sir, you bring up some good points.

Mr. TAYLOR. I also want to say, Mr. Cummings, if you owned a crew boat, a boat that takes people out to an off-shore oil rig and you wanted to stretch that crew boat and still have it certified to carry passengers, the Coast Guard would have run the tests before they ever recertified that vessel again. So it is absolutely crazy that something they do every day in judging the private sector, they apparently didn't do for themselves, and no on has ever answered that question.

Mr. SAMPSON. Sir, I think to clarify, I think there are some issues there that may have been crossed over. The metal fatigue and the material properties were things that were subsequently looked at well after the Matagorda failed. Those were things that were addressed after the fixes did not work in the hopes to try to figure out exactly what transpired.

Mr. TAYLOR. To the point I was told they never looked at metal fatigue in the beginning when they were running the hogging and sagging calculations. Is that true?

Mr. SAMPSON. That, I am not aware of, but I would suspect that is the case.

Mr. TAYLOR. Did they run hogging and sagging calculations up front just like they would have if a crew boat operator had gone to them, wanting to stretch their vessel?

Mr. SAMPSON. Mr. Ghosh would probably be the best one to answer that, sir. My understanding is they did, and there were some errors in those calculations, but he would give you a definitive answer on that, sir.

Mr. TAYLOR. Did anyone ever test the steel that I am told came from England which probably would have required a Made in U.S.A. waiver and that, if we did that, we undoubtedly paid a premium for it in the first place to see whether or not it was up to the spec that we probably paid the premium for?

Mr. SAMPSON. Okay, to my understanding, no steel was imported from England.

The initial design, both the 110s and the 170s, all those craft were designed by a British company called Vosper Thornycroft. They had a material requirement in their design of what they call British steel 4316. It is a British standard saying this is a material property.

It is my understanding, and Bollinger may be able to correct this, but it is my understanding that they had specifically mill runs performed by U.S. steel mills and all that material made to that British standard and delivered to Bollinger Shipyard for construction of the 110. Whether or not they had any material testing done at that time, I am not aware of.

Mr. TAYLOR. To the point, what do you think happened? I am game now for the fourth opinion of why these ships failed and yet no one is responsible.

Mr. SAMPSON. Sir, I think there is a combination of things, but I believe that the longitudinal bending. In real simple terms—and I will try to make this brief—when you take a hull and you put it in the water, it has to be designed to handle, to go in through waves and over waves.

Mr. TAYLOR. Mr. Sampson, I have stretched a steel boat, my boat. So I am familiar with all of that.

Mr. SAMPSON. Okay, okay. You have to design for both of those loading conditions. The loading conditions that were initially assessed by the 1997 ABS rules underpredicted those loads that the boat would have to meet.

It may have been the FE-I do not know. Mr. Ghosh may be able to provide the information.

But we understood, as Combatant Craft, that those rules were faulty. We did our own simplified investigation to determine that the loadings would have been much more significant to require, to provide strength of that hull sufficient enough to withstand the operations.

There were other issues later on where the specification, the performance specification came into question. I have read the performance specification that was issued. To me, it is very clear that the intent was to have a platform that was as capable as the 110 WPB at the end of the conversion. That did not happen, obviously.

At all the times of the failures of the 123s, we had 110s out and operating that suffered no hull damage whatsoever.

Mr. TAYLOR. For the record, who did you notify?

Mr. SAMPSON. I notified ELC, Mr. Debu Ghosh. I notified the Deepwater Program Office, Ms. Diane Burton and another gentleman who I cannot remember his name. I notified Bollinger Shipyard, Dennis Fanguy and anybody else would listen. But those were the three primary contacts that we notified.

Mr. TAYLOR. For the record, did any of them change their plans in any way or did any of them recalculate the tests to address your concerns?

Mr. SAMPSON. At the time, sir, I was with CCD. The Coast Guard, I was not intimate with the Coast Guard. I do not know what they did.

Mr. Ghosh took the matter very seriously. I am not sure what he did.

Mr. TAYLOR. Okay.

Thank you, Mr. Chairman.

Mr. CUMMINGS. Before we get to Mr. Diaz-Balart, let me just ask you one question. I would direct this to Mr. Braden and to Mr. Sampson.

Yesterday, the Coast Guard announced its intention to bring the systems integration functions back in-house. How do you think this changed process will help?

I mean do you think it will help at all? Do you think we will still have the same kind of problems?

I am following up on what Mr. Taylor just talked about. I am just wondering. Nobody has been fired to my knowledge either, and it seems like this is a situation that all parties involved have some responsibility and some issues.

But I am just wondering. He has made this announcement apparently in an effort to try to cure the situation and make it better for the future. I was just wondering are you familiar with that, what he said?

Mr. BRADEN. Yes, I am.

Mr. CUMMINGS. Mr. Braden, do you have an opinion on that?

Mr. BRADEN. Well, I feel, and I think this was mentioned previously, that the Coast Guard is ill prepared at this time to provide quality systems engineering and integration oversight. I have heard from the members that there are efforts to beef up their staff, to hire the necessary people. I think that is going to be a major challenge for them to do that.

I think they will still need to rely heavily on industry to provide that guidance. I believe, personally, that oversight, meaning an independent assessment of what the requirements have been agreed to, is the biggest key to success on the program.

In the past, as a performance-based requirement, there is a good bit of subjectivity as to how you achieve the final performance goal, and that subjectivity was, I would say, a major point of contention between the Coast Guard, in my direct experience on the 270s, and ourselves in terms of debating probably needlessly and sometimes seemingly endlessly as to someone's interpretation. And I think by getting clear requirements and then having oversight of those requirements, that would go a long way towards making sure that things get done exactly right the first time.

Mr. CUMMINGS. It sounds like, Mr. Braden, that you are very strong with regard to your standards, and you are not going to bend, no pun intended, but you are not going to bend.

It sounds like to me basically they let you alone, and you did what you had to do. Apparently, as we see now, it worked out fine. That is what it sounds like now.

Mr. BRADEN. Well, I will echo what I have heard previously too, and that is that I had the utmost respect for the people who put their lives on the line daily in the Coast Guard, and it was my intention to be certain that we delivered the best quality system we possibly could.

And I found that, in some instances, I saw in other areas of the program, sort of an adversarial relationship between the Coast

Guard and the contractors. I tried to nurture a friendly, cooperative, open discussion, and that is how we did finally nail some of the issues we had to contend with in terms of interpretation.

Mr. CUMMINGS. Mr. DeKort, same question.

Mr. DEKORT. We had a different experience, Mr. Braden and I. If I had the ability to be that independent and to have that relative authority, we would not be talking right now.

Mr. CUMMINGS. Mr. Sampson?

Mr. SAMPSON. Sir, I guess my FE

Mr. CUMMINGS. See, you have a unique perspective, Mr. Sampson. You had the Navy and the Coast Guard experience.

Mr. SAMPSON. Yes, sir.

Mr. CUMMINGS. What we have been hearing is that the Navy is well equipped to do a lot of these things and maybe the Coast Guard isn't there yet.

But you go ahead. I am listening.

Mr. SAMPSON. I love the Coast Guard, sir, through and through.

Mr. CUMMINGS. We do too.

Mr. SAMPSON. It is the best organization out there. I think the Coast Guard, one of the more trying aspects that the Coast Guard has is resources.

If you look at the Navy, it is a huge organization, lots of money, lots of human capital to take care of many of the challenges that are put before them.

With the Coast Guard, now this is Scott Sampson's personal opinion, but the Coast Guard, we are asked to do more and more and more. I had to give up billets out of the section that I supervise to provide people for Pat Forswa, the 110s that we have overseas supporting our men and women over there. I have to give up a lieutenant JG for an admiral's billet that doesn't get replaced.

We are continuing to do more and more. I have a friend of mine who is in the acquisition office, that puts in routinely 12 to 14 hour days including weekends, and he doesn't get to see his wife much because we ask more and more of our folks, and we are never provided or very rarely are we provided the men, the resources to try to get those tasks accomplished.

While I have the utmost in confidence in the Commandant's direction and leadership, I think this is going to be a significant challenge for the Coast Guard to provide that additional oversight that is going to be placed upon us.

Mr. CUMMINGS. Thank you very much.

Mr. Diaz-Balart?

Mr. DIAZ-BALART. Thank you, Mr. Chairman. I actually really don't have a question, more just a couple of comments.

First, I want to thank you, Mr. Chairman, for what I think has been a very important hearing, and I want to thank also those of you who have come forward for spending all this time with us. I think it has been very helpful to allow us to understand what the issue is.

Secondly, when I was listening to Mr. Taylor, I share his concern and his frustration, the fact that what he said, and I am paraphrasing, Mr. Taylor, but about the fact that nobody has been fired. We shouldn't be surprised, either Mr. Taylor and I, that in the public sector, it is very hard to fire people anyway which is one

of the problems with creating a larger bureaucracy is you can never get rid of them. But it is clearly frustrating for him and for me, and I don't think it should surprise us.

Number three is that I think it is very important, and you all have not done that, but it is very important that anybody listening doesn't. When we speak about the Coast Guard or Lockheed Martin, it is not the Coast Guard or Lockheed Martin. There may be some individuals that have made mistakes, and that is not the entire entity. You all understand that. We understand that. I just want to make sure that everybody else understands that.

Lastly, Mr. Chairman, I just want to thank you and also Chairman Oberstar for your statements to Mr. LoBiondo's question or comments and your commitment to that because, as Mr. Sampson just stated, the Coast Guard has always been underfunded which is why this project, this Deepwater project is so important. But, obviously, it is important not only that it receives a funding but that it is funded and the money is spent efficiently and effectively. That is the purpose.

I want to thank both of you gentlemen for clarifying that. Again, nothing that we didn't expect to hear from you, but it is always, I think, important that we thank you for that strong statement of support for an efficient, effective Deepwater program that does protect our national interests, our national security and obviously the men and women who perform.

Mr. OBERSTAR. Would the gentleman yield?

Mr. DIAZ-BALART. Yes.

Mr. OBERSTAR. Just briefly for an observation, I have served on the Coast Guard Subcommittee since I came to Congress 32 years ago. We have added 27 new functions to the Coast Guard in those years, but the Congress and administrations, Democratic or Republican, have not given the Coast Guard the funding they need to carry out those functions. That is what I am talking about. That is the frustration. By damn, we are going to work on that and do that in this Congress.

Mr. DIAZ-BALART. I thank the Chairman if I may claim my time back. I thank the Chairman for that, for his commitment. I know that. I have been in conference with you not that many years obviously, and I have seen that commitment. Clearly, the Coast Guard deserves the funding.

I think one of the problems that I am seeing here from Mr. Sampson's statement. Again, I don't want to paraphrase. I am paraphrasing what you said.

One of the issues that may be unfolding here is that yes, frankly, with this Deepwater program, we have finally funded some assets for the Coast Guard that frankly since probably the Coast Guard has been underfunded for so many years, they just weren't ready for it, no excuse there.

But, anyway, I just wanted to make those statements.

I wanted to thank the Chairman of the Subcommittee and the Chairman of the full Committee for allowing us this opportunity. I think it has been very fruitful. Thank you.

Mr. LATOURETTE. Will the gentleman yield to me on your time?

Mr. DIAZ-BALART. Yes, sir. I give you the rest of my time.

Mr. LATOURETTE. Thank you very much. I just wanted so I don't have to drag out this panel.

Mr. Atkinson, could you clarify your $20 remark? I have asked Mr. DeKort and Mr. Braden about it. I thought I heard you say, and I don't want to put words in your mouth but the difference between the mylar aluminum and the braided shielded was 20 bucks. Is that 20 bucks a foot, 20 bucks a mile?

Mr. ATKINSON. No, sir. The Coast Guard, excuse me.

ICGS purchased a cable made by a company called Cable General. This was an ethernet cable similar to what many of you have in your offices, but it was a heavier duty version of that cable.

Now this cable is made in two formats. It is called a ship LAN cable designed for local area networks aboard ships. The first version is an unshielded twisted pair with a mylar shield only. There is also another version which is only slightly more expensive, which is a double shielded braid and foil. On the ends of this cable is a connector made by Sentinel Connector Company or Sentinel Connector Systems, Inc., which the actual connector itself was developed by Lockheed Martin.

The price difference between the shielded cable and the mylar shielded cable or the double shielded cable, if you will, and the mylar shielded cable, the total cost for a 10 foot cable that is mylar shielded is about $7.50.

Mr. LATOURETTE. For 10 feet?

Mr. ATKINSON. For a 10 foot cable.

Mr. LATOURETTE. Anybody have any idea how many feet of cable we are talking about in the 110 conversions? Mr. DeKort?

Mr. DEKORT. There are almost 400 cables in total. I don't know how many there are, but I would imagine several dozen. But again, sir, that would need to multiplied times 49 times the rest of the vessels because it is a system of systems.

If I could because I understand why you are going down, if I could clarify really quickly, when you have a program where you bid $4 million per boat and you know you are over-running double that and it is $8 million per boat, it is very possible that they thought their potential profit literally was in five cents per cable.

Also, though, by the time these issues had snowballed, I believe Lockheed Martin, part of their thought was this is embarrassing. So, at some point, they just didn't want this to come out because how avoidable it was and how crucial these issues were. So it is the combination, sir, of the costs, schedule as well as not wanting to necessarily come out.

Mr. LATOURETTE. I got you. I thank you and Mr. Diaz-Balart for yielding. Thank you.

Mr. CUMMINGS. Mr. Hall?

Mr. HALL. Thank you, Mr. Chairman and Chairman Oberstar.

I thank you for the patience of all our witnesses and our other witnesses. I will keep this really brief.

Mr. Sampson, I gather you are, among other things, a Naval architect.

Mr. SAMPSON. Yes, sir, that is correct.

Mr. HALL. When one builds a 110 foot vessel or any vessel, I would guess that the Naval architect tries to make it of the ideal proportions to begin with. In other words, you are going to have the

right proportion of length overall, beam draft, deck strength and so on and so forth, and the boat is designed to handle varying sea states in its existing proportion.

There have been a number of famous cases of failures or believed failures, perfect Storm being one, for instance, where a fishing boat was altered without consulting a Naval architect in that case and wound up, some people think, capsizing because it had lockers installed on the deck that caught a sea that came transverse and pushed hard on it and it just rolled over. We will never know about that.

But my question is when you take a 110 foot boat that was originally designed to be the ideal proportions, aren't you taking it off of its ideal proportions by lengthening it, almost by definition?

Mr. SAMPSON. Absolutely, yes, sir. That was our, one of our main points, that this was such an elementary decision point or observation, that if you lengthen a vessel, the midship section modules or the strength of that vessel has to be increased.

This is a high speed craft. You don't have that much reserve margin built into an existing craft or you would overdesign it, and it wouldn't make the speed. So to make the assumption that the craft did not have that or that had that reserve strength.

Mr. HALL. That is what I thought.

I just noticed in some of the testimony, the written testimony of the later witnesses that the design specs call for it to operate up to Sea State 5, 8 to 13 foot seas. I used to have a 39 foot cutter myself that I sailed in seas bigger than that.

That seems to me rather like a low threshold for a ship that may have to operate, or a boat. It is a ship to me. But anyway, it is a boat that may have to operate under considerably more extreme weather and does probably.

On top of everything else, I am just curious how one could not overbuild in this situation when you know you are cutting a boat open and then sending it. Has that occurred to you?

Mr. SAMPSON. Absolutely. There are several things that are associated with that performance specification and later information that I was told in regards to the requirements.

We were always verbally told that it was designed to be the same capability as a 110, just a 123, so that a 110 for purposes of the operators. Mr. Ghosh has commented to me, and he will probably confirm this is that the 110 is, in essence, unrestricted. It can go out and operate in a sea that normally the human will give up long before the ship.

Mr. HALL. Right.

Mr. SAMPSON. They will pull the throttles back. With the 123, after the failure, it was explained by Mr. Jacoby that the design spec was actually poorly written and that the requirements that were being interpreted were actually lower than what we felt was operationally needed.

Mr. HALL. Thank you.

Mr. Atkinson, I just wanted to ask you. I understand that by Coast Guard accounts the Matagorda was given its ATO in January of 2005 and then later that year had a visual inspection. Do you know if the deficiencies identified in that visual inspection were severe and was it appropriate that they were waivered?

Mr. ATKINSON. No, sir. None of the items that were detected in the visual inspection should have been waivered. By issuing these waivers, they quite literally were covering up significant vulnerabilities. While our enemies may not have directly exploited those vulnerabilities, they did nonetheless create vulnerabilities that the Coast Guard decided were acceptable.

Mr. HALL. What is the risk to national security if a TEMPEST certifications testing process is not done properly and the vessel operates and broadcasts to other vessels?

Mr. ATKINSON. National security, a foreign government will be able to access our classified communications not just on a one ship basis but more of an everything our Country has. If they can a detect our codes, our ciphers, our hopping patterns, our communications, they can exploit that not just on the Matagorda but on everything in our inventory. You give them the keys to the kingdom when you breach TEMPEST.

Mr. HALL. Let them in. Thank you very much.

Thank you, Mr. Chairman.

Mr. CUMMINGS. Thank you.

First of all, I want to thank all of you for your testimony. I was just sitting here, thinking about what you all have said, and I am so glad that we have Americans who care as much as all of you care, and I really mean that.

One of the things that is really nagging at me, though, is Mr. DeKort, and I am wondering.

Mr. Braden, you have been with Lockheed Martin how long?

Mr. BRADEN. Thirty years.

Mr. CUMMINGS. Thirty years.

You have heard the complaints of Mr. DeKort. In your mind, I mean the things that you know about that you can express an opinion. Were those reasonable things to raise?

I just want to make sure. Here is a man who, just like everybody else, has made it clear that he wants the best for the Coast Guard and the best for our Country. I am just wondering. What was your opinion on those things?

Mr. BRADEN. I think the issues he raised, I would expect to be raised by any competent program manager, project manager or engineer.

Mr. CUMMINGS. All right. Thank you very much.

Mr. Chairman?

Mr. OBERSTAR. I just want to nail a couple of things down with Mr. Atkinson.

The difference between a visual test and an instrumented test, a visual review and certification through follow-up instrumentation testing, what is the significance of the one and the other and the two in combination?

Mr. ATKINSON. The physical inspection tells us if hardware has been properly placed onto the equipment, that cables are properly bonded, that cables are connected properly, that they are properly grounded, that isolation distances have been rigorously adhered to. Those must be done in a visual inspection before you do an instrumented inspection.

Mr. OBERSTAR. Is it sufficient to do the visual? If those factors are verified, can the inspector say that is sufficient?

Mr. ATKINSON. No, sir. It must pass a visual inspection and then pass an instrumented inspection.

Mr. OBERSTAR. The instrumentation will tell us whether there is linkage and what distance and what can happen, how the signal can be intercepted, is that correct?

Mr. ATKINSON. Yes, sir. It is very similar to going to the doctor with a cough. The doctor can hear your cough. He can see that you are in pain, but he doesn't know that you have water on your lungs. So he will send you to a radiologist to have your chest examined and x-rayed. The x-ray is an instrumented test. An instrumented test is an absolute measure based on scientific principles, not just a visual observation.

The two must be done, but the visual needs to be done before the instrumented, and then the visual needs to be repeated on a fairly regular basis.

Mr. OBERSTAR. There is a risk to national security in a vessel handling classified information and conducting classified communications with shoreside and airborne equipment. What is the risk to national security if a vessel handles such traffic without proper TEMPEST certification?

Mr. ATKINSON. If a Coast Guard cutter goes into the territorial waters of Cuba and while they are in the territorial waters of Cuba they transmit a classified message through their satellite communications link or through other means and they have leaky equipment and Cuba picks up on those leaks, they will have just disclosed to the Cuban government how our cryptographic equipment works, how our C4ISR equipment works, the coding that it works on and they will be giving away not only their position, but they will be giving away, again, the keys to the kingdom. They will allow Cuba to listen in now on any of our ships.

Mr. OBERSTAR. It can be at close range or at long range?

Mr. ATKINSON. It can. Depending on the specific vulnerability, it can be as little as somebody getting within 30 to 50 feet of a vessel or, in other cases, it can be in excess of several hundred miles.

Mr. OBERSTAR. Under those circumstances, was it an acceptable risk that the Matagorda received Authority to Operate in January, 2005?

Mr. ATKINSON. No, sir.

Mr. OBERSTAR. Without an instrumented test?

Mr. ATKINSON. The Matagorda had an instrumented test. It failed.

Mr. OBERSTAR. Without a successful test.

Mr. ATKINSON. Without a successful test. However, in Coast Guard documents, there is indication that they had planned a second instrumented test which was never accomplished.

Mr. OBERSTAR. Never accomplished, that is right.

I thank you very much.

Mr. Chairman, as you said earlier, I think we should move on to the next panel.

I am grateful to these four public spirited citizens who take their sense of responsibility deeply and genuinely, and I am grateful for your testimony today. It will help us get the Coast Guard on a better track.

Mr. CUMMINGS. I understand Mr. Kagen has a few questions.

Mr. KAGEN. Thank you, Mr. Chairman. I apologize for being late.

Mr. DeKort, I will keep you only very briefly. Would you agree that this process of self-certification by Lockheed Martin played a key role in the failure that you observed?

Mr. DEKORT. Yes, sir. It was the fox in the henhouse.

Mr. KAGEN. So you think this process of self-certification should be continued anywhere else?

Mr. DEKORT. I don't know that there is a place where you would allow self-certifying anywhere whether it is in the Government or private enterprise. It just doesn't sound like something you would want to do.

Mr. KAGEN. Very good.

Would you also agree that in this project overall there was no effective oversight?

Mr. DEKORT. Yes. The oversight was not effective, and the reason I hesitated is because I want to draw a distinction between the oversight that existed and needing more. I don't necessarily. I know you need more, okay, because of coverage issues.

Again, there was plenty of oversight, though, with these issues being raised with the people who were there who had the authority to make changes. So more in this case wouldn't have solved a thing. It was the decisions that the people, they had made, and every bit of it could have been avoided.

Mr. KAGEN. It was the effectiveness of that oversight that was lacking.

Mr. DEKORT. Yes, sir.

Mr. KAGEN. On a personal note, have you ever, at any time. felt that your health or your life was in danger? Do you ever feel nervous?

Mr. DEKORT. No, sir. I feel that I suffered retribution after this while I was in Lockheed Martin, but it never elevated to the point where I thought that myself or my family. I never, and nothing ever occurred to make me actually think that.

Mr. KAGEN. Very good. Thank you very much.

I yield back.

Mr. CUMMINGS. Just to clear up, following up on Chairman Oberstar's questions, Mr. Atkinson, one of the most troubling things is this whole idea of waivers because you can have all the standards in the world, but if you are waiving, that is a problem.

The Matagorda, the visual TEMPEST test results are the most troubling or dangerous from a perspective of protecting classified materials, is that right?

Mr. ATKINSON. No, sir. My concerns would be with all of the ships. The Matagorda received extra attention because it was a prototype. That which was on the Matagorda is also on the other ships because Lockheed Martin was required to make it identical on every ship. Therefore, if the first ship failed, all the ships fail. If the first ship passes, all the ships pass. All eight ships failed.

Mr. CUMMINGS. Although there were waivers, I guess you are saying that even without the waivers, they would have probably failed.

Mr. ATKINSON. Yes, sir. It is akin to developing a hull breach and putting duct tape on it. It will fix it but not really.

Mr. CUMMINGS. So this is a mess.

Mr. ATKINSON. It is an enormous mess.

Mr. OBERSTAR. One last question, Mr. Chairman, if I may, I know the panel has visited this subject. On the question of certification, would you recommend that for hull for TEMPEST, that the Coast Guard engage or be subjected to an outside independent party for certification purposes?

Mr. ATKINSON. That is a very difficult issue. The Coast Guard lost their, it is referred to as a CTTA which is a Certified TEMPEST Authority that attends and graduates a TEMPEST school. They lost that person due to death prior to the Matagorda being commissioned or inspected.

This person's second in command was then appointed an acting CTTA. He was not formally recognized at, by the National Security Agency as the cognizant authority. This is a matter of documentation which the Committee has in their possession. As a result, he was not recognized by the NSA as being competent to perform these inspections not competent to make the instrumented inspections.

The Coast Guard turned to the Navy. The Navy sent their CTTA to the shipyards. He performed the instrumented inspection which had three failure points.

The report then went back to the Coast Guard acting CTTA, and they started issuing waivers. Things were found bad. Instead of fixing it, they threw a waiver on top of it.

Mr. OBERSTAR. Let me ask the other members of the panel, briefly, your response to that question.

Mr. SAMPSON. In regards to structural certifications and such, sir, Mr. Ghosh would probably be better suited for that question.

The issue primarily is focused, I think, for purpose of the hull. We have the capabilities. It is a matter of whether or not we have time, resources or the administrative authority to correct the contractor.

Many times, as it has been stated before, that I have been told many times as an engineer by a contracting officer that we have to give the contractor the opportunity to fail, and that is a very frustrating position to be when we know for a fact that they are going to fail. But because we are required to give them that option, if we try to correct the contractor, it is always, well, delay and disruption or you are telling me or my way would have worked, and it is a very tenuous situation.

Mr. OBERSTAR. Mr. Braden and Mr. DeKort, do you have a comment?

Mr. BRADEN. As I said earlier, I believe that I would say that an independent third party that would provide some degree of oversight would go a long way towards resolving differences, subjective differences of what a requirement is or isn't, and I think that would help immensely both with efficiency of the Coast Guard side and the contractor sides.

Mr. OBERSTAR. Would the American Bureau of Shipping perform that function?

Mr. SAMPSON. That would be for the hull. ABS does have that capability to do certifications of designs, yes, sir.

Mr. OBERSTAR. Thank you. Thank you.

Mr. DeKort?

Mr. DEKORT. Relative to TEMPEST, I could see utilizing, sir, the Navy to do that because of their capabilities. However, I would come back to ships that float, planes that fly. These are basic items that are just done, and they are considered to be elementary. So I don't know that we necessarily need to overthink oversight or who should be testing.

You get in your car. You put it in drive. You punch the gas, and the car goes forward. If it doesn't go forward, it failed. I mean, sorry. These are basic things.

The Coast Guard should have equipment that survives the elements. If they don't, then who is?

I mean if you have every ship in the Coast Guard inventory, matching designs like I have said and Mr. Atkinson, 20 years from now, if the Coast Guard gets in level Sea State 6 or whatever condition or excessive whatever it is, who is going to rescue the Coast Guard?

And I would imagine, sir, that you could find pleasure craft, okay, especially research vessels that are in much better shape than these craft would have been going forward.

Mr. OBERSTAR. Thank you.

Mr. GILCHREST. Mr. Chairman, to your left, to the left of the Chairman.

Mr. CUMMINGS. Yes. Sorry, Mr. Gilchrest, my Maryland buddy.

Mr. GILCHREST. A quick question to Mr. DeKort or anybody else who wants to answer this, standard design, and I am curious. People have been making these Coast Guard cutters for a long time now. So if you go from 110 feet to 123 feet, why should that be a problem?

Mr. DEKORT. Mechanical engineering is not my background, sir. But I will just say from an observer at 30,000 feet, looking in on this, it shouldn't.

I mean here is the thing. If the contract was that loose or the requirements were that gray, I would like to know how is it ELC, Mr. Sampson or I figured it out. I don't know that we had some special insight capabilities or we are clairvoyant.

So we had the same requirement set, the same contract, the same everything. Now it wasn't perfect. Did we need more oversight? Yes.

Was ICGS potentially a contractual mess? Fine, yeah.

Could the requirements have been written better? Yeah.

But we are talking about just elementary items there that really don't take much discussion.

Mr. GILCHREST. This is Lockheed Martin. This is not a new boat builder.

If it is elementary design to go from 110 feet to 123, I mean is this that difficult that the hulls are going to breach? What happened?

Mr. DEKORT. Sorry. Well, sir, and I can't speak for the breach, but I can speak for all C4ISR.

Again, it was the perfect storm. They just, they made a strategic decision to bid the job without enough C4ISR engineers and to use people who literally didn't have enough background or they didn't have enough people who had the background, and when they got into it, they were behind right away because it was aggressively

bid. So they quickly had to make decisions so that they could stay on schedule.

Like I said, the person who picked the non-waterproof radios background was a software configuration management specialist. It was a hardware item. I mean it sounds kind of incredible, I suppose, but it is literally what happened.

So that perfect storm just hit it. Sorry, I am mixing metaphors. But then it snowballed, and they just got in so deep that I don't know that they could figure a way out.

Mr. GILCHREST. This was like the chaos theory in reverse.

Mr. DEKORT. Yes, sir.

Mr. GILCHREST. Thank you, Mr. Chairman.

Mr. CUMMINGS. Well, again, I thank you all.

Mr. DeKort, what you just said, it seems you are right. It seems so elementary. It seems so elementary, it is painful, really, and it is painful from the standpoint that we are talking about lives, lives of our Coast Guard folks. We are talking about ships that are not out there now, guarding our coasts, interdicting drug runners, and the American people are paying big time.

So I want to thank all of you. All I can say is—and I will say it 50 million times—if we can send people to the moon, we ought to be able to fix a ship that is no bigger than this room. It is incredible to me.

We ought to be able to have communications whereby Cuba and other countries don't even have the capability of eavesdropping onto those communications. It is incredible and literally shocking to the conscience.

Thank you all very much.

We will move on to the next panel.

Before you all sit down, I am going to administer the oath.

Do you solemnly swear to tell the truth, the whole truth and nothing but the truth, so help you, God?

[Witnesses respond in the affirmative.]

Mr. CUMMINGS. Thank you.

Dr. Mackay?

TESTIMONY OF LEO MACKAY, VICE PRESIDENT AND GENERAL MANAGER, INTEGRATED COAST GUARD SYSTEMS; MARC STANLEY, EXECUTIVE VICE PRESIDENT OF GOVERNMENT AFFAIRS, BOLLINGER SHIPYARDS, INC.; JAMES E. ANTON, EXECUTIVE VICE PRESIDENT OF INTEGRATED COAST GUARD SYSTEMS AND VICE PRESIDENT OF THE DEEPWATER PROGRAM, NORTHROP GRUMMAN SHIP SYSTEMS; THOMAS RODGERS, VICE PRESIDENT, TECHNICAL OPERATIONS, LOCKHEED MARTIN MARITIME SYSTEMS AND SENSORS; BRUCE WINTERSTINE, PRINCIPAL PROJECT ANALYST, LOCKHEED MARTIN MARITIME SYSTEMS AND SENSORS; MARYANNE LAVAN, VICE PRESIDENT FOR ETHICS AND BUSINESS CONDUCT, LOCKHEED MARTIN

Mr. MACKAY. Good evening, Mr. Chairman and Ranking Member.

I am very grateful to be here on behalf of the people of Lockheed Martin and get the chance to explain the progress that Lockheed Martin is achieving on the integrated Deepwater system program

where we are responsible for aviation, C4ISR integrated logistics and system engineering.

Lockheed Martin has enabled deployment of more than 75 upgraded HH-65 helicopters featuring more powerful engines, delivered 2 new HC-144A maritime patrol aircraft with 6 more in varying stages of contracting and construction, progressed through developmental tests and evaluation of the HC-144A electronic mission system, commenced mission system and sensor installation on all 6 J Model HC-130 long range search aircraft and sustained service of the MH-68A armed helicopters comprised in the Coast Guard's helicopter interdiction squadron.

Lockheed Martin has upgraded command and control systems aboard all the Coast Guard's 39 medium and high endurance cutters, resulting in significant increases in the seizure of illicit drugs.

In March, the Coast Guard issued full Authority to Operate, the Deepwater command and control system at its district command center in Miami in District 7. Achieving Authority to Operate is the Government certification that the system performs and operates correctly. This system provides enhanced mission planning tools and facilitates rapid exchange of information through a common operating picture among Coast Guard commands, cutters and aircraft.

The system is now being installed in Sector San Juan in Puerto Rico, soon to be followed by a major Coast Guard commands in Massachusetts, Virginia, Washington, Hawaii, California and Louisiana.

Deepwater is delivering and making a real difference impacting drug seizures, migrant interdiction and lives saved. On the Pacific Coast earlier this year, the Coast Guard performed a rescue utilizing an HH-65 Charlie helicopter under conditions that would have been impossible for the aircraft that it replaced.

Just last month, the Coast Guard Cutter Sherman, patrolling off Central America, utilized its Lockheed Martin installed electronics to track passively a ship of interest, to board her without alerting her and to coordinate the seizure of a record 21 tons of cocaine with a street vale of $300 million via secure satellite communications.

We take the concerns raised by the Department of Homeland Security's Inspector General, seriously.

For example, during a Lockheed Martin review of 123 foot patrol boat cabling, it was determined that 85 out of approximately 490 cables per ship cannot be confirmed as having low smoke properties. Subsequently, the Government determined that the risks were low enough to grant a waiver. The cables extend outside on the mast or on the deck, are surrounded by windows enabling easy ventilation and are short in length.

After C4ISR equipment environmental requirements were updated in 2005, it became necessary to resolve inconsistencies in the specifications. A joint Coast Guard-Lockheed Martin working group was established, and after their consideration of the mission criticality of each component, its specification compliance and its function aboard the boat, a request for waiver was determined to be the appropriate action.

This action permitted reconciliation of the program's acquisition strategy to maximize the use of ruggedized, off the shelf commer-

cial and Government equipment with a multitude of military standards incorporated into the requirements. By requesting a waiver, the Coast Guard was afforded the ultimate decision as to a course of action according to its standards of cost effectiveness and safety.

While there has been much discussion regarding C4ISR TEMPEST capabilities, the Inspector General determined in its report that the installed C4ISR system was not a security vulnerability. In fact, an independent third party, the U.S. Navy Space and Naval Warfare Systems Center or SPAWAR as it is colloquially known, determined the system on the 123 foot patrol boats did not have compromising emissions in two instrumented tests, and it was subsequently approved by the Coast Guard to operate in a classified environment.

Finally, as the Inspector General found, the camera system on the 123 foot patrol boats fully complies with the video surveillance system requirements. It was designed as part of an overlapping series of measures including sentries and an intruder detection system. Lockheed Martin did not consider it prudent to unilaterally increase costs by providing functionality that the customer did not want or need.

We continue to support the implementation, contractual and program management process improvements initiated by the Coast Guard as well as the active incorporation of lessons learned. We have supported the creation of a joint configuration control board and the participation of third parties for independent certification.

In closing, I would like to read a short quote from the commanding officer of the Coast Guard's new Lockheed Martin installed C4ISR training center in Petaluma, California: "The contrast between our tools of 1983 and the tools of the future ships like the Bertholf is significant. I remember analog radar, message traffic by teletype, paper charts and maneuvering boards, Polaroid cameras and slow criminal history checks."

"By contrast, our new National Security Cutters will train on computerized digital sensors, radar and charts, have live sharable digital video, message traffic by PC, voice communications with anyone, clear or secure, and real time criminal histories and intelligence checks."

"The Coast Guard will have increased maritime domain awareness to identify threats and a common operating picture to act when necessary, all to protect our coastlines and citizens."

Thank you again for the opportunity to present and explain the progress we are achieving on the Deepwater program. I look forward to answering your questions.

Thank you, Mr. Chairman, Mr. Ranking Member.

Mr. CUMMINGS. Thank you very much.

Mr. Stanley, do you have a statement?

Mr. STANLEY. No, I don't have a statement. I am here to answer questions.

Mr. CUMMINGS. Thank you very much.

Mr. Anton?

Mr. ANTON. Good evening, Mr. Chairman and Ranking Member of the Committee, and thank you for the opportunity to appear before you to discuss the Deepwater program.

I am the Executive Vice President of Integrated Coast Guard Systems and the Vice President of the Deepwater Program of Northrop Grumman Ship Systems.

As you may know, NGSS has nearly 70 years of experience designing, constructing and maintaining ships of all types. In that time, NGSS Gulf Coast operations has produced a total of 534 ships and has built nearly a quarter of the Navy's current fleet.

On behalf of the Northrop Grumman and all the men and women working in support of this program, I would also like to thank this Committee for their strong support of the Coast Guard and of the Deepwater program.

The 110 foot patrol boats have seen extensive duty since their entry into service some 20 years ago. The 123 conversion was intended as an interim measure to enhance the capabilities of the aging patrol fleet until a new vessel, the Fast Response Cutter, was available to replace it.

The conversion work was performed by Bollinger Shipyards, the original builder of the 110s under subcontract to Northrop Grumman.

The conversion project underwent a traditional set of design and review processes with contractor and Coast Guard personnel. After being awarded the patrol boat conversion work but before beginning the actual conversion work, the Coast Guard, ICGS, NGSS, Lockheed Martin and Bollinger with their joint venture partner, Halter, engaged in design reviews including a preliminary design review, a critical design review and a production readiness review. These reviews were reviews of the 123 conversion design which were presented to the Coast Guard in increasing levels of details.

Although not a contract requirement, ICGS conducted the Preliminary Design Review or PDR. As part of the PDR process, drawings and analysis were submitted to the Coast Guard for consideration and review. Half of the attendees at the PDR were Coast Guard personnel.

The next stage was Critical Design Review or CDR. In conjunction with CDR, the Coast Guard reviewed a series of design deliverables. CDR presentations included results from a number of design tests, and the Coast Guard represented nearly half of the attendees.

CDR was followed again by a Production Readiness Review. During the PRR, the production process, procedures and state of the design to convert the 110 vessel into the 123 were presented. As with the design reviews, the Coast Guard fully participated in the PRR process.

Four days later, the Coast Guard delivered the Matagorda to Bollinger for conversion in Lockport, Louisiana.

In addition to these various reviews with the Coast Guard during the conversion of the first vessel, the Matagorda, the American Bureau of Shipping examined the design of the hull extension, the new deckhouse and monitored key elements of the work being performed. The Coast Guard also had a Program Management Resident Office on site to oversee the 123 conversions.

At the completion of each conversion and as part of the acceptance process, the Coast Guard, similar to what the Navy does, established an In-Service Inspection Board to examine the perform-

ance of the converted cutter and make a formal recommendation of acceptance.

At the conclusion of the Matagorda work, Abs issued a letter of approval for the conversion work and expressed no reservations with the feasibility of the conversion.

Based on all of these reviews and actions, the Coast Guard accepted delivery of the Matagorda. This same process was applied to each of the seven patrol boats delivered to and accepted by the Coast Guard.

To date, the problems associated with the 123 conversion include buckling or hull deformation and shaft and propeller line problems. Neither Coast Guard engineers nor our engineers have been able to determine the root cause for the 123 patrol boat structural problems.

We understand that Admiral Allen has decided to decommission the eight 123 boats converted under the Deepwater program. We are not privy to the research, tests and reports that led to this decision. We will continue to support the Coast Guard's effort to address its mission needs.

Thank you again for the opportunity to discuss with you the Deepwater program.

Mr. CUMMINGS. Does anyone else have a statement?

Thank you very much.

Let me just begin the questioning. To Mr. Rodgers, what position did you hold with regard to the Deepwater program?

Mr. RODGERS. From January, 2003 through September, 2005, I was the Lead Program Manager for Lockheed Martin.

Mr. CUMMINGS. Did that position give you the overall day to day costs and schedule responsibility for the entire Deepwater and C4ISR effort?

Mr. RODGERS. The C4ISR effort was part of that responsibility.

Mr. CUMMINGS. All right. Was there ever any suggestion provided by you or your superiors at Lockheed Martin that costs and schedule goals were paramount and that the mission needs of the Coast Guard took a back seat to these considerations?

Mr. RODGERS. No, sir.

Mr. CUMMINGS. Was there pressure to produce this?

You were here when Mr. Braden testified, were you not?

Mr. RODGERS. Yes, I was.

Mr. CUMMINGS. I think he talked a little bit about pressure. I am not trying to put words in his mouth, but he did talk about pressure. So you don't know anything about that pressure, the pressure that he talked about?

Mr. RODGERS. From an overall program, there is always pressure to perform in that sense. In my 24 years, there is always pressure to execute the job you are assigned to.

Mr. CUMMINGS. Is it the case that employees of Lockheed Martin regarding an assignment to the Deepwater project as a type of punishment? Did you ever get that impression?

Mr. RODGERS. No, I did not.

Mr. CUMMINGS. To what degree did limited resources available for the C4ISR components of the Deepwater project contribute to the failure of Lockheed to meet all contractual requirements of the systems installed in the 123s?

In other words, were there budgetary problems?

Mr. RODGERS. Overall, we had a schedule challenge. We missed the original schedule in November of 2003, and it was replanned with the Coast Guard to March of 2004. The major focus area was how do we achieve the first delivery.

Mr. CUMMINGS. Wait a minute. I am sorry. I didn't hear a word you said.

Mr. RODGERS. Okay.

Mr. CUMMINGS. Say that again.

Mr. RODGERS. The original schedule for delivery of the 123 was November of 2003, and we did a replan with the Coast Guard to make that March of 2004.

Mr. CUMMINGS. All right.

Mr. RODGERS. So from a schedule point of view, we replanned the original schedule.

Mr. CUMMINGS. All right. Now you heard the testimony of Mr. DeKort, did you not?

Mr. RODGERS. Yes, I did.

Mr. CUMMINGS. Were you here for the entire testimony?

Mr. RODGERS. Yes, I was.

Mr. CUMMINGS. Did Mr. DeKort raise each and every one of these issues to you and your superiors, the ones that he stated?

Mr. RODGERS. Not to me personally.

Mr. CUMMINGS. Did you know about them?

Mr. RODGERS. I knew. I knew after the fact in a sense that I knew there were some issues. I facilitated him meeting with some of senior management. To that point, I was aware of them.

Mr. CUMMINGS. In other words, did you know what he was going to meet with senior management about?

Mr. RODGERS. I know he had some concerns with the program that were not being addressed, and he wanted to have the ability to talk to some people in more senior management.

Mr. CUMMINGS. In other words, you made it possible for him?

Mr. RODGERS. That was facilitated.

Mr. CUMMINGS. So you never really discussed them in any kind of detail, is that what you are saying?

Mr. RODGERS. Yes, from my seat, I would not. I was the overall program manager. So I would not have spoken in technical detail to his concerns. We would have relayed that to engineering.

Mr. CUMMINGS. Let me ask you this. Do you know whatever became? Do you know who he met with as a result of your facilitating discussions? Do you know who he met with after that, in other words, who you made it possible for him to talk to?

Mr. RODGERS. He mentioned in his testimony that he met with the Vice President of Engineering, Carl Bannar. I was aware of that meeting.

Mr. CUMMINGS. You know for a fact that he did meet with the Vice President. What is his name again?

Mr. RODGERS. Carl Bannar.

Mr. CUMMINGS. You know for a fact that he met with him?

Mr. RODGERS. I knew that meeting was being set up and I have no reason to believe that did not happen.

Mr. CUMMINGS. You did hear. I guess to facilitate the meeting, you had to hear a little bit about what he was concerned about. Did you have an immediate response other than facilitating a meeting?

Mr. RODGERS. Overall, he has a chain of command within his department. His concerns, I believe, were expressed to his chain of command as he testified.

Mr. CUMMINGS. Where would you have been on the chain of command in regard to him?

Mr. RODGERS. I was the overall Program Manager.

Mr. CUMMINGS. In other words, what I am trying to say is he had to go two steps up to get to you? Were you on the same level? I am trying to figure out.

Mr. RODGERS. In general -

Mr. CUMMINGS. Hear my question. I am just trying to figure out where you fit on the chain.

Mr. RODGERS. Overall, from a Lockheed perspective, there was approximately 350 people in the Deepwater program. I was the overall lead.

Mr. CUMMINGS. The last words?

Mr. RODGERS. I was the overall lead.

Mr. CUMMINGS. So you were like at the top?

Mr. RODGERS. Or second to the top, yes.

Mr. RODGERS. Okay, so in order for him to get to you, that meant he skipped over some folks.

In other words, what I am trying to get to is he got to you, and you said there is a chain of command. You said there are some 300 people. You are at the top. So you then told him to meet with somebody above you. Is that it?

Mr. RODGERS. Overall, he had some engineering concerns. We had him meet with the head of engineering to share his concerns.

Mr. CUMMINGS. The person who you facilitated the meeting with, the vice president that you spoke of.

Mr. RODGERS. Yes.

Mr. CUMMINGS. That person was above you.

Mr. RODGERS. Correct.

Mr. CUMMINGS. Okay, gotcha.

You are familiar with the Deepwater program, and you just said that you were responsible for the day to day costs and schedule responsibilities. So you are pretty familiar with it, are you not?

Mr. RODGERS. I left the program 18 months ago. So I am familiar with it up until September of 2005.

Mr. CUMMINGS. Well, let me ask you. You heard the complaints of Mr. DeKort today, did you not?

Mr. RODGERS. Yes, I did.

Mr. CUMMINGS. I am just wondering. Do you have an opinion? Do you think they were reasonable complaints?

Mr. RODGERS. The first time I read his complaints was in the Inspector General's report which when I called to testify I read. I understand the Inspector General's report. I don't have a specific opinion on his complaints from a technical perspective because his complaints to me are technical perspectives.

Mr. CUMMINGS. Is that unusual for employees to have complaints of this nature, to have had them with regard to this Deepwater program? I am just curious.

I am sure you have done other programs too. Is it unusual for people to bring issues like this to you?

Mr. RODGERS. No, it is not unusual for people to bring issues like this to me.

Mr. CUMMINGS. Now did you ever have a conversation with the vice president that you referred him to about his complaints? Was there ever a conversation, ever?

Mr. RODGERS. No, not about his complaints, specifically.

Mr. CUMMINGS. Say that again.

Mr. RODGERS. Not about his complaints, specifically.

Mr. CUMMINGS. About him?

Mr. RODGERS. Other than facilitating the meeting, I did not get feedback from the meeting.

Mr. CUMMINGS. All right. Now were you aware that Lockheed had planned to install a non-waterproof radio in the prosecutors' launch from the 123s? Were you aware of that?

Mr. RODGERS. No, I was not.

Mr. CUMMINGS. Were you aware that the installation of a non-waterproof radio would put the crew or the prosecutors at risk of potential electric shock?

Mr. RODGERS. Can you clarify when you say are you aware?

Mr. CUMMINGS. Well, this is what I am asking you. You are the day to day guy.

Mr. RODGERS. Right.

Mr. CUMMINGS. You are number one and number two. You are up there. You are up there, and you said, I didn't say this, you said it. You are the day to day costs and schedule responsibility guy, and you said you are familiar with the project.

Mr. RODGERS. Correct.

Mr. CUMMINGS. I mean is that right? I am not trying to put words in your mouth.

Mr. RODGERS. 123 is just one of many projects within the Deepwater program.

Mr. CUMMINGS. Okay. Now what I am asking you is that I think you would agree if you heard Mr. DeKort, and I think maybe another person may have said it too. This radio that they use is their means of communication. Is that right?

Mr. RODGERS. I am not a technical expert on the 123 design.

Mr. CUMMINGS. Let me ask you this. If you are producing a boat and water is splashing up on it and there is a radio, would you deem it prudent to have a radio that is waterproof?

Mr. RODGERS. Yes, I would.

Mr. CUMMINGS. Let me ask you something else. Were you aware that the topside equipment was installed on the 123s that would not meet environmental requirements?

Mr. RODGERS. No, I was not aware at that time.

Mr. CUMMINGS. Were you aware that Mr. DeKort tried to identify this noncompliant equipment and have it replaced and that Lockheed directed him not to do so?

Mr. RODGERS. No, I was not aware of that.

Mr. CUMMINGS. Were you aware that the contractor eventually self-certified that the topside equipment met specifications when, in fact, it did not? Did you know that?

That is from the IG report? Are you aware of that?

Mr. RODGERS. I have read the IG report once. I am not familiar. I have not studied its contents.

Mr. CUMMINGS. Let me ask you this. Do these things that I am saying to you concern you?

I mean, in other words, you were the top guy.

Mr. RODGERS. Right.

Mr. CUMMINGS. We have a radio that is not waterproof. We have got topside equipment that they claimed met specifications but didn't, and you are the top guy. You are the one, I guess, that if anything goes wrong, somebody says, wait a minute, what happened? Is that right?

You are the one that I guess the President would ask the questions of.

Mr. RODGERS. I have overall program oversight.

Mr. CUMMINGS. Does it concern you that these things have come out in the IG report when you were responsible for this?

Mr. RODGERS. From an IG report, as I said, I read it. I have not studied its results. I have been off the program. The first time I saw the IG report was on Tuesday of this week.

Mr. CUMMINGS. Maybe you can answer this and maybe you can't. Why was the deficiency in the topside equipment on the 123s not clearly spelled out on the Matagorda's DD-250 as the intention to submit a waiver for noncompliance when the requirement for low smoke cabling was clearly singled out in the DD-250?

Mr. RODGERS. I don't know.

Mr. CUMMINGS. Was the deficiency with the topside equipment noted on any of the DD-250 forms or any of the eight 110 foot patrol boats lengthened to 123 feet?

Mr. RODGERS. I would not have had the day to day cognizance of what went on that 123 DD-250.

Mr. CUMMINGS. Did the integrated team indicate on self-certification forms that there were no applicable environmental requirements for the topside equipment?

Mr. RODGERS. I am not familiar with the self-certification form.

Mr. CUMMINGS. Is there anybody up here that would be familiar with that? Do you know? Nobody?

Can you all, can anybody tell us who we can get the answers to these questions from? Anybody?

Mr. Mackay, you seem like you have got an answer?

Mr. MACKAY. Mr. Chairman, if I might.

Mr. CUMMINGS. This concerns us because we are here just trying to get to the bottom of some things, and you tell us that you are in charge. This is a major corporation, major project. You are sitting there under oath, and then you tell us you don't know anything.

Mr. Taylor said something that was very interesting when he talked about the fact that he couldn't understand why nobody had been fired. I guess nobody has been fired because nobody knows anything.

Mr. Mackay?

Mr. MACKAY. Mr. Chairman, if I might, just to explain some things about the way the certifications and the other things, the requirements on the program are determined. As other people have mentioned, it is an IPT environment, and issues are vetted in a

joint environment—Coast Guard, Lockheed Martin, Northrop Grumman, industry.

In specifying a ship program and the C4ISR specifically on that, the way the program operated was that there is a cutter certification matrix, some 1,700 documents that have all the requirements and specifications that cutter, that go into outlining the requirements for a cutter, that industry must meet as it presents the cutter for DD-250 and acceptance.

What happens is from those universal requirements, the cutter specific certification matrix or a subset of those requirements is called out, and they are either assigned to the HM&E lead, Northrop Grumman, Bollinger, Halter-Bollinger, those folks or to C4ISR.

In the event as I understand it and have talked to people who have contemporaneous knowledge, the issue is that if you look in the IG report, the standard that is called out, Mil. Standard 1399 Charlie, at the time was only specified for HM&E. It was not specified for C4ISR. It was not until the July, 2005 timeframe that that specification was deemed and agreed to by Coast Guard and industry working together, that that specific sort, Sort 21, if you look on the document, presented in the IG report, photostatically copied there, was deemed to apply to C4ISR.

That is why if you look closely at that document, the signature attesting to the S016 is from Bollinger. They were attesting to environmental standards with respect to HM&E.

Once those, it was understood that those should be assigned properly to C4ISR, a joint working group was undertaken, and as the IG outlines in its report, eventually a request for waiver process was undertaken.

And let me be clear about what that process entails. Industry presents to Government the conditions, specifications, costs of complying with the requirement. Then Government looks at that data and makes an independent judgment based on its standards of cost effectiveness, its assessment of the safety consideration and either grants the waiver or deviation or does not do so. And so, it is a very disicplined process in which all the facts relevant come out on the table, and the Government is allowed to make a decision about the prudence of a waiver or deviation or compliance to the requirement.

And so, the form S016 that is photostatically copied in the IG report does not bear a Lockheed Martin signature because at that time on the program in March, 2005-FE I think if you look on the document-FE those specifications, Mil. Standard 1399 Charlie or Sort 21 as it is also called right there on the form were not understood by either Government or industry to pertain to the C4ISR portion of the program.

That judgment was subsequently corrected or changed, altered by mutual agreement.

Mr. CUMMINGS. The Coast Guard has always said that the certification was required. Are you familiar or aware of that?

You haven't heard the testimony. But are you aware of that?

Mr. MACKAY. No, sir, I am not.

Mr. CUMMINGS. They have consistently said that.

Mr. MACKAY. The facts that I am aware of, Mr. Chairman, are that it was not until July, 2005, that that specific sort was deemed to apply to C4ISR. It was given to the HM&E side of the program. It was not given to the C4 side until later in the spring, summer timeframe of 2005.

Mr. CUMMINGS. Would it concern you if we produced a system. C4 system, where the Cubans and others could eavesdrop?

I am just curious. Would that concern you?

You know I look, I watch when a President comes to the capital, and they go through 50 million changes. They bring in all kinds of experts to make sure he has got a secure line. I mean they have somebody guarding the line. I mean literally. I wish you could see the operation.

When I listen to the testimony that we heard a little earlier about countries being able to eavesdrop, I am just wondering is that something that would concern Lockheed Martin?

Mr. MACKAY. Yes, sir, it very well would, and I would like to just read from the DHS IG report on page five. You know the complaint. I am quoting here. I am reading from the report itself.

The complaint also alleged that the use of non-braided cable would limit the 123 cutter's ability to meet TEMPEST testing requirements which we have talked about at length here. However, TEMPEST testing conducted on the Matagorda and Padre between February, 2004 and July, 2006, indicated the cabling installed on the C4ISR upgrade was not a source of compromising emissions. Those instrumented tests were conducted by SPAWAR, by the Navy Space and Electronic Warfare Command, the U.S. Navy with all their expertise.

Mr. CUMMINGS. To your knowledge, was there ever certification, TEMPEST certification done and it passed?

Mr. MACKAY. I am not.

Mr. CUMMINGS. Are you familiar with any TEMPEST certification that took place with regard to the systems that you put in place?

Mr. MACKAY. I am aware of these tests that were done by the Navy's Space and Electronic Warfare Command. One was done prior to the DD-250 or the acceptance of the vessel in the February, 2004 timeframe, and the other was done in 2006 after the allegations were raised in the IG report, sir.

Mr. CUMMINGS. Now, why were you testing in 2004?

Mr. MACKAY. That would be testing pursuant to the DD-250 which is the turning over of the vessel from industry to Government. It is an acceptance form. That is what a DD-250 is, sir.

Mr. CUMMINGS. You were testing then. So then there were tests later on. Is that correct?

Mr. MACKAY. Yes, sir. After the IG report and the concerns were raised, another instrumented test was performed by the Navy and SPAWAR, and I just read the quote from the IG report about the results of those instrumented tests conducted by the Navy. I can read it again, sir, if you would like.

Mr. CUMMINGS. No. I am going to come back.

Mr. MACKAY. Yes, sir.

Mr. CUMMINGS. Mr. LaTourette?

Mr. LATOURETTE. Thank you very much, Mr. Chairman.

Just a couple of observations before I make my questions, I would say to the Chairman over my spring vacation, one of the places that I visited was the Lockheed Martin site in Akron. Mr. Chairman, you should see. They have taken over the air dock down in Akron, Ohio. It is one of three, it is my understanding, that are existing still in the Country, and they are going to build a high altitude airship. We are not only excited about that, but we are happy with the work of the aerostats that are protecting our border and also doing yeoman's work at 5,000 feet in the Middle East.

Having said that, I know that you were all in the room for the first panel. There is nobody, I think, on the Committee, there is nobody in the audience, there is nobody in the Country that thinks that spending $90 million for eight ships that don't work is a good idea or that it is acceptable. If anybody think that it was a good idea, then you can chime in, but I don't think I am going to get any responses.

There is a big difference between that in my mind because you prosecute people. You sue people. Money damages are awarded. There is a big difference between that and some of the stuff that came up during the first panel and then some of the accusations, quite frankly, that are being leveled against Lockheed Martin.

The staff tells me that these cameras located around here, 60 Minutes, and I am going to tell you that there are two types of stories. There is bad performance on a contract which is unacceptable, but there are also two allegations that I really think, Dr. Mackay, I would like you to address, that have been made during the course of the first panel and maybe as we proceed.

Mr. DeKort, the whistleblower in this case, and let us start with one first and that is national security. The story sort of perking under the surface here is that because of a difference between $7 a cable, $7.95 for 10 feet of a cable and $27.95 for 10 feet of cable, that Lockheed Martin in the reconfiguration of these 110 foot ships made either a schedule decision or a cost decision to put our national security at risk by installing aluminum mylar cable instead of the braided shielded cable.

I think I need you to tell me what you think about that allegation.

Mr. MACKAY. Well, what I will tell you is what I know, sir, is that, and these facts are verified by the IG report, the aluminum mylar cable met contract specifications. I think the experts that were here said that there are design choices that are made. Braided cable has some superior characteristics, but it is not always and universally a superior or the appropriate choice.

As verified by the IG report, the aluminum mylar met contract specifications and both these tests conducted by the Navy's SPAWAR and reported in this IG report said that there were no compromising emissions. That is what.

Mr. LATOURETTE. That is my next question because Mr. Atkinson said. You may remember I asked Mr. Atkinson, can any witness under oath, but even not under, I mean I don't think everybody has to be under oath. If they don't tell the truth, that is a bad thing, the oath notwithstanding.

But I believe in response to my question, can any witness come before us and indicate that this system passed the TEMPEST test,

and he said that anybody that said that would be committing perjury.

Now I understood you to not only read that section on page five of the IG's report but I understood you to say in your introductory testimony that the TEMPEST system passed. Is that right?

Mr. MACKAY. Sir, what I am attesting to is what I read.

Mr. LATOURETTE. Right.

Mr. MACKAY. There were no compromising emissions. That was the judgment of the DHS IG reviewing that data.

Mr. LATOURETTE. Okay, but for your sake as well as the Country's sake, I want that in language that people sitting home apparently some Sunday evening can understand.

The allegation was made that Fidel Castro is going to be listening in on our most secure communications. The keys to the kingdom was the phrase used by the first panel. Because Lockheed Martin made a design choice to put in the $7.95 cable as opposed to the $27.95, the keys to the kingdom are given to Fidel Castro and our enemies. I want you to tell me that that is not so if you believe that.

Mr. MACKAY. Sir, that is what I believe, and that is what, if you read the Inspector General's report, that is what they attest to.

Mr. LATOURETTE. Now let me get to the second issue because just as important, if not more important, than national security are the lives and the well being of the Guardsmen that serve on these ships. Mr. DeKort's second observation was about low smoke cabling.

I think Mr. Oberstar was exact. I think many of us remember what happened when the bundled cables ignited, and we had horrible problems on airplanes. There has to be a reason for low smoke cabling specifications for fires as well as certainly the health and safety of the crew.

I understood you to say that you went to the Coast Guard. Who came to who on the low smoke cabling?

I am sorry for not remembering. Did you go to them for the waiver or did they come to you and ask for a waiver?

Mr. MACKAY. Since we are in an IPT, it is sort of we always discover these things in almost simultaneously, sir.

Mr. LATOURETTE. Okay, but regardless, a waiver was granted. So somebody reached the conclusion, and maybe jointly if you are all in these meetings, that low smoke cabling wasn't required on these 110 conversions or at least waived that requirement.

Mr. MACKAY. The determination was made that in a situation like this, you examine all of the relevant facts which is where the low smoke cabling is, what the density of it is. Those are just a couple of things. When an analysis was done, 85 of 490 C4ISR cables that are on each individual ship were not low smoke.

A couple of facts: 16 of the 85 cables were actually extended outside to the mast or on deck. So if the issue is that when there is a fire, that there are fumes, those fumes immediately waft away.

Seventy-one of the 85 cables run into the pilothouse which is surrounded by windows enabling easy ventilation and the cables.

We are using commercial off the shelf or Government off the shelf equipment, trying to maximize savings. That is our acquisition strategy. And so, a lot of times you have proprietary cable as-

semblies where there is not a low smoke equivalent available. There are cable assemblies that are attached to equipment, to radar masts and the like. Sometimes if you remove the manufacturer supply cable, you void the manufacturer's warranty, and in some situations it might be cost prohibitive due to the employment of unique connectors.

But all of that data, and it is a request for waiver or deviation. All of that data, all those considerations are bundled together. They are given to the Government.

The Government makes a judgment based on cost effectiveness, its safety standards, how much risk it is willing to take and whether it is a prudent risk, and they either grant a waiver or they say no, you have to. That is the process, sir.

Mr. LATOURETTE. I get that. I get that. During these hearings, I think there was bad judgment all the way around.

But, again, I want this to be real clear on the record. The allegation is made, and people aren't being shy about the allegation here. The allegation is made to save money, to meet a deadline, Lockheed Martin installed low smoke cables on a ship that endangered the lives of Coast Guardsmen, and I want you to tell me whether that is true or not.

Mr. MACKAY. No, sir.

Mr. LATOURETTE. Because of the explanation, I assume.

Mr. MACKAY. The explanation, I assume? I am not saying that there is no low smoke, that there is not, that all the cabling is low smoke

Mr. LATOURETTE. I know that.

Mr. MACKAY. I said that for all the factors that I mentioned.

Mr. LATOURETTE. But my question was the allegation is that by not using low smoke cables, you put Coast Guardsmen at risk and you put the ship at risk. I believe your answer is no, but could you just say no if that is your answer.

Mr. MACKAY. No, sir, not in the judgment of the Government which granted the waiver.

Mr. LATOURETTE. Okay. The last question, Mr. Chairman, just so we are not parsing words.

On the TEMPEST system passing, I think that if Mr. Atkinson were able to come back in here and take another swing, he would say that the reason that the TEMPEST system passed the SPAWAR test was because so many waivers were granted that it really didn't pass the test; it passed a test that wasn't a test. Would he be right if he said that?

Mr. MACKAY. Sir, that is a question that would have to be asked to the Government agencies that granted that.

Mr. LATOURETTE. Then I will.

Mr. MACKAY. And also to, I guess, the IG that made the determination that there were no emanations that compromised those standards, sir.

Mr. LATOURETTE. Right. Okay, thank you very much.

Thank you, Mr. Chairman.

Mr. CUMMINGS. In fairness, I want to be real clear. We are under oath, and I want to be real clear.

SPAWAR has stated to this Committee that they did not certify the ships in an instrument test. They simply ran a test. They gave

the data to the Coast Guard. It had deficiencies. The Coast Guard has turned over records that we have in our possession, that we have reviewed, that showed that they could not have passed and if they did "pass" it was because of waivers.

The IG told the Committee that the Coast Guard told them they passed. In other words, the Coast Guard says they passed, but the IG did not have the expertise, and that is according to the IG, to evaluate the records. And so, the Committee did have the records evaluated.

We can mess with words from now until forever, but we have gone through 50 million changes getting records. As a lawyer, I have never seen anything like it, from the Coast Guard mainly. Our staffs have spent literally 19 hour days going through those records. We got records as late as yesterday evening that we requested almost a month ago.

I hear you, Mr. LaTourette, but I don't want the record to remain there, that there is something where there has been TEMPEST certification because I know you are as concerned as I am that certification has been, in fact, done. All I can say is that is what we have.

I am going to come back to you, Mr. Rodgers, because I have some concerns about some of your testimony, but now we will go on to Mr. Oberstar.

Mr. OBERSTAR. Was there a contract specification for a particular type of radio for these vessels?

Mr. MACKAY. Mr. Chairman, if you are directing that at me, I was not on the program at that time. My entry to the program was in July of 2005. I don't have any contemporaneous knowledge of that.

Mr. OBERSTAR. Well, in the contract, this is an unusual type of contract in which there was an absence of very specific contract specifications. So in the agreement, in the contractual agreement between the Coast Guard and Lockheed who is the electronics suppliers, was the contractor free to choose what it, in its judgment, felt was the proper equipment to put on board this class of vessels?

You don't know? You can't answer that question?

Mr. MACKAY. With specific reference to those radios, no, sir, I cannot.

Mr. OBERSTAR. Is anyone on the panel able to answer that question?

Mr. RODGERS. Dr. Mackay mentioned the IPT. Within the IPT environment, the Coast Guard working with ICGS, with Northrop Grumman and Lockheed Martin would then have gone through that process to choose which radios.

Mr. OBERSTAR. So somebody made a choice for a radio that was not waterproof to be operating at sea in an exposed situation where it could short out or shock someone or worse, right?

No one wants to take responsibility for that. No one knows anything about it on the panel.

Lockheed was the contractor, right?

Mr. MACKAY. Yes, sir, I just, my experience on the program just doesn't extend back that far, Mr. Chairman.

Mr. OBERSTAR. The issues that I think Mr. LaTourette was raising about whether individuals were compromised is not a question

of whether he made a deliberate choice of the type of cable to achieve a particular end, but the fact is that this cable was not sufficient. The cable used on the to-be 123 foot patrol boats was not sufficient to prevent leakage, correct?

That is what we heard from the previous panel.

But on the 170s, that cable, the more secure cable was, in fact, used. Now why was cabling on one class of vessels used at a higher level and a different level used on the other class of vessels?

Dr. Mackay, have you got an answer?

Mr. MACKAY. I don't, Chairman. As I mentioned, my tenure on the program doesn't extend back to that timeframe. I can take the question for the record if you would like.

Mr. OBERSTAR. Mr. Winterstine, do you believe Lockheed made the right technical, contractual and ethical decisions on the 123 program?

Mr. WINTERSTINE. Mr. chairman, Lockheed Martin entered into a contract arrangement to satisfy the 123 requirements that we had under contract. We went through the design processes, shared those designs with the Coast Guard, discussed those designs with the Coast Guard and then implemented those designs. So, yes, sir.

Mr. OBERSTAR. You are the Program Management Liaison of the integrated team.

Mr. WINTERSTINE. Yes, sir.

Mr. OBERSTAR. Are the allegations made that you heard previous by Michael DeKort, are they with or without merit?

Mr. WINTERSTINE. Mr. Chairman, Mr. DeKort made quite a few allegations. I would rather not offer opinion, sir.

Mr. OBERSTAR. Well, on January 7th, 2004, Mr. DeKort sent a memo to a number of people including Mr. Rodgers, and there are others, Mr. Clifford; Mr. Ewing, Patrick; McLaverty, Brian. Brian McLaverty, I am sorry, I just got the names in reverse order.

In which he says: "I have become increasingly frustrated with the direction the Deepwater project is following, and we have sacrificed hard earned and well founded engineering and customer focused principles in order to meet the needs of nonrealistic schedules. I believe this path will lead, at best, to the delivery of a substandard product that will harm our reputation and, at worst, the delivery of a product that will hamper our customers' ability to successfully carry out their mission."

Are you aware of that memo?

Mr. WINTERSTINE. No, sir, I am not.

Mr. OBERSTAR. Mr. Rodgers, you were on that memo. Are you aware of it?

Mr. RODGERS. Not specifically.

Mr. OBERSTAR. If you received such a memo, would that get your attention?

Mr. RODGERS. Was it a memo? Was it e-mail?

Mr. OBERSTAR. Whether it was an e-mail or a memo makes no difference. It was a message sent on January 7th, 2004, time, 11:53 a.m. Maybe it was an e-mail.

The question is it is a very strong allegation: a substandard product that will harm our reputation and, at worst, the delivery of a product that will hamper our customer's ability to successfully carry out their mission.

Mr. RODGERS. Sir, what you are referring to is an e-mail, and I am not specifically familiar with this e-mail itself.

Mr. OBERSTAR. If you had gotten that, would that trouble you? Would you want to do something about it?

Mr. RODGERS. Overall, with that said, I would encourage him to express his concerns to his management and let us get them adjudicated.

Mr. OBERSTAR. Well, it doesn't appear that much was done about it. It was sent. You didn't see it, and you were one of the assignees.

Mr. RODGERS. I receive many, many e-mails in a day.

Mr. OBERSTAR. This is a big contract.

Mr. RODGERS. Yes, sir.

Mr. OBERSTAR. This goes to the expertise of your organization. You are supposed to pay careful attention to this stuff and not dismiss it saying I get many e-mails. I get thousands. All of us get thousands of communications a week.

Mr. RODGERS. Yes, sir, I did not specifically

Mr. OBERSTAR. Something of this magnitude, it is serious. You have got to pay attention to it.

Mr. CUMMINGS. Will the gentleman yield for just one question?

Mr. OBERSTAR. Yes.

Mr. CUMMINGS. Thank you, Mr. Chairman, for yielding.

In answer to one of my questions, you said that the first time you had heard about this was, I think recently and you just did not have very much detail about it. This memo really outlines everything very, very carefully. I am just wondering does this refresh your recollection at all, this memo, now that you have it in your hand because he really lays out everything and you are one of the top people on the project.

If somebody came and said I have got these issues, Mr. Rodgers, and they put them in writing, and they are talking about issues that go to our national security and go to the safety of the wonderful, brave men and women, patriotic men and women of the Coast Guard that we are supposed to be producing a vessel for, that is safe. It seems to me that is something that would go to the very essence of your thought process.

It would also concern you that your corporation, Lockheed Martin, you don't want them, I am sure, to be placed in an embarrassing position.

But what you are saying is that you don't remember the e-mail at all?

Mr. RODGERS. Let me clarify, sir. Overall, I mentioned the schedule issue in November of that year. With that, we added resources. We added additional talent. Some of the people on this e-mail were added, such as Mr. Clifford and Mr. Ewing and Mr. Wilhelm. They were added to the team. My day to day interaction was with those gentlemen.

So to clarify, after the November timeframe, I did not interface with Mr. DeKort on a day to day basis.

Mr. CUMMINGS. Did any of those gentlemen bring it to your attention, the memo?

Mr. RODGERS. This memo? Not to my recollection, sir.

Mr. CUMMINGS. All right, I yield back.

Mr. OBERSTAR. What is emerging from the questioning and from the responses is that the fundamental issue we are concerned about, there is a structural failure in the way this program was carried. There is a structural failure in the Coast Guard self-certifying and allowing the contractor to self-certify, and there was not a third party oversight of this in an effective way.

Ms. Lavan, you are Vice President of Ethics and Business Conduct for Lockheed, correct?

Ms. LAVAN. That is correct. Actually, right now I am Vice President of Internal Audits since February.

Mr. OBERSTAR. But you were at the time.

Ms. LAVAN. For the past three and a half years since October of 2003.

Mr. OBERSTAR. When you got an ethics complaint, what was your procedure for dealing with it?

Ms. LAVAN. Well, just as a bit of background on Lockheed Martin and its ethics program, we have a very solid program that is comprised of a number of components. One of the most important components is that we have ethics officers at each of our major locations, for instance, here where Deepwater is located. And so, those ethics officers are tasked with taking in any kind of complaints that employees bring forward.

So they are to conduct thorough and complete investigations of any complaints that are brought forward, and that is what Mr. DeKort brought forward in October of 2004 to the ethics office.

Mr. OBERSTAR. He brought forth very technically complex complaints?

Ms. LAVAN. He did, yes, and the ethics officers that investigated it, both had engineering backgrounds.

Mr. OBERSTAR. They had the technical expertise to evaluate the complaint from Mr. DeKort. Then in what way was it disposed of?

Ms. LAVAN. They conducted an investigation that took over two months. They looked at all his concerns, talked to people on the program and reviewed documents and determined that his concerns about an ethical issue were not substantiated and that they, we believed, they believed that the customer was well informed and involved in the decision-making process on the issues that were raised.

I do want to mention that Mr. DeKort at that time had raised the radio issue.

Mr. OBERSTAR. Yes.

Ms. LAVAN. It was not investigated because, as Mr. DeKort himself mentioned to the Committee, it was replaced under warranty by Lockheed Martin. So those radios were never put on the boat.

Mr. OBERSTAR. Do you have a document of exoneration, of self-exoneration of Lockheed?

You said the issue was resolved, and it was determined that there was not an ethical issue here. Was that in writing?

Ms. LAVAN. The issue about the radio?

Mr. OBERSTAR. No. The other, the previous question.

Ms. LAVAN. We keep a record of our ethics investigations. That is not something we typically share with the complainants. It is internal to Lockheed Martin.

Mr. OBERSTAR. Mr. DeKort said that you told him that the official response to the allegations, that his allegations were baseless and had no merit. Is that how the ethics issue was resolved?

Ms. LAVAN. Actually, there were three separate ethics investigations. As Mr. DeKort continued to be unsatisfied with the results of the investigations, they went to increasingly different levels.

The next level involved what we call our business area where we put together a team of experts that had technical background, procurement background as well as programmatic background, and they again looked at the original investigation. They talked to people on the program, looked at documents, talked to Mr. DeKort and found that his concerns were unsubstantiated because they were being worked with the customer through the customer system.

Mr. OBERSTAR. Did you dismiss the DeKort complaint, ethics complaint, on grounds of ethics or on substance of the work to be accomplished?

Ms. LAVAN. But we never dismissed his complaint. We took his complaint very seriously and invested.

Mr. OBERSTAR. You said it was disposed of.

Ms. LAVAN. Internally, we talked. We would go back to Mr. DeKort.

Mr. OBERSTAR. You found it not substantiated.

Ms. LAVAN. Exactly, yes.

Mr. OBERSTAR. So I call that a dismissal.

That is a very important element in this whole inquiry. When you said that you hold these matters internally, could the Committee receive a copy of your internal documents for our review if you wish in a confidential manner?

Ms. LAVAN. Yes, the ethics investigation certainly. You would be entitled. You could receive a copy of that.

Mr. OBERSTAR. We would like to have that.

Ms. LAVAN. They are actually, they are fairly substantial documents.

Mr. OBERSTAR. It is a very substantial issue, and I think it goes to the core of our inquiry here.

In the end, did your office at the time or did Lockheed conclude that the deficiencies existed as listed by DeKort but that Lockheed was not responsible for them because the Coast Guard took contractual delivery of the boats?

Ms. LAVAN. The way we looked at it, then there was a third investigation which I spoke with Mr. DeKort myself and looked at the program myself, personally, and the way we looked at it from the issues that Mr. DeKort raised was that what was the customer informed, were they fully aware and were there decisions being made in terms of for the benefit of the customer and the program?

We knew that at that point, that SPAWAR had approved the TEMPEST. It has passed the TEMPEST test. We also knew the ongoing IPT was looking at the C4ISR specifications and that was to be resolved on a contractual basis. So we knew that there was ongoing dialogue and debate between the customer and Lockheed Martin.

Mr. OBERSTAR. In the end, Lockheed took the position that if the Coast Guard wanted the problems fixed, they would deal with it, extend the schedule and add the funds to do so. Is that correct?

Ms. LAVAN. We viewed that there was an open and honest dialogue between Lockheed Martin and the Coast Guard and that both Lockheed Martin and the Coast Guard through the IPT provisions of the contract would reach a decision that was well informed on both sides.

Mr. OBERSTAR. Mr. Chairman, I will withhold at this point.

Mr. CUMMINGS. Mr. Coble?

Mr. COBLE. Thank you, Mr. Chairman.

I was here earlier but I have missed a good portion of this panel. It appears what we have is a dependable, respected armed service in the U.S. Coast Guard and two highly regarded defense contractors plagued by an expensive fiscal error.

Dr. Mackay, let me ask you a question. In light of the Commandant's proposal for a new direction for the Deepwater program and the problems that have been revealed today and in previous hearings, what suggestions would you have to improve the protocols and the procedures that govern acquisition, design, construction, coordination, et cetera, for future projects?

Mr. MACKAY. Sir, I will limit my remarks to the Deepwater project. I think that the course of action that the Commandant has laid down is prudent and goes to a direct and active dealing with issues that have surfaced on this program. Industry, both Lockheed and Northrop Grumman, both myself, Mr. Anton, and well above us extending to our CEOs, have been in active consultation and discussion about the way forward on this program.

The new acquisition plan that the Commandant has laid out, the features of it, some of the other things at a lower level, like the joint configuration control board, the incorporation of ABS, I think are an affirmative series of steps to meet the challenge and the issues that have been raised by this Committee and other bodies. We look forward to continuing to cooperate with the Coast Guard to effectuate those steps to improve this program and to continue to deliver the kind of performance that I alluded to in my opening statement.

The fact that every Coast Guard Station now has new HH-65 Charlie helicopters, that all of their medium and high endurance cutters in the Coast Guard have been touched by not one but two rounds of upgrades, the fact that though we have spent a lot of the program time upgrading legacy cutters, in this year of 2007 we now turn to deliver all new systems—the HC-144, and eventually the national security cutter, and redeliver the C130Js to the Coast Guard, which will be their longest range and most capable maritime patrol aircraft.

There is a lot that can be gained as this program goes forward. I think the Commandant has laid out a prudent and well-considered way to get there.

Mr. LOBIONDO. Thank you, sir. Let me ask you this, Doctor. What level of responsibility do the system integrator and the contractors have for the failure of the 110-foot conversion project?

Mr. MACKAY. Lockheed Martin is responsible for the C4ISR. I am not aware of a C4ISR issue that is directly connected to the issues that led to the lay-up of these cutters.

Mr. LOBIONDO. Anybody else want to weigh in on that?

Mr. Stanley, Mr. Sampson, the naval architect who was employed by the Navy and the Coast Guard, appeared on the first panel. Did he ever contact you regarding this matter?

Mr. STANLEY. Not to my recollection, no, sir.

Mr. LOBIONDO. Do you know whether he contacted anyone in your company?

Mr. STANLEY. It could have happened. But not to my knowledge.

Mr. LOBIONDO. All right. I thank you, Mr. Chairman. I yield back.

Mr. CUMMINGS. Thank you very much.

Mr. Taylor.

Mr. TAYLOR. First of all, I want to thank all of you gentlemen and ladies for staying around till 8:20 tonight. I am going to go back to my question to the last panel. Well over $50 million was spent, eight working Coast Guard cutters are now rendered useless, and everybody says it was not me. Now if I were running a large supply boat company and had tasked a company to design a change to those vessels to make them longer, and had hired a company to implement that, and then I found out in a subsequent Coast Guard inspection that those vessels are now rendered useless, I would do one of several things. I would sue the company that designed it, I would sue the company that built it, and I would tell all the authorities involved that my company is not going to do another dime's worth of business with any of you until someone accepts responsibility.

The reason I say that is that I am fortunate enough to serve, as is Mr. Cummings, not only on this Committee but also on the Armed Services Committee. There is a heck of a lot of similarities between this vessel and the LCS; both very similar thin hulled vessels designed to operate in very tough conditions. The Navy is counting on the LCS program to ride to the rescue as far as getting the numbers of the fleet back up. We are having substantial problems with the LCS program dollar-wise. Some very serious mistakes I think were made in the construction of it, not addressing problems as they arose but continuing to build the vessel so that when it came time to fix those things it cost a heck of a lot more than it should have.

So again, using that analogy, I do think this Congress has some very substantial leverage when it comes to someone stepping forward. It is really easy in my capacity to say we are not going to build any LCSs. If the folks who made the screw-ups here are being counted on to do great work there, and no one is going to admit a mistake, I have got to believe they are going to make the same mistakes on the next one. So at what point does one of you step forward and say we made a horrible mistake. We are not going to bill our Nation $50 million-plus for the mistakes we made and we are going to accept responsibility for ruining eight ships that still had a good ten to fifteen years of life left in them.

That really is an option that is available to me. I cannot guarantee that the other members of my Subcommittee or the other members of my Committee will go along with it. But at this point, I am dead serious when I make that statement. I cannot look 700,000 Mississippians in the eye and say you all have treated us

fairly, and I sure as heck cannot look 300 million Americans in the eye and say that you all have treated our Nation fairly.

I will open that up to the panel, because, apparently, all of the decisionmakers are represented right there. I think the stakes are pretty high, folks. I am giving you an opportunity to tell me what went wrong and who is going to accept responsibility. Because we do know that there are eight ruined ships that the Coast Guard is not even trying to fix at this point. They are either going to scrap them or sink them and hope that it is swept under the rug. It is now swept under the rug. It is a very real problem and it is a problem that could very well occur again in the LCS. I cannot in good faith let that happen.

Mr. MACKAY. Mr. Taylor, I will tell you that I have met with, and Lockheed Martin has put forward to the Coast Guard for the C4ISR——

Mr. TAYLOR. Let us talk about the hull, sir. Because the reason that the ships are being retired is not because the radios were not waterproof, which strikes me as really dumb, or that we had vulnerabilities on the communications, particularly if you are a Colombian drug lord and want to know whether or not the Coast Guard is going to be in a certain place, and there are countries around the world that might be cooperating with them, so I can see that one, too. But the reason the ships are being retired is because of hull failure. No one has stepped forward to say we screwed up—the builder says he did not do it, the designer says he did not do it. I can tell you one thing, apparently the two welders I hired in Bay St. Louis with a sketch that I did on the back of an envelope, we built a boat that still works. All these experts apparently could not do what those couple of guys in Bay St. Louis did for me.

Mr. MACKAY. Mr. Taylor, I cannot address the hull aspects. Lockheed Martin was not under contract for that. But I will tell you that we have approached the——

Mr. TAYLOR. I think, as a point of clarification, I think Lockheed Martin was the lead contractor on that.

Mr. MACKAY. No, sir. No, sir.

Mr. TAYLOR. You were not involved in any way in the stretching of that vessel?

Mr. MACKAY. No, sir, not with respect to the hull, the hull machinery and the electricity. No, sir. That was a——

Mr. TAYLOR. You were not involved in the design?

Mr. MACKAY. No, sir.

Mr. TAYLOR. You did not hire someone to do the design work? You did not pay the folks who did do the work?

Mr. MACKAY. No, sir. As a point of clarification, sir, and then I will turn it over to my partners to comment. In ICGS, Lockheed Martin is responsible for C4ISR. With respect to shipbuilding, that is the responsibility of Northrop Grumman and its partners, one of which is represented here in Halter Bollinger. What I wanted to tell you is, in respect to C4ISR, we have discussed with the Coast Guard Lockheed Martin proposals for the reuse of the 123 C4ISR data, equipment on the 123s, and the Coast Guard has considered that and they will dispose of that as they deem fit. We were not contractually responsible or otherwise participated in the design or fabrication of the hull. That was a responsibility under the joint

venture of Northrop Grumman Ship Systems and their partners on that side.

Mr. TAYLOR. Mr. Anton?

Mr. ANTON. The Coast Guard yesterday made the announcement that they were going to lay up the 110 to 123 converted vessels. In that announcement, the Commandant indicated that there were multiple pieces of analysis that have been done and that the root cause cannot be determined based on that analysis. Now, we are not privileged to that analysis, but we have requested a copy of it.

We need to determine the cause of the failure, sir. When we determine the cause of the failure, we will determine accountability. And when we determine accountability, we will know who needs to stand up.

Mr. TAYLOR. How long does that take? What was it, two years ago, right around the time of the hurricanes? Now I realize some of us were busy with other things. But to the best of my understanding, the problems on Matagorda were better than two years ago.

Mr. ANTON. The first problem on Matagorda did occur two years ago. We immediately dispatched a team, both the Coast Guard, industry, Bollinger, Northrop Grumman, Bollinger, and the Coast Guard dispatched a team to the Matagorda to survey that ship and to find out what had happened and why the ship had buckled. In that survey, we found an unwelded stringer right in the area where the buckling occurred. When we went back and reviewed the analysis, we felt like the stringer had caused the problem. At that point, Bollinger welded the stringer, under no cost, and we thought we had the problem solved.

For the record, I will have to tell you for the record the string of events, but I cannot tell you when the next failure occurred, but I can tell you all eight boats were already in conversion. When the next failure occurred, I believe four or five of the boats had been delivered.

So, it does take a long time. A lot of people have looked at it. Just today, testimony from Scott Sampson indicates that the 1997 ABS rules were flawed. It takes time. We were not aware of that comment until today.

With respect to the design, and with respect to the fabrication of the extension, and the vessel, I will have to let Mr. Stanley comment on that.

Mr. TAYLOR. For the record, because I think I have heard otherwise and so I would like a clarification from you gentlemen under oath, for the record, was anyone from Bollinger Shipbuilding ever invited to look at the vessels after the problem occurred to see if they could identify what they thought was causing the problem?

Mr. ANTON. I will let Mr. Stanley answer that.

Mr. OBERSTAR. Will the gentleman yield? The gentleman is right on with the line of questioning. In fact, I was going to pursue it at a later point. But at this stage, Bollinger also did the Navy's extension of the 170 to 179 foot and you had no failures there.

Mr. STANLEY. That is correct.

Mr. OBERSTAR. From what I understand, the work proceeded by strengthening the hull. And you advised the Coast Guard that they needed to do the same because they were doing a much greater

percentage extension of hull than the Navy was doing and they did not take your counsel. I want you to add that on in your response to the question that the gentleman from Mississippi raised.

Mr. STANLEY. I will be glad to answer all the questions. If we could, Congressman Taylor, there are several periods of damage to the Matagorda and you have got to decipher and discuss for clarity where Bollinger was involved and where it was not. I would like to offer if I could, and I think it might be helpful, if we would spend a couple of seconds and go back over the history of the Matagorda and then——

Mr. TAYLOR. Okay. Can we go back to my direct question first, and then I certainly want to give you an opportunity to say what you want to say.

Mr. STANLEY. All right.

Mr. TAYLOR. I thought I heard representatives from Bollinger Shipyard say that they had never been invited to inspect the failed vessels so that they could give their opinion of what went wrong.

Mr. STANLEY. That is correct. You heard that in your office and I was there the day it was said.

Mr. TAYLOR. That seems to be a little different from what the gentleman from Northrop just said.

Mr. STANLEY. No, it is not.

Mr. TAYLOR. So, again, I am giving everyone an opportunity to clarify that.

Mr. STANLEY. That is what I was trying to do. I need to spend just a moment with you. After the Matagorda came out of completion at Bollinger's of the work that was contracted under Deepwater, Matagorda went into what they call a PDMA, it went into a maintenance period. So there was work done on the ship that was separate and apart from the Deepwater scope of work. Before it went into its PDMA, it went through an operational test evaluation period to see if it effectively would perform to the specifications of the contract for the conversion. It went into the PDMA. Then after the PDMA, it went to Key West, and then following its arrival at Key West it left Key West fleeing one of the storms that year enroute to Miami. This is the September timeframe of 2004. In fact, several of the boats, all of the boats in Key West left for Miami fleeing that same storm that year.

The first damage on Matagorda, the buckling damage happened at that time. That was reported to Bollinger. The ship was brought back to Bollinger, to Lockport, Louisiana, and repaired by Bollinger, with a joint discussion with the Coast Guard of what had happened, what has caused the failure, and what should be done to correct it. Northrop Grumman was in that discussion, ICGS was in that discussion, all the Coast Guard collectively was in that discussion. We recognized that in the early calculations of the 110's conversion that some mistakes were made in those calculations, we all identified those mistakes, and for the mistakes that Bollinger made, Bollinger certainly stepped up to the table and said that was a mistake and this is the correct number and this is what should be done with this number.

Then what happened was that ship sailed. It had other damage and it had other decisions made to correct that damage. Believe it or not, I did not know until January, in some of the Coast Guard's

testimony, of some of the repairs that were done to the Matagorda after it left us.

So it is very difficult for us as a shipyard. You personally have known our owners many years. We are very proud of our work and very proud of what we have done with the Coast Guard. We built all the hourglass, we built all the CPBs. Our employees have married Coast Guard people, our employees have son and daughters that serve in the Coast Guard. We take this very seriously. We are at a loss as to what happened. And although we respect the Commandant's decision, we do not believe that this question should remain unanswered. There is an answer. You are absolutely correct.

The Commandant, and I cannot speak for him, but I think his decision was that in the best interest, considering everything, it is better to decommission those ships and move forward. I think that is what he is thinking, but I certainly cannot speak for him. But if you want an answer, there is an answer. And there has been, as Mr. Anton said, many independent studies done that neither Bollinger nor Northrop has seen. I think we could be very helpful in resolving the situation. But that information needs to be shared.

Mr. TAYLOR. Well, I appreciate the gentleman's answer. I stick by what I am saying. If all the parties involved are also involved in the LCS and none of the parties involved are going to step forward and say that is the problem, this is who ought to pay, then I do not see why our Nation ought to be doing business with you for the LCS.

Mr. Chairman, I yield back my time.

Mr. OBERSTAR. Mr. Chairman, I would like to follow up on Mr. Taylor's. Mr. Stanley has said some extremely important here. We had a loss as to what happened. There should be an answer. And is the answer that Bollinger built both the 170 and the 179, and the 110 and the 123. The 179 did not crack because the hull and the hull girders were strengthened. The Navy specified that strengthening and the Coast Guard did not.

Mr. STANLEY. That is not quite correct, Mr. Chairman. If I could, let me separate two issues for you.

Mr. OBERSTAR. All right.

Mr. STANLEY. The patrol coastals, the PCs for the Navy were strengthened very early after their delivery into service, long before the extensions were added to them and for a much different reason. The patrol coastals, like the Island Class and like the specifications for the 123, and like most operating equipment in the marine and in the air environment, they have operational restrictions. In the case of the PC, the PC was actually designed and specified to work in the Latorials, but it found itself making many transits on open ocean.

And as it made transits in normal Navy operations, it made those with large ship convoys at convoy speeds. Sometimes the speed of the convoy and the size of the ship would get into weather that would not affect big ships but it really affected small ones, like the PC. And we had cracking on the PC because the PC was operating outside of its planned and designed environmental envelop. We strengthened the PCs which allowed them to then transit with the big ships in heavy seas at transit speeds.

Much later on some of the PCs, not all, but some of the PCs received stern extensions for a very similar reason that we extended the 110s to all out for the boarding of a small rigid hull inflatable, for the safe boarding and exit of a rigid hull inflatable. But the two are not necessarily connected together. I think that is very important. It is true that the hulls of the PCs were strengthened. In the case of the 110, this calculation——

Mr. OBERSTAR. But did the Navy specify hull strengthening for the extension of the 170 to 179? Did they not give a specific——

Mr. STANLEY. No. No. Because the hulls had already——

Mr. OBERSTAR. That is what the Navy told us.

Mr. STANLEY. Well, no. I do not think there is a——

Mr. OBERSTAR. The Carderock division, the David Taylor Model Basin specialist told us that, and you are saying they did not?

Mr. STANLEY. I think it is a matter of timing. The Navy and Bollinger strengthened the hulls on the PCs, all of the PCs, long before, long before, several years before the stern extensions were added. So to say that the Navy instructed Bollinger to increase the strength of the hull because they wanted to add stern is incorrect. The hull had already been changed for another reason and its strength increased for another reason.

Mr. OBERSTAR. All right. We will desist there because there are other members who have questions and we need to go on, in all fairness. Thank you, Mr. Gilchrest, for forebearing here.

Mr. CUMMINGS. Mr. Gilchrest.

Mr. GILCHREST. Thank you, Mr. Chairman. I guess I would like to stick with the hull design here for a little while. Mr. Anton, you are executive vice president of Northrop Grumman; is that correct?

Mr. ANTON. Yes, sir.

Mr. GILCHREST. And so you, working with the ICGS, got the contract to work on the hulls on these 110s; is that correct?

Mr. ANTON. ICGS is the prime contractor. When the contract comes into ICGS, the HM&E portion of the work is given to the Northrop Grumman partner of the joint venture.

Mr. GILCHREST. So Northrop Grumman has this contract and you subcontract to Mr. Stanley, with Bollinger?

Mr. ANTON. We did.

Mr. GILCHREST. So when Bollinger Shipyard was done with each of these boats at various times, what was your responsibility before the boat was put into service after Bollinger Shipyard finished the boats?

Mr. ANTON. Could you ask that again?

Mr. GILCHREST. Northrop Grumman is the contractor to extend the hull or make the 110 into the 123. So you subcontract to Bollinger Shipyard to do the work.

Mr. ANTON. Yes, sir.

Mr. GILCHREST. Once Bollinger Shipyard is done, what is your responsibility to ensure that the work was done appropriately?

Mr. ANTON. During the production effort at Bollinger, we had a QA plan and a quality assurance team and we worked side-by-side with the program office from the Coast Guard reviewing the work that Bollinger was accomplishing. In addition to that, the Coast Guard again formed an in-serve team, and in service inspection

team which actually took the ship out on trials and then made a recommendation as to whether to accept the ship or not.

Mr. GILCHREST. Apparently you and the Coast Guard accepted each of these ships at various times.

Mr. ANTON. Bollinger certified to Northrop Grumman that the work was in accordance with the specs. In the case of the hull extension, ABS monitored the structural part of the conversion process and they also signed a certification that the work was done in accordance with the design and we accepted that certification based on our on site QA team, and we certified that, yes.

Mr. GILCHREST. So as a result of that, looking in hindsight at each of these eight ships going into service, the Matagorda 7 February 2005 went into service and the hull problem was identified 10 September 2004. That is what I have here. Rather than go through all the dates, in hindsight, was there a design flaw in this extension, or was there less than top grade material used? Mr. Stanley and Mr. Anton, what was the problem with the breach of the hull?

Mr. ANTON. I am going to tell you we have to determine the root of the cause for the failure then we will understand and we will be able to answer that question.

Mr. GILCHREST. Are each of the eight ships different in their failure?

Mr. ANTON. Yes. Each ship, in fact, fails in a different area. The modeling that has been done to date, to my knowledge, I know the modeling that we have done, but the modeling I believe that the Coast Guard has done as well has not been able to predict the occurrence of these failures on each vessel.

Mr. GILCHREST. Has there ever been a 110 extended to a 123 that passed?

Mr. STANLEY. No, not to my knowledge.

Mr. GILCHREST. This is the first time.

Mr. STANLEY. Yes.

Mr. GILCHREST. Did you, Mr. Anton or Mr. Stanley, who conducted the technical review of the design prior to the beginning of construction?

Mr. STANLEY. We initiated the design which Northrop reviewed as well as the Coast Guard reviewed in the design process. Before we took the design to construction or to conversion, that design was generated and vetted many different times.

Mr. GILCHREST. How was the design vetted? Was it vetted with third parties, other engineers, other boatyards, other shipbuilders?

Mr. STANLEY. No. It was vetted inside of the Deepwater or the ICGS structure. Parts of that design, the stern extension, the superstructure, was vetted to ABS outside to review that design.

Mr. GILCHREST. Now the hull failures went from 10 September 2004 to 24 March 2006. Can you tell us about once you had a failure in 2004, was there any sense or anticipation that you were going to have another failure in another boat? Was the design changed in future boats?

Mr. STANLEY. As I outlined for Congressman Taylor, we were involved in the initial failure of the Matagorda.

Mr. GILCHREST. You say you were not involved?

Mr. STANLEY. No, I said we were involved. The boat was brought back to Louisiana, calculations reviewed with the Coast Guard, and hull strengthening on the Matagorda and all the boats that followed her was applied. Failures that happened after that point, and studies that happened after that point, and events that happened after that point, we do not have any knowledge of. That has not been shared with us.

Mr. GILCHREST. So you were the contractor that worked on the hulls of all these eight boats?

Mr. STANLEY. Yes, sir.

Mr. GILCHREST. But you are not familiar with the problem of the breaches in the hull other than the Matagorda?

Mr. STANLEY. That is pretty much correct. Let me say, we are not the only contractor that worked on the breaches in the hull. As I reported, the ships left us, they went into an availability, and then at some point in time those ships also received modifications to their hull structure that——

Mr. GILCHREST. Where did they receive modifications? From different shipyards——

Mr. STANLEY. From different shipyards, in Savannah and Alabama.

Mr. GILCHREST. But regardless of the modifications, every one of them that had this extension failed.

Mr. STANLEY. I am not sure of that. We do not have those records of how many boats failed.

Mr. GILCHREST. Thank you, Mr. Chairman.

Mr. CUMMINGS. All eight failed. According to what I saw. All eight of them failed.

Mr. Kagan, you can go ahead.

Mr. KAGAN. Thank you, Mr. Chairman. I recognize the hour is late and the interest is still quite high, at least for this new Representative. I have been here 100 days and change, so I am new to shipbuilding. I am a physician, a doctor. I design laboratory tests. I have never designed a boat. I want to thank you all for being here and giving your best opinion. But I am still trying to sort out in my mind about the these ships that have a hull that does not work. It is obvious to me that the design was less than perfect, and that no matter who touched and tried to repair the ship after this design was put into place, they were unable to keep it together. So I am trying to decide where the buck stops. Earlier when you were testifying about the electrical wire and how well or unwell it is wrapped for security purposes, I got a little bit dizzy and confused trying to decide who is in charge. So with regard to who is in charge, where does the buck stop with regard to the hull design? Would that be Northrop? Would that be Bollinger? And just to make it easy for me, I built this for you. I will hand it to you and you can pass it around, but when it stops that is the person I want to talk to. The buck stops here. Who is going to take it?

Mr. ANTON. Bollinger did the design work for the 110 123 extension. And so I think it is appropriate that Mr. Stanley answer your question.

Mr. KAGAN. So, Mr. Stanley?

Mr. STANLEY. I would be glad for the buck to stop here.

Mr. KAGAN. Very good.

Mr. STANLEY. I can only supply the information that we have, and I can only tell you the reason that I am here today, and one of our basic corporate tenets in our company is to not shy away from good times or bad times, I cannot answer your question where the buck stops yet. I really cannot. I can tell you that we did the design.

Mr. KAGAN. All right. So the answer is, yes, you did do the design for the hull?

Mr. STANLEY. We did the design.

Mr. KAGAN. And if that design has been proven to be inadequate for the task at hand, would you agree with me that your company then would be responsible for the failures that follow?

Mr. STANLEY. That could be possible.

Mr. KAGAN. And so if I represent the people in northeast Wisconsin and we got something designed, the designed failed, would it be too much to ask for our money back?

Mr. STANLEY. You certainly could do that.

Mr. KAGAN. If you did accept damages and we did get all of our money back including loss of use for these eight ships in their future years, would that permanently damage your company? Would that put you out of business?

Mr. STANLEY. There is a question before that. There are very clear ways contractually in Deepwater as well as naval shipbuilding that Mr. Taylor refers to, to determine where the buck stops.

Mr. CUMMINGS. Mr. Stanley, we cannot hear you. This testimony is, I really want to hear this.

Mr. STANLEY. There are very clear ways and established ways to settle where the buck stops. There are contractual obligations that are placed on the contractors, there are obligations the Government undertakes in its side of the contract, and in the case of the 110 and in the case of any dispute where the contractors and the Government have a problem, there are very clear ways forward. We encourage ways at Bollinger to be pursued. And I hope that answers your question.

Mr. KAGAN. It does in part, and it leads to some other queries. When you do design a piece of work to extend a ship off the rear end, I am sure you had other people take a look at your plans and your designs. Is that true?

Mr. STANLEY. Yes. And I cannot tell you how many.

Mr. KAGAN. But would that also mean that there might be other people besides your own company that should accept at least partial responsibility for this failure of design?

Mr. STANLEY. That is part of the process that is described that I tried to describe.

Mr. KAGAN. Are any of those companies represented here this evening?

Mr. STANLEY. Well, the Coast Guard is here, Northrop Grumman is here.

Mr. KAGAN. So that is two other individuals.

Mr. STANLEY. And Bollinger is here. I do not know if there are ABS people here, I have not seen them. But certainly all three of those groups have a responsibility to share a part of the success or failure of a contract.

Mr. KAGAN. Well, I want to applaud your honesty in accepting the buck stops here sign. I think it takes a great deal of courage to be here when things are bad. I know in the practice of medicine sometimes doctors will do everything right but things still do not work out; people still succumb even to an illness that is treated appropriately. I am a little saddened because no one has really gotten to the bottom line in figuring out why this unprecedented modification of a light weight, high speed craft has not been analyzed to the point where you could present the data here this evening to someone who really understands shipbuilding that could explain exactly where a single or multiple failures occurred in the design. But, obviously, this is a troubled project, and you would accept that.

Mr. STANLEY. Yes, it is.

Mr. KAGAN. I applaud you for accepting if not total at least partial responsibility. I yield back my time.

Mr. CUMMINGS. Thank you very much. Mr. Stanley, I just heard what you said and let me make sure I am clear. Are you trying to tell us, because I just want to make sure I am clear on this because I want the record very, very, very clear because a lot is riding on what you just said, are you telling me that you believe that Bollinger is responsible for the hull problem? Is that what you are telling us?

Mr. STANLEY. No, not at all.

Mr. CUMMINGS. Then what are you saying? Because I want to make it clear. I want to make sure that whoever is responsible, going back to what Mr. Taylor was talking about, is held responsible because we are not going to be able to prevent these things from happening in the future if we do not get to the bottom line. And so, as I listen to your answers that you just gave, I am sitting here as a lawyer and I am saying if this were my case and I were representing Northrop Grumman, I would be saying hallelujah because apparently somebody had taken responsibility. I am just asking you to be clear. What are you saying? He has talked about the buck stopping, and when I hear the buck stopping and hear what you just said, it sounded like you were accepting liability here. Sworn testimony, I would think somebody would be able to take that into a court of law and do something with it. So, I am just curious.

Mr. STANLEY. I would like to be very clear with you. I thought I was very clear with the Congressman. I said there is a process in Federal contracting, a very clear one, that adjudicates disputes and the adjudication of the dispute places responsibility and accountability. In our interchange, the Congressman asked me how many people was here in that process that could have responsibility, and I said three.

Mr. CUMMINGS. Okay. I got you. I just wanted to make that clear and I wanted to make sure that the people back at your company would not be mad at you when you got back.

Ms. Lavan, let me go to something that you said that is troubling me. You said that the Coast Guard was kept informed when we were talking about Mr. DeKort's complaints, and there is a letter sitting up there somewhere from Mr. DeKort where he made some complaints, would you pass that to her, Mr. Rodgers, you said that

the Coast Guard was kept informed of the various things that were happening with this contract. Is that correct?

Ms. LAVAN. Yes, sir.

Mr. CUMMINGS. Would they have been kept informed of the topside issue?

Ms. LAVAN. You are referring, first of all, to the email, this is January 2004, before the ethics complaint came in, which was October 2004. And in terms of the topside equipment where I was talking about the flowdown of the specifications and where, as Dr. Mackay was talking about, where the sort should have been placed, Coast Guard was part of the IPT, which is the integrated product team, that was looking at that issue.

Mr. CUMMINGS. Okay. So when DeKort raises topside, and that memo was January 2004; is that right?

Ms. LAVAN. That is right.

Mr. CUMMINGS. It was dated January 2004, the Matagorda is received and a DD-250 is dated around March 2004; is that right?

Ms. LAVAN. Yes.

Mr. CUMMINGS. Now the Coast Guard becomes aware of noncompliance, according to the IG, and I notice everybody is very familiar with the IG report, which I am very impressed with, thank you very much, July of 2005. Are you aware of that?

Ms. LAVAN. Yes.

Mr. CUMMINGS. And August 29 of 2006, the Coast Guard gets a letter from the integrated team indicating that the topside equipment did not meet minimum standards. Are you familiar with that?

Ms. LAVAN. Not specifically, no.

Mr. CUMMINGS. Well they did. Are you familiar with that, Mr. Mackay?

Ms. LAVAN. I think we are talking about two different——

Mr. CUMMINGS. All right. Help me.

Ms. LAVAN. One is the Tempest issue, the other is the topside equipment issue. The Tempest issue is the one that was approved by SPAWAR in March of 2004. Separate issues.

Mr. CUMMINGS. Okay. So the Coast Guard was made aware of that; is that right?

Ms. LAVAN. The Coast Guard, as I understand it, was part of the testing.

Mr. CUMMINGS. Right. That clears that up. That is good.

Ladies and gentlemen, any other questions? Well, we have heard a lot of testimony here today and, I will tell you, if I were a judge I would let a higher authority try to ferret all this out. I am being very frank with you. We have so many documents that, to be frank with you, show all kinds of inconsistencies. I am at a point right now where I have questions but I think it is better that I turn them over to somebody else, a higher authority, because this concerns me tremendously. Thank you very much. You are dismissed.

Mr. CUMMINGS. We will now call our third panel. Mr. Debu Ghosh, Mr. Joe Michel, Lieutenant Commander Jacoby, and Ms. Martindale. Please come forward.

If you will please repeat after me, I swear to tell the truth and nothing but the truth, so help me God.

[Witnesses answered in the affirmative.]

Mr. CUMMINGS. Thank you. We will begin with Mr. Ghosh.

TESTIMONY OF DEBU GHOSH, NAVAL ARCHITECT, BRANCH CHIEF, U.S. COAST GUARD BOAT ENGINEERING BRANCH; JOE MICHEL, ASSISTANT DEPUTY FOR SYSTEMS IMPLEMENTATION, U.S. COAST GUARD NATIONWIDE AUTOMATIC IDENTIFICATION SYSTEM PROJECT; LIEUTENANT COMMANDER CHAD JACOBY, PROGRAM MANAGER, SCALEABLE COMPOSITE VESSEL PROTOTYPE PROGRAM SCIENCE AND TECHNOLOGY DIRECTORATE, DEPARTMENT OF HOMELAND SECURITY; AND CATHY MARTINDALE, CONTRACTING OFFICE CHIEF, COAST GUARD ENGINEERING AND LOGISTICS CENTER

Mr. GHOSH. Good evening, Mr. Chairman and distinguished members of the Committee. It is a pleasure to appear before you today to discuss compliance with requirements of the Deepwater contract. I am Debu Ghosh, executive officer of the Coast Guard's Asset Project Office Standard Boats. I am a naval architect with over 33 years of experience specializing in the design of high speed craft. I have been in the boat engineering branch of the United States Coast Guard for the last 23 years, serving as the branch chief for the last 15 years. Mr. Chairman, I would like you to include my written statement in the record.

I have a Bachelor's degree in naval architecture from IAT, a MBA from Tulane University in New Orleans, and a Master of Science degree from ICAF.

I have been involved with all recent patrol boat acquisition programs in the Coast Guard including the 110 Island Class, 87-foot coastal patrol boat, the 123-foot conversion, and the fast response cutter. My branch's participation in the Integrated Deepwater Systems 123-foot patrol boat program began in the spring of 2002 following the contract award to Integrated Coast Guard Systems. After identifying our initial concerns with possible longitudinal strength problems, I asked both Coast Guard and the Bollinger members of the technical management information team to award contracts to the Navy's Combatant Craft.

I also suggested that Bollinger consult Vosper Thornycraft, the original designer of the Island Class patrol boats. I was unable to get support for this because the Deepwater contact was a performance based contract so the contractor was solely responsible for the success of the design. Nonetheless, I advised Bollinger to study this matter more carefully, due to the unusual nature of the lengthening a lightweight vessel by adding length aft instead of by adding length at midships, which is the normal process.

After the cutter Matagorda failure, the section modulus calculation of the midship section submitted by Bollinger was found to be in error and did not meet the ABS Guide for high-speed craft 1997. A detailed review of the longitudinal strength and buckling calculations by ELC revealed that the primary stress of the deck and the side shell would exceed the critical buckling strength of the damaged panels. Subsequently, the Coast Guard accepted the ICGS proposed solution known as Modification One, comprising three straps welded on to each side. This raised the section modulus enough to meet ABS high-speed craft guide. This modification re-

duced the stress to an adequate level and also increased the allowable buckling load on the critical plates.

After the cutter buckling damage, I took over as the project engineer from Deepwater to find the root cause of the problems with the cutters when such problems continued. I awarded six different contracts to nationally and internationally known consultants to resolve the problems. A variety of tests, analyses, and reviews were performed including independent third party verifications of the analyses. It is important to note that although this problem originates in longitudinal bending and involves overall hull girder strength, the light structure required for high speed, small patrol boats results in various types of buckling failures, not merely cracking. These are much more complicated structural responses than those commonly seen in larger ships.

I believe this shows that the Coast Guard has to have more direct responsibility for, and control of future acquisitions, and oversight for vessel designs, as this Committee has advised and as the Commandant is now implementing. The Coast Guard has to rely more on the experience of existing proven vessels and experienced designers of these specialized high speed craft. This had been the practice that produced the successful 87-foot coastal patrol boat and the original 110-foot Island Class patrol boat, and this is the strategy that Coast Guard is now following for the replacement patrol boat, FRC-B. This also suggests that independent survey and design funding should be available to Coast Guard engineers as it was in the past so that the Coast Guard can investigate potential problems like this in a proactive fashion.

Thank you for the opportunity to testify before you today. I will be happy to answer any questions you may have.

Mr. CUMMINGS. Thank you very much. Mr. Michel.

Mr. MICHEL. Good evening, Mr. Chairman and distinguished Committee members. It is a pleasure to appear before you today to testify on the Compliance with Requirements of the Deepwater contract. My name is Joe Michel. Currently I am an assistant deputy with the Nationwide Automatic Identification System project, the Coast Guard Office of Acquisition. Prior to that, I was engineering technical lead with the Ports and Waterways Safety System also with Coast Guard Acquisition. And from December 2001 to March of 2004, I was the Coast Guard's lead C4ISR engineer on the 123-foot patrol boat integrated product team.

I am pleased at the opportunity to appear before you and I will be happy to answer any questions that you have.

Mr. CUMMINGS. Thank you very much. Lieutenant Commander Jacoby.

Lieutenant Commander JACOBY. Good evening, Mr. Chairman and distinguished members of the Committee. It is a pleasure to appear before you tonight to discuss the Compliance with Requirements of the Deepwater contract.

I am Lieutenant Commander Chad Jacoby. I served as the program manager for the 123-foot patrol boat conversion project from July 2004 to October 2006. As the 123 program manager, I managed the delivery task orders under the Deepwater contract that pertained to the production, delivery, and warranty support of the 123-foot cutters.

During my time as program manager, I supervised the delivery of Coast Guard Cutter ATTU, Coast Guard Cutter NUNIVAK, Coast Guard Cutter VASHON, Coast Guard Cutter MONHEGAN, and Coast Guard Cutter MANITOU. I managed contracts with engineering firms to diagnose structural issues, I administered the one-year warranty period on all eight delivered 123s, and I managed the contract modifications to install structural upgrades on the cutters.

Thank you for the opportunity to testify before you tonight. I will be happy to answer any questions that you may have.

Mr. CUMMINGS. Thank you very much. Ms. Martindale.

Ms. MARTINDALE. Mr. Chairman, I have a brief oral statement. I request that my written statement be entered into the record.

Good evening, Mr. Chairman and distinguished members of the Committee. It is a pleasure to appear before you today to discuss Compliance with Requirements of the Deepwater contract. I am Cathy Martindale. I am currently the chief of the contracting office for the Coast Guard's Engineering and Logistics Center located in Baltimore, Maryland. I have been a contracting officer for the U.S. Coast Guard for 15 years. I hold a Bachelor of Science degree in business administration from the University of Maryland. I also hold a Certificate in procurement and contract management from the University of Virginia, and a Defense Acquisition University level III certification.

I was a contracting officer with Coast Guard Headquarters and assigned to the Deepwater program beginning January 2000 through March 2006. While assigned to the Deepwater program, I served at various times as a contracting officer in both the surface and air domains at the systems integration program office located in Rosslyn, Virginia. I was one in a series of three contracting officers responsible for administering the 110/123 conversion of the Matagorda. As a contracting officer I had responsibility for administering, interpreting, and ensuring compliance with contract requirements. I worked daily with my contracting officer technical representative, the program office, and Integrated Coast Guard Systems. I attended design reviews, participated in integrated product team meetings, and accepted contract deliverables.

Thank you for the opportunity to testify before you today. I will be happy to answer any questions that you may have.

Mr. CUMMINGS. Thank you very much. I want to thank all of you for being here. We really appreciate it.

Mr. Michel, was anyone in the Coast Guard aware during the 123 program of the internal disputes at Lockheed or of the actions of Michel DeKort to raise awareness of his concerns? Would those kinds of issues have been things that would have come to your attention?

Mr. MICHEL. Not as such, sir. I was not aware until sometime later that Mr. DeKort had actually pursued alternative action up through his management team.

Mr. CUMMINGS. Mr. DeKort indicates that he contacted the Coast Guard to raise his concerns with them. Do you know whether any action was taken? I take it that you found out later on that he had raised issues. Did you ever find out whether action had been taken in regard to the issues that he raised?

Mr. MICHEL. No, sir, I did not. He was extremely vocal during my tenure with the IPT.

Mr. CUMMINGS. And when you say he was extremely vocal, how did it come to your attention that he was extremely vocal?

Mr. MICHEL. He made his concerns known inside and outside of Integrated Product Team meetings.

Mr. CUMMINGS. And so you did have knowledge of those concerns, did you not, based on what you just said?

Mr. MICHEL. I did, sir, but I did not know that he had gone as far up his management chain.

Mr. CUMMINGS. When he was complaining, were you aware of specific complaints?

Mr. MICHEL. I was, sir.

Mr. CUMMINGS. And did you have an opinion back then when you were hearing them as to whether or not you considered them to be valid complaints and things that you all should be concerned about?

Mr. MICHEL. Well, sir, he and I shared a lot of the same concerns.

Mr. CUMMINGS. Is that right?

Mr. MICHEL. Yes, sir.

Mr. CUMMINGS. Why not tell us about the concerns that you shared and why you had the concerns that you had.

Mr. MICHEL. I think we have talked a lot about the Tempest concerns this evening.

Mr. CUMMINGS. Yes.

Mr. MICHEL. A few things that he might have perhaps——

Mr. CUMMINGS. Let me go back for one moment, because I want us to be clear. Mr. DeKort had his concerns, as I understand it, and you had concerns. Was this a thing where it just so happened that you sort of ended up with the same concerns, or were you all talking and he say, you know what, I really do not like this Tempest situation, and you sort of joined in to that? Were these things that you could have observed sort of independently, is what I am asking?

Mr. MICHEL. Yes, sir, independently. Any two C4ISR systems engineers looking at the same problem would have come to the same sort of conclusions.

Mr. CUMMINGS. No doubt about it?

Mr. MICHEL. Absolutely, sir. No doubt.

Mr. CUMMINGS. Tell me the concerns that you had that were common to his complaints, his concerns.

Mr. MICHEL. Early on during the design reviews and during the review of various contract data exhibits, it was apparent that there either was not a clear understanding of Tempest requirements, for example, within the Lockheed design community, or they were not addressing them. So during design reviews. During review of contract documents, designs, and submission of comments via the IPT process these concerns were made known to Lockheed from the Coast Guard perspective. And I was not alone. There were many folks in the C4I community that were matrixed into the IPT that made these concerns known. So Lockheed went and did this study that was referred to earlier this evening, and they came to the same conclusion that yes, in fact, Tempest was a requirement proc-

essing classified information, we are going to have to adhere to Tempest if we are going to get this cutter certified and operate on classified networks.

So, a round turn was taken on the design. Lockheed did try. They did try. The equipment racks were reconfigured, red and black equipment was separated, red and black cables were separated. I cannot say that there was any material solution pursued, that is, the equipment that they had procured, the cables that they had procured, that is what they were using.

Mr. CUMMINGS. So, in other words, he was saying, if I understood his testimony correctly, that he felt there should have been some other kind of cables. It seems like there has been a big deal made of the kind of cable that was used as opposed to the kind that he thought would be best for Tempest certification. Did you have that same concern?

Mr. MICHEL. Yes, sir.

Mr. CUMMINGS. So what you are saying is that the same type of cabling, although there were the complaints, Lockheed Martin's reaction to that was to keep the same type of cabling but to just kind of reconfigure it. Is that a fair statement of what you just said?

Mr. MICHEL. Yes, sir. Yes.

Mr. CUMMINGS. Did you ever make any complaints?

Mr. MICHEL. I did, sir. During the design reviews and during the review of the designs themselves, I made numerous comments and raised my concerns. Some of the problems, and I think we have talked about the structure of the Deepwater contract at length this evening, I was trying to work within the structure of the contract.

Mr. CUMMINGS. Speaking of working within the structure of the contract, did you take your concerns to the higher ups in the Coast Guard?

Mr. MICHEL. I elevated those concerns as high as I could within the program.

Mr. CUMMINGS. And how high is that?

Mr. MICHEL. To the deputy at the Systems Engineering and Integration Team.

Mr. CUMMINGS. And who would that have been?

Mr. MICHEL. Mr. Giddons was at the time.

Mr. CUMMINGS. And what reaction did you get when you took those to his attention?

Mr. MICHEL. He was extremely concerned and he wanted the issues to be resolved.

Mr. CUMMINGS. And do you know why they were not resolved?

Mr. MICHEL. Well, regrettably, I had mentioned that in March 2004 my time with the Deepwater program came to an end. There were many issues that were unresolved, they were contractually identified on the DD-250, which was also referred to earlier this evening, that were, quite frankly, still up in the air.

Mr. CUMMINGS. Why were you so concerned about the Tempest issue?

Mr. MICHEL. For some of the same reasons that the first panel indicated, sir—compromise of classified information.

Mr. CUMMINGS. When did you leave?

Mr. MICHEL. About three weeks after Matagorda was delivered.

Mr. CUMMINGS. All right. I will come back to you.

Ms. Martindale, you were the contracting officer for Deepwater?

Ms. MARTINDALE. Yes, I was the contracting officer administering the 110/123 delivery task order for the Matagorda.

Mr. CUMMINGS. And does the contacting officer have the authority to decline to accept delivery of a ship or a boat?

Ms. MARTINDALE. Yes, sir.

Mr. CUMMINGS. And is that something that you have done in the past with regard to Deepwater? In other words, have you declined——

Ms. MARTINDALE. I have declined acceptance of a data deliverables, but not a ship, sir.

Mr. CUMMINGS. I see. Explain that. Explain what you just said. You declined a date but not a ship.

Ms. MARTINDALE. No. I am sorry, sir, a data deliverable. We had delivery requirements for data, design documents, and when they did not comply with contract requirements, we did not accept delivery. We gave them our comments, asked that corrections be made, and then they were accepted once those corrections were made.

Mr. CUMMINGS. So, basically, you would get documents from the integrated team; is that right?

Ms. MARTINDALE. That is correct, sir.

Mr. CUMMINGS. With regard to, let us say, for example, a ship, a vessel.

Ms. MARTINDALE. Yes. Technical specifications, yes, sir.

Mr. CUMMINGS. And then you would not necessarily see the ship itself. You would actually base your judgement on documents that you received. Is that a fair representation?

Ms. MARTINDALE. No, sir. Prior to delivery of the ship, there is a series of data deliverables, technical specifications, design documents. If they did not comply with the requirements of the contract, then I would reject those deliverables.

Mr. CUMMINGS. Okay. Then how do you confirm the quality of the items for which you accept delivery?

Ms. MARTINDALE. I rely on the technical expertise of my contracting officer technical representative.

Mr. CUMMINGS. And so if a technical representative comes to you and says something is, for example, certified, Tempest certified, then you basically accept that. Is that correct?

Ms. MARTINDALE. That is correct, sir.

Mr. CUMMINGS. And the procedure, I take it, is that if they are incorrect, you would not necessarily know that. All you do is you get a document saying that it is fine or not fine.

Ms. MARTINDALE. Yes, sir. I rely on their technical expertise.

Mr. CUMMINGS. Were you at all concerned about the condition in which the 123s were delivered?

Ms. MARTINDALE. Yes, sir. There were areas where it did not comply with the contract. As a contracting officer, it would be my preference not to take delivery of something not in full compliance. But we had discussions with regard to that on the COTR and myself and the noncompliance issues were such that they could be resolved after delivery.

Mr. CUMMINGS. In other words, let me make sure I get this right, you are saying that you would accept the delivery and you would

accept it but there were assurances made to you that things would be corrected later?

Ms. MARTINDALE. That is correct.

Mr. CUMMINGS. Was that standard procedure?

Ms. MARTINDALE. It is not unusual, sir. It is a common practice in contracting where you sign a DD-250 accepting delivery of a product or service and you may withhold some aspect of payment or identify noncompliance areas with the expectation that at some point in the future they will bring the product into conformance.k

Mr. CUMMINGS. Were all the major deficiencies noted in the DD-250 for the Matagorda and each subsequent ship?

Ms. MARTINDALE. I cannot speak to the subsequent ships, sir, but for the Matagorda, to my knowledge, all the nonconformances were identified in the DD-250, sir.

Mr. CUMMINGS. Was the noncompliance of the topside equipment noted on the DD-250 with regard to the environmental standards?

Ms. MARTINDALE. No, sir.

Mr. CUMMINGS. It was not. And if it was not, why would that not have happened? In other words, if there was a problem with the topside equipment with regard to environmental standards and it had not been met, why would that not be noted on the DD-250?

Ms. MARTINDALE. If there was an area of noncompliance, it should have been noted, sir.

Mr. CUMMINGS. And the IG said that it was an area of noncompliance. Are you aware of that?

Ms. MARTINDALE. No, sir.

Mr. CUMMINGS. Does it concern you that we may have accepted a ship that did not have that notice on a DD-250?

Ms. MARTINDALE. Yes.

Mr. CUMMINGS. When, in fact, there was a problem.

Ms. MARTINDALE. Yes. That would be a concern, yes, sir.

Mr. CUMMINGS. Are there occasions when this has happened in the past where maybe something came in, you accept the compliance, DD-250 prepared, and then you later found out there was something that was not right? Has that happened?

Ms. MARTINDALE. I have not had any firsthand experience with that, sir.

Mr. CUMMINGS. Okay. I want to just make sure I am clear on this. With regard to the 123 program, I will call it the program, were there other things that concerned you overall? Was there anything unusual that concerned you?

Ms. MARTINDALE. It was a very large, complex program, sir. I was not only responsible for the 110/123 DTO administration, but I also had responsibility for administering the NSC, the SRP, and FRC. So I was spread very thin, sir.

Mr. CUMMINGS. You did all of that by yourself?

Ms. MARTINDALE. Yes, sir. I was the sole contracting officer responsible for all of those delivery task orders. So that was certainly a concern.

Mr. CUMMINGS. Now with regard to change orders, how were they dealt with?

Ms. MARTINDALE. If the COTR identified an area of the contract requirements that they wanted to modify or add or subtract from,

I would request a proposal from the contractor and then we would receive that proposal, review it, negotiate and modify the contract.

Mr. CUMMINGS. Did that happen often with the 123 project?

Ms. MARTINDALE. No, sir.

Mr. CUMMINGS. You have been sitting here during all the earlier testimony, have you not?

Ms. MARTINDALE. Yes, sir.

Mr. CUMMINGS. And you heard that there were some concerns with regard to wiring and whether one piece of wire/cable costs a little bit more than the other. Did those kinds of things ever come to your attention in any way? In other words, did the integrated team ever come back and say, look, we have got a problem here, we need to change the wiring?

Ms. MARTINDALE. On the 110/123 contract, that delivery task order?

Mr. CUMMINGS. Yes.

Ms. MARTINDALE. That was a firm fixed price, performance-based contract. So as far as the contractor and the type of cable that they would install, for them to correct that issue would not have necessitated a modification to the contract. They needed to do whatever was necessary to meet the standards that were incorporated into the contract.

Mr. CUMMINGS. Period?

Ms. MARTINDALE. Period.

Mr. CUMMINGS. Let me make sure I am clear on this. Even if it cost more, you are saying that if the specifications asked for a certain thing, if they wanted to change, do something other than the specifications with regard to cabling——

Ms. MARTINDALE. The specifications of the 110/123 contract did not specify a type of cable. It specified a standard. They may have had to decide what type of cable to use to comply with that standard. If they chose the wrong cable and needed to use a different type of cable, a contract modification is not necessary to make that change. They just need to make whatever changes are necessary to comply with the standard that was incorporated into the contract.

Mr. CUMMINGS. But if their complaint was that it was going to cost more money——

Ms. MARTINDALE. That is the firm fixed price risk nature of performance of that type of contract.

Mr. CUMMINGS. So it would fall on the contractor?

Ms. MARTINDALE. Yes.

Mr. CUMMINGS. So you might not ever even know about that. Is that what you are saying?

Ms. MARTINDALE. That is correct, sir.

Mr. CUMMINGS. Let me just ask you a final question. The Defense Acquisitions University, are you familiar with them?

Ms. MARTINDALE. Yes, sir.

Mr. CUMMINGS. Its report on Deepwater indicates that the contractors and the Coast Guard were both incentivized to underestimate the cost of the new systems and their technical support needs. Do you think that was the case?

Ms. MARTINDALE. No more than any other contractor is incentivized to do that to capture a contract in their bidding proc-

ess. They may have underestimated things in an attempt to come in with the lowest possible bid to capture the contract.

Mr. CUMMINGS. That is not unusual?

Ms. MARTINDALE. No. And we did do cost realism analysis when we evaluated the initial proposals at the award of the Deepwater contract to try to ferret out those types of concerns.

Mr. CUMMINGS. And did the integrated team ever develop cost estimates that it knew were low-ball?

Ms. MARTINDALE. Not that I am aware of.

Mr. CUMMINGS. Basically, what you are saying to me is that folks can come in with a low bid to get the contract, get the contract, and then when they get it come back for change orders and things of that nature, and that is not unusual? Yes or no?

Ms. MARTINDALE. I do not know that I can say unusual or not.

Mr. CUMMINGS. But you have seen it? You believe that you have seen that happen?

Ms. MARTINDALE. Yes, sir.

Mr. CUMMINGS. You cannot say for sure, but based upon your judgement you believe that has happened?

Ms. MARTINDALE. Yes, sir.

Mr. CUMMINGS. Okay. And I am not trying to put words in your mouth. I am just asking a question.

Mr. LaTourette?

Mr. LATOURETTE. Thank you, Mr. Chairman. Ms. Martindale, I want to pick up a little bit where the Chairman left off. I think I have in front of me the DD-250 for the delivery of the Matagorda. Just so I am clear, under the exceptions section, there is no reference to the shielded braided cable. The requirement left on the Tempest system is that the Tempest and classified testing will occur after the delivery of the ship.

Ms. MARTINDALE. That is correct.

Mr. LATOURETTE. Have you looked at the Inspector General's report, the DHS Inspector General's report?

Ms. MARTINDALE. No, I have not, sir.

Mr. LATOURETTE. The reason for that not being listed on here, on Page 5 of the Inspector General's report it indicates that the contract required the use of only shielded, not braided, metallic shielded cable as recommended by the National Security Telecommunications. And so, because the contract did not make the requirement of braided, you would not list that as an exception, what was yet to occur as the Tempest testing. Is that correct?

Ms. MARTINDALE. That is correct, sir.

Mr. LATOURETTE. Mr. Michel, I do not know if you are the right one to ask this series of questions or not, but we have sort of been going round and round on this Tempest testing business. We had a witness on the first panel that said no way could this ever pass the Tempest testing. We have in the Inspector General's report not a clear indication that it passed the Tempest testing, but the sentence is: "The Tempest testing conducted on the Matagorda and Padre between February 2004 and July 2006 indicated that the cabling installed..." so I guess this is the mylar aluminum cabling, "during the C4ISR upgrade was not a source of compromising of missions." Are you familiar with that finding by the Inspector General?

Mr. MICHEL. I am not, sir.

Mr. LATOURETTE. And do you have any opinion on that in light of your observation that you shared the same concerns as one of our previous witnesses?

Mr. MICHEL. I had examined the visual inspection report that was provided to the program by TISCOM and I was made aware of the instrumented Tempest survey results that had been performed by SPAWAR. In neither case at the initial survey was the vessel recommended for certification. Basically, it failed both tests. So what we did to simplify matters, on the DD-250 the items were rolled up into this one line item, this Tempest in classified testing, because it was simply impossible to do classified testing until we could get the vessel to pass Tempest; you just cannot do it.

Mr. LATOURETTE. Let me ask you this. This observation by the IG that whatever testing was conducted indicated that there was not—the big issue in the first panel, if you were here, is that we had national security stuff floating all over the country and our enemies could have the ability to listen in on these ships, compromising national security. Do you think this statement that the cabling installed, even though it is not the braided cable that everybody prefers, was not a source of compromising of missions is an accurate statement or not?

Mr. MICHEL. It is possible, sir. I did not actually see the instrumented Tempest results for that particular compartment?

Mr. LATOURETTE. Who would have been in charge of that?

Mr. MICHEL. That would have been Mr. Ron Porter at TISCOM. The report itself was classified.

Mr. LATOURETTE. Okay. Back to you, Ms. Martindale, for a minute. One of the exceptions listed, number seven, is low smoke cable, that we heard some things about. We have also heard from Lockheed Martin that I think at some point in time, I think after the delivery of the fourth ship, that a waiver was granted. Were you involved in that process?

Ms. MARTINDALE. No, sir.

Mr. LATOURETTE. Who would have been involved in that process? Yes, Commander Jacoby, thank you. Could you sort of walk us through that process?

Lieutenant Commander JACOBY. Yes, sir. In July of 2004, I reported on board. One of the issues that was pending, sir, was a request for waiver from the contractor to the Coast Guard for around eighty cables that did not meet the low smoke requirement. I could see from the documentation that the IPT had worked this issue for close to a year. The number of low smoke cables in the waiver request originally was very high. Through the IPT process the number of cables on the waiver was reduced to eighty. I consulted with the IPT, got their input, I also called the C4ISR lead, Mr. Michel's replacement, and got his input on recommendation on approval or disapproval of the waiver, I signed recommendation of the waiver, forwarded it to the contracting officer, and the contracting officer approved the waiver.

Mr. LATOURETTE. Okay. Again, there are a couple of storylines that can come out of this investigation and this hearing, and one, relative to the low smoke cable, is that because that requirement was waived that guardsmen are put at risk if there should be a fire

aboard that vessel. So I guess I appreciate your observations as to why you agreed to that waiver, if that were an accurate assessment.

Lieutenant Commander JACOBY. Yes, sir. To be accurate, the requirement was not waived, the request for deviation was approved for specific cables and those specific cables, as was addressed before, were either on the mast, which the rationale that was provided from the IPT and from the C4 community was that a cable on the mast that produces smoke does not put anyone at risk. Also, some of the cables on the waiver request were, for example, phone cords or keyboard cords, not cables that were installed by Lockheed Martin but cables that came on equipment. The determination from the IPT and from the C4 community was that you would not want to cut the phone cords off the COTS equipment and have Lockheed try to put low smoke cables in their place, sir. Those were the rationales that I received before signing the waiver.

Mr. LATOURETTE. Okay. And were you involved at all in the Tempest cabling issue?

Lieutenant Commander JACOBY. I was involved not with the initial design, no, sir, but I did make the cutters available to the Tempest inspectors. And then also as the PM, when discrepancies were identified, I pursued either physical correction of those discrepancies by enforcing the requirements of the contract, or correcting the discrepancies to the satisfaction of Mr. Porter, the certifying authority at TISCOM, sir.

Mr. LATOURETTE. Okay. And let us get to that. Again, when I was talking to Mr. Michel and when I was talking to the other witnesses, the allegation is that even though the contract was not violated according to the IG's finding, that the contractor had a choice, there is a preferred cable, the preferred cable was not used, and because the preferred cable was not used, we had a danger of national security being compromised. What is your take on that?

Lieutenant Commander JACOBY. My take, sir, is I relied on the recommendations and counsel of the C4 experts in the Coast Guard, which, to my knowledge, are certified to certify Tempest requirements. Like I said, we made the ships available for the inspections, we received the discrepancies from the inspections, we satisfied those discrepancies to the satisfaction of the Tempest authority.

Mr. LATOURETTE. This is kind of key to me because I think everybody wants to be clear. When you say satisfied "to the satisfaction of the Tempest authority," is there, when this thing passes, I know when it does not pass you get a report and say here are the problems, when it passes is there some kind of certificate that is issued? How do you know that it has passed?

Lieutenant Commander JACOBY. An Interim Authority to Operate or an Authority to Operate is granted once Mr. Ron Porter is satisfied with the Tempest results. For some perspective from the program management standpoint, the time period between the inspections and the final Authority to Operate or even the Interim Authority to Operate was a span of months, which was weekly meetings of the program office, the contractor, and Mr. Porter working off those discrepancies. So from a program management point of view, for one, it was very difficult to work through this

process and gain that ATL. And how we knew that we had done that was satisfied the requirements of Mr. Porter, the Coast Guard's Tempest certifying authority, sir.

Mr. LATOURETTE. Is it fair, because I do not operate in your world, but is it fair that when the ATO, the Authority to Operate was issued on these ships that the Tempest test had been completed and the system was installed in a manner that was acceptable to the service?

Lieutenant Commander JACOBY. Yes, sir.

Mr. LATOURETTE. And would acceptable to the service include a system that was leaking national security information out of its cables?

Lieutenant Commander JACOBY. I would have to assume that the Tempest certifying authority would not grant an ATO if that were the case, sir.

Mr. LATOURETTE. And did you get ATOs on all eight ships?

Lieutenant Commander JACOBY. Yes, sir.

Mr. LATOURETTE. Okay. I thank you. Nothing else, Mr. Chairman.

Mr. CUMMINGS. Mr. Oberstar.

Mr. OBERSTAR. Mr. Ghosh, you are internally and integrally involved with the design. So who was primarily responsible for the design for lengthening the hull 110 to 123 feet?

Mr. GHOSH. In my opinion, sir, it is Bollinger and ICGS.

Mr. OBERSTAR. It was——

Mr. GHOSH. ICGS as the——

Mr. OBERSTAR. ICGS.

Mr. GHOSH. ICGS as the prime contractor and support contractor Bollinger.

Mr. OBERSTAR. What was your role in all of this? You are a naval architect, are you not?

Mr. GHOSH. Yes, sir. Yes, sir, we got involved in the sense that in review of the design. But again, Bollinger calculations solved that the required strength exceeds the calculations, the 123 exceeds the stand by 100 percent but also I was the first person to contact Carderock and VT and Bollinger to get these people on board.

Mr. OBERSTAR. Now you had conversations with, as we understand it, Scott Sampson, a Navy employee at the Carderock facility, which I always called the David Taylor Model Basin. In September 2002, Mr. Sampson warned the Coast Guard at that time of a likely design flaw. Did you get detailed information about that?

Mr. GHOSH. Yes, sir. Before even then, actually, the 179 problem, the cracks on the 179, I knew about that. And they are correct that the 179 was lengthened only five percent, but under 123 it was 12 percent. But there is a distinction between the length. The 110-foot versus 175-foot, that length difference makes this problem different. In our analysis, for the analysis in the future, what we found and we knew for a small boat the failure which the PC had is a yielding failure, meaning steel has yield strength of 40,000 pounds per square inch. The failure on the 179 PC was cracking due to tensile strength exceeding that 40,000 pounds. But in our case, the 110, because of the short length, the failure is completely different. It is a buckling failure, which could be much lower. Like

in our Matagorda case, it was only 7,200 pounds per square inch. So the two failures are completely different and all the knowledge and ABS rules and DNV rules, everybody suggested that, like for example the DNV rules only apply to more than 150-foot length. The ABS rules, the 1997 rule which Mr. Scott Sampson mentioned, did not apply. In that rule it said that this buckling, and all this conversion needs to be done if it is more than 20 feet. Subsequently, of course, ABS changed that rule in 2003 to 79 feet.

Mr. OBERSTAR. ABS changed the rule?

Mr. GHOSH. ABS changed the rule. Yes, sir.

Mr. OBERSTAR. Now, did the Navy offer to provide design and engineering support for Bollinger, for Northrop Grumman, and for the Coast Guard?

Mr. GHOSH. Yes, sir.

Mr. OBERSTAR. We understand that offer was declined.

Mr. GHOSH. Because I couldn't get the funding. I didn't have any funding.

Mr. OBERSTAR. The funding was how much?

Mr. GHOSH. Forty two thousand dollars, as stated.

Mr. OBERSTAR. Forty two thousand dollars, did you say? Total cost, we understand, was somewhere between $50,000 and $60,000. This is a $90 million project?

Mr. GHOSH. Yes, sir.

Mr. OBERSTAR. Commander Jacoby, could you not find that money?

Lieutenant Commander JACOBY. Respectfully, sir, this was two years before I joined the program. I cannot really speak for whether they could find the money or not, sir.

Mr. OBERSTAR. All right. The Navy offered, and it was not going to do this free, they were going to do it on a cost reimbursable basis, and the cost was in the range of $60,000 on a $90 million contract. I do not understand this. When did you, Mr. Ghosh, become aware of the deck cracking issue on the 123s?

Mr. GHOSH. After September 2004 Matagorda.

Mr. OBERSTAR. By a year later, at least six of the eight converted ships had developed severe cracking. Is that correct?

Mr. GHOSH. It is not cracking, sir. There is cracking in the aluminum deck, but the main problem has been the buckling on the side cells. The current problem is buckling of the bottom and misalignment of shafts, we cannot keep the shafts aligned. It is a much more complicated problem.

Mr. OBERSTAR. You can have buckling without cracking?

Mr. GHOSH. Yes, sir.

Mr. OBERSTAR. I understand.

Mr. GHOSH. Because the stress level for the buckling is much, much lower.

Mr. OBERSTAR. Did you think it was useful to have the Navy advise the Coast Guard on this?

Mr. GHOSH. Well, the current problem, the way we have analyzed it—yes, of course, it would have been good. But the solution they would have presented at the time, like we have already done in our Mod 1, Mod 2 structures, we have increased the section modulus as well as the buckling, in case the buckling, and still

there are problems. So it is a much more complicated problem than Navy size to think.

Mr. OBERSTAR. You said something very interesting earlier in your statement. You are comparing strength of steel. I know a good deal about steel. My district is very much involved in it and I have spent a great deal of time on the steel industry. You talked about 14,000 pound strength per square inch?

Mr. GHOSH. Forty, sir.

Mr. OBERSTAR. Pardon me?

Mr. GHOSH. Forty thousand, sir.

Mr. OBERSTAR. Forty thousand?

Mr. GHOSH. Yes, sir.

Mr. OBERSTAR. I misunderstood.

Mr. GHOSH. It is a high strength steel.

Mr. OBERSTAR. Very high strength. Yes. And was it 7,200 pounds per square inch——

Mr. GHOSH. For the buckling failure, sir, yes.

Mr. OBERSTAR. So what was the specification for strengthening of the hull, if any, on the 123?

Mr. GHOSH. The contract is supposed to look at this critical buckling strength, 7,200. But, again, the section that was calculated was so high, almost 200 percent than required, so they did not do any calculations. Plus, it did not require it.

Mr. OBERSTAR. A previous panel said that this was not a problem at all. That the problem of hull buckling or cracking was due to an underlying stringer in the ship construction that was not attached and therefore did not provide strength, and that the failure was due to something else, not to the design of the hull extension.

Mr. GHOSH. That is true. The Matagorda——

Mr. OBERSTAR. True that there was a stringer——

Mr. GHOSH. A stringer not welded.

Mr. OBERSTAR. Did that have a relationship to the strength of the hull?

Mr. GHOSH. That stringer not being welded, the Matagorda failed at very low wave height, at very low systems. But eventually, when we fixed the problem and increased the strength based on when we found the calculus mistake and we increased the strength, which Carderock would have suggested the same thing, still we had failure. That failure is not due to just not having the welders stiffen her. It is much more complicated. And our theory is, again, we have spent half a million dollars almost in trying to solve this problem with experts from Europe, the original designer VT, and several fine detail analyses we have done.

The main theory, what we think is that because the engine room hatch basically does not have the deck, it has a soft patch to remove the engines, that moved towards the midship of the hull. Also one other problem would be the 110 and 123 has aluminum deck, not steel. Aluminum basically behaves like rubber in this particular case. And that is like a canoe, if you have an open canoe, you can push it and it sort of buckles. And that is what is happening. We cannot prove it by analysis and we have gone to many experts, nobody could pinpoint the exact failure mode.

Mr. OBERSTAR. Why would that not have shown up prior to actual construction work undertaken on the vessel? Why would there

not have been a design evaluation before you put the vessel to construction? And secondly, why in the lengthening and strengthening, why did not someone notice the stringer was not attached? I do not understand that.

Mr. GHOSH. Okay. Sir, the stringer not attached was——

Mr. OBERSTAR. And was that endemic to the other vessels?

Mr. GHOSH. No, sir.

Mr. OBERSTAR. Just to this one?

Mr. GHOSH. Just that one.

Mr. OBERSTAR. But the others cracked, the others buckled.

Mr. GHOSH. Buckled. And the main problem right now is that we cannot keep our shafts aligned.

Mr. OBERSTAR. All right. So the testimony we got in the previous panel was, not your words but mine, a coverup for their failure. When you received this information from the Navy and then you passed it on and recommended their guidance and action was not taken because, in the Coast Guard's words, they did not have the money to do this, did you have any further leverage in this arena? Were your hands tied at that point?

Mr. GHOSH. No, sir. We could not use our own money plus we did not have our money also, because these engineer projects we have like kind of money to use, you can use can mix and match.

Mr. OBERSTAR. All right. Thank you, Mr. Chairman. I think that testimony is very helpful and sheds important light. I am going to come back and review this matter of steel strength and take a closer look at it later, not in this hearing but in another context. I appreciate that. That is very, very useful testimony.

Mr. CUMMINGS. Mr. Gilchrest.

Mr. GILCHREST. Thank you, Mr. Chairman. Maybe if you wrote a letter to the Coast Guard Auxiliary they would have contributed that $40,000 for that extra evaluation.

Mr. Ghosh, you have in your testimony on Page 3, I just want to read a couple of sentences, second paragraph, "I asked both the contracting officer's technical representative and the Bollinger members of the technical management information team to award contracts to the Navy's Combatant Craft division because of its experience with similar problems that occurred after lengthening the 179-foot Patrol Craft and its earlier involvement with the 110-foot Island Class Patrol Boat. I also suggested that Bollinger consult Vosper Thornycraft because it was the original designer of the Island Class Patrol Boats. I was unable to get support for this." Who did you need to get support to have this done?

Mr. GHOSH. I would say the project office.

Mr. GILCHREST. Who was in the project office that did not give you support for this?

Mr. GHOSH. While I was a member of the team I could go there and I could not go any further. But also I would like to point out that even if we had gotten the support at the time, the section modulus, suppose we had gone to Carderock at the time, they would have told us to increase the section modulus, and that is exactly what we have done to date. But still the boat fails.

Mr. GILCHREST. So what I am saying is you had some concern about design flaws I guess and you could not get support for further evaluation for those proposed design flaws.

Mr. GHOSH. No, sir. I did not know there was a design flaw. I just wanted them to look at the design because they have the experience, more than I did.

Mr. GILCHREST. Now why were you not able to get support for this further evaluation?

Mr. GHOSH. I cannot speak for—I did not control the money.

Mr. GILCHREST. Who specifically was the person that turned you down?

Mr. GHOSH. I cannot remember exactly, but everybody in the Deepwater program knew about that we wanted to get the money to get the——

Mr. GILCHREST. I would just like, Mr. Chairman, I would like to follow up and find out who that person was that you suggested that you get this other information, and I think I would just like to follow through so we that we can find out who that person or persons were.

I would like to go to Page 5 of your testimony, the second from the last paragraph, about the middle way down. I just want a clarification from you, Mr. Ghosh, that it seems from what you say here that you now understand what caused the damage on the hull buckling on these ships: "After analyzing all additional information, the Coast Guard's Engineering Logistics Center has developed a solution that might address all the possible mechanisms of damage; add a stiff beam in a closed tube to the upper edge of the deck. I believe this will address the major structural problems, but I cannot provide complete certainty that this will work, or that there are no other unanticipated problems." So what we are talking about here, what Mr. Oberstar is talking about, the hull breaches, the hull buckling and all of those issues, a stiff beam in a closed tube to the upper edge of the deck will solve some of those problems possibly?

Mr. GHOSH. Possibly so, yes. The thing is that increasing the strength by just putting plates or stiffener did not work. What we have come to the theory about that, if we have a closed cell which is several hundred times stronger in torsion and that will stabilize the deck.

Mr. GILCHREST. We have eight ships sitting up at Curtis Bay just outside of Baltimore City. If you think you might have a solution to this problem, should we scrap those boats or should we pick out one and see if it will work?

Mr. GHOSH. Well, that is not——

Mr. GILCHREST. That is not your decision to make.

Mr. GHOSH. That is not my decision to make. I do not have a 100 percent guarantee. I cannot guarantee.

Mr. GILCHREST. Considering all the money that has been put into this project—there are some pretty good workers up there at Curtis Bay. Is it possible to hold the line, say let us not scrap all these ships, let us see if we can salvage one, put it out on the high seas for a year? And I will sail down to the McMerdo on it if need be, Mr. Chairman, give me six months leave of absence. Are these ships so far gone that salvaging one and testing it out just is not worth it?

Mr. GHOSH. No, sir. I agree, you could do that, what you say, sir.

Mr. GILCHREST. So these 110 boats changed to 123, that has never been done before? This is the first time we took 110s to make them 123s?

Mr. GHOSH. Yes, sir.

Mr. GILCHREST. This is really a silly question I guess, but considering all the potential problems that we are seeing here, both from Lockheed Martin and from Northrop Grumman, from the aviation, the logistics, the hulls and all that, would it not have been more prudent to do one, set it out there, because the first one entered service in 2005 but there were already hull problems in 2004 on that same boat, set it out there and see if you could get the kinks out?

Mr. GHOSH. Yes, sir.

Mr. GILCHREST. Did the Navy have similar problems when they went from 170 to 179?

Mr. GHOSH. Not similar problems, sir. I just said that the stress level on the deck, their's is in the 40,000 pounds per square inch level and ours is between 7,000 to 12,000, in that range.

Mr. GILCHREST. You talked about solving—this will be my last question, Mr. Chairman—you talked about as far as add a stiff beam in a closed tube to the upper edge of the deck would have solved some of those damage problems with the 123. Is there a similar design in the 179?

Mr. GHOSH. No, sir. They have, again because the problem is different, they have increased the strength. Though my solution also calls for increasing the strength, but in the 123 case, just increasing the strength does not help. It has to have a closed cell because of the open deck. In the PC, though they have some hatch, but by increasing the strength that solved their problems. There was cracking in their case. In our case it is mostly buckling.

Mr. GILCHREST. How many 110s are left in the Coast Guard?

Mr. GHOSH. Forty-one, sir.

Mr. GILCHREST. Are any of those going to be 123s?

Mr. GHOSH. No.

Mr. GILCHREST. Okay. Thank you, Mr. Chairman.

Mr. CUMMINGS. Before we go to Mr. Kagan, let me ask you this, Mr. Michel. Given that you agreed with Mr. DeKort's concerns, did you believe that Lockheed Martin did anything unethical?

Mr. MICHEL. I would not say unethical, sir, no.

Mr. CUMMINGS. Did you file an ethics complaint?

Mr. MICHEL. I did not, sir.

Mr. CUMMINGS. Okay. Mr. Kagan.

Mr. KAGAN. Thank you, Mr. Chairman. I did not know when I took this job we might be having sleep-overs. I do not think I brought all my equipment.

Mr. CUMMINGS. At least you are a doctor, so if we get sick you can take care of us.

Mr. KAGAN. That is right. But I am not allowed to write myself those prescriptions.

Is it Doctor Ghosh? Ph.D?

Mr. GHOSH. No, sir. I have just a Bachelor's degree in naval architecture from Indian Institute of Technology.

Mr. KAGAN. With 33 years of experience in architecture related to naval vessels?

Mr. GHOSH. Yes, sir.

Mr. KAGAN. And were you here during the earlier testimony when I questioned Mr. Stanley?

Mr. GHOSH. Yes, sir.

Mr. KAGAN. And do you agree with his answers with regard to potential responsibility?

Mr. GHOSH. I would say yes, sir.

Mr. KAGAN. Is there anybody else that you think you should add to the list of three?

Mr. GHOSH. No, sir.

Mr. KAGAN. And with regard to the name of the person, either your superior or someone in your organization that may not have been able to come up with the money necessary to do some more studies, is it possible that you could find that person's name, if not tonight then in the next several days, certainly during my first term here?

Mr. GHOSH. It has been five years, sir. I did not keep that good notes on that. But again, it was in a meeting and all names have been given.

Mr. KAGAN. All right. Well can you offer perhaps three things that you think were the primary things that went wrong with the 110? Give me a list. I have a scientific mind. But do not shake your hands because I teach medical students when a professor does this we put out notes down, do not write anything, because it is just a bunch of bull. So just give me three things that you think were the key things that went wrong with this project. Design. You mentioned the space in the hull, the hatch, so to speak. Let me ask you yes or no: Can you come up with three things that you think were central to the failure of this project?

Mr. GHOSH. I guess I could.

Mr. KAGAN. Perhaps then you could write to me and give me the answers in writing at a later time.

[Information follows:]

Insert on Page 264, Following line 6158

In my opinion, there were errors in the section modulus (strength) calculations performed by the Integrated Coast Guard System (ICGS) subcontractor and failures to fully consider other engineering issues, particularly critical buckling strength. While these errors were not the primary cause of the failures, the flawed calculations provided industry and government with a false confidence in the design which affected the decision process on the issues listed below. I believe, there were three fundamental problems that created the situation in which these failures were possible:

1) Proposal Evaluation. In my opinion, the time to stop the concept was at the proposal stage. The basic concept of lengthening the cutter, especially from the aft end, was unusual and therefore high risk. Even aside from any details of the proposal, this approach implied that the original Island class cutter designers did not wring every ounce of weight out of the structure and had structural capacity to spare, which is unlikely for a high performance light vessel. This proposed modification should have been subject to much more scrutiny and should not have been accepted without detailed analyses verifying the structure. Though the risks of this proposal were pointed out by Engineering Logistics Center (ELC) "big ship" naval architects during proposal evaluation, the ELC subject matter experts on patrol boats who were also intimately familiar with the Island class cutters did not participate in this phase. These subject matter experts could have either done a more extensive analytic scrutiny of the vessel or at least elevated the concerns, before the program was irrevocably committed to this course of action. The evaluation of the proposal should also have considered the extent of the expertise of the builder/designer, Bollinger Shipyards Ltd. Bollinger has been a very successful builder of patrol boats for the Coast Guard. They built the original Island class cutters and more recently the smaller Marine Protector class cutters. However, in both of these projects they had substantial engineering support from experienced design agents; Vosper Thornycroft for the Island class cutters and Damen, and other specialists specific to stern launch ramps, for the Marine Protector class cutters.

2) Prototype Trials. In my opinion and as Representative Gilchrest suggested during the hearing, a single prototype could have been built and proven fully at sea for a reasonable period of time prior to proceeding with awards for more conversions. Some of this testing could have been conducted with instrumentation for motions and structural stresses. Though this would have had adverse schedule and budget impact, it might have avoided our subsequent problems. In my opinion, the trial data obtained also would have enhanced our understanding of the fundamental design factors for light weight high-speed craft. The Coast Guard has, in the past, successfully followed this philosophy of prototype testing before full production. One prototype and five pre-production prototypes of the 47-foot Motor Life Boat were tested extensively for over two years before full production. Currently, the Response Boat-Medium project has taken an even more conservative approach – three contracts were awarded for construction of three different prototype boats. These boats were fully tested before awarding a full production contract, and the tests allowed each contractor to improve his offer, and allowed the government to reduce its risk in selecting a single final contractor for production.

3) Enforceable, Detailed Standards. As witnesses have testified, the Deepwater contract and its referenced standards and performance requirements left many areas open for interpretation. I believe this shows the clear need for definitive, proven, detailed standards and criteria, and for contract language that allows the government to test, verify and enforce those standards. The American Bureau of Shipping (ABS) Guide for Building and Classing High-Speed Craft 1997 has language that advises critical buckling studies, but this guidance was not mandatory. In my opinion, for the Island class conversion, clear direction to consider critical buckling due to longitudinal bending would have at least given an alert to prevent initial side shell and deck buckling, and this alert may well have resulted in more extensive scrutiny.

It is my opinion that the Coast Guard's over-reliance on the contractor's engineering ability and oversight at the beginning of the contract award; a bias toward schedule over other factors and standards and contract wording that were vague and not easily enforceable, combined to produce the problems that led the Coast Guard to stop production after eight cutters.

Mr. KAGAN. Mr. Michel, you mentioned in your statement that you are an assistant deputy for systems implementation with the Coast Guard's nationwide automatic identification system project.

Mr. MICHEL. Yes, sir.

Mr. KAGAN. I am sure they do not answer the phone that way. But can you give me just a little background about what that means, what you do?

Mr. MICHEL. These days I am more of a program management type than an engineering technical lead. But the two are closely related in my present responsibilities.

Mr. KAGAN. So someone in that organization depends on your judgement?

Mr. MICHEL. Yes, sir.

Mr. KAGAN. And your judgement is based not just on your education, but your training and your experience. Is that correct?

Mr. MICHEL. Yes, sir.

Mr. KAGAN. Sir, you were involved in this project. Let me ask you this. Do you agree with everything offered in sworn testimony by Mr. Atkins?

Mr. MICHEL. I do not.

Mr. KAGAN. Is there anything that you disagree with him on?

Mr. MICHEL. I think that some of his statements were a bit of a stretch.

Mr. KAGAN. So the adjectives might be a problem. But what about the facts? Is it not a fact that some wiring and covering of wiring created the possibility, as you testified earlier this evening, for eavesdropping?

Mr. MICHEL. For compromising emanations, yes, sir.

Mr. KAGAN. And when you left the project, is it not also true that that same wiring was in place?

Mr. MICHEL. Yes, sir.

Mr. KAGAN. Do you think your judgement was sound in allowing it to continue to be present?

Mr. MICHEL. I made my concerns known during my tenure.

Mr. KAGAN. Well you did talk about it. But what happened? What were the results? What do you think? Was it poor judgment to walk away from that project knowing that there were unshielded wiring?

Mr. MICHEL. Perhaps, sir. But it was a promotion.

Mr. KAGAN. Okay. Okay. I will tell you, I am new around these parts and I think, Joe, you testified earlier that you thought there was really a contract problem. I do not think it is a contract problem. I think it is a people problem and it is really a problem of oversight. And I can, as my time expires here, reassure you that the 110th Congress is intently interested in providing oversight. And in my evening that I am spending here with you, there was one man who was honest thus far, and that gentleman from Bollinger is sitting in the back row. Mark fessed up, he accepted responsibility, and he has invited everybody else to accept responsibility.

If I may just ask Cathy Martindale a question. Are you understaffed? Do you have a lot more responsibility to do personally than you think one person should be doing?

Ms. MARTINDALE. While assigned to the Deepwater project, yes, sir.

Mr. KAGAN. So how many other staff members do you feel would be adequate to get the job done right?

Ms. MARTINDALE. There should be an over-arching surface contracting officer, there should be a contracting officer assigned to each asset; that would be the SRP, the 123, the NSC, the FRC, the OPC. That would be five contracting officers, and they would need two to three specialists working for each of those contracting officers.

Mr. KAGAN. Is that not a staff of close to 18 in addition to you?

Ms. MARTINDALE. Yes, sir.

Mr. KAGAN. And who would be responsible for providing all that staff? Who is the decisionmaker? Where does that buck stop?

Ms. MARTINDALE. I really do not know, sir.

Mr. KAGAN. See, one of the principles in my businesses that I have run is that if I give someone a job that they cannot do, shame on me. Someone gave you a job that was humanly not possible in my early estimation. Would you agree with that?

Ms. MARTINDALE. Yes, sir.

Mr. KAGAN. All right. So it is a question again of failure of oversight. It is not a failure of contracts. I do not think this is necessarily a problem that is going to be solved by attorneys. This is going to be solved by this Congress in its oversight of activities, not just in the Coast Guard but elsewhere.

Any other comments from the panel before I yield back my time?

Ms. MARTINDALE. I have a comment, sir. I believe another issue of concern is the construct of the contractor. It has been a struggle in administering the contract when you have a joint venture, ICGS, which is a shell of a company, and then you have subcontractors, Lockheed Martin, Northrop Grumman Ships Systems, and then another tier subcontractor, Bollinger. Not necessarily do those contract relationships reflect that of the Coast Guard's with ICGS making it an additional challenge. Also, the work was divided up. C4ISR was focused on doing their C4ISR work, HM&E was focused on doing their HM&E and not necessarily when the two would come together do they work compatibly. That was just a fallout of the organizational construct with whom we had a contract relationship.

Mr. KAGAN. You have just described a disorganized orchestra where everyone is playing their own musical instrument but there is no conductor. So we have Madam Speaker Pelosi to guarantee there is going to be oversight in this Congress. I yield back my time.k

Mr. CUMMINGS. Thank you very much. I just wanted to say that Admiral Blore, who is right over there, Ms. Martindale, is the guy who can get you some more help. Okay?

Mr. Altmire.

Mr. ALTMIRE. Thank you, Mr. Chairman. I wanted to clarify one thing. This question is for Commander Jacoby. You talked earlier about Ron Porter and the visual Tempest exam of the Matagorda.

Lieutenant Commander JACOBY. Yes, sir.

Mr. ALTMIRE. My question is, was Ron Porter a fully certified Tempest authority at the time he conducted the visual Tempest exam of the Matagorda?

Lieutenant Commander JACOBY. To my knowledge, he was. Although I did not verify his certification, sir.

Mr. ALTMIRE. Okay. Thank you. My next question is also for you Commander. According to records supplied by the Coast Guard, Matagorda received its Interim Authority to Operate its C4ISR on October 14, 2004. It then has a visual Tempest inspection on December 19, 2004, which noted a few lingering discrepancies. It received its Authority to Operate on January 19, 2005. Next, the 123 class received a class waiver for visual discrepancies on July 12, 2005. Matagorda itself was reinspected for visual Tempest on October 28, 2005. So the question is, why did Matagorda receive its ATO before the class waiver for the 123's visual discrepancies was granted and before Matagorda was given a visual Tempest inspection to assess the condition of remaining deficiencies?

Lieutenant Commander JACOBY. I tried to keep up with you on dates there, sir. I believe that there is a mixing of two issues there. The class-wide waiver which applied not to the Matagorda but the follow-on hulls was granted I believe on the date you mentioned. If I can just run through the Matagorda dates, I think that would clear up things.

Mr. ALTMIRE. Please.

Lieutenant Commander JACOBY. The Matagorda received a visual Tempest inspection and an instrumented Tempest inspection in the February 2004 timeframe, it received Interim Authority to Operate in October 2004, and a final Authority to Operate in January of 2005. Those dates in sequential order I believe are the only ones applicable to Matagorda. The class-wide waiver, in my understanding from what I have received from Mr. Porter, was after several cutters had been tested, his confidence level that the class met a configuration management standard that was consistent across the class and so he felt comfortable granting a class-wide Authority to Operate.

Mr. ALTMIRE. Okay. Thank you. My final question we pulled from the testimony and it has some acronyms in there which I am going to try to pronounce correctly, but forgive me if I do not. From March 11 to April 5, 2005, Matagorda was among a group of ships reassessed by Navy's COMOPTEVFOR unit and the Navy wrote the following, which I think we were going to put up on the screen but it is late now: "Tempest discrepancies and COMSEC discrepancies were corrected in Coast Guard Cutter Matagorda; however, there were unsolved installation discrepancies which precluded SPAWAR CISCOM recommendation for Coast Guard 62 to release an IATO. Without an IATO cutters were not authorized to transmit and receive classified information, significantly limiting their participation in U.S. Coast Guard tactical operations" And then later they wrote: "In spite of this progress, physical connectivity was still assessed as a high risk based upon the inability to establish and maintain classified two-way data exchanges with other Coast Guard and naval vessels."

Lieutenant Commander JACOBY. Yes, sir. It is my understanding that the date on which COMOPTEVFOR, the Navy Command, as-

sessed the Matagorda it did not have an ATO, therefore could not energize their secure communications. So COMOPTEVFOR noted that they could not test certain gear during that evaluation. And I believe the ATO for Matagorda came several weeks after COMOPTEVFOR had done their evaluation, sir.

Mr. ALTMIRE. Commander, had the Matagorda been handling classified information by this time?

Lieutenant Commander JACOBY. No, sir.

Mr. ALTMIRE. They had not?

Lieutenant Commander JACOBY. No, sir.

Mr. ALTMIRE. Okay. Why did the Coast Guard issue an ATO in January 2005 to the Matagorda when the Navy noted that unresolved installation discrepancies precluded SPAWAR from recommending the Coast Guard to release IATO when the system is still considered high risk at that time, March-April of 2005?

Lieutenant Commander JACOBY. Sir, I believe there are two separate processes, the Navy's operational evaluation of the cutter is not linked to Mr. Porter's working with SPAWAR and determining the suitability of the Tempest system, sir.

Mr. ALTMIRE. Okay. Thank you, Commander. Last question. Did the sequence of events pose a risk of compromising national security at any time?

Lieutenant Commander JACOBY. It has always been my belief based on input from the C4 community and the Coast Guard that that is not the case.

Mr. ALTMIRE. Okay. Thank you, sir.

Mr. CUMMINGS. Tell me again, when did the Matagorda get its ATO?

Lieutenant Commander JACOBY. I show a final ATO granted on 19 January 2005, sir.

Mr. CUMMINGS. And was that before the Navy assessment?

Lieutenant Commander JACOBY. I do not have the Navy report in front of me, sir.

Mr. CUMMINGS. March-April of 2005. How does that affect your testimony?

Lieutenant Commander JACOBY. I would have to check those dates, sir.

Mr. CUMMINGS. That is very, very important because you just gave us some information that we want to make sure is accurate. We can tell you that the information we got is that the Navy's examination was in March of 2005.

Lieutenant Commander JACOBY. Yes, sir. I believe what I am reading off of is something we provided for the record. I would be happy to provide this and the actual reports for the record, sir.

[Information follows:]

Insert on Page 273, Following line 6379

The timeline for TEMPEST testing is attached. COMOPTEVFOR's letter of 27 April 05 was requested by the Coast Guard as a follow up to their Operational Assessment Analysis that was conducted from June 03 to July 04. In that letter, COMOPTEVFOR noted that the 123' WPB had achieved TEMPEST certification. An Operational Assessment Analysis is a precursor to the Operational Evaluation. TEMPEST is only one of the considerations of the Operational Evaluation.

123' PATROL BOAT TEMPEST TIMELINE – INSERT 060

123' WPB Name	Hull Number	Date Delivered	Visual Inspection[1]	Inspector(s)	Instrumented TEMPEST Survey[2]	Inspector
USCGC MATAGORDA	WPB-1303	1-Mar-04	19-21 Feb 04	Ron Porter	16-23 Feb 2004	SPAWAR
USCGC METOMPKIN	WPB-1325	13-Apr-04	7-Jan-05	Joshua Cole	N/A	N/A
USCGC PADRE	WPB-1328	24-Jun-04	28-Jan-05	Joshua Cole	July 14-19, 2006[6]	SPAWAR
USCGC ATTU	WPB-1317	3-Aug-04	3-Aug-05	Timothy Neary	N/A	N/A
USCGC NUNIVAK	WPB-1306	15-Feb-05	7-Jan-05	Joshua Cole	N/A	N/A
USCGC VASHON	WPB-1308	9-Mar-05	17-Mar-05	David Cooper/James Bennett	N/A	N/A
USCGC MONHEGAN	WPB-1305	4-Oct-05	2-Nov-06	Brian Meetze/Michael Harrison/James Cabese	N/A	N/A
USCGC MANITOU	WPB-1302	13-Jan-06	23-Jan-06	Kevin Priddy/David Beaver	N/A	N/A

123' WPB Name	Hull Number	Date of Interim Authority to Operate (IATO)[3]	Issuing Authority	Date of Authority to Operate (ATO)[4]	Issuing Authority
USCGC MATAGORDA	WPB-1303	14-Oct-04	CG-62[7]	19-Jan-05	CG-62
USCGC METOMPKIN	WPB-1325	6-Apr-05	CG-62	23-Jun-05	CG-62
USCGC PADRE	WPB-1328	25-April-05[5]	CG-62	22-Jun-05	CG-62
USCGC ATTU	WPB-1317	14-Oct-04	CG-62	22-Jun-05	CG-62
USCGC NUNIVAK	WPB-1306	N/A	N/A	10-Feb-06	CG-62
USCGC VASHON	WPB-1308	N/A	N/A	10-Feb-06	CG-62
USCGC MONHEGAN	WPB-1305	N/A	N/A	10-Feb-06	CG-62
USCGC MANITOU	WPB-1302	N/A	N/A	10-Feb-06	CG-62

[1] The 123' WPB Class TEMPEST waiver was issued on July 12th, 2005, but Visual TEMPEST Inspections are still required for each hull. More than one visual inspection may be conducted as discrepancies are corrected. Visual Inspections are conducted by Field TEMPEST Authorities (FTAs).
[2] Usually conducted for the First of Class only, must be conducted by a Certified TEMPEST Testing Authority (CTTA). The U.S. Navy's SPAWAR was the CTTA. The remaining cutters did not require an ITS.
[3] There may be more than one IATO, as an IATO may be issued with a time-dependent condition, so if a condition isn't met in accordance with the first IATO, it would be rescinded, then a second IATO would be required.
[4] The date of Authority to Operate for the entire 123' WPB Class was February 10th, 2006, making IATO for the last four cutters not applicable (N/A).
[5] The Coast Guard is attempting to locate the documentation for this date.
[6] PADRE also had an Instrumented TEMPEST Survey (ITS), after ATO. This survey would not normally have been required, but was conducted in response to Department of Homeland Security Inspector General concerns about the TEMPEST testing on MATAGORDA.
[7] Chief, Office of Communications Systems, Captain L. Ritter.

Mr. CUMMINGS. Mr. Taylor.

Mr. TAYLOR. Thank you, Mr. Chairman. Commander Jacoby, you were the project officer?

Lieutenant Commander JACOBY. I was the program manager for the 123 program.

Mr. TAYLOR. In previous testimony I heard the gentlemen talking about electronics that were exposed to the weather that were not required to be waterproof. I kept waiting for someone to say, no, you are wrong, it was in the specs. I still have not heard anyone say that. How does something as basic as that happen? Any boatswain mate third class is going to go the first time it rains, the first time we catch a wave this stuff is ruined. How does something like that happen?

Lieutenant Commander JACOBY. I agree with your assessment, sir, that that does not seem like something that could happen. In reality, coming on the program halfway through, I still know the contract states environmental requirements for operation of the equipment and that a certain radio was installed on the SRP that did not meet those environmental requirements, sir.

Mr. TAYLOR. Were you empowered to catch mistakes like that?

Lieutenant Commander JACOBY. It actually happened two years before I reported, sir. But yes, if I as program manager saw items that did not meet the contract requirements, I was empowered to work through the contracting officer and make corrections.

Mr. TAYLOR. Okay. So your predecessor program officer, was he a lieutenant also at the time? I am taking it you were a lieutenant a couple of years back.

Lieutenant Commander JACOBY. The prior program manager, there were several, some were GS-14s, I am not sure of all the ranks of the previous ones.

Mr. TAYLOR. I realize the Coast Guard, as all the services do, throws a heck of a lot of responsibility on very young officers. But it strikes me that a program with a $90 million expenditure, eight ruined cutters, did you at any time then or since think you just were not high enough of a pay rate to address these problems?

Lieutenant Commander JACOBY. Sir, I think I mirror Ms. Martindale's feelings of the program early on, the staffing levels were very bleak. When I reported aboard my billet was actually to be the deputy surface program manager with an over-arching view of all the cutters construction. Shortly after arriving I saw the 123 program with a need for some change and some guidance and I took that over in addition to the deputy surface job. After some months of work on the 123 it was clear that was a full-time job plus. So in that timeframe of 2004, people were wearing two and three hats and moving the program forward. The Commandant yesterday talked about increasing manning levels and oversight. I can attest I witnessed over my two and a half years on the program the increase of staffing levels. After a while the people who were wearing three hats got replacements and before I left in October of 2006 we were properly manning each billet instead of asking people to cover two and three billets, sir.

Mr. TAYLOR. Again, and I would invite you to correct me, but that one jumps out at me as so glaring that I find it inconceivable.

Let us take it to something a little bit more complicated, the hogging and sagging calculations. Is that your normal expertise within the Coast Guard? If a crewboat company or a ferryboat operator were going to lengthen their vessel, is that the sort of calculation that you would run?

Lieutenant Commander JACOBY. I am not a naval architect or a marine safety inspector, sir. But I am a shipboard engineer for the Coast Guard, an engineer on 2-through 78-foot ships and even an engineer supporting the patrol boats down in Key West prior to my deepwater career. I think, from a commonsense standpoint, I share your concern that that does not pass the commonsense test. But I am not a naval architect to back that up with calculations, sir.

Mr. TAYLOR. Commander, let me ask you this, and I very much appreciate your frankness, what is being done so it does not happen again? I have told you my concerns with the LCS, I have told you my concerns with the next generation cutters. Shame on me if a mistake is made once, but shame on all of us, enlisted, officer rank, Members of the Congress, members of the Administration if we let this happen again. I really, based on what I have heard here tonight, do not have any confidence that we are doing this any better. And what is particularly troubling, I sense this is the shipboard equivalent of sweeping it under the rug when you cut this ship up for scrap or if it is sunk offshore for a fishing reef and it is no longer there to be on 60 Minutes. We have got a real problem here.

Lieutenant Commander JACOBY. Yes, sir.

Mr. TAYLOR. I would like to hear from you as an up and coming officer in the United States Coast Guard that you have got a high degree of confidence that this is being addressed rather than just let us hope nobody asks that question again.

Lieutenant Commander JACOBY. Yes, sir. I firmly believe that the factors that led to the structural as well as the C4 issues we have talked about tonight I could see the evolution of the things that will keep those from happening again in my two and a half years in the Coast Guard. One of them was the manning level that we talked about, the wearing three hats. I think there has been comparisons between Deepwater manning and Navy shipbuilding manning and we were trying to build ships with very few people.

Another major contributor is the specificity of the requirement in the contract. In all these situations, we were dealing with contract language that was signed in 2002 and left the contractor and the Government in many cases unclear on the exact requirements. It was a performance-based contract but it still could have specificity that both the Government and industry could use to manage costs, manage expectations, manage requirements.

Additionally, the oversight and the input from regulatory agencies, the Commandant and the PEO have mandated the use of regulatory agencies in further designs, and I have personally been involved in incorporating the things that brought us problems on this contract, like specific words in the contract or lack of words in the contract, into future contracts for the FRC and the OPC. So I do have a sense that I have contributed by the painful lessons learned to better contracts and better oversight and better manning for the Deepwater program, sir.

Mr. TAYLOR. If a contract passed your desk tomorrow that called for a radio, a radar, fill in the blank, that is going to be exposed to the weather and did not mandate that it be waterproof, and we all know the difference between weatherproof and waterproof, would you be empowered to say, no, we are going to fix this right now rather than buy two or three or four of these at Government expense and replace the ones that do not work?

Lieutenant Commander JACOBY. Absolutely, sir. I do have examples of issues that arose in the Deepwater program that the program office felt did not meet contract requirements and were able to enforce those requirements and get design changes and even retrofits on the cutters. So there are examples of successes in enforcing the contract requirements, and then there are examples of the program office unsuccessfully enforcing, mostly because of the wording that was incorporated into the contract in 2002, either vague or lacking the specificity.

Mr. TAYLOR. Who in your opinion should have caught the hogging and sagging problem before it happened?

Lieutenant Commander JACOBY. The Coast Guard's contract is with ICGS. I feel the responsibility was with ICGS. In fact, I worked with my contracting officer to issue two latent defect letters to the contractor; one days after the Matagorda buckling incident, the other several months later when the deformations appeared on other cutters.

Mr. TAYLOR. Okay. Thank you very much, Commander.

Lieutenant Commander JACOBY. Yes, sir.

Mr. TAYLOR. Thank you, Mr. Chairman.

Mr. CUMMINGS. Mr. Oberstar.

Mr. OBERSTAR. Yes. I have a follow-up for Mr. Jacoby. In January of 2005 the Matagorda got authority to operate; meaning that they also had authority to transmit and receive classified data. But at that time, according to all testimony we have seen, they had not yet passed the instrumented test, as it is called. The only instrument test which allegedly was passed was in July 2006 but for another ship in the same class as the Matagorda. Was it legal for the Matagorda to operate under those circumstances?

Lieutenant Commander JACOBY. I believe so, and I will tell you from my perspective why I believe that, sir. The two instrumented Tempest inspections, one on Matagorda, one on Padre, were not related. The Padre inspection was not meant to validate Matagorda's Tempest system. The original instrumented Tempest inspection on Matagorda, which you referred to as failed, was in my view as a program manager, Ron Porter assessed the vulnerabilities or issues with that, over time the physical discrepancies were corrected or Mr. Porter waived the discrepancies that were noted, and that original Tempest inspection was eventually the basis for Mr. Porter approving Authority to Operate, sir.

Mr. OBERSTAR. How does that authority compare to the judgement of the Navy which said in a document we have that the system is still high-risk.

Lieutenant Commander JACOBY. That is from a COMOPTEVFOR report sir?

Mr. OBERSTAR. Yes.

Lieutenant Commander JACOBY. I believe that the authority for Tempest certification lies with for the Coast Guard Mr. Ron Porter, for the Navy SPAWAR and not with COMOPTEVFOR, sir. I cannot speak to whether they would determine——

Mr. OBERSTAR. There is this gray area here which is now becoming somewhat clearer that there were deficiencies and these deficiencies were granted waivers instead of being repaired rather than being covered up.

Lieutenant Commander JACOBY. I do not know the waiver process or the mentality that goes behind the waiver process at Mr. Ron Porter's shop.

Mr. OBERSTAR. Okay. Thank you. We need to proceed on to the next panel. I particularly want to thank Mr. Ghosh, a naval architect, for his very candid and straightforward and helpful answers.

Mr. CUMMINGS. Thank you. Thank you all very, very much for being with us. Your testimony has been extremely helpful. You are excused.

Mr. CUMMINGS. We will call our next panel now. Rear Admiral Gary T. Blore, and Vice Admiral Paul E. Sullivan.

Raise your right hands, please. Do you swear to tell the whole truth and nothing but the truth, so help you God? Thank you. Let the record reflect that the witnesses answered in the affirmative.

Thank you all very much. I know it has been a very, very long day. Hopefully, we will not take you into tomorrow.

Rear Admiral Blore.

TESTIMONY OF REAR ADMIRAL GARY T. BLORE, PROGRAM EXECUTIVE OFFICER, COAST GUARD INTEGRATED DEEPWATER SYSTEM; VICE ADMIRAL PAUL E. SULLIVAN, COMMANDER, NAVAL SEA SYSTEMS COMMAND, U.S. NAVY

Admiral BLORE. Thank you, sir, and the members who have stuck it out with us. Good evening, Mr. Chairman, and distinguished members of the Committee. It is a pleasure to be here today with my colleague Admiral Sullivan. I respectfully request my previously submitted written testimony be entered into the record.

Mr. CUMMINGS. Without objection, so ordered.

Admiral BLORE. I would like to thank the Congress, in particular this Committee, for your oversight of the integrated Deepwater system. We have adopted many of your Committee recommendations as we reform the Deepwater acquisition process. I believe the Deepwater program is our best strategy for building a 21st century Coast Guard capable of executing our missions in maritime safety, environmental protection, homeland security and homeland defense. As part of our effort to strengthen the Deepwater program, and with the Commandant's leadership, we have met extensively with Integrated Coast Guard Systems, ICGS, Lockheed Martin and Northrop Grumman. We have had frank discussions with industry about our intentions moving forward. We have strengthened the Coast Guard's acquisition process and revamped our procedures to ensure that the contract expectations of the Coast Guard and the American taxpayer are crystal clear.

This hearing is focused on mistakes the Coast Guard made in our first Deepwater shipbuilding project. Not a day goes by that I

am not fully committed to avoiding a recurrence of this disappointment. Our Coast Guard men and women deserve better as does the public we serve. You have my assurance that I will take every step necessary to redress insufficiencies in analysis and communications that led to the premature decommissioning of the 123-foot patrol boats. However, we must not fall victim to living in the past which neither recapitalizes the Coast Guard nor serves the public interest. Instead, we must apply lessons learned to ensure a successful future for the Coast Guard, our acquisitions, homeland security, and the American people.

The Coast Guard has options in choosing from whom to acquire our assets, consistent with the Federal Acquisition Regulations. With the Commandant's support, I intend to use robust business case analysis, competition, and best value criteria in choosing which manufacturers will execute our projects. In many cases that may continue to be Lockheed Martin and/or Northrop Grumman, and to that end the Commandant and the company CEOs recently signed an agreement asserting the Coast Guard would: transition into becoming the systems integrator, lead management of all lifecycle logistics, expand the use of the American Bureau of Shipping, accelerate the resolution of remaining national security cutter issues, and where practicable work directly with the prime vendors. These actions combined with numerous other acquisitions and program management reforms will make the Deepwater program of tomorrow fundamentally better than the Deepwater program of today.

This Committee has been a catalyst for much of this change. But the fundamental underpinnings of this reform began the day Admiral Allen became Commandant, just under a year ago. His first, very first new initiative as our Commandant was to direct a consolidation of our acquisition organization. Shortly thereafter, he adopted the blueprint for acquisition reform which called for a restructuring and prioritization of our agency's entire acquisition process. We will stand up this new structure beginning July 13th and it will take shape fully over the next several months.

For the upcoming award term, which starts this June, the Commandant has asked me to focus on more favorable Government terms and conditions and on those priority delivery task orders occurring during the first 18 to 24 months. This allows the recapitalization of the Coast Guard to continue unabated while acquisition reforms are implemented, at the same time allowing a full spectrum of options for future Government purchases.

Today marks the start of my second year in this assignment. Critical to our acquisition is the partnership we have built with our sister service. The Navy is our third party independent assessor of choice. They speak Coast Guard, they understand us, and have superb engineering and technical expertise to share. For example, a quarter of my resident project office staff at the Pascagoula shipyard is on loan from NAVSEA on a reimbursable agreement. Our daily contact is across dozens of NAVSEA's divisions, involving millions of dollars transferred from everything such as Navy-type, Navy-owned equipment to technical review. And now with the elevate role of our Coast Guard Technical Authority, the relationship with NAVSEA is even more integrated.

In conclusion, a properly equipped Coast Guard is critical to our Nation, and reforming the Deepwater acquisition is critical to a 21st century Coast Guard. I look forward to working with you to ensure we can accomplish acquisition reform without derailing recapitalization but while focusing on the acquisition fundamentals of cost control, schedule integrity, and the surpassing of performance expectations. Thank you, Mr. Chairman. I would be pleased to answer your questions.

Mr. CUMMINGS. Thank you very much.

Vice Admiral Sullivan.

Admiral SULLIVAN. Good evening, Mr. Chairman. Thanks for having us here tonight. My name is Vice Admiral Paul Sullivan. I am the Commander of the Naval Sea Systems Command. Before I had the job I have today I was the deputy commander for ship design, integration and engineering. I have also been a program manager of two submarine acquisition programs.

I am here to discuss our partnership with the Coast Guard with regard to acquisition and also technical authority. I would be happy to answer any of your questions, sir.

Mr. CUMMINGS. Very well. Thank you very much to both of you.

Rear Admiral Blore, first of all, I want you to know that I think everybody on our panel on both sides of the aisle have tremendous confidence in Admiral Allen. He has clearly been a man of action and he has made it clear that he is going to make some significant changes. I had an opportunity to review his statement yesterday, his press statement, and I was very impressed and was glad that he was moving in the direction he is moving in.

That being said, you have heard the testimony today. I think we can actually start with Ms. Martindale. She seems to be very diligent and hard working employee, contracting officer, given that she has got not enough people. I do not think that she was trying to make you all look bad, she was just answering questions honestly. We have heard testimony throughout about how it appears that there are problems with having the personnel to do the Tempest test and the resources to properly do them. So while we listen and we hear, and I can go on and on, you have heard the testimony, it is clear to me and it is a worry that I have expressed to Mr. Oberstar on at least two occasions, if not more, that we have got to make sure that if the Coast Guard is taking on these responsibilities that they have the personnel, the expertise, and the resources to take them on. To me, if that is not the case, then I think that we move from one bad situation to another bad situation.

So I am just wondering where does that stand? I will be very frank with you. At this moment, just based upon what I have read and what I have heard, I do not know that the Coast Guard is in a position to do certification with regard to Tempest. I am not sure. And there are a lot of other things I am concerned about. That is not beating up on the Coast Guard, because we want to be the Coast Guard's number one advocates, but we want to make sure that the Coast Guard has what it needs. So taking into consideration what was said by the Admiral yesterday, are we prepared to take on that responsibility?

Admiral BLORE. Yes, Mr. Chairman, I believe we are. I share your respect for Ms. Martindale and I would like to hire her back

as a contracting officer for the Deepwater program if she would like to return and join us.

Since I became the program executive officer a year ago, we have brought on about 45 new staff positions. That was the first increment that the Commandant and I had worked out together as we started preparing to build out our system integrator capability. I would not disagree with you for a moment that we are not prepared tomorrow to take over entirely the system integrator role. The Commandant has a plan to transition. We are much more capable on the logistics and the material side of the Coast Guard. We still need to do a lot of build out especially on our C4ISR side, and I will be depending on my colleague heavily and other Government sources to assist the Coast Guard with that.

Right now, we have 22 contracting officer billets within the program. We have expanded that since Ms. Martindale left. Again for full disclosure, and I believe NAVSEA probably shares this issue, while I have 22 contracting officer positions, I do not always have 22 contracting officers. Hiring in the Washington, DC general area for what is called an 1102 general schedule person is difficult, especially at the junior classification rates, although we work on that very hard again with our colleagues. We will continue to use SPAWARs as a facility to run our Tempest testing. I think some of the confusion earlier is we have always used them for the instrumented testing. The actual certification is done by a Coast Guard official, and that is why sometimes it may have been confusing who was doing the certification. Tempest for Coast Guard assets is certified by the Coast Guard based on SPAWAR testing.

Mr. CUMMINGS. Let me ask you this. In the Admiral's statement yesterday he said something that while it impressed me and it made me feel good, left me kind of slightly with question marks. He said the Coast Guard will expand the role of the American Bureau of Shipping or other third parties as appropriate for Deepwater vessels to increase assurances that Deepwater assets are properly designed and constructed in accordance with established standards. What does that mean, if you can tell me? In other words, one of the things that we have run into here with regard to Tempest is what is the standard. Is the standard a moving target? Is the standard something that can be waived or whatever? But putting Tempest aside, let us just deal with the American Bureau of Shipping, in talking to all of our experts they tell me if we would adhere to their standards we would be in pretty good shape, very good shape. I am wondering, does this statement mean that is the standard we will be using, or what does this mean?

Admiral BLORE. Do you mind if I just ask Admiral Sullivan to comment on ABS because we try to pattern off his program.

Mr. CUMMINGS. Sure. Please. Whoever is best to explain it.

Admiral SULLIVAN. Yes, sir, Mr. Chairman. When you are building a ship or any complex system there obviously has to be a standard that that ship or system is built to. Either the service can maintain a set of standards that you design and construct the ship in accordance with those standards and then you certify that ship that it has been built to the design that meets the standards. The third party aspect can either be handled by the service or by this third party, such as the American Bureau of Shipping. In the case

of what we have in the Navy, we have been partnering with ABS, we have had a situation where we were unable to maintain our own standards due to lack of funding, we partnered with the ABS and developed a new set of standards that are not ABS standards, they are Navy-ABS partnership standards called the Naval Vessel Rules.

We have had a lot of discussions in Mr. Taylor's Committee on what that meant to the LCS program. But they are the rules to which you certify the ship. Either the service can perform that certification by an examination inspection, looking at paper signatures, objective quality evidence we call it, to make sure that the ship has been certified to those standards, or we can actually hire the third party, which in this case is the American Bureau of Shipping, to what we call "class the ship" by examining first the design and making sure the design meets that standards, and then by inspecting the ship as it is being constructed and certifying that the ship was built in accordance with the design which met the class standard.

Mr. CUMMINGS. So who would do, say, the third party certification of things like the systems such as electronics? Who would do that?

Admiral SULLIVAN. Yes, sir. ABS does not have experience to do that. So for naval ships, as Admiral Blore said, the Space and Naval Warfare Systems Command, otherwise known as SPAWAR. They would do that certification for the Navy.

Mr. CUMMINGS. Admiral Blore, can you guarantee that none of the problems found on the 123s will be repeated on the NSCs?

Admiral BLORE. Mr. Chairman, I can guarantee you that when we discover them we will address them individually and correctly, and will communicate, and will do the analysis necessary so that we knowingly walk into the future. I am not going to suggest for a moment that a platform as complex as the National Security Cutter is not going to encounter issues. I have 20 or 22 right now that I look at at my level but we address each one, we address the risk, we address the potential consequences, we work with our colleagues primarily at SUPSHIPS down in Pascagoula and eliminate them as discrepancies.

Mr. CUMMINGS. Are you anticipating, other than beyond what you just said, are you anticipating those problems similar to the 123s in any way?

Admiral BLORE. Absolutely not. The National Security Cutter will be the finest Coast Guard cutter we have ever had. It will be more capable, we are working through all the issues, and we are doing it before we accept delivery of the cutter.

Mr. CUMMINGS. Thank you. Thank you. That is helpful. Is that a new way of doing business?

Admiral BLORE. I think Congressman Taylor would say it is the only way of doing business. It is the way we should have always been doing it to work out these things before the Government accepts final delivery. In almost probably every case when you do a DD-250 and accept custody there is going to be some discrepancies, but there should be no major high-risk discrepancies that you are accepting when the Government takes ownership.

Mr. CUMMINGS. Thank you. As far as low smoke cabling, is that used in the NSC?

Admiral BLORE. Yes, sir.

Mr. CUMMINGS. Is it meeting specifications?

Admiral BLORE. Yes, sir. But there is similar issues to what we discussed before in that one of the tenets of the Deepwater program, and I think it is a good tenet, is to attempt to use commercial off-the-shelf equipment when it is appropriate. So we have a lot of the little like the mouse cable to the computer, a water fountain that just does not come with low smoke cabling. It is possible for the Government to request that all to be switched out, but we do not think anybody is at any degree of risk because of a couple feet of cable. When it is longer, for example, the main mount, the 57 millimeter came with non-low smoke cable and we asked the manufacturer to switch that out before we installed it because it was a pretty long run.

Mr. CUMMINGS. You have heard the testimony with regard to these waivers. Do you think that the Coast Guard appropriately waived in the past, and do you see any changes with regard to waivers in the future? One of the concerns, it seems to me, and I heard the testimony of some earlier witnesses about how there were certain things that maybe were connected to telephones and things of that nature, wires, but it seems to me we would try to be in front of all of that so that we lessen the disputes. I am just wondering, are there any lessons learned with regard to waivers? You know what happens when we hear about waivers, we begin to think, well, is somebody trying to get around the provisions of the contract. And when you are talking about low smoke cabling, then it sends up bright lights and alarms because we are concerned that your personnel might be harmed in case of an emergency. So I am just wondering, are there any lessons learned with regard to these waivers?

Admiral BLORE. Yes, sir. I think there are a lot of lessons learned. But let me just speak to one of them because I think it is probably the singularly most significant event in the way we conduct the Deepwater program now. When Deepwater was first organized it was basically our organic organization; everything was contained within it. We did our own logistics, this is going back to 2002/2003, and it became somewhat isolated. It originally started with only 75 Government personnel. We are much larger than that now.

We have formally established the role of our technical authority, which is Admiral Dale Gable, which is, in essence, a smaller version of NAVSEA that we have within the Coast Guard, and we have another Admiral Dave Glen who functions in the same role for C4ISR. I am not an engineer. Even the engineers will offer different opinions occasionally, some of which you have heard today. The beauty of the current system is I do not try to sort that out. I go to the chief engineer of the Coast Guard and say what would you like me to do, or I go to the chief C4ISR admiral in the Coast Guard and say what would you like me to do. Because, in the end, it is their opinion that I am going to value and follow. So I think that is the most significant thing. If the chief engineer of the Coast Guard said that we should accept a waiver on something, I would

certainly discuss it with him to make sure I understood what his rationale was, but that is why he was appointed in that position for the Commandant, and the same thing on the electrical side.

Mr. CUMMINGS. Now would you send the cutter one to the Navy COMOPTEVFOR, is that how you pronounce it?

Admiral BLORE. Yes, sir, COMOPTEVFOR. It is Commander, Operational Test Forces.

Mr. CUMMINGS. Will you do that? In other words, are you going to send them to that center for the same analysis that was performed on the 123s?

Admiral BLORE. Yes, sir. In fact, we have established a huge staff of eight Coast Guard men and women that are actually assigned the COMOPTEVFOR that work with the larger staff that is there so that we can help advise the testers and evaluators with COMOPTEVFOR of what the Coast Guard unique requirements are, and the Coastees are actually assigned there full-time and sit next to our Navy and Marine colleagues.

Mr. CUMMINGS. Now the Defense Acquisitions University recommends that the Coast Guard should convene a summit of the Coast Guard, the integrated team, and the Navy to examine all opinions about fatigue life on the NSCs. Will you convene that summit?

Admiral BLORE. Yes, sir. I actually hired Defense Acquisition University to come in and do that analysis because we wanted to get the opinion of acquisition professionals on our acquisition policy. As you know, they gave us a good number of recommendations which we are incorporating. We have already had that summit. We have worked with the Carderock division of NAVSEA, and we have actually worked out a technical solution now with Northrop Grumman. It is not on contract yet, it should be on contract by the end of this month. It is typically referred to in the Coast Guard as the "one break solution," but it assures the fatigue life of the National Security Cutter of 30 years, 30-plus years.

Mr. CUMMINGS. What measures will now be taken to increase the role of the Navy in testing the C4ISR security, in assessing the effectiveness of the ship designs, and improving the management of the Deepwater contract?

Admiral BLORE. Specifically for C4ISR, Mr. Chairman, we are trying to build our own Coast Guard organic capability a little bit more. It is going to probably take us 18 months before we have our own evaluators within the Coast Guard. In the meantime, we are completely dependent on NAVSEA for any of the instrumentation and testing. We certainly have some expertise in the Coast Guard but it is certainly not our intention to go it alone for C4ISR. That will be an area in particular that we will be heavily dependent on Admiral Sullivan and others.

Mr. CUMMINGS. The Defense Acquisition University report suggests that the acquisitions excellence in business competencies are not valued in the Coast Guard as much as operational excellence. Can you comment on this finding, and what will you do to cultivate acquisitions and financial management expertise among your personnel? I want to go back to something that the Commander said when he talked about, and this has come up in other hearings, the capacity to have contracting officers, folks who have expertise in

putting together these contracts. I think Admiral Allen has admitted, along with many others, that part of the problem with this contract is that a lot of the provisions are not necessarily in our best interest, and some place us in a position where they just call out for dispute because there are some ambiguities. Perhaps we could have resolved a lot of this, I think Ms. Martindale may have mentioned it too, if we had had the experienced contract folks involved in the process of creating the contract that was more balanced and certainly in the best interests of the Coast Guard and the American people.

Admiral BLORE. I agree with what you just stated, Mr. Chairman. We have a type of contract that probably requires the most sophisticated expertise in contracting officers as opposed to a contract that has a lot more specifications. That is why we are changing the terms and conditions as we go into the next award term. We really do believe that the contract is the key, which is why we want to work on the terms and conditions, and at least enough specificity that, while it is still a performance-based contract, there is enough specificity so there is no misalignment with what we expect from industry.

Mr. CUMMINGS. Thank you. Mr. LaTourette.

Mr. LATOURETTE. Thank you very much, Mr. Chairman. Admiral Blore, in your written testimony you state, "At no time did the 123-foot patrol boats engage in mission operations without first successfully completing standardized testing." Does that mean that at no time did these vessels operate without the Authority to Operate designation?

Admiral BLORE. Sir, to the best of my knowledge, they have never transmitted on a classified frequency or received on a classified frequency without the correct authority to operate. These cutters have commanding officers, they know when they have authority to operate; they will and have in the past gotten underway and not energized any of their secure gear because they did not have the authority to operate. I can also say as part of my sworn testimony that I have never been made aware of any compromise that has ever occurred off a 123-foot cutter. We are also, the Coast Guard, a member of the intelligence committee, and neither has my chief of intelligence of the Coast Guard ever notified me that there has been a detected compromise from a 123-foot cutter.

Mr. LATOURETTE. And to both admirals. The Chairman talked about waivers and we have spent a good portion of the hearing talking about Tempest and Tempest testing and waivers. Is it unusual for waivers to be granted in the Tempest testing program either in the Coast Guard or in the Navy?

Admiral SULLIVAN. It is not unheard of but it is not common.

Mr. LATOURETTE. Admiral Blore?

Admiral BLORE. I really do not think I know the answer to your question. I am sorry. It certainly appears to have happened in the 123. I would be happy to submit something for the record and go through the rest of our cutters and see whether they have any waivers.

Mr. LATOURETTE. If you could.

[Information follows:]

Insert on Page 302, Following line 7034

The following waivers have been granted:

USCGC SENECA (270' WMEC) - a waiver was granted for a Protective Distribution System (PDS) to be constructed from armored fiber vice metallic or PVC conduit in the void (empty space) from the secure space to work stations. (April 2004)

123' WPB cutter class – a waiver was granted for the location of the RT-1794 radio transmitter/receiver being within three meters of classified servers. (July 2005)

123' WPB cutter class – a waiver was granted for the three meter separation requirement between the classified and unclassified cables entering a switch. The switch itself provides adequate isolation and is approved for multi-level signal switching. (July 2005)

123' WPB cutter class – a waiver was granted for the three meter separation requirement between cryptographic equipment and the RT-9000 radio transmitter/receiver. There is a bulkhead between them, the radio is enclosed in a metallic enclosure, and the equipment rack has metal side panels. (July 2005)

USCGC SEQUOIA (225' WLB) - a waiver was granted for hand held radios to be put in chargers inside of a secure space. The normal separation requirement is 10 feet, however as long as the unit has a written procedure that requires the radio to be turned off when placed in the charger, it is acceptable. (February 2007)

110' WPB cutter class – a waiver was granted for classified processors to be in an adjacent rack to a radio transmitter without a metal barrier between the racks. The processors and radio are both in their own metallic enclosures. This item has been waived only until ships go through a yard maintenance availability. (May 2007)

Mr. LATOURETTE. As a follow up question, and if you cannot answer this today maybe you can get back to me too, but Admiral Sullivan, if you know, can these waivers ever be granted if there is a risk that national security will be endangered?

Admiral SULLIVAN. I think I would rather take that for the record so I could pass it to the proper people. I am more the ship engineering guy than the C4ISR.

Mr. LATOURETTE. Okay. And Admiral Blore, maybe you could get back to us on that one as well.

Admiral Blore, yesterday in the Commandant's statement he made about three insightful and succinct points that led us to that point. He stated that the Coast Guard relied too much on the contractors to do the work of Government. As a result, the tightening AC&I budgets, a dearth of contracting personnel in the Federal Government, and a loss of focus on critical Government roles and responsibilities in management and oversight of the program. I think the principles that he laid out clearly address the third item.

But relative to the contracting officers, I think it would be my observation that contracting officers, like Ms. Martindale, do not fall from the sky. And one of my questions was does the service have the ability to do that today, and I think you said no, and I think you said something about 18 months. Maybe I am mixing your answers. Can you just share with us how many of these experts the Coast Guard thinks it needs to hire to adequately do the job, and how the service plans to identify and hire these folks?

Admiral BLORE. Yes, sir. I believe currently we have sufficient contracting officer positions, the 22 that I alluded to before. I think right now we have 17 filled, so I would like to bring that up to complement. There are a couple things that the Office of Personnel Management is allowing us to do now. We can do what is called direct hires. So if I find somebody that is fully qualified, I can basically offer him a job on the spot if they are qualified to be a Government contracting officer.

So that has helped. We have also had a shift in processes where we are using our contracting officers in the field more than we did originally with the Deepwater program. For example, I have a contracting officer in Elizabeth City at the aircraft repair and supply center, and I am doing a lot of the spare parts purchases for the CASA and also through Eurocopter for the H-65 helicopter through the facility at ARNSC. We are starting to set up the same thing. I have a contracting officer that is about to be warranted in Pascagoula so that much of the contracting work can be done on site, which I think frankly is the Navy model where contracting officers are typically on site where the construction is taking place.

Mr. LATOURETTE. Okay. My last question, Mr. Chairman. The first panel, I know Admiral Blore you were in the room for the first panel, I think I have tried to boil down the essence of the allegation that was made. The allegation that was made by some folks in the first panel is that Lockheed Martin underbid the 110 conversion contract without the expertise to properly complete it. Then when discovering that they were over their head, they made business decisions based on cost and schedule on, among other things, low smoke cables and shielded cables for the Tempest system that compromised national security and endangered Coast Guard per-

sonnel. Do you think that is an accurate representation of what happened with this conversion program?

Admiral BLORE. I do not believe I have the necessary information to make a judgement, sir. The one thing I would say, and I think this would support what Ms. Martindale said, is a properly run acquisition would run enough Government cost estimates and other surveys, including using our Government audit agency, to ensure that a contractor is not bidding a price that on its appearance could not possibly do the work that the Government is asking for. That is the way the Government protects against what someone earlier referred to as an aggressive bid. If it is that aggressive, then the good Government cost estimate should show that it is too aggressive and work should not be awarded. I do not know enough about the details to really answer the question you asked, sir.

Mr. LATOURETTE. Specifically on the waivers and the low smoke cabling that Commander Jacoby talked about, are you in agreement or in a position to be in agreement with the decision he made relative to the placement of those cables on the ship?

Admiral BLORE. I think I would, based on everything I know, I think I would agree that the waivers were appropriate for the non-low smoke cables that were used. One of the things that the Inspector General pointed out, which was very true, is that often the waivers and deviations were given after the fact; in other words, they were following installation. That is another bad acquisition practice. If you are going to do something like that, it ought to be done before anything is installed. But I think the actual location, and I think even the Inspector General agreed with this, that there was no risk to the Coast Guard crew for the non-low smoke cables that were installed. But they did find fault with the process and why the deviations were given after the fact.

Mr. LATOURETTE. And the fact that four ships had been delivered out of spec until that waiver was requested and granted. Okay. Thank you very much. Thank you, Mr. Chairman.

Mr. CUMMINGS. We are going to do business differently now, right? I am just following up on what Mr. LaTourette just asked you. We are not going to be having these waivers after the stuff is already done, are we?

Admiral BLORE. Not unless the waiver is in the interest of the Government. There is always going to be considerations made that perhaps a piece of equipment is in the interest of the Government to have installed before the fact, otherwise we will not accept it.

Mr. CUMMINGS. Before we get to Mr. Oberstar, I think one of the things that we are most concerned about, when you talk about this low smoke cable and things that would go to the very survival, I am talking about life and death of the very people that you command, I think that we have to have a certain hope, a standard where if we are going to err with regard to waivers, we err on the side of life and safety. And sometimes I just wonder, I have read what has been written in the IG report or what has been represented to us, and I just wonder whether we have done that consistently with those waivers. I think when we are dealing with things like that, you know what, if we are granting these waivers and then something happens and we in the Congress knew about

it and did not try to address it, then I think we become a part of the problem.

Mr. Oberstar.

Mr. OBERSTAR. Well said, Mr. Chairman. And Mr. LaTourette, I also appreciate your line of questioning and the issues you raise. They are extremely important.

Admiral Blore, at the outset of your testimony, and Admiral Allen's remarks in a news conference yesterday, "avoid recurrence." Good. We want to avoid recurrence. But let us avoid living in the past. Let us not review the past. Philosopher George Santayana wrote "Those who do not study the past are condemned to relive it." Thirty years ago, the Coast Guard in 1978 completed construction of two polar icebreakers. It was my first or second term in Congress. The Polar Sea and the Polar Wind. The Polar Sea went on mission to break ice in the North Pole. In February of 1981 it got stuck and stayed there for two months. We are about learning lessons from the past and making sure they are not repeated in the future. I do not want to be lectured in this Committee and all our members be lectured about learning from the past.

Were you aware that Admiral Kraymek [phonetically] after he retired went to head the ABS, American Bureau of Shipping?

Admiral BLORE. Yes, sir.

Mr. OBERSTAR. And that during his tenure, he is now retired from there, he offered to Bollinger to do structural engineering analysis and to do it free. Are you aware of that? And was refused.

Admiral BLORE. I am not aware of the details, sir. I have certainly heard that but not from a necessarily credible source. But certainly I have heard the story that it was offered.

Mr. OBERSTAR. In one case the Coast Guard said, gee, we do not want to take the Navy's offer of doing this design analysis because it is going to cost us $42,000. On the other hand, the shipyard gets an offer of free review and analysis and they will not take it either. There is something wrong with this.

Admiral Allen announced yesterday the Coast Guard is going to take the lead role of systems integrator for Deepwater. I am not convinced you are ready to do that. Tell me how you think you are going to be able to do that in light of the testimony we have heard today.

Admiral BLORE. Yes, Mr. Chairman. Before I answer that, let me say it was never the intent on the part of the Coast Guard, and certainly I speak for the Commandant, to sound like we were lecturing anyone on learning from the past. There is perhaps a little bit of a semantic difference. We do believe in learning from the past. We do believe in applying those lessons to the future. I think we meant it more in the context of not to fight the last war. We need to learn from the past and apply it to the future acquisition, because we know, and as you know, we have a responsibility to recapitalize the Coast Guard so we can keep doing our missions. That is what we meant. I am not suggesting for a moment we should not learn lessons from what occurred——

Mr. OBERSTAR. I appreciate that, but we want to know that the Coast Guard is learning those lessons and that they are ready to in various ways shoulder the responsibility of handling multibillion dollar contracts that are going to carry the Coast Guard's capital

equipment program into the future with a high degree of certainty that it can succeed. I have been through this years ago with the FAA.

They were unable, as it turned out, and it was again the Navy who came in and did an assessment, Admiral Sullivan, of FAA's procurement program in the STARS acquisition an the Advanced Automation Replacement System, and said they just do not have the personnel, they do not have the systems, they do not have the structure, they do not have any understanding of how to handle these multibillion dollar contracts.

And it seems to me the Coast Guard was in the same mess. You got in way over your head and you allowed these contractors to certify themselves. And we want to know when we go forward, we want to do this Coast Guard authorization bill and do it right, put the money out there that is needed, give you the resources you need to move ahead, we want to know you are going to be able to do the job right.

Admiral BLORE. Yes, sir. I appreciate that and I appreciate your support for the resources. I believe we can do it right. That is why we have increased our staffing, that is why we have changed our processes on how we address things, and that is why we have a much closer working relationship with the United States Navy, because we know what we can do and we know what we cannot do and that is where we will depend on other Government agencies, primarily the Navy.

Mr. OBERSTAR. To whom does the Navy turn when it needs advice on hull, machinery, and electronics? Or are you really, as everyone says, the gold standard?

Admiral SULLIVAN. Sir, I do not know if we are the gold standard, but we have worked very hard to keep the expertise for hull, mechanical, electrical, and electronics in-house because we believe that only the service can be in charge of knowing what it wants and specifying what it needs and in directing the contractors to deliver the performance that we need. Now that is a very precious core capability, we feel it is inherently governmental, and it takes years to grow.

Mr. OBERSTAR. In the upcoming authorization bill, it seems to me this would be an appropriate time to craft, as we have done for the Corps of Engineers in a bill that is coming up on the House floor tomorrow, a process of independent review. Admiral Blore, what would be the Coast Guard's reaction to, in general, an independent review authority for major contracts?

Admiral BLORE. Well I think generally our reaction would be if it is the desire of the Congress that we would execute it. I do not know that we need congressional authority to do that. I think much of the independent reviews, such as hiring Defense Acquisition University and using third parties, we have ample authority to do ourselves.

Mr. OBERSTAR. There is no question you have ample authority to do it. You have showed you have not used that authority and maybe what you need is direction from the Congress.

Admiral BLORE. Mr. Chairman, respectfully, I think that I would agree with your statement for 2002 through about 2004-2005. I think that the Commandant has changed the way we do our proc-

esses. Having said that, our number one priority as far as any legislative language is just that the Coast Guard be allowed the opportunity to continue our recapitalization program. Anything else that the Congress desires us to do, if it is passed in the legislation, obviously we would do it, but we would hope that we would be allowed to continue to recapitalize the Coast Guard so we can execute our missions. And anything else, if the Congress would like to suggest it, we would be happy to execute it.

Mr. OBERSTAR. We do not want to slow down that process at all. We do not want to stop it in its tracks. But the same with the Corps of Engineers who act only on direction of the Congress, and yet we have felt for some time that there was a need for independent review. The Corps of Engineers came to an agreement with us on that and we have language that tomorrow will be on the House floor that will provide for that independent review. We will explore this further as we move into the authorization process and draw on the great resources we have in the members on this Committee on both sides of the aisle. Thank you, Mr. Chairman. And thank you very much, Admiral. We are about to set a record for endurance in this Committee. In another 15 minutes we will have done that. I thank you for your endurance.

Mr. CUMMINGS. Mr. Gilchrest.

Mr. GILCHREST. Thank you, Mr. Chairman. Admiral, how did these cutters get to Curtis Bay? These eight cutters, how did they get up there?

Admiral BLORE. I believe we towed the cutters. They may have gotten underway because they were capable of it to meet whatever cutter was towing them. It was our choice to tow them because we had put operational restrictions on them to keep the crew safe and not at risk and we felt it progressed to the point that we did not want the cutters functioning independently.

Mr. GILCHREST. So I understand they are going to be scraped.

Admiral BLORE. Yes, sir.

Mr. GILCHREST. Where are they going to be scraped?

Admiral BLORE. I do not think that has been determined yet, sir.

Mr. GILCHREST. So they are in such a condition that none of them could be salvaged or fixed?

Admiral BLORE. Again, I am speaking on what I have been told because I am not an engineer. Admiral Gable, our chief engineer, did do a fairly exhaustive study on the cutters. There was about six recommendations presented to the Commandant. I think right now there are three competing theories on what the root cause is.

One is a naval architectural effect called channeling. Another is that the stern section, because of the way the lines are, was overly buoyant. The third is that the metal itself was so fatigued it did not have enough structural strength from the original 110s. It is Admiral Gable's opinion that he has a very low confidence that any——

Mr. GILCHREST. At any rate, it is likely that the best thing to do rather than go through any more expense is to just scrap all eight?

Admiral BLORE. Yes, sir. Because it is going to involve millions of dollars. A single cutter, probably 18 to 24 months to develop whether your solution actually works. And I think the Commandant would like to focus elsewhere, sir.

Mr. GILCHREST. Just a couple of other questions. This would be to Admiral Sullivan. Do you feel that the Coast Guard adequately addressed the concerns that apparently the Navy shared with its engineers about the hull integrity of these 123s?

Admiral SULLIVAN. I can tell you, we said to the Coast Guard we were worried about the plate thickness in the section modulus of the hull, and we offered to help beyond that. I would be remiss to try to explain——

Mr. GILCHREST. Was this consultation in the early stages of the consideration of the design of these vessels?

Admiral SULLIVAN. I think the consideration stared with very casual conversations in 2002 and nothing came of those, and then there were more serious conversations in 2005 when we actually produced a cost estimate for what we would do. And then that was about it, sir.

Mr. GILCHREST. So, Admiral Blore, do you think that the problems that we have seen here today about adequate communication, consultation, recommendation between you and the Navy regarding this kind of issue has been adequately resolved?

Admiral BLORE. Yes, sir, especially as far as relationships between us and the Navy, and in this particular case, using CCD or the Carderock division for expert counsel.

Mr. GILCHREST. This ranges from hull design to logistics to C4ISR, the whole ball of wax. Do you feel the integration here is pretty well complete on these issues?

Admiral BLORE. Yes, sir. And I would say really at all levels between C&O and the Commandant, between me and my colleague and certainly PEO ships, and same thing on the logistics and the naval engineering side and C4ISR side.

Mr. GILCHREST. Let me ask, the capabilities that the Navy has for in-house engineering, is that also part of your conversation that those capabilities, that in-house engineering capability, can any of that be available to the Coast Guard?

Admiral SULLIVAN. Yes, sir. We stand ready to help. We are heavily loaded today. We have our own issues with cost reduction and staffing reduction at headquarters. But compared to the capability that the Coast Guard lacks, we are robust, and subject to workload, we would definitely be ready to work.

Mr. GILCHREST. Is that something that you would solicit, Admiral Blore, from the Navy?

Admiral BLORE. Yes, sir. You are expressing it, respectfully, as if there is some hesitation on our part. There is no hesitation for us to work with the United States Navy.

Mr. GILCHREST. Have the Coast Guard and Navy discussed the possibility of enhancing the commonality of the Navy and Coast Guard vessel designs and component systems?

Admiral BLORE. Yes, sir. I could just give you two quick examples. Certainly for much of the navy-type, navy-owned equipment on the National Security Cutter, we are using the recommendations of the Navy. Our preference is to stay standard with them if we can, because they bring——

Mr. GILCHREST. You say your preference is to stay standard. Would it not be better if it were standard, and can it be made standard?

Admiral BLORE. Yes, sir. But, for example, they would put many more weapons systems on a patrol boat than we would. So there are some cases where we will not be standard because we just will not have as powerful a weapons suite as they would. In the case of the Offshore Patrol Cutter, which is still a couple of years away, we are currently working with NAVSEA to actually do a study together on how the LCS, and original design offshore cutter, or even our National Security Cutter might be used to kind of form the basis of a design. We are very interested in seeing how the Latorial combat ship develops and whether it would be possible to have potentially, for example, a Coast Guard version of that. So we are very interested in being aligned and have commonality when we can.

Admiral SULLIVAN. Let me give a couple more examples, sir. The gun on the National Security Cutter is the same as the gun on the LCS, and that gun is also going to be used on a DDG-1000. We are sharing all of our information across the services to work to make sure we are as common as we possibly can be in the installation of that gun. Additionally, I mentioned Naval Vessel Rules before where we were developing them in conjunction with ABS. The Coast Guard signed on I guess about two years ago and there is a Coast Guard annex to the Naval Vessel Rules.

So we are sharing all the lessons learned and all of the rule development. My chief engineer, Kevin McCoy, and Admiral Gable, his counterpart in the Coast Guard, have co-signed an agreement that they will work together, and Admiral Gable is now attending all the meetings of the Naval Vessel Rules Committee. So there is an awful lot going on there now.

Mr. GILCHREST. Thank you very much, gentlemen. Thank you, Mr. Chairman.

Mr. CUMMINGS. Thank you very much. Mr. Kagan.

Mr. KAGAN. Thank you, Mr. Chairman. I will make no reference to icebreakers because by the time we get out of here all the polar ice caps are going to be melted.

Admiral Blore, I just want to get your opinion on record here about Mr. Ronald Porter. Is Ron Porter a CTTA?

Admiral BLORE. Again, as was mentioned before, I do not think I have actually met him or asked to see his credentials. I would go to the assistant commandant for command control and information to get certification on Tempest and I believe they used Mr. Porter.

Mr. KAGAN. Okay. Then I will ask you a hypothetical question. Assuming that he is not CTTA, then would it be true that those ships that have been firing up their communications equipment have been doing so in violation of our rules and laws?

Admiral BLORE. I would assume you need to have the proper certification and authority to grant the Authority to Operate, yes, sir.

Mr. KAGAN. Okay. Thank you, gentlemen, for your service to the country. I yield back my time.

Mr. CUMMINGS. Thank you very much. I want to thank you all for your testimony. I want to thank the Members of Congress for sticking around this long. I know they have fifty million things to do.

This does conclude our hearing. But please understand that Mr. Oberstar and many of us have expressed our concerns with regard

to where the Coast Guard is going. We want to make it very, very clear, and I said it from the very beginning when I was appointed the Subcommittee Chairman, I am going to be a number one fan of the Coast Guard. But in being a number one fan, that also means that we want the Coast Guard to be the very, very, very best it can be so that it can do all the things that it is mandated to do and do them effectively and efficiently.

So this has in no way been an effort to try to make anybody look bad. We just need to look to see what has happened in the past, as Mr. Oberstar said, so that we can chart a most effective and efficient course for the future. I think this hearing has gone a long way towards doing that. We certainly will look very carefully at what has transpired here and act accordingly. I am sure that there will be some follow up questions. We thank you all very much.

This hearing is adjourned.

[Whereupon, at 11:30 p.m., the committee was adjourned.]

OPENING STATEMENT OF REP. STEVE COHEN

House Transportation and Infrastructure Committee

"Compliance with Requirements of the Coast Guard's Deepwater Contract"

April 18, 2007

I am pleased to be here today to receive testimony from representatives of Lookheed Martin and others regarding the $24 billion Deepwater acquistions program.

A number of different reports have been issued by a variety of sources detailing problems w/ the Deepwater contract, including a report from the Department of Homeland Security's Inspector General's (IG) Office.

Deepwater is a program of procurements projected to cost $24 billion and currently expected to take 25 years to complete. The procurements encompass the rehabilitation or new construction of 91 cutters, 124 small surface craft, and 244 new or converted aircraft, including both helicopters and fixed-wing airplanes.

The report by the IG entitled "Improvements Needed in the U.S. Coast Guard's Acquisition and Implementation of Deepwater Information Technology Systems" examined tests performed on the program's C4ISR hardware and software control system to assess its functionality. The IG found that the simulator system being used to test the functionality of the C4ISR was not itself certified or accredited. The report also found that the Coast Guard did not properly oversee the National Security Cutter contract.

It is my hope that we can take from this hearing solutions to address the many concerns with the contract to improve the Coast Guard.

Statement by Congressman Jerry F. Costello
Committee on Transportation and Infrastructure
Hearing on Compliance with Requirements of the Coast Guard's Deepwater Contract
April 18, 2007

Thank you, Mr. Chairman. I am pleased to be here today as we examine compliance with requirements of the Coast Guard's Deepwater Contract. I would like to welcome today's witnesses.

The Deepwater program, a $24 billion program which includes contracts to design and build 91 cutters, more than 100 small surface ships and 244 new or converted helicopters and airplanes, has been plagued from the start. I am pleased that the Coast Guard Commandant Adm. Thad Allen yesterday acknowledged that it has relied too heavily on contractors to do proper oversight and responsibilities that should have been handled by the Coast Guard. I know the Transportation and Infrastructure Committee has been pushing for the Coast Guard to take over management of the contract and with the statements yesterday, it seems we are moving in the right direction.

The DHS IG and other documents have made reference that the Coast Guard was well aware of the design flaws from the beginning but made no attempts to rectify the situation. Further, there is also documentation of contractor cover-ups and that installation flaws were accepted by the Coast Guard and that unsafe ships were "self-certified" by the Coast Guard. I am interested in hearing from our witnesses about the 123 foot patrol boat conversions and the structural problems that have plagued these cutters as well as any further information on contractor cover-ups and to what extent the Coast Guard had knowledge of these problems.

Given our current budget situation and the significance of this program to the coast Guard, allowing the Deepwater program contract to be so mismanaged and mishandled from the beginning is unthinkable.

I look forward to today's hearing as we discuss this important topic.

"For the Record"

STATEMENT OF THE HONORABLE JOHN L. MICA
RANKING REPUBLICAN MEMBER
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
OVERSIGHT HEARING ON COMPLIANCE WITH REQUIREMENTS OF THE COAST GUARD'S DEEPWATER CONTRACT

APRIL 18, 2007

- Today the Committee is continuing its oversight of the Coast Guard's Deepwater program. Unfortunately, we are largely going over material that has already been examined by the Department of Homeland Security Inspector General.

- I want to applaud Coast Guard Subcommittee Chair Cummings for starting his Deepwater oversight with a hearing in January, and following up with testimony from the DHS IG, and the General Accountability Office in March.

- At the January hearing Chairman Cummings and the Commandant agreed that there would be hearing a hearing 120 days later in which the Coast Guard

would report on changes in program, and progress that had been made. That was an excellent plan, and coordination at the subcommittee level has been excellent.

- However, I deeply regret that instead of following Chairman Cummings' plan we having a media driven 18 witness hearing – the 6th held this year – number 7 is next week in the Senate -- to review issues on which everyone agree that mistakes were made.

- No one is more deeply troubled that I am about the disastrous failure of the 110-to-123 conversion. These vessels were scheduled to be operated out of Sector Key West, and the loss of these assets are putting a strain on the Coast Guard's capabilities to safeguard and secure maritime activities in my home State of Florida.

- One of my questions for the later witnesses is how they intend to stem the flow of illegal migrants, and drugs, respond to emergencies and protect Florida's

environment having lost the use of these crucial patrol boats.

- However, this hearing merely rehashes issues that the IG has looked at testified about`at the March Coast Guard Subcommittee budget hearing. The minority was not included in the selection or interviewing of these witnesses, and given the traditional bipartisan nature of work on Coast Guard and maritime transportation issues that is troubling.

- I also understand that one of today's witnesses is being paid by the Committee as a consultant – Mr. Chairman is that correct?

- Again the minority was not consulted about hiring this witness, and having looked at his personal mission statement that posted on the internet I have grave concerns about him. --- [Read from attachment.]

- The Deepwater program is critically important, and the Coast Guard needs to acquire these new and enhanced vessels and aircraft as quickly as possible and at the lowest cost to the American taxpayer.

- In January, Admiral Allen appeared before this Committee and committed himself and the Coast Guard to improving the service's oversight over decisions that are made by the contractors and subcontractors – and as requested by Chairman Cummings to coming back the this Committee with a report on his progress in 120 days.

- The Committee should have stuck with that plan.

- Nonetheless, 16 witnesses from now, I look forward to Admiral Blore's update from the Coast Guard on the service's actions to improve its Deepwater acquisition performance. I want to continue to work with the Coast Guard to make sure that this crucial program is successful.

1

Statement of Rep. Harry Mitchell
House Transportation and Infrastructure Committee
"Compliance with Requirements of the Coast Guard's Deepwater Contract"
4/18/07

--Thank you Mr. Chairman.

--The 25 year, $24 billion Deepwater acquisition program procures ships, aircraft and other essential assets for our Coast Guard.

--It is vital to our nation's security, and we have an obligation to ensure that it is done properly.

--But unfortunately, it appears that's not the case.

--The Coast Guard recently accepted eight unusable vessels, which have all been taken out of service.

--While this is obviously embarrassing, and clearly unacceptable, it is not, by itself, the reason we are here today.

2

--We are here to investigate the extent to which these kind of serious flaws may have been known early in the Deepwater program, both by the Coast Guard, and by its contractor Integrated Coast Guard Systems, a company comprised of Lockheed Martin Corporation and Northrop Grumman Corporation.

--If warnings went unheeded, we need to know.

--If there was a cover-up, we need to know.

--We have an obligation to correct what has gone wrong, and ensure that mistakes like these never happen again.

--I want to thank the committee for its hard work preparing for this hearing, as well as today's witnesses for taking the time to give this committee some very important testimony.

--I yield back the balance of my time.

STATEMENT OF
THE HONORABLE JAMES L. OBERSTAR
HEARING ON "INVESTIGATING COMPLIANCE WITH THE REQUIREMENTS OF THE DEEPWATER CONTRACT"
APRIL 18, 2007

When I assumed the Chairmanship of the Transportation and Infrastructure Committee last January, I announced that I would place a very strong emphasis upon oversight and investigations of the programs within this committee's jurisdiction. I have always been committed to a strong oversight function, and I was Chairman of the Investigations and Oversight Subcommittee on our predecessor Committee, the House Committee on Public Works and Transportation in the 99th - 100th Congresses.

When I was chosen as Chairman of our Committee this year, I increased the investigative staff of the committee, and I urged all the subcommittees to step up their oversight activities. The record of this committee's work and the record number of hearings and legislation produced by this committee in less than 4 months is unprecedented and speaks volumes about that commitment.

Of all the issues that have come before the Transportation and Infrastructure Committee in the 110th Congress, none is more disturbing than the failures of the Coast Guard's Deepwater acquisition program. Our Oversight and Investigations staff has been conducting an in-depth investigation over the last 3 months of the program to convert 110-foot patrol boats to 123-foot boats and to modernize their

electronics suites. What we have uncovered in our investigation is far more disturbing than anything previously disclosed by other investigations.

Of course, some major problems in the program have been widely disclosed. 4 years after the Coast Guard began Deepwater to replace or upgrade virtually all of its ships, planes and helicopters, we know that 8 110 foot patrol boats have been found un-seaworthy and were essentially rendered useless by a poorly designed hull extension to 123'. We know that plans to produce a new class of 147-foot ships have been shelved after a new hull design was found to be flawed. We know that serious questions have been raised regarding the structural integrity of the new National Security Cutter, and whether it can be expected to meet its projected lifetime in service. We know that numerous problems have swelled the cost of the fleet renewal program from $17 billion to more than $24 billion. We know that the Coast Guard's ability to fulfill its mission has been compromised, and much needed assets will not be available. The service has been forced to cut back on patrols and, at times, ignore tips from other federal agencies about drug smugglers. The difficulties will only grow more acute in the next few years as old boats fail and replacements are not ready.

However, what we have learned in our investigation is even more disturbing. In today's hearing, we will hear charges of serious management failings in contract execution and oversight among all the parties involved in Deepwater. We will not pass final judgment on these charges until we have heard the response of the

contractor and the Coast Guard. Without prejudging our final conclusions, I should point out that the testimony we will hear suggests that serious problems were known very early in the program and that many warnings were delivered by very courageous individuals involved in the program from the earliest days. Many of these warnings were consciously rejected or not taken seriously by various levels of management. I want to commend those individuals who were courageous enough to put their jobs on the line at the time by trying to do the right thing, and have assisted us in understanding what happened. In particular, I'd like to thank Michael DeKort, Robert Braden and Scott Sampson for doing the right thing. I would also like to thank Mr. James Atkinson, who is an expert on classified communications systems for donating hundred of hours of his time to assist our Oversight and Investigations staff with an analysis of the certification records.

The Coast Guard seems to be following a "lessons learned" approach to the disasters that occurred in the 110/123 conversion program. We hope that today's hearing will also make a major contribution to this process. We saw evidence of that yesterday, when Admiral Allen announced significant changes to the Deepwater contract. Only time will tell whether these changes are aggressive enough to recover from the errors of the past. But, one thing is certain -- we will be watching every step of the way.

STATEMENT FOR THE RECORD

Mr. James E. Anton, Vice President Deepwater Program
Northrop Grumman Ship Systems (NGSS)
1000 Jerry St. Pe` Highway
Pascagoula, Mississippi 39568
Tel: 228-935-1526

Testimony Before
The House Committee on Transportation and Infrastructure

WEDNESDAY, APRIL 18, 2007
2:00 PM
2167 Rayburn House Office Building

Good afternoon Chairman Oberstar, Ranking Member Mica, and distinguished members of the Committee.

Thank you for the opportunity to appear before you today to discuss the Deepwater Program. As you know, within the Integrated Coast Guard Systems (ICGS) structure, a joint venture established by Northrop Grumman and Lockheed Martin, Northrop Grumman Ship Systems (NGSS) is responsible for hull, mechanical and electrical design construction, installation of Command, Control, Communications and Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) equipment provided by Lockheed Martin, and overall support of the surface assets, such as the 110 foot to 123 foot converted Island Class Patrol Boats. References in this statement to ICGS or separately to Northrop Grumman or NGSS should be construed to mean the role of Northrop Grumman Ship Systems as part of ICGS.

Northrop Grumman has nearly 70 years of experience designing, constructing and maintaining ships of all types. In that time, NGSS's Gulf Coast operations has produced a total of 534 ships -- 351 ships at Ingalls and 183 at Avondale -- and has built 24 percent of the Navy's current fleet of 276 vessels. In just the last 30 years, we have completed 15 new designs representing a diverse group of military and commercial seagoing ships: LSD 49; CG47, DDG993, LHD1, LHD8, LSD41, LMSR, USCGC Healy (Polar Icebreaker), 2 Classes of T-AO (Kaiser & Cimarron), Polar, NSC, LPD17, Saar5, and DDG1000.

On behalf of Northrop Grumman and all of the men and women working in support of this program, I would like to thank this Committee for your strong support of the Coast Guard, and of the Deepwater Program. We look forward to working closely with you and the Coast Guard to ensure the success of this important modernization. The following statement contains information that I, on behalf of Northrop Grumman, am submitting based on my current knowledge, information and belief.

Patrol Boats The Coast Guard's current 110 foot patrol boats were built in the 1980s and early 1990s by Bollinger Shipyards, Inc. These boats have seen extensive duty in support of the Coast

Guard mission to save lives, interdict aliens and seize drugs. ICGS and its teammate, Halter Bollinger Joint Venture (HBJV), proposed to convert the 110 foot boats to 123 foot boats as an interim measure to improve the capability of this vessel until its FRC replacement entered operation in 2018.

ICGS proposed the conversion concept as a means to provide the Coast Guard with the capability to continue to meet its mission objectives while remaining within the confines of program funding requirements. Deepwater competitors were required to propose a "system of systems" solution that did not exceed the funding limitation of $500 million per year. With new assets such as the National Security Cutter (NSC), Maritime Patrol Aircraft (MPA) and the Vertical Unmanned Air Vehicle (VUAV) being developed early in the program, it was not possible to design, develop and construct new patrol boats at program inception while keeping within annual funding limitations.

Bollinger had designed and built the original 110 foot boats and was very familiar with their construction. Bollinger was awarded a contract for 16 110' Island class boats in August 1984 and another contract for 33 more boats in 1986. The design of the 110' Island class was approximately 20 years old and was based on an existing patrol boat developed by a British firm, Vosper Thornycroft (UK) Ltd. The 110' Island Class boats were commissioned between November 1985 and 1992. Notably, after the first boats came into service, it was discovered that the 110s suffered from hull problems when operated in heavy seas. As a correctional measure, heavier bow plating was added to hulls 17 through 49 during construction and additional stiffeners were retrofitted to earlier hulls.

Under the proposed Deepwater conversion plan, HBJV added a 13 foot extension to the 110', which was similar to the 9 foot extension they had successfully added to the Cyclone patrol boats starting in 2000. This extension accommodated a stern ramp for the launch and recovery of a small boat, used primarily to support boarding and rescue operations. In addition, the conversion installed an improved pilot house, enhanced C4ISR capabilities, and extensively improved habitability and maintenance. During the conversion process HBJV identified and renewed hull plating in areas where an ultrasonic thickness inspection indicated that the existing plating was deteriorated.

At the time the proposal was submitted, some general knowledge about the condition of the 110s was available, and ICGS believed that replacement of the hull plating would adequately address and offset their deteriorated condition. This is consistent with the findings of the Coast Guard's 110' WPB Service Life Extension Board, published in March 2002, which recommended a program of systematic hull repairs, predominantly in documented problem areas, to address the hull deterioration problems that were impacting the operational availability of the 110s.

As is typical of ship construction projects, periodic reviews of the 123' conversion design were held. Prior to each review, the contractors submitted numerous design documents, including engineering data, calculations and model test results, to the Coast Guard for its review and comment. Coast Guard comments were received in conjunction with each of the three primary design reviews, all of which included Coast Guard, NGSS, ICGS and HBJV representatives.

The first such review was the Preliminary Design Review (PDR). The Preliminary Design Review was not a contract requirement, but was conducted by ICGS as part of the 110' to 123' design process. As part of the PDR process, approximately 43 contract-required data items (CDRLs), including 23 drawings and 14 analyses were delivered to the Coast Guard for consideration and review. During PDR, the Coast Guard was provided with an overview of

procurement, model testing procedures and schedule, as well as the planned hull/structure inspection process, which included blasting the hull to the main deck, ultrasonic and visual inspection, as well as bulkhead Ultra Sonic Testing allowance. The Coast Guard represented 23 of the 46 attendees at PDR.

The next phase was the Critical Design Review (CDR). In connection with CDR, the Coast Guard reviewed 47 design deliverables. In addition to 123' conversion design information and drawings, CDR presentations included design tests such as model basin testing for bare hull resistance, propeller and open water cavitation, self propulsion, planar motion maneuvering and course keeping, numerical simulations of turning circle and course keeping, and sea keeping. The Coast Guard represented 34 of the 75 in attendance at CDR.

CDR was followed by a Production Readiness Review (PRR). During the PRR, the production process, procedures and state of the design to convert the 110' vessel into a 123' were presented. Following the PRR, ICGS received notification from the Coast Guard that "ICGS had presented a comprehensive assessment of the state of the design development and readiness for production." The Coast Guard did not identify any risks associated with hull deformation or buckling. Four days later the USCG delivered Matagorda to Bollinger at Lockport, Louisiana for conversion.

In addition to these various reviews with the Coast Guard, during the conversion of the first vessel, the Matagorda, the American Bureau of Shipping (ABS) examined the design of the hull extension and new deckhouse and monitored key elements of the work being performed. The Coast Guard had a Program Management Resident Office on site at Bollinger to oversee the 123' conversions. At the completion of each conversion and as part of the acceptance process, the Coast Guard established an INSURV board to examine the performance of the converted cutter and make a formal recommendation of acceptance. At the conclusion of the Matagorda work, ABS issued a letter of approval for the conversion work and expressed no reservations with the feasibility of the conversion. Based on all of these reviews and actions, the Coast Guard accepted delivery of the Matagorda. This same process was applied to each of the other seven patrol boats delivered to and accepted by the Coast Guard.

The Performance Specification requirement calls for the 123' to be capable of unrestricted operation up through sea state 3, or seas averaging approximately four feet or less. Coast Guard operation restrictions are imposed beginning at sea state four, or seas less than eight feet, where the boats are to be able to sustain limited operations, altering course or reducing speed as required to maintain a ride which does not damage the boat or its machinery or overly fatigue the crew. The Performance Specification requires the 123' to be able to survive sea state 5, or seas averaging between eight and 13 feet, maneuvering as necessary to minimize damage or injury to the crew, and then be capable of returning to port under its own power once the seas have subsided.

In September of 2004, after all 8 hulls had entered the conversion program and the first 4 hulls had been delivered, the Matagorda was forced to conduct a high speed transit to avoid Hurricane Ivan. This operational necessity forced the Coast Guard to transit in a sea state and speed where the cutter was operating near or above the design limits of the 123' conversion. Upon arrival at their destination, the crew discovered buckling of the side shell and main deck on the starboard side near midship. An engineering tiger team was formed consisting of Coast Guard and NGSS personnel. This team was dispatched to investigate the problem where it was discovered that the Matagorda had an inherent workmanship issue in the baseline 110' that existed prior to the conversion and contributed to the hull buckling. Specifically, a hidden, unwelded aluminum deck stringer was discovered immediately beneath the area where the failure occurred. Other boats

were examined, and this unwelded stringer was also found on one additional hull undergoing conversion. When modeled using finite element analysis, the stresses in the panels which failed on Matagorda were significantly higher than the stresses shown when the model was run with this stringer intact. Based on this finding, the team believed this to be the primary cause of the buckling on Matagorda, and repairs were made accordingly.

In addition, a reconstruction of the engineering analysis of the 123' structure was conducted. Based on this, it was also discovered that an early calculation overstated the strength margin for the boat. A revised calculation using a common, agreed to set of assumptions by a Coast Guard, Northrop Grumman and Bollinger engineering team showed the 123' would still meet the required operations defined in the Performance Specification.

In an effort to further improve the structural integrity on the 123s, three stiffener bands were installed; one at the upper edge of the side shell, one below this one and another on the edge of the main deck to increase the overall structural strength. While the finite element analysis and conventional calculations both agreed that the original hull, with the stringer under the deck intact, should be sufficient throughout the operating range of the 123', these additional stiffeners were considered to provide an added margin of strength.

By March, 2005, 6 of the 123s had received the structural upgrade and had been delivered. Certain operational restrictions imposed on these boats by the Coast Guard following repairs to the Matagorda had been lifted. Then, during a transit from Key West to Savannah, Georgia, the Nunivak experienced hull deformation in an area aft of the new reinforcing straps. This deformation occurred in a different area from that of the Matagorda. Further, this was not an area which had indicated potential for high stresses under any conditions modeled in the earlier finite element analysis.

An outside engineering firm, Designers and Planners, was engaged by the Coast Guard to perform a more detailed finite element analysis of the 123' hull, which showed that the overall hull structure design was adequate under all expected operating conditions up to the worst operating condition modeled. The analyses were not able to replicate the deformation seen on Nunivak. A more detailed look at specific regions on the hull showed an area with high potential for localized buckling in a section of the side shell where the original 110' hull had been constructed of exceptionally thin four-pound plate. Despite this finding, no actual failures had ever been experienced in this area on 110' or 123' patrol boats. As a precaution, this thin plate was replaced with heavier plating on those cutters undergoing the Post Delivery Maintenance Availability, with plans to eventually upgrade all the boats. Lastly, a metallurgical analysis of the deck material determined that the particular grade of aluminum used on the 110s is prone to corrosion and cracking in elevated heat and marine conditions. We provided that information as input to the testing and analysis that was being conducted by the USCG.

In July 2005, then Coast Guard Commandant Admiral Collins' written testimony before Congress outlined the twofold reason for stopping the conversion process as follows: "As the first eight 110' to 123' conversions were conducted, the Coast Guard found that the 110' WPB hulls were in much worse condition than anticipated. This extended the conversion timeline and would have increased projected costs for conversions after the first eight (the first eight were negotiated under a firm-fixed-price contract). An operational analysis of the 123' WPBs also identified high risks in meeting mission needs, particularly in the post-9/11 environment." Based on the deteriorated condition of the 110' hulls and post 9/11 requirements, the Coast Guard accelerated FRC design and construction by ten years to meet the shortfall in patrol boat hours.

To date the problems associated with the 123' conversion include buckling or hull deformation and shaft alignment problems. In addition to the actions previously described, additional and substantial work has been (and continues to be) done to determine cause or causes. In addition to the repairs and reviews of structural calculations, the review process has continued by conducting two independent finite element analyses, modeling both the original and the upgraded hull, and completing metallurgical testing that revealed an issue in the main deck which exists on both the 123s and across the legacy 110 fleet. Extensive strain gage testing has been conducted on a 123' hull to validate the finite element model and to identify potential problem areas which the model may not show. The parent craft designer, Vosper Thornycroft, has been engaged by the Coast Guard to evaluate the 123' hull and provide recommendations. Data has been collected on shaft alignment and maintenance procedures both during the conversion and since, so that the procedures for checking and correcting alignment can be validated for both the 110' and the 123'. Elements of the 123' design, including the propellers and the SRP stern-launch system are being reexamined and validated.

We are committed and determined to identify the root cause of the structural problems. Reviews and analyses of available data on the 110' and 123' patrol boats continue in an effort to better understand the cause or causes of both hull buckling and shaft alignment problems. Until these efforts are complete, it is premature to speculate on the final cause and the final way forward. We understand, however, that the Coast Guard intends by the end of April 2007 to make a determination about the future of the converted 123' patrol boats.

I want to assure the Committee that Northrop Grumman will continue to work with the Coast Guard to address its mission requirements throughout the life of the Deepwater Program.

Thank you for this opportunity to discuss with you the progress of the Deepwater Program.

Granite Island Group
127 Eastern Avenue, #291
Gloucester, MA 01931

James M. Atkinson
jmatk@tscm.com
http://www.tscm.com/
(978) 546-3803

The information contained herein may not be utilized without the written permission of James M. Atkinson.

Testimony of
James M. Atkinson
President and Sr. Engineer
Granite Island Group

Before the
House Committee on Transportation and Infrastructure
U.S. Coast Guard Budget and Oversight Hearing
April 18, 2007

My name is James M. Atkinson, and I am the President and Senior Engineer of Granite Island Group located in Gloucester, MA, which is a small veteran owned company that since 1987 has specialized in the field of electronics engineering. We have special capability involving the protection of classified, confidential, privileged, or private information against technical attack, eavesdropping, or exploitation.

I am responsible for performing visual and instrumented TSCM (Technical Surveillance Counter Measure) surveys. This includes the analysis of all signals present on the airways; evaluation of telephone lines, computer networks, detection of computer viruses and Trojan horses, security of voice and data switching systems, and any mechanism by which a spy could commit technical eavesdropping or surveillance against or exploitation of a target through technical means. Also included in these responsibilities are the studies of electromagnetic interference (EMI), and the study of electromagnetic compliance (EMC), to include the performance of visual and instrumented TEMPEST inspections, and measures to mitigate other technical weaknesses in communications and computer systems.

I have attended extensive private and government sponsored TSCM, TEMPEST, cryptographic, technical intelligence, electronics, and security training both in the United States and abroad. I have been involved in many hundreds of TSCM, TEMPEST inspections, over the past 25 years of government and private sector assignments. I have been extensively published on these subject matters, and have authored materials that have affected national policy.

My clients include major corporations, heads-of-state, diplomats, government agencies, defense contractors, hospitals, courthouses, police stations, banks, universities, publicly traded companies, private companies, stockbrokers, ranchers, farmers, fisherman,

accountants, law firms, restaurants, political leaders, ministers, small businesses, and private individuals.

I believe that I am in the unique position to act as an independent and disinterested party, "honest broker", (and Voice of Reason in these proceedings). I was not involved in the ICGS Deepwater program in any regard or capacity and have no ax-to-grind. I am also able clearly explain highly technical and highly classified subject matters such as TEMPEST and TSCM to this committee in an unclassified way that a non-technical layman can understand. The documents in this matter are highly technical, and it takes a TEMPEST and TSCM expert to fully understand what is in those documents, what they represent, what they mean, and more importantly to bring forth the gravity of the situation.

I have also carefully analyzed hundreds of pages of documents and reports which where provided to the government by ICGS (the Deepwater contractor) when the first eight 123 foot cutters were delivered to the Coast Guard. These documents were not classified in any way, and were available to any member of the public by merely asking the Coast Guard for them. Within these documents, I discovered that ICGS delivered seriously defective ships to the government, which did not comply with TEMPEST standards, which the government could not use for classified missions, and which could not be used to store, process, or transmit classified information.

All of the information contained within this written testimony, and all information, which is presented in my oral testimony, is completely unclassified.

TEMPEST Introduction

When a new consumer electronic device such as a computer, DVD player, blender, electric razor or other modern electronic marvel is offered for sale to the public the manufacture has to gain a special certification or authorization from the FCC. This process ensures that when the consumer uses the device that they will not interfere with other devices in the area. For example, we do not want a DVD player or blender to accidentally jam all the TV, and cellular telephones in a five-block area due to a poor product design.

The FCC (Federal Communications Commission) and its foreign equivalent have created a series of formal standards which new equipment is evaluated against before it is offered for sale to the public.

These new products are taken into a specialized laboratory, and an engineer completes a complicated battery of tests. These test results are then sent to the FCC who then approves or denies permission for the product to be sold to the public.

When modern electrical devices operate, they generate electromagnetic fields. Digital computers, radio equipment, typewriters, and so on generate massive amounts of electromagnetic signals, which if properly intercepted and processed will allow certain

amounts of information to be reconstructed based on these "compromising emanations". Anything with a microchip, diode, or transistor, gives off these fields.

Compromising emanations are these unintentional intelligence-bearing signals, which, if intercepted and analyzed, potentially disclose the national security information, transmitted, received, handled, or otherwise processed by any information-processing equipment.

These compromising emanation signals can also escape out of a controlled area through power line conduction. Other conduction paths can be air conditioning ductwork, plumbing, wiring, or by simply radiating a signal into the air (much like a radio station). These signals can also mix with or be impressed onto other unclassified signals, where the eavesdropper merely intercepts these unclassified signals, and extracts the classified information riding on top of the unclassified signal.

An excellent example of these compromising emanations may be found in several modems and fax machines. When these modems operate, they generate a very strong electromagnetic field, which may be intercepted, demodulated, and monitored with nothing more then a radio that any member of the public can purchase at Radio Shack, Best Buy, Wal-Mart, or other retailer of consumer electronics (which, in some cases, may, or may not be legal). This is also a very serious problem with many speakerphone systems used in executive conference rooms and government offices. A considerable problem also exists with many fax machines, computer monitors, external disc drives, CD-R drives, scanners, printers, and other high bandwidth or high speed peripherals and network devices. If an eavesdropper is using high quality, intercept equipment the signal may be easily acquired several hundred feet or more away from the target, although the eavesdropper would normally be located quite close to the system under surveillance.

In the consumer markets, a slight amount of signal leakage really does not present a problem and at most would result in a breach of private information or disclosure of some corporate secrets. However, if a computer or other communications equipment that was processing classified information has a leak, the results could be devastating. Soldiers can be killed, wars can be lost, and nations can fall.

During the early days of telephones, there was a significant problem where a person talking on one telephone line could clearly hear a person talking on another telephone line. This was most often the results of shoddy workmanship on the part of the phone installer, but also a result of using poor quality wiring in the early phone systems, and having inferior, albeit newly developed equipment. This problem is called "cross-talk", where one conversation leaks into a nearby phone line and can be heard by a third party to the original conversion between the original two parties. While this problem can been drastically limited in modern phone systems it has by no means been eradicated completely, and continues to be a problem most often caused by poor quality workmanship.

World War One brought about a method where soldiers on one side of a battlefield were able to eavesdrop on their enemies telephone calls. This allowed them exploit this

information to determine troop movements, and to gain a significant tactical advantage on the battlefield.

During World War II, both sides of the conflict exploited signals, which leaked out of each other aircraft, surface vessels, and submarines. The Germans were able to detect, and shoot down U.S. bombers when their radio and navigation systems were merely turned on, but not actually transmitting. Submarines where similarly hunted by listening for this accidental leakage, and to this day the study and exploitation of this type of accidental signal leakage has become a staple of the intelligence and military community.

In the 1950's NATO eavesdroppers in Germany discovered that classified information could be derived by monitoring unclassified teletype circuits. The cause of this was found to be that the classified and unclassified wiring was running too close to each other and causing classified information to bleed onto the unclassified wiring. What this investigation by intelligence analysts discovered was that by monitoring local high power radio stations that fragments of classified information could be extracted from the unclassified broadcast stations from a considerable distance from the location where the classified information was being processed. Continued investigation led to a sub-specialty in the field of electronics engineering that permitted one side to monitor the classified efforts of the other side by merely exploiting unclassified communications that were passing through the classified area. In other words unclassified signals opened the door to the acquiring of classified information.

To deal with this "signal leakage" issue the U.S. government developed a series of formal, and extremely rigid engineering standards which lay out how equipment should be designed, installed, and maintained to avoid such leakage. These TEMPEST standards are really nothing more then several standard civilian engineering measurement standards and procedures enhanced by the NSA to make then more rigid and comprehensive then their civilian counterpart.

TEMPEST is an acronym for "Telecommunications Electronics Material Protected from Emanating Spurious Transmissions" and includes technical security countermeasures; standards, and instrumentation, which prevent (or minimize) the exploitation of security vulnerabilities by technical means. Other popular names for TEMPEST are "Transient Emanations Protected from Emanating Spurious Transmissions", "Transient Electromagnetic Pulse Emanation Standard", "Telecommunications Emission Security Standards", and several similar variations.

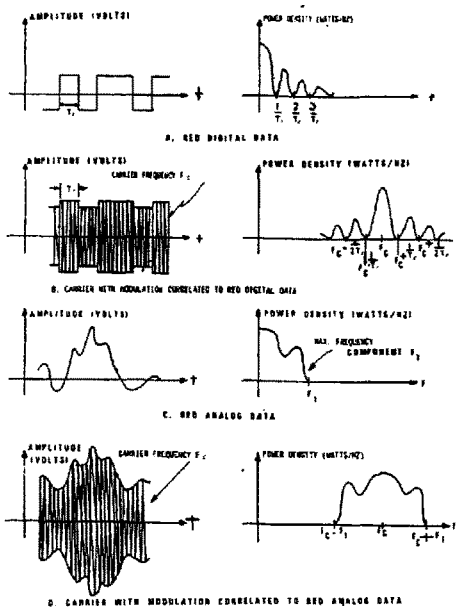
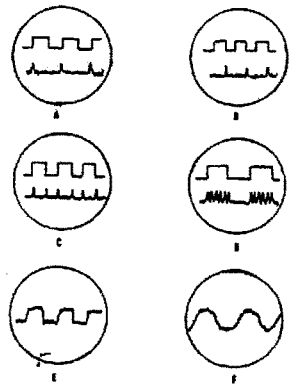


Figure 1-1.—Pulse-Emanation Relationships (U) (C)



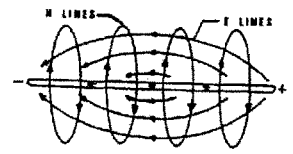


Figure 1-2.—Electromagnetic Field Composition (U) (U)

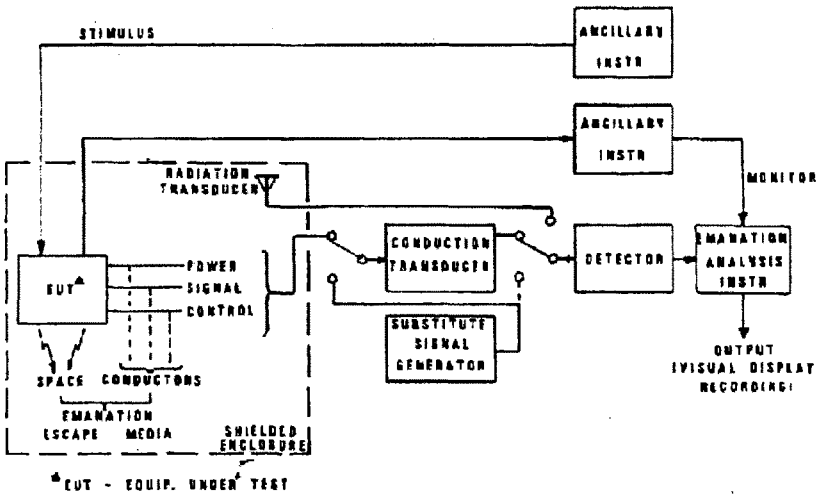
In 1957, the U.S. Government mandated rigid TEMPEST required for highly classified systems that were responsible for handling the most classified secrets of the Cold War and helped to contain our secrets for the next 20 years until details of those systems were sold to the Russians by multiple spies in trusted positions in the U.S. government.

TEMPEST is nothing more then a fancy name for protecting against technical surveillance or eavesdropping of UNMODIFIED equipment, (the unmodified part is important.) TEMPEST and its associated disciplines involve designing circuits to minimize the amount of "compromising emanations" and to apply appropriate shielding, grounding, and bonding. These disciplines also include methods of radiation screening, alarms, isolation circuits/devices, filters, isolation distances, and similar areas of equipment engineering.

A certified TEMPEST technical authority (CTTA) is an experienced, technically qualified U.S. Government employee (not a contractor) who has met established certification requirements in accordance with NSA approved criteria and has been appointed to fulfill CTTA responsibilities.

There is an isolation area just outside of a classified system where it is less practical to exploit TEMPEST vulnerabilities. However, other systems present inside or near this isolation, area can considerably extend this distance to well outside the isolation area. This is often referred to the "zone of control", or "zone of exclusion".

The Equipment Radiation TEMPEST Zone (ERTZ) is a radius established because of determined or known equipment radiation TEMPEST characteristics. The zone includes all space within which a successful hostile intercept of compromising emanations is considered possible. This zone can range from a few yards, to several miles depending on the nature of the classified information on the equipment on which it is being processed.



As a spy moves away from a location where classified information is being processed the exploitation of accidental leakages becomes increasingly difficult. There is a specific classified voltage level called the "Compromising Emanation Performance Requirement (CEPR). This is the maximum emanation level permitted at the standard measurement distance during an instrumented TEMPEST evaluation. When the CEPR is met, there will be minimal chance that a compromising emanation will be detected beyond the specified design radius unless the equipment has not been properly maintained, or if a secondary signal provides a carrier for the classified signal.

The point where the compromising emanation performance requirement (CEPR) applies. For an electric or magnetic field emanation, the standard measurement point is one meter from the equipment under test. For a conducted emanation, the standard measurement point is the design radius. This is called the "Standard Measurement Point," and it represents a distance similar to that found in civilian EMI and EMC studies.

The goal of the CEPR and ERTZ is to ensure that the signals emitting from an item of classified equipment is below -164 dBm at a distance of 1 meter, and ideally below -174 dBm (although signals below -150 dBm are tricky to measure during a one week TEMPEST inspection). The TEMPEST standards are thus based on reducing signals

below these levels, often involving keeping a cable more then a meter away from another cable, or keeping high threat device 3 meters away from others.

The delicate point is that the CEPR and ERTZ can also foster a great sense of false security and a TEMPEST Zone can completely pass a visual and instrumented TEMPEST evaluation and yet still be highly exploited by spies for classified signals and information.

A "TEMPEST zone" is a formally designated area within a facility where equipment with appropriate TEMPEST characteristics may be operated. Once the classified equipment is installed into this area is meticulously checked by a CTTA with a formal instrumented and visual TEMPEST inspection. This zone is commonly called a "Black Vault", or "Black Room" where classified equipment is located even though the zone will contain RED signals, RED equipment, and RED lines ("RED" means the equipment in the "Black Vault" is classified. This is a common point of confusion, and as such, a "black room" should be considered the same as a TEMPEST zone. The isolation zone is the area immediately surrounding the "TEMPEST Zone" of Black Vault.

Focus of Study, and Objectives

TEMPEST disciplines typically involve eliminating or reducing the waveform of signal transients caused by a communication signal and the resulting harmonics or mixing of the classified information with unclassified signals. These signals and their harmonics could allow the original classified signal or information to be reconstructed and analyzed by a spy.

TSCM or Technical Surveillance Countermeasures on the other hand deals with protecting against hostile penetrations or manipulations by an eavesdropper to facilitate the interception and exploitation of classified, confidential, privileged, or private information. It is important to note that TSCM deals with things that have been manipulated in some way, and TEMPEST deals with unmodified things.

The mind-set, hypothesis, or base-line of a TEMPEST inspector is that nothing is there until you can prove otherwise. Their job is to stop or limit compromising emanations and the technical leaks of classified information that are the results of poor equipment design, installation, or maintenance. A TSCM inspector on the other hand always assumes that an eavesdropper is active or that a bugging device or hostile manipulation is present until they can scientifically prove otherwise. TEMPEST assumes a proactive position on protecting classified information, whereas TSCM involve the reactive protection of the same information. Both disciplines are equally important and should be engaged in a proactive manner.

C4ISR is the fusions of "Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance" into a single operative system to permit a more cohesive flow of critical information in a battlefield or tactical arena. The critical components of this are the core "Command and Control" elements. In a modern battlefield, the commanders need as much information available to them, on as rapid as

possible timeline. With this in mind C4ISR draws together most of the resources on a battleship, command post, or forward control station directly into the hands of the people who need it most.

C4ISR system included the missions of gathering, processing, and transmitting information, the Command, Control, Communications, Computer, Intelligence, Surveillance, and Reconnaissance (C4ISR) facility contains as a minimum ten distinguishable elements. These are the structure or housing; electrical power generation and distribution [both alternating current (ac) and direct current (dc)]; non-electrical utilities; heating, ventilation, and air-conditioning (HVAC); an earth electrode; lightning protection; communications systems; computer and data processing systems; control and security systems; and personnel support systems.

TEMPEST in a TEAPOT and HIJACK Exploits

Between the TEMPEST and TSCM fields of study there is also an area of our field that deals with unmodified or quasi-modified equipment and signals, which interact with each other. This is the case where in effect a classified signal or classified information is accidentally impressed onto an unclassified signal. Thus, the unclassified signal carrying the classified data with it is accidentally transmitted a considerable distance allowing for eavesdropping by those who should not possess the information. This is usually the result of TEMPEST standards not being rigorously followed during equipment design, installation, and maintenance.

The investigation, study, and control of intentional compromising emanations from telecommunications and automated information systems equipment that was created, provoked, or induced by a spy is known by the code name of "TEAPOT". An example of this would be the positioning of a rack of two way radios need a secure telephone, or by installing RED cable near to a BLACK cable. This can also involve modifications to software, to slight breaches to the configuration of equipment.

An example of this would be a case where a cable, which contains only unclassified radar, navigation, or communications signals, is placed near a cable, which carries highly classified information. On a maritime vessel an example of an unclassified signal would be the VHF marine radios, the unencrypted HF (shortwave) radio communication systems, and sections of the radar and IFF systems. Should any of these cables or equipment be placed near the classified systems an eavesdropper could intercept the classified information that was riding-on-the-back-of the unclassified signals.

Another example of this would be a warship that downloads classified spy satellite imagery through the onboard satellite communication system. The problem is that the installer of the classified system has not properly installed the system that creates considerable TEMPEST problems causing these signals to leak off the ship a short distance. This is further complicated by several cables which do not carry classified information but which pass in close proximity to the classified cables. Due to the unclassified cable, perhaps being a high power antenna link the classified information can

now leak out of the ship and be monitored by spies from dozens, if not hundreds of miles distant.

Instrumented TEMPEST Inspections

If the instrumented inspection turns up a problem that was major or serious then they absolutely would have had to have performed the entire instrumented inspection again; however, if they were only very minor problem turned up in the instrumented inspection the inspector could have merely pointed out several minor faults and left it up to a third party to resolve the issue.

If the equipment configuration was materially changed to correct visual TEMPEST discrepancies, or equipment or cables were moved in the area that was inspected then the instrumented TEMPEST inspection would have had to be repeated again and again until all discrepancies had been fully cleared.

Given the magnitude of the problems found during the visual TEMPEST inspections there would have been material changes in the secure areas, cables would have to have been re-routed, and physical and electrical changes would have been made. In turn, yet another, expensive follow-up instrumented test would be needed.

This is why is it so critical for all visual discrepancies to be fully resolved before the instrumented TEMPEST inspection is initiated as the correction of visual deviancies may render the prior instrumented inspection of little or no value.

It is a painful issue because with this number of visual faults it is unlikely that the ship could have passed the instrumented TEMPEST inspection. The magnitude and number of the problems with the TEMPEST on this ship are such that the instrumented inspection SHOULD have been re-performed from scratch. The Coast Guard had to relocate quite a bit of equipment, and re-run quite a bit of cables and systems to resolve the massive faults listed in the DD250 (attachment C), these changes would have create a number of significant and material changes from what an instrumented TEMPEST inspection before and after the changes would have seen.

If the initial instrumented TEMPEST inspection identified only the instrument panel and LAN intersection weaknesses then there is an even bigger problem because it should have also picked up on the faulty ground straps on the racks, the emissions from the ARC-210 wiring, the signal leakage from the unshielded cables, and so on. If you find significant problems on a visual inspection, you should also pickup on similar problems in the instrumented measurements as well.

It is best compared to your checkbook where one column is your credits, and one column is your debits. If you have a loose grounding cable, it should show up in the visual inspections, and then once you begin the instrumented inspection you should see the same effects of the ground cable not being hooked up properly. On the other hand, if the visual inspector was finding problems at the same time the instrumented inspector was

performing the instrumented inspections the two events could have been interfering with each other and resulting in inconsistent results.

In the records of the first four ships there is mention of an instrumented TEMPEST inspection being performed, and in all four cases both the instrumented and visual inspections failed.

In the two OIG reports, I was unable to find any reference to the PADRE being subjected to a second instrumented TEMPEST inspection as the Coast Guard has contended in other documents. If the PADRE was in fact re-inspected, who did the inspection, and did they have any links to ICGS, LM, GD, USCG, SPAWAR, DHS (the bigger question is that did the agency or contractor who performed the second instrumented inspection on the PADRE have any bias, or benefit to the PADRE passing)?

The Coast Guard appears have issued waivers too many of the TEMPEST requirements, gained IATO, keyed the C4ISR systems, and then granted ATO. This causes a problem though, because if they were granting large numbers of waivers for TEMPEST the waivers would be a matter of record on the second PADRE inspection. A USCG TEMPEST inspector is going to honor the waivers, but any other independent TEMPEST inspector is going to instead write up the systems as not being in compliance with a range of NSA TEMPEST standards and documents.

The NSA requires that the equipment meet TEMPEST standards of performance before it is allowed to pass classified information. If the system passes an instrumented or visual inspection, and the ship or equipment is modified in a material way then the instrumented test should be performed from scratch. In order to correct, the things found in the visual inspection there would have been material changes made to the ship.

The method that the OIG report tries to describe during the TEMPEST inspection is called a "propagation study" or "walk away study" and is performed when an instrumented inspector is unskilled and cannot obtain a solid reading with his instruments. He will tune a receiver to a signal of interest and slowly back away from an area he is examining until the reading drops below a preset level. This is performed in all directions around the area being protected, but is often the best test a technician can perform if they are limited in equipment, experience, or time on target.

It is in extremely bad form to do this, but often it is the only way to evaluate how "dangerous" a TEMPEST problem is. The concern that we run in to with merely performing a "propagation study" is that is fosters bad engineering practices, and can conceal much more serious issues that could be exploited by a spy.

An unclassified example of a similar situation would be a USB cable between a computer and printer that is leaking a signal that the TEMPEST inspector measures to be quite strong 20 feet away from the cable. The NSA specifications will mandate that this signal is not a problem so long at the voltage level drop below a certain level (we will arbitrarily say -130 dBm to set an unclassified level), beyond a certain distance (we will arbitrarily say 70 feet to set an unclassified level). So if the signal measures say -35 dBm at 20 feet

away, but only -130 dBm at 70 feet away we say that the signal has been attenuated by 95 dB over a distance of 50 feet.

If the inspector detects the signal radiating from the USB cable, instead of performing actual measurements to document the technical parameters of the fault, the inspector will "back away" with his test instruments to see if his equipment can still pick up the signal when he is X feet way from the cable or equipment be tested.

It is actually better to get as close as physically possible to something that you are trying to certify, and to be mere inches away at the most. This depends on the signal or piece of equipment that you are trying to measure, but as a rule you place the test instrument antennas as close as physically possible, and run a test cable back a few yards so that the TEMPEST or TSCM inspector does not pickup the signals from the equipment he is using to make the measurements (or even his own wrist watch).

Without disclosing any classified information I can relate to you that classified (or RED) equipment should not present a voltage level greater then -174 dBm at a distance beyond 3 meters. Further, there should never be any signal that exceeds -50 dBm within 3 meters of any classified system, but the general rule is to keep this -50 dBm number actually closer to -135 or even -160 dBm (which is only possible with modern test equipment, including modern TEMPEST instruments).

It must be further pointed out that skilled engineer (or spy) equipped with the proper equipment, and given the appropriate amount of time can actually find and exploit signals that are far weaker than this.

Within TSCM, TEMPEST, TEAPOT, HIJACK, NONSTOP, JERICHO, and related disciplines of electronics engineering we endeavor to correlate signals into our test equipment. More specifically, we will synchronize our test equipment to the timing signals created inside the equipment we are testing. We will then use this correlated signal to "gate" our test equipment into initiating a measurement when a certain signal threshold is detected, observed, or expected or we will gate the equipment to a specific time or other event.

An example of this "gating effect" or correlation would take place in a radio, which uses Frequency Hopping or Direct Sequence modulation techniques or waveforms. If we know the technical parameters of these waveforms in advance, we can program our TEMPEST test equipment to only perform the measurement of the equipment under test when the Frequency Hopping signal is following a certain hopping sequence or pattern.

Another example of this gating effect would be the timing signals used on a RADAR system or on an IFF system where the signals appear at fixed or highly predictable time periods. By only taking the measurement with the TSCM or TEMPEST instruments during these "moments of opportunity" the effectiveness can be increased by several thousand times.

Related to this, if the spy can also determine the timing or other parameter of an operations system (such as RADAR, IFF, SATCOM, INMARSAT, VHF, UHF, etc) the

spy can also exploit this gating effect to enhance his effectiveness by several thousand fold as well.

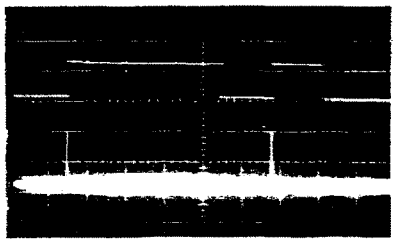
If a hot, BLACK (unclassified) signal is exposed to a weaker RED (classified) signal the two signals will mix and the BLACK (unclassified) signal will now carry parts of the RED (classified) signal. In the case of the Bluewater cutter 500-watt IFF transponder, very high power RADAR systems, and the strong two-way radio systems on the ship, even the slightest leakage in the RED (classified) equipment will cause mixing with the black equipment signals and thus a hemorrhage of classified information.

A typical piece of (unclassified) equipment that would be used for this measurement would be the DSI-1550-A (http://www.dynamicsciences.com/client/show_product/33) and the DSI-9000A, DS-200, DSI-110, R-1580, R-1250, R-1180, and related equipment made by the same company. Other companies such as Electro-Metrics offer products such as the EM-2100 series, and with Watkins-Johnson, we have the venerable WJ-8999 Portable EMC/TEMPEST Test Receivers or WJ-9195 systems, and with other companies, we have a host of similar products of an unclassified nature.

This equipment is highly specialized test instruments that are designed to measure extremely weak signals levels and which can measure a low level signals that is barely measurable by other means. This is one of the many pieces of equipment the instrumented TEMPEST folks would have used, and they would have used a wide range of related equipment resulting in several thousand pounds of equipment being brought to bear against the ship for these measurements.

The DSI110 for example is capable of making measurements down to -164 dBm, and by using signal simulators and converters; the range can be greatly increased to well within, and below the Johnson noise floor of -174 dBm. The test equipment can also be triggered via a direct connection from the equipment under test to "gate" the measurement, which further enhances the sensitivity. This would be combined with high performance cables, ultra-sensitive low noise amplifiers, oscilloscopes, computers, cables, dozens of antennas or probes, and many hundreds, it not thousands of pounds of support equipment.

Examples of Captured "Compromising Information" of Leakage



Example Test Lay Out

MIL-STD-461E

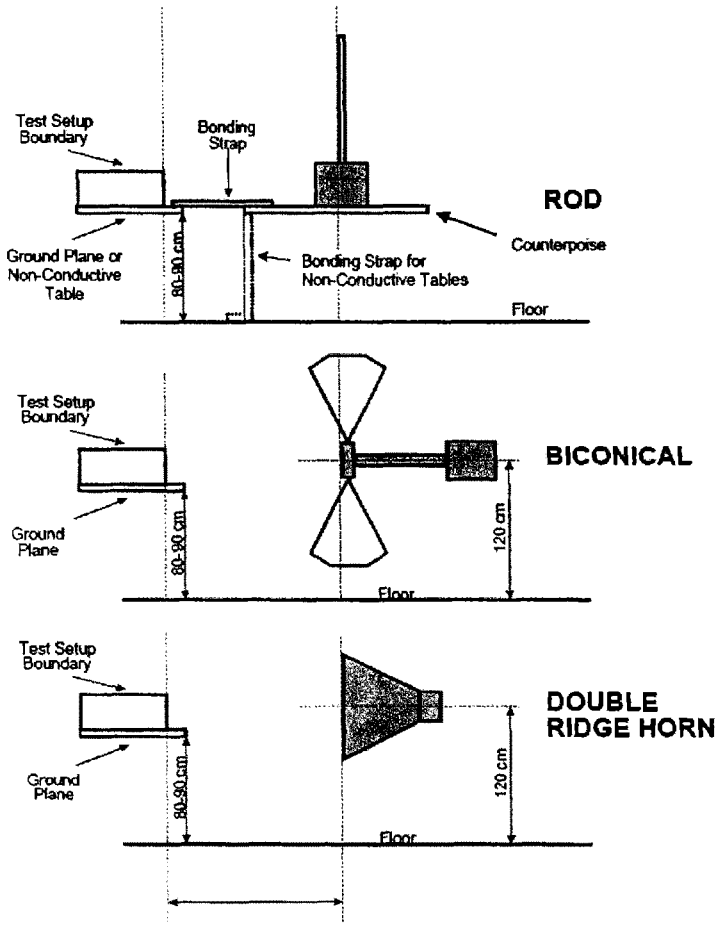


FIGURE RE102-6. Antenna positioning.

The vast majority of this equipment can be openly purchased on the market, and surprisingly the U.S. Government often sells this same equipment off on a regular basis as scrap or surplus.

There is no reason for the Coast Guard not to have had this equipment on hand to perform their own instrumented TEMPEST inspections, and further no reason for ICGS and/or Lockheed-Martin to have had this equipment on hand to perform at least some measure of instrumented inspections prior to the SPAWAR instrumented inspections.

Red and Black Isolation

A BLACK line, BLACK signal, or BLACK system is one in which no classified information is present, and onto which no classified information can leak or can be manipulated to cause the leakage of classified information. If a signal of message is intercepted off of a black system or line, it will not divulge any classified national security information if recovered and analyzed by a spy.

RED lines, RED signals, RED components, RED modules, and RED systems are those, which handle highly classified national security information. Should any weakness or flaws of any type in a RED system take place the results could be devastating to the national defense as classified information could be leaked to spies.

RED/BLACK isolation is part of the concept that electrical and electronic circuits, components, equipment, and systems. Thus, RED signals which national security information or unencrypted language, and unclassified information in electric signal form (RED) be separated from those, which handle encrypted or non-national security information (BLACK). Under this concept, RED or BLACK terminology is used to clarify specific criteria relating to, and to differentiate between such circuits, components, equipments, systems, etc., and the areas in which they are contained.

TM 5-690

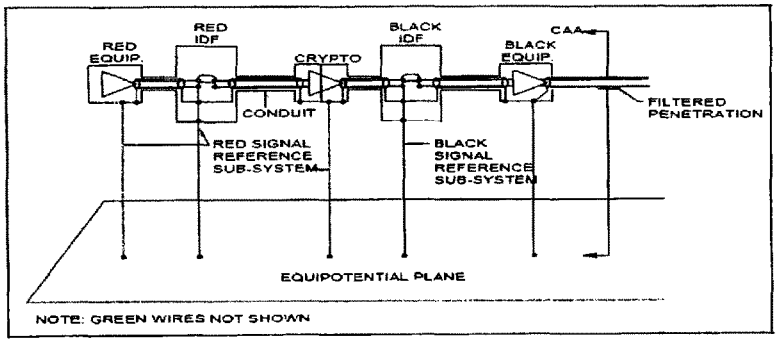


Figure 2-5. Recommended TEMPEST signal reference subsystem

Perpetual Vigilance

TEMPEST and TSCM both require extreme attention to detail, and aggressive, perpetual vigilance. The slightest flaw in classified equipment design, installation, or maintenance can be, and frequently have been exploited by foreign intelligence agency. Spies aggressively seek out the technical weaknesses in our ciphering systems, our classified information systems, our computers, and our intelligence systems.

When one of our government agencies is asleep at the wheel, only bad things can happen. When inspection reports are falsified bad things can happen. When government agencies start passing responsibility to other parts of the government and not owning up to their own inter-agency responsibilities only bad things can happen. When the leadership of a government agency ignores their responsibilities to glad-hand the agencies contractors only bad things will result. When there is malfeasance in the leadership of a military or civilian agency and the government contractors take advantage of that malfeasance to gouge the government and provide them with flawed goods and serves then only bad things can happen.

The men and women of the Coast Guard have a difficult and critical job to perform on behalf of the public. They save lives, they defend our maritime ports, and they perform drug interdictions, ensure safe maritime transport, and are responsible for the security of our port and waterways. The Coast Guard needs solid and stable ships so that they can engage in a wide range of mission to defend this country and ensure the safety of the public. When the safety and lives of service members of the Coast Guard is at risk, so is the safety and lives of every member of the public.

Several of the missions of the Coast Guard requires that it has immediate access to classified information via a classified network called SIPRNET, but access to this classified network and the information must be tempered with great control and oversight. To maintain this control and oversight a series of standards have been developed which first address the actual hardware through which this network communicates, and then a second set of standards that dictates a standard of performance for the software, which operates on the hardware. TEMPEST standards that apply to the hardware part of the equation rigorously dictate the performance characteristic of all equipment used to engage in classified communications, which includes all Coast Guard assets with access to classified systems.

The Coast Guard must be perpetual vigilant not only in regards to search and rescue missions, but also must be equally aggressive with protecting classified information, classified networks, and classified communications systems.

Much the same way that a minor error during a Coast Guard search and rescue mission can lead to the death of someone they have been sent out to rescue, a seemingly insignificant installation error, or lack of aggressive oversight of TEMPEST on a Coast Guard asset can be far more devastating and can cause suffering and death on a national level. It can also be something as simple as a cable not being properly routed, or a lock

washer not being of the correct type, and mounting bolts not being torque down properly, or threads on a bolt not being cleaned.

Our foreign adversaries want to steal our secrets, and they have considerable resources to facilitate such thefts. Foreign countries are actively spying on us, and aggressively trying to steal our secrets. The only defense against this constant threat is perpetual vigilance, and aggressive, and pro-active protection of classified systems. This nation will not survive, nor will it endure unless we can protect these systems.

DD250 and Acceptance Documents

A DD250 form is a standardized "Material Inspection and Receiving Report" that a contractor fills out prior to developing an asset to the government. On this document, the contractor lists the prices that the government will pay for the asset, and will list incidental charges that they may have incurred such as charges for special testing, special supplies on so on.

Once an authorized representative (or a group of representatives) has inspected the asset, the document is signed on behalf of the government, the asset is formally accepted, and the contractor can be paid for the asset, which they are selling the government, or for the work, which they performed on the governments' behalf.

It is customary for the DD250, or a document attached to the DD250 to include a list of all of the flaws that may have been discovered during the government inspections, or systems that may not have been fully functional or installed on the date that the asset was delivered to the government. This allows the government to withhold a reasonable amount of the money that is due the contractor until after the problem is resolved or the missing equipment installed.

Attached to the DD250 will usually be some type of formal document or "Certificate of Conformance" prepared by the contractor in which they promise that they complied with all of the contract requirements, adhered to the specifications, and providing the asset in the condition in which the government ordered it.

It is inevitable that a complex asset such as a ship, submarine, or aircraft will have some minor issue on the date of acceptance both the government and the contractor will work together and endeavor to correct these deviancies so that the contractor gets fully paid the withheld funds, and the government has a fully operational asset. Examples of deviancies would be radios which do not work, light bulbs that are burned out, propeller shafts that wobble, cables not being properly secured, and other issues that are caused by either shoddy workmanship, defective materials, or a combination of a lack of oversight or weak project management.

The DD250 will also have as an attachment the results of specialized testing required by the government, or specialized certifications, which are required as, part of the acceptance process. An example of this is that an asset, which passes or accesses classified communications networks must pass a series of classified, tests to include NONSTOP evaluations, HIJACK studies, TEMPEST evaluations, and TSCM inspections.

The most basic, and most critical of these tests which would take place prior to the DD250 being completed, and the asset being accepted by the U.S. Government, would be the operational testing and inspection of all communication equipment, and the completion of both a physical, visual, and instrumented TEMPEST inspection. Once the asset has been accepted and all of the deficiencies corrected the asset would be fully transferred into government control and additional signal testing. This would include, but

not be limited to additional TEMPEST testing, HIJACK studies, NONSTOP countermeasures, and TSCM inspections, which are difficult, or impossible to perform unless the ship or other asset construction was completely finished and all the prior problems or discrepancies fully resolved.

At this point the government would authorize the asset (in this case a ship) to have an IATO or "Interim Authority to Operate" which means that a limited amount of classified information or equipment could be brought onto the asset to facility further testing, and to initiate shakedown or seaworthiness testing. An example of this would be ciphers and codes that would be needed to permit the radios to pass classified communications, and to permit classified testing to take place.

Classified testing, or the testing of classified systems would then be undertaken under the IATO, and once completed and all problems noted during the classified testing were resolved the contractor would receive their funds that had previously been withheld, and the government agencies to whom the asset belongs would issue the Final Authority to Operate or ATO.

The time between the DD250 being signed and the asset being accepted by the government, and the final ATO being issued is a major liability for the government. The longer the duration of this time the greater the problems are with the asset. If, for example, the government accepts a ship, but the ATO is not granted until two years later, the ship has essentially been sitting unused while the deviancies where corrected. The length of this delay is also a key indicator of the competence of the contractor, and the oversight and effectiveness of the government contracting office.

My professional opinion for the ideal situation is for the contractor not be paid the final 30% of any contract until the asset in delivered in full (with zero discrepancies or shortages), the asset is then formally accepted by the government, testing by the government is fully completed, and all deviancies resolved by the contractor to the governments satisfaction in a reasonable amount of time.

Contactors struggle to deliver assets as quickly as they can, but in so doing, details are other missed, or standards and contracts are not complied with. In a rush to complete a multi-million, or even multi-billion dollar project the contractor may well cut corners or falsify test results to get the government to accept the asset before work is actually complete and in turn to receive the bulk of the money they are due for the project. The contractor then lists the incomplete work on the DD250, and the government inspectors then document those additional things, which the contractor failed to mention. This permits the contractor additional time to complete the work after the acceptance, which should have actually been completed PRIOR to acceptance that sadly, this is a type of soft procurement fraud on the part of the contractor.

Ships That May Leak Secrets Things

To be very specific, prior to the Coast Guard taking delivery of the USCG Cutter Matagorda the USCG TEMPEST Program Manager and the Navy SPAWAR TEMPEST Authority initiated a visual and instrumented TEMPEST inspection of the Matagorda. The cost of this inspection is listed in the DD250 for this ship on page 2, as line item 55-5 in the amount of $121,000.

On examination of the DD250, in attachment C to the ICGS Certificate of Conformance, exceptions listed for incomplete or defective services or equipment were noted in detail.

Examples of the significant number of exceptions or failures found on the USCG Cutter Matagorda were engine control cables not working properly, massive failures of the TEMPEST requirements, security cameras not being properly mounted, communications systems being inoperative, power supplies and wiring being defective and highly hazardous PVC jacketed wiring being used aboard the ship.

In lieu of resolving some of these problems, the exceptions (failures) were simply overlooked, and waivers were granted, not only on the Matagorda, but on the other ships as well. Instead of removing the hazardous PVC cables, a waiver was issued to keep them on board, and thus to recklessly endanger the crew.

Instead of correcting, the TEMPEST failures and performing a second instrumented inspection the Coast Guard neglected to perform the second instrumented inspection that was mentioned in attachment C, and instead just made token changes and issued waivers for the rest of the problems.

This pattern of behavior is also seen in the other ships where follow-up instrumented inspections were not completed after the first inspections failed, or the initial instrumented inspections were never performed at all.

In that case, of one ship (PADRE) a follow-up instrument TEMPEST inspection was only initiated after a Department of Homeland Security - Inspector General Investigation was initiated to investigate fraud within the contracting and delivery of these ships. It is unclear as to who performed the second instrumented TEMPEST inspection on the PADRE, but it does not appear that it was a government entity.

TEMPEST Problems within the 123' Deepwater Cutter/Patrol Boat Program

Matagorda (1303)

TEMPEST Inspect:	24-Feb-04 (failed) [Initial Instrumented SPAWAR Sweep]
Delivered:	01-Mar-04
Authority to Operate:	14-Oct-04
TEMPEST Inspect:	19-Dec-04 (failed again, 29 unresolved problems)
Date Entered Service:	07-Sep-05
TEMPEST Inspect:	03-Aug-05 (failed again, 14 significant unresolved problems)
DHS-OIG Report:	11-Aug-06 (Uncovers failures on many systems)
123" Shutdown:	30-Nov-06 (Coast Guard finds cracks in all 8 ships... they leak)
DHS-OIG Report:	09-Feb-07 (Uncovers Massive Project Failure)

Attachment C of the 1st DD250 (Matagorda) specifies a SPAWAR TEMPEST Instrumented Survey must be re-performed (this would have been the SECOND instrumented survey) after the first instrumented inspection failed.

Further, there was absolutely no plan in place for the TEMPEST element of this project prior to the acceptance of this ship on 01-Mar-04, and no plan of action until after the government TEMPEST inspections failed miserably during the inspection in February of 2004.

However, in the cases of the three ships delivered after the acceptance of this first ship the contractor began charging the government $5,000 to provide a "TEMPEST POA&M", which means that the government and the contractor had no plan in place for the first ship, but that such a plan was put in place after the fact for the second, third, and fourth ships.

The notable issue with the first ship (Matagorda) is that it was the only ship on which an actual instrumented TEMPEST inspection was performed prior to acceptance. The cost in line item 55-5 of the Matagorda DD-250 shows a charge of $121,000 and reflects that a SPAWAR TEMPEST inspection team was onsite for 7 days to survey the vessel.

Typically (but not always) this is a 6 man team with a man hour requirement of 300 to 350 man hours on site for a vessel of this size and complexity, plus prepatory time, report writing, and expenses. The industry standard for a government or contractor TEMPEST team is $2500 per man-day, plus all expenses, and per diem. However, the TEMPEST inspection can also be performed by only 2-3 people if they are highly skilled and properly equipped, but most U.S. Government TSCM, TEMPEST teams and CTTA's tend to be ill equipped, and ill staffed.

A TEMPEST team can also involve several dozen people, with only 2-3 members actually doing the work. It is even more disturbing because the "actual talent" of a TEMPEST team is often just one person (the CTTA) who is taking the measurements, then 1-2 extra people to adjust antennas, switch cables, and twirling knobs, and then a

group who sort of stands behind the scenes in support functions of the small number of people who are actually doing the inspection.

It is quite possible for a small team of only two skilled engineers using the proper equipment to perform an instrumented TEMPEST inspection of a vessel of this size and complexity in as little as 7 days, although most of the work will be performed by computer controlled test equipment that merely needs a human to baby sit the equipment and periodically move a cable or to adjust an antenna.

If in fact, SPAWAR provided a smaller two man instrumented inspection team (or even a single engineer) the expense of $121,000 is extremely excessive and should have been about a quarter of this amount, or less.

There needs to be a detailed break down of the charges for the initial $121,000 that was spent on the 7-day TEMPEST inspection. For example, how much was spent of travel, how much on freight, how much for actual on-site measurements, how much was spent off site, how much time was a spent writing report, and so on. All of this information is totally unclassified, but it will help to prove/disprove that the instrumented tests were falsified or not. For example, if the SPAWAR CTTA came out from San Diego there would be a charge for his and his teams airplane ticket, and there would be freight charges for shipping his (several tons) of equipment out to the shipyard.

The delicate issue here is that the Coast Guard did the visual TEMPEST inspection, but the instrumented TEMPEST team was from SPAWAR (Navy), and it was the Coast Guard TEMPEST program manager who found the various serious visual TEMPEST compliance problems and who performed the VTI (Visual Tempest Inspection). We see that the USCG inspector was performing a 3-day visual inspection during the same time that the instrumented inspection by SPAWAR was being performed, which is highly irregular.

If the Coast Guard TEMPEST program manager were not capable of performing the instrumented TEMPEST inspection without the assistance of SPAWAR, then he would have been unqualified to perform the visual inspection as well, and certainly not qualified to issue waivers in regards to TEMPEST matters.

Normally a visual inspection will be performed well in advance of the instrumented inspection is started, not performed at the same time. In fact, the USCG TEMPEST program manager should have made a number of inspections of the ship several times during the build-out months before the acceptance date, and would have visited the ship during the final instrumented TEMPEST inspection (pre-acceptance). Further, the USCG TEMPEST program manager would have been on hand from the time the very first designs for the ship came off the drawing board, and would have inspected the ship dozens of times while it was being built out.

On review of the initial blueprints for this ship, and ships that followed it the Coast Guard program manager would also have discovered several glaring design flaws in that way that racks and panel had been located, and would have discovered that the certain systems were not being properly isolated from other systems.

Should the USCG TEMPEST Manager have actually inspected the wiring, shielding, bonding, grounding, and other systems during the build out many of the TEMPEST problems would have been identified and corrected well before the SPAWAR TEMPEST instrumented testing. The program manager's periodic visits and implementation of the immediate corrective measures may have slowed the production cycle down a bit, but there would not have been such a huge number of flaws detected during the instrumented inspection, and what appears to be a fairly ugly failure of both the visual and the instrumented inspection.

As a result of the TEMPEST program manager, not performing these periodic inspections the contractor was paid for incomplete and defective work, and the ship failed its first instrumented TEMPEST inspection. As there was no plan of action and milestones laid out in advance for this project, there could not have been an implementation of a plan that did not exist.

This serious bungling of the scheduling of the TEMPEST inspections appears to be a trend that was following into the other ships as well, and not a situation isolated to just this first ship.

Towards the end of the Matagorda's DD250 documents, it states "TEMPEST re-inspections will not be required if Matagorda's C4ISR configuration is the same as the 123 class vessel tested in Step 2". Sadly, the TEMPEST inspector appears to be saying that if all of the flaws found are resolved that they do no need to come back in for another (expensive) instrumented re-inspection. Nevertheless, this is a serious problem because if you fail a visual or instrumented TEMPEST inspection due to equipment not being installed correctly, you have to correct the error, and then completely repeat the entire TEMPEST inspection. Now if the equipment does not change, then there is no reason to repeat the TEMPEST inspection as the results will be the same as the original inspection. The document also contradicts itself in also stating that the instrumented TEMPEST survey needed to be repeated by SPAWAR.

This is an example of the "double speak" that was observed throughout the Coast Guard documents on this matter. For example, the TEMPEST inspector is saying that you must repair several problems, but that the TEMPEST inspection does not need to be repeated so long as the equipment is unchanged. If the equipment is in fact modified (by so much as a single wire) then the whole inspection has to be performed again. So, the TEMPEST inspection team is telling the Coast Guard to go away and stop bothering them, but they are couching their wording in such a way so as not to tip off USCG leadership as to the severity of the problem, or in other words, they are using "double speak" to conceal a very dangerous and very significant problem.

The DD250 for this ship further conflicts with itself where a second instrumented TEMPEST inspection was ordered to be performed by SPAWAR, but there is no record that this second inspection ever took place, and records created since the government accepted this ship indicate that to second instrumented inspect has yet taken place.

It is my professional that the MATAGORDA was not capable of passing both a visual

and instrumented inspection, and that the failures of the tests meant that it could not get IATO. So they fixed a few things, and it failed the TEMPEST inspections yet a second time, so they issued waivers, and ram-rodded the IATO (illegally), loaded up classified information (illegally), performed classified testifying (illegally), the then got full ATO (illegally), and continued to operate (illegally) until pulled out of service due to hull cracks.

The MATAGORDA had TEMPEST waivers for any visual discrepancies that were not corrected. There was not a re-test. MATAGORDA Visual TEMPEST Inspection (VTI) was conducted 19-21 February 2004 and produced a list of discrepancies. The Instrumented TEMPEST Survey (ITS) for USCG Cutter MATAGORDA was conducted 18 to 24 February 2004 and the result of the survey is classified SECRET.

MATAGORDA was first given Interim Authority to Operate (IATO) on 14 October 2004 and Authority to Operate (ATO) on 19 January 2005. (Note: IATO followed the COMOPTEVFOR Operational Analysis Assessment (OAA) by approximately 3 weeks.) IATO or ATO cannot be granted if there are any compromising emanations. Specific results cannot be discussed as they are documented in the classified instrumented survey report.

In October 2004, when IATO was granted, MATAGORDA had outstanding discrepancies from her VTI. Visual inspection discrepancies may be waived if, in fact, there are no compromising emanations noted by the ITS. The Secure Electrical Information Processing System was again inspected by Mr. Ronald T. Porter of the Coast Guard Telecommunications and Information Command on 19 December 2004.

The Coast Guard 123 WPB class TEMPEST waivers were established by TISCOM on 12 July 2005. (TISCOM Memorandum 2241). An example of a waiver was for an unclassified radio located within 3 meters of classified servers. This was identified as a discrepancy during visual inspection. The waiver is appropriate since a WPB is a small ship and does not have a large communications room or combat information center (as you would find on a Navy ship or larger Coast Guard cutter) - the size of the communications room on a WPB-123 is only approximately 3 meters by 2.5 meters. This physical size makes it impractical to provide the 3-meter separation. The TEMPEST instrumented survey results were sufficient so the visual inspection discrepancy should be (and was) waived.

The only reason that the ships "passed" and got ATO is that all of the serious problems got waivered, but not actually corrected.

It is all about smoke, mirrors, and misdirection.

Metompkin (1325)

Delivered: 13-May-04
TEMPEST Inspect: 04-Aug-04 (one unresolved problem)
Date Entered Service: 03-Mar-05 (began service before being issued ATO)
Authority to Operate: 06-Apr-05
123" Shutdown: 30-Nov-06 (Coast Guard finds cracks in all 8 ships... they leak)
DHS-OIG Report: 09-Feb-07 (Uncovers Massive Project Failure)

Attachment D of the 2nd DD250 (Metompkin) mentions that a SPAWAR instrumented inspection was performed, but there is no mention that SPAWAR specifically had to perform the future instrumented inspections, nor is it mentioned that additional instrumented inspections would be required.

It also appears that there is a falsified documents listed as Attachment D on this DD250, where there appears to be a claim that instrumented TEMPEST inspections took place when there is evidence in other documents that these inspections did not take place. Records appear to have been either falsified the doctored.

The acceptance date was just over two months after the Matagorda and there does not appear to be a charge on the DD250 for an instrumented inspection, but there is a charge of $5,000 to prepare a TEMPEST "Plan of Action and Mile Stones" of POA&M, plus a charge of $3,000 for the "classified testing" which would actually have been the preparation of a POA&M for the TEMPEST and classified testing, not the actual testing itself.

Further, into the TEMPEST issues resolution and classified testing segment of the Metompkin there are comments that would lead someone reading the report to suspect that an instrumented inspection was performed, but since there is no charge for such an inspection on the DD250 the instrumented inspection may have been falsified after the massive failure of the first ship. Since the Visual and Instrumented TEMPEST inspection both failed, the "classified testing" could not take place as ciphering or keying materials (KEYMAT) could not be loaded into a suspect system that was or could be leaking classified information.

The "TEMPEST visual inspection" of the Metompkin was performed independent of an instrumented inspection (as it should be), but the charges for an instrumented inspection does not appear on the DD250 for this ship, and as such it is likely that no such instrumented survey ever actually took place.

On Metompkin there is an $8000 holdback to resolve the major three TEMPEST problems. However, if the cost of making these repairs exceeds the held back money (which it does) it is common for the contractor to merely absorb the $8,000 as a loss instead of throwing good money after bad. This means that the USCG would have to pay the many thousands of dollars to resolve the problems, and merely not pay the contract to held back $8,000 as liquidated damages.

Unless a documents can be found the specifically states that all of the visual and cabling items were resolved, that it passed a second visual AND instrumented inspection you should assume that the ships leak secrets, and you should assume that the original TEMPEST inspections were either falsified or the records doctored.

The Metompkin does not appear to have had an instrumented TEMPEST inspection performed, but does appear to have had a visual inspection performed. This would have been in-line with SPAWAR CTTA possibly rebuking the USCG TEMPEST Program Manager over wasting their time for not having completed a visual TEMPEST inspection completed prior to scheduling an instrumented inspection.

Most, but not all TEMPEST and TSCM specialists tends to be extraordinarily attentive to even the slightest technical details, and are absolutely obsessed with following rigid rules and guidelines for these kinds of inspections, and keeping a tight hold to the technical specifications and guidance under which they operate. The technicians and engineers in these professions recognize the gravity of that they are trying to protect, and the grave consequences of equipment that leaks secrets.

On the Metompkin, the DD250 bill in incomplete. The question that needs to be resolved is the possibility that the charge for the instrumented was not individually noted -- but the holdback of $8000 was noted (pending correction of the deficiencies noted in the instrumented inspection).

In the Navy OAA II document dated 27-Apr-2005, on page 2 of the chart (item 1.4), second square down on the right-hand side, there is a description of on-going problems with the LTP (local tactical picture) and COP (common operational picture, to the extent that the system was not yet approved for classified communications and could not be used for actual operations.

The Navy OAA II report further details in line item 1.11 (page 4) that the cutter was unable to pass TEMPEST testing and that as a result it was unable to obtain access to classified or sensitive information.

I have very carefully studied the documents received to date, and in my opinion, the faults found on the visual inspection are truly appalling. The contractor must know that they cannot offer this kind of shoddy workmanship on a U.S. Government asset. For example, the placing of the IFF cable into the same area as the classified data lines could have resulted in a massive breach of classified materials as the signals from this IFF cable would have mixed with the classified signals and carried them quite some distance from the ship. Had this not been caught by the visual TEMPEST Inspection it could have results in an enormous leak of highly classified information that would have affected not only this ship, but also all ships, and all aircraft in the U.S. Inventory.

The contractor who performed all of this work, and the Coast Guard people responsible for the pre-acceptance inspections (pre instrumented TEMPEST inspections) are grossly at fault here, and their careless disregard for the protection of classified information presents a serious liability to our national security.

Padre (1328)

Delivered: 24-Jun-04
TEMPEST Inspect: 28-Jan-05 (failed, 11 unresolved problems or "waives")
Authority to Operate: 22-Jun-05
Date Entered Service: 22-Mar-05 (began service before being issued ATO)
123" Shutdown: 30-Nov-06 (Coast Guard finds cracks in all 8 ships... they leak)
DHS-OIG Report: 09-Feb-07 (Uncovers Massive Project Failure)

The "TEMPEST visual inspection" of the Padre was performed independent of an instrumented inspection (as it should be), but the charges for an instrumented inspection does not appear on the DD250 for this ship.

There also appear to be only a single visual inspection of the PADRE that took place just prior to the acceptance, and not a series of inspections at specific milestones along the build out.

Attachment D of the 3rd DD250 (Padre) mentions that a SPAWAR instrumented inspection was performed, but there is no mention that SPAWAR specifically had to perform the future instrumented inspections, nor is it mentioned that additional instrumented inspections would be required.

It also appears that there is a falsified documents listed as Attachment D on this DD250, where there appears to be claims that the instrumented TEMPEST inspections took place when there is every evidence found in other documents, that these inspections did not take place but were instead either falsified or the record doctored.

This ship also entered service before is had been granted an official Authority to Operate, which indicates that the ship may have had classified materials on board and was passing classified traffic and connecting to classified networks, but that it was not legal for it to have such access.

Further this ship was later the subject of an Inspector Generals investigation, and was submitted for its first instrumented TEMPEST inspection, but there seems to be some confusions to the issue of a fully instrumented inspection taking place by an independent inspector, or if the instrumented inspection was hindered by waivers that permitted an otherwise defective ship to pass the inspection, but still to be leaking classified information.

Attu (1317)

Delivered:	02-Aug-04
Authority to Operate:	14-Oct-04
Date Entered Service:	12-May-05
TEMPEST Inspect:	03-Aug-05 (failed, 15 unresolved problems)
123" Shutdown:	30-Nov-06 (Coast Guard finds cracks in all 8 ships… they leak)
DHS-OIG Report:	09-Feb-07 (Uncovers Massive Project Failure)

The "TEMPEST visual inspection" of the Attu was performed independent of an instrumented inspection (as it should be), but the charges for the instrumented inspection does not appear on the DD250 for this ship.

Attachment C of the 4th DD250 (Attu) mentions that a SPAWAR instrumented inspection was performed, but there is no mention that SPAWAR specifically had to perform the future instrumented inspections, nor is it mentioned that additional instrumented inspections would be required.

It also appears that there is a falsified documents listed as Attachment D on this DD250, where their appears to be claims that an instrumented TEMPEST inspection took place when there is evidence in other documents that these inspections did not take place but were instead either falsified or the record doctored.

Nunivak (1306)

Delivered: 14-Feb-05
TEMPEST Inspect: 07-Sep-05 (5 unresolved problems)
Authority to Operate: 10-Feb-06
Date Entered Service: 24-Mar-06
123" Shutdown: 30-Nov-06 (Coast Guard finds cracks in all 8 ships... they leak)
DHS-OIG Report: 09-Feb-07 (Uncovers Massive Project Failure)

The Nunivak DD250 does not contain any charges for a TEMPEST POA&M, or for any classified training.

The DD250's for this ship does not contain any mention of, schedules for, charges in regards to, or any indication that TEMPEST or TEMPEST related work, surveys, or planning was every undertaken, completed, or even discussed.

There is a very high probability that this ship was never approved for legitimate classified equipment, codes, ciphers, or to access the classified systems of other agencies. The ship would have essentially of no value in support of the Coast Guard mission.

There also appears to be a number of TEMPEST waivers that the Coast Guard issued as a method of making the problems go away on paper, but not in real life, and that the ship may have in fact been illegally gaining assess to classified systems via insecure equipment if such were being made from the ship.

Vashon (1308)

Delivered:	09-Mar-05
TEMPEST Inspect:	17-Mar-05 (failed, 5 unresolved problems)
Authority to Operate:	10-Feb-06
Date Entered Service:	08-Aug-06
123" Shutdown:	30-Nov-06 (Coast Guard finds cracks in all 8 ships… they leak)
DHS-OIG Report:	09-Feb-07 (Uncovers Massive Project Failure)

The DD250's for this ship does not contain any mention of, schedules for, charges in regards to, or any indication that TEMPEST or TEMPEST related work, surveys, or planning was every undertaken, completed, or even discussed.

There is a very high probability that this ship was never approved for legitimate classified equipment, codes, ciphers, or to access the classified systems of other agencies. The ship would have essentially of no value in support of the Coast Guard mission.

There also appears to be a number of TEMPEST waivers that the Coast Guard issued as a method of making the problems go away on paper, but not in real life, and that the ship may have in fact been illegally gaining assess to classified systems via insecure equipment if such were being made from the ship.

Monhegan (1305)

Delivered: 03-Oct-05
Authority to Operate: 10-Feb-06
TEMPEST Inspect: 03-Nov-06 (failed again, 19 major problems)
123" Shutdown: 30-Nov-06 (Coast Guard finds cracks in all 8 ships… they leak)
DHS-OIG Report: 09-Feb-07 (Uncovers Massive Project Failure)
Date Entered Service: Not Operating, Never Actually Used

The DD250's for this ship does not contain any mention of, schedules for, charges in regards to, or any indication that TEMPEST or TEMPEST related work, surveys, or planning was every undertaken, completed, or even discussed.

There is a very high probability that this ship was never approved for legitimate classified equipment, codes, ciphers, or to access the classified systems of other agencies. The ship would have essentially of no value in support of the Coast Guard mission.

There also appears to be a number of TEMPEST waivers that the Coast Guard issued as a method of making the problems go away on paper, but not in real life, and that the ship may have in fact been illegally gaining assess to classified systems via insecure equipment if such were being made from the ship.

Manitou (1302)

Delivered:	13-Jan-06
TEMPEST Inspect:	23-Jan-06 (failed again, 14 unresolved problems)
Authority to Operate:	10-Feb-06
Date Entered Service:	05-Apr-06
123" Shutdown:	30-Nov-06 (Coast Guard finds cracks in all 8 ships… they leak)
DHS-OIG Report:	09-Feb-07 (Uncovers Massive Project Failure)

The DD250's for this ship does not contain any mention of, schedules for, charges in regards to, or any indication that TEMPEST or TEMPEST related work, surveys, or planning was every undertaken, completed, or even discussed.

There is a very high probability that this ship was never approved for legitimate classified equipment, codes, ciphers, or to access the classified systems of other agencies. The ship would have essentially of no value in support of the Coast Guard mission.

There also appears to be a number of TEMPEST waivers that the Coast Guard issued as a method of making the problems go away on paper, but not in real life, and that the ship may have in fact been illegally gaining assess to classified systems via insecure equipment if such were being made from the ship.

123' Cutters Present a "High Risk"

In a letter to Congress (attached Rupprecht letter dated 13-Apr-07), the Coast Guard admits the 123' class of cutters represented a "high risk" for physical connectivity in regards to TEMPEST, COMSEC and related technical security disciplines. Essentially, the first four cutters failed inspections, and were deemed a TEMPEST and COMSEC hazard. While the Coast Guard resolved several of these issues that created the initial test failures, other problems where simply ignored, or were issued waivers.

The issuing of these waivers circumvented the TEMPEST inspection failures, and rather then resolving the TEMPEST issues, the Coast Guard merely pretended that they did not exist to "certify" the cutters. This allowed the Coast Guard the tell SPAWAR that the cutters now were certified, and as such they could now handle classified information, even though this was a "high risk" proposition.

By permitting the Coast Guard to certify their own assets, a very dangerous situation has developed that endangers national security. If these problems are present in the 123' cutter, Deepwater program they are likely present in other Deepwater and related programs as well.

I would encourage the government to freeze all work, on all ships or projects the Deepwater, firms are involved in until competent inspectors can get on-board and rigorously review the work that has been performed to date to ensure that ships will pass both rigorous a visual TEMPEST and instrumented inspection without waivers, falsified test results, or doctored documents.

Further, I would strongly recommend that the ships that were previously built by this firm be carefully reviewed in regards to both visually and with instrumented TEMPEST inspections to see if previous problems have been corrected, or if indeed any of them have actually fully passed as opposed to being waivered.

This is a very, very grave situation, and a waste of $64 million dollars that the Coast Guard could have used for better things... please do not let it continue.

An Organized Pattern of Malfeasance

This pattern of malfeasance and oversight problem can be explained is the following way.

1) There was never a plan to have these ships pass a TEMPEST inspection in place when the ships where being built, nor considered when the initial contracts and blueprints were drafted.

2) When the ships were built the classified communications systems were installed in a haphazard manner, with little or no regard to industry and/or U.S. government standards.

3) The configuration of the equipment, positioning, shielding, bonding, and grounding did not comply with that required to protect classified information systems.

4) These ships leak secrets, and based on the documents, which I have examined and some of which are attached to this document I, feel that they continue to leak secrets to this day.

5) Just prior to acceptance several of these ships were subjected to a visual and instrumented TEMPEST inspection, and in all cases, the ships failed both the visual and the instrumented inspections.

6) The contractor has not completed the remedial actions required for the ships to pass either a full visual or an instrumented TEMPEST inspection.

7) As such the ships are not allowed to have classified ciphering materials, scramblers, classified software, or classified operating systems on board as adding these systems to the ship would result in the unauthorized disclosure of classified information.

8) The ships have to fully clear both a SERIES of visual inspections during build out, then a simulator inspection (which is often not performed), then an instrumented inspection, and they apply for a interim authority to operate, and with this IATO they can load the ciphers and software that will allow them to pass classified information into the C4ISR systems on-board the ships.

9) But, this assumes that the C4ISR systems themselves have been deemed secure independent from the TEMPEST testing. TEMPEST deals with the hardware side of the problems, but the C4ISR systems must also pass a series of standards that deals with finding backdoors in the computers and evaluating weak points in the software and firmware. There is significant documentation that the systems on board these ships also failed the software security examinations as well as the TEMPEST inspections.

10) Once everything passes the actual authority to operate (ATO) is granted, the C4ISR systems becomes live with classified signals and data, and the next phase of testing can be undertaken.

11) At this point you would normally perform NONSTOP evaluations and search for any HIJACK vulnerabilities (you have to have classified data and all communications systems usable and data seamlessly flowing to do this,) and would then begin the classified testing.

12) Once the government fully takes over the ship, but before it is dispatched on a real-world mission the ship would normally be subjected to a TSCM or Technical Surveillance Measures inspection to ensure that no eavesdropping devices are present. During this TSCM inspection, the TEMPEST inspection would be repeated to include the visual and instrumented inspection that would be far more rigorous then the original TEMPEST inspections.

13) It would be highly desirable for the TSCM team, and the TEMPEST inspectors involved in these final series of inspections to not have any prior involvement in prior Deepwater ships, no links to ICGS, and no links to Lockheed,

Mind Set

The mind-set of a TEMPEST inspector is that nothing is there until you can prove otherwise. Their job is to stop or limit compromising emanations and the technical leaks of classified information.

A TSCM inspector on the other hand always assumes that an eavesdropper is active or that a bugging device is present until they can scientifically prove otherwise. As you can see a TEMPEST, inspection has a different assumption then that of a TSCM inspection that is why both need to be performed before a vessel is operated in earnest.

The Bottom Line

These ships have since been decommissioned due to the hulls cracking and water leaks, due to a poorly designed modification and shoddy workmanship. There is good reason to believe they will never be in service again. Once the hulls cracked, all efforts to resolve the TEMPEST problems appear to have been completely suspended.

The Coast Guard now has eight worthless ships, for which they wasted $64 million dollars… how much money have they wasted on other assets that do not work, and will the new National Security Cutter be as equally a monumental failure… will it actually float, or will it too develop huge cracks in the hull and massive leaks of classified information?

Recommendations

Salvage all usable electronics, tactical, and mechanical equipment from all eight cutters.

Sell the stripped ships for scrap metal

Demand a partial refund of monies from ICGS, and consider DLA debarment proceedings the responsible contractors for fraud.

Immediately suspend all projects associated with ICGS and with Lockheed Martin in regards to the Deepwater program until all Coast Guard assets have been completely brought up to par, and completely re-inspected from scratch.

Request that this Committee and the U.S. Department of Justice investigate the faulty workmanship that caused the hull cracks, and all other shoddy workmanship present on this project, and that criminal proceedings be undertaken should such be warranted.

Request the U.S. Department of Justice immediately initiate a counterintelligence investigation into the TEMPEST flaws on these ships to determine if these flaws were the result of the efforts of a foreign government, or merely just shoddy design and workmanship.

Request the U.S. Government, and more specifically the TEMPEST engineers and students from the National Security Agency be allowed to examine this ship as a "lesson learned" program before the ships are dismantled or stripped. By studying the problems (that still doubtlessly exists) in these ships, the national TEMPEST and TSCM can be enhanced as a whole by learning from these mistakes. This would turn these eight ships into a temporary training range for the TSCM and TEMPEST profession.

Conduct an investigation into the entire Coast Guard TEMPEST program to determine the extent to which the USCG was, or is issuing waivers in lieu of legitimate TEMPEST inspections, installations, maintenance, and repairs.

It appears that none of the ships has ever actually passed a TEMPEST inspection, and that a huge number of major flaws were found on all ships, and that after the first four of ships grossly failing that the stopped all TEMPEST testing for the second four ships.

In order to perform a TEMPEST, NONSTOP, and HIJACK testing you must have all operational gear installed and active. If the piece of equipment requires a key to operate (such as the ARC-210) you use a testing key or a simulator during the testing, and then once you have IATO authority to operate you can load up the real keys and software, and retest.

Your Committee also needs to request the work schedules of all USCG, and SPAWAR TEMPEST employees and contractors to see how often they went out to the shipyard before the instrumented tests, and then investigate their activities during the periods of interest. Essentially, you want to see all of their movements and activities during the

entire deepwater program.

In my professional opinion none of the ships (all 8 of them) are capable of passing either a visual or an instrumented TEMPEST examination, but rather failed miserably, which required that the government hold back money until the failure points were corrected. There this minimal documentation that any of these problems were actually fully corrected after delivery (other then a few minor problems, when the major problems were ignored).

The bottom line, is that based on the documents I have reviewed these ships are all a major liability to our national defense.

It is possible that the USCG has corrected the entire problem, and has had the ships subjected to a new visual and instrumented inspection, but there is no documentation to even hope that they have done this.

The Coast Guard has been very obstructive to this inquiry, has not been reasonably responsive in providing information, and instead provides mere fragments. They seem to issuing glowing press releases about the Deepwater program instead releasing the documents detailing the TEMPEST and other problems. In a nutshell, the Coast Guard has been giving this committee nothing but lip service.

While the Navy did not actually certify the TEMPEST inspections, but were merely contractors that performed the instrumented tests, while the Coast Guard performed the visual inspections.

Instead, the Coast Guard "self certified" themselves, but lacked the technical competencies and equipment to perform the instrumented TEMPEST tests on their own. This is a tell-tale sign that the USCG should not have been involved in their own TEMPEST program at all. The Navy SPAWAR does issue "pass/fail" recommendations on USN installations, but they specifically do not do that for the Coast Guard.

After carefully studying the documents relative to the Coast Guard Deepwater program I have become reasonably convinced that there has likely been criminal conduct and gross negligence on the part of one or more Coast Guard, and Navy employees or members, and that there has likely also been criminal conduct and gross negligence on the part of the contractor, and subcontractors in a secondary capacity.

In my professional opinion the bungling of the Deepwater 123' program (as least on the TEMPEST, COMSEC, Ciphering, and Technical Security side) has resulted in the "losing defense information" and the unauthorized disclosure of classified information, codes, ciphers, and related systems as defined by Title 18, Sec. 793, and Section 798 due to gross negligence.

It is my professional opinion that by the Coast Guard operating these ships absent proper TEMPEST inspections that they, the Navy, and the contractor have disclosed highly classified information to our enemies.

The issuing of these TEMPEST waivers is the smoking gun, and I feel that they are only the tip of the proverbial iceberg.

If the Navy had even the slightest idea that waivers were being claimed and that the problems were not being corrected (bur rather falsified or the records doctored) they were duty bound to notify the cognizant authorities that the ships did not meet NSA TEMPEST standards, and hence to move to revoke any waivers.

I believe that the proper terminology is "accessory before the fact", as SPAWAR knew of upcoming illegal activities involving the disclosure of classified information, and while they may not have been the certifying authority for the USCG, he had full knowledge that at least one or more ships failed.

If the USCG is not qualified to perform these instrumented tests themselves, then they are not qualified to issue the waivers either. It is a bit of a double-edged sword of many excuses.

"TEMPEST waivers for any visual discrepancies" can also called "doctoring a TEMPEST inspection," since they could not get the ship to actually pass the inspection they covered the discrepancies with waivers and falsified documents. In some circles this is also called "pencil whipping" the inspection.

The results of the instrumented TEMPEST inspection are not classified, the actual report is classified, or more specifically 10% of the final report is classified. I would point out that during the DD250 that the USCG discloses that both the visual and instrumented inspections failed.

IATO and ATO can be granted if all of the TEMPEST visual and instrumented violations where falsified with "waivers". They could have also issued waivers for screen doors on submarines, but that does not mean that the submarines will be any safer or more secure.

The "Coast Guard 123 WPB class TEMPEST waivers" comments means that the Coast Guard just decided to abandon the TEMPEST standards and inspections right after PADRE failed (again), but gave PADRE Authority to Operate anyway (with falsified TEMPEST waivers). So discovered that the only way to get the ships to pass was to not inspect them in the first place.

SPAWAR's Involvement and Comments

According to the Navy, visual inspections are normally conducted first so that discrepancies can be corrected before the instrumented test, which is comparatively both expensive and time consuming. However, there is no technical reason to preclude doing both at the same time. Scheduling is a USCG decision. They do not recall when the visual inspection was done since SPAWAR did not perform the visual inspection. The USCG may have performed the visual inspection during the first day since SPAWAR had the night shift. SPAWAR recalls having information about visual discrepancies during the test, but do not recall the details. However, it was SPAWARs understanding at the

time that Lockheed Martin did not intend to correct visual discrepancies, so there was no reason to perform the visual inspection in advance of the instrumented test.

Lockheed Martin/ICGS has stated that they were not responsible for TEMPEST; SPAWAR claimed that they could only run the instrumented tests, but could not certify anything. The Coast Guard lacked the expertise, equipment, or resources to perform their own inspections so it turned into a case of everybody claimed that someone else was responsible for the problem.

SPAWAR tested two 123' hulls, the USCGC Matagorda in February 2004 and the USCGC Padre in July 2006. SPAWAR did not track or record installation changes between the hulls, nor was that a requirement--SPAWAR just tested what was equipment was there when they conducted the test. The test results are again classified. SPAWAR did not make a recommendation, either for or against, TEMPEST certification in the report for the Padre.

The Coast Guard and ICGS is Playing Games

While MIL-HDBK-232A does involve many TEMPEST topic matters it is not the "Core Document", nor should it be considered "THE" TEMPEST standard by any means. If MIL-HDBK-232A is the only document, which they list as the only contractual requirement, then there was never any formal requirement for TEMPEST compliance in the program, only a specification of distances between equipment and cables.

The Coast Guard had admitted that the only standard or protocol that they required for TEMPEST certification was only one publications, that being "MIL-HDBK-232A" A list of relevant government standards, which should have been listed within the contracts and the designs, are amended to this document.

When the ships began failing all of their TEMPEST inspections the issue of "other standard and specifications" started being brought up. While we initially see that the USCG and SPAWAR quoted violations in regards to NSTISSAN 2-95 and IA PUB 5239-31, but in October 2005, the USCG inspector began trying to apply Air Force standards to the matter at hand to obtain a waiver.

This dragging in an Air Force standard is a case of "document shopping" where the Coast Guard and/or ICGS didn't like what the NSA standards for TEMPEST said, so they shopped around for another government standard that they could quote that would let them get away with a waiver of a dangerous situation.

This is akin to a child not liking the answer one parent give them, only to run to the other parent to ask the same question in order to get an override.

The interesting issue here is that by seeking a waiver under AFMAN 33-214V2, the Coast Guard states that cheap Mylar/foil shielding may be used in cases where the digital signals are less the 5,000 bits per second (or 5Kbps). The CAT 5E cables that are at issue are actually capable of speeds up to, and in excess of 100 million bits per second (or

100Mbps), or twenty thousand times faster. If the cable were merely used for ISDN communications for a STE connection then the data speeds involved would be 192kbps, which is 38 times faster then the USAF specification. In either regards, brining up an Air Force specification, as an excuse as to why he Coast Guard should issue a waiver on the matter is ludicrous, but it also shows just how desperate the Coast Guard was to cover up the problem.

In Summary

I have serious discomfort and grave concerns with the prospect of any further asset deliveries, given what I have seen by studying documents regarding the Deepwater program… the men and women of the Coast Guard have a tough job to do, and they deserve better then ships that leak, and are unusable.

It has been on honor to be of service to my country in this matter, and an honor to render assistance to this committee.

Thank you,

James M. Atkinson

Amendment One

At an absolute minimal, these ships should have rigorously adhered to the following government standards in concerning TEMPEST and their associated disciplines. These standards should have been adhered to from the date the first drawings were prepared until the current time.

NSA-82-89, NACSIM 5000, TEMPEST Fundamentals, National Security Agency.

NACSIM 5004, Tempest Countermeasures for Facilities within the United States, National COMSEC Instruction

NACSIM 5005, Tempest Countermeasures for Facilities outside the United States, National COMSEC Instruction, NACSIM 5005

NACSIM 5009, Technical Rational: Basis for Electromagnetic Compromising Emanations Limits

NACSIM 5100A Compromising Emanations Laboratory Test Requirements, Electromagnetics. National Security Telecommunications and Information System Security (NSTISS)

NACSIM 5108, Receiver and Amplifier Characteristics Measurement Procedures

NACSIM 5109, TEMPEST Testing Fundamentals

NACSIM 5112, NONSTOP Evaluation Techniques

NACSIM 5201, TEMPEST Guidelines for Equipment System Design

NSA 82-90, NACSIM 5203, Guidelines for Facility Design and RED/BLACK Installation, National Security Agency

NSA 65-5, NACSIM 5204, RF Shielded Acoustical Enclosures for Communications Equipment: General Specification, National Security Agency

NSA 65-6, NACSIM 5204, R.F. Shielded Enclosures for Communications Equipment: General Specification, National Security Agency

NSA 73-2A, NACSIM 5204, National Security Agency Specification for Foil RF Shielded Enclosure, National Security Agency

NSA 89-01 (Draft), NACSIM 5204, National Security Agency Specification for a High Performance Shielded Enclosure, National Security Agency

NCSC 3, TEMPEST Glossary

NTISSI 4002, Classification Guide for COMSEC Information

NTISSI 7000, National Telecommunications and Information Systems Security Instruction, TEMPEST Countermeasures for Facilities.

NTISSP 300, National Telecommunications and Information Systems Security Policy, National Policy on the Control of Compromising Emanations

NSTISSAM TEMPEST 1-92, Compromising Emanations Laboratory Test Requirements, Electromagnetics. National Security Telecommunications and Information System Security (NSTISS)

NSTISSAM TEMPEST 1-93, Compromising Emanations Field Test Requirements Electromagnetics

NSTISSAM TEMPEST 2-91, Compromising Emanations Analysis Handbook, National Security Telecommunications and Information Systems Security Advisory Memorandum

NSTISSAM TEMPEST 2-92, Procedures for TEMPEST Zoning

NSTISSAM TEMPEST 2-95, RED/BLACK Installation Guidance, National Security Telecommunications and Information Systems Security Advisory Memorandum

NSTISSAM TEMPEST 3-91, Maintenance and Disposition of TEMPEST Equipment

INFOSEC System Security Products & Services Catalog, October 1990, National Security Agency

DOD Directive C-5000.19, Control of Compromising Emanations

MIL-STD-461E, Department of Defense Interface Standard, Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment.

MIL-STD-IB8-124B, Military Standard Grounding, Bonding and Shielding for Common Long Haul/Tactical Communication Systems including Ground Based Communications-Electronics Facilities and Equipment.

MIL-HDBK-232, Red/Black Engineering - Installation Guidelines.

MIL-HDBK-411A, Long Haul Communications (DCS), Power and Environmental Control for Physical Plant.

MIL-HDBK-419, Grounding, Bonding, and Shielding for Electronic Equipment and Facilities.

MIL-HDBK-1195, Radio Frequency Shielded Enclosures

MIL-STD-188-124, Grounding, Bonding, and Shielding for Common Long Haul and Tactical Communications Systems.

MIL-STD-285, Method of Attenuation Measurement for Enclosures, Electromagnetic Shielding for Electronic Test Purposes.

FCC 47CFR, Radio Frequency Devices.

MIL-STD-464, Electromagnetic Environmental Effects Requirements for Systems.

MIL-STD-469, Radar Engineering Interface Requirements, Electromagnetic Compatibility Metric.

MIL-STD-1542B, Electromagnetic Compatibility and Grounding Requirements for Space System Facilities.

MIL-HDBK-235/1B, Electromagnetic (Radiated) Environment Considerations for Design and Procurement of Electrical and Electronic Equipment, Subsystems and Systems.

MIL-HDBK-237B, Electromagnetic Environmental Effects on Platforms, Systems, and Equipment.

MIL-HDBK-241B, Design Guide for EMI Reduction in Power Supplies.

MIL-HDBK-1512, Electroexplosive Subsystems, Electrically Initiated, Design Requirements and Test Methods.

MIL-HDBK-1857, Grounding, Bonding and Shielding Design Practices.

OPNAVINST C5510.93E, Navy Implementation of National Policy on Control of Compromising Emanations

AR 380-19-1, Control of Compromising Emanations, September 1990 (Army)

ANSI/IEEE C63.2, Standard for Instrumentation-Electromagnetic Noise and Field Strength, 10 kHz to 40 GHz, Specifications

ANSI/IEEE C63.4, Standard for Electromagnetic Compatibility, Radio-Noise Emissions from Low Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz, Methods of Measurement

ANSI/IEEE C63.14, Standard Dictionary for Technologies of Electromagnetic Compatibility (EMC), Electromagnetic Pulse (EMP), and Electrostatic Discharge (ESD)

ANSI/NCSL Z540-1, General Requirements for Calibration Laboratories and Measuring and Test Equipment

Amendment Two

It is my professional recommendation that this Committee request that the Coast Guard immediately supply you the following EXACT information for each of the eight cutters.

The proper answer to each of these questions is either: Yes, No, or a specific date, a person's name, and so on. You should assume that you are being forced to deal with the Coast Guard leadership, as a hostile witness, and that they are being evasive in their direct answers. As such, you must now ask harsh, but questions to which they can only supply simple, yet direct answers.

I recommend that you insist that the Coast Guard provide these exact questions with exact answers and that no answer be qualified with a footnote or answered in any evasive way. I further recommend that you give the Coast Guard one request for each of the eight ships, and that they give you the answer in the form of narrative form.

You may also find it prudent to expand this query to not only include the eight 123' cutters, but also to include all assets in the Coast Guard inventory acquired in the past 10 years to include the National Security Cutter, and all other assets capable of C4ISR access, or with access to classified systems or networks including those which may be legacy assets, and projects that are still on the drawing board.

In regards to Hull/Keel Number xxxx, also known as xxxxx (asset name) please provide the following answers.

1a) What date was the (fill in the asset name and number) subjected to it's first visual TEMPEST inspection by the contractor

1b) On what dates did the contractor provide any additional visual TEMPEST inspections

1c) What were the results of each of these visual tests performed by the contactor

1d) Who performed these visual inspections

1e) What were the results of this inspection

1f) What documentation exists in regards to this inspection

2a) On what dates did the contractor subject the (insert name) cutter to any kind of instrumented TEMPEST inspection

2b) On what dates did the contractor provide any additional instrumented TEMPEST

inspections

2c) What were the results of each of these instrumented tests performed by the contractor

2d) Who performed these instrumented inspections

2e) What were the results of this inspection

2f) What documentation exists in regards to this inspection

3a) What date was the (fill in the name and number) cutter subjected to it's first visual TEMPEST inspection by the USCG

3b) On what dates did the USCG provide any additional visual TEMPEST inspections

3c) What were the results of each of these visual tests performed by the USCG

3d) Who performed these visual inspections

3e) What were the results of this inspection

3f) What documentation exists in regards to this inspection

4a) On what dates did the USCG subject the (insert name) cutter to any kind of instrumented TEMPEST inspection

4b) On what dates did the USCG provide any additional instrumented TEMPEST inspections

4c) What were the results of each of these instrumented tests performed by the contractor

4d) Who performed these instrumented inspections

4e) What were the results of this inspection

4f) What documentation exists in regards to this inspection

5a) What date was the (fill in the name and number) cutter subjected to it's first visual TEMPEST inspection by Space and Naval Warfare Center (SPAWAR)

5b) On what dates did SPAWAR provide any additional visual TEMPEST inspections

5c) What were the results of each of these visual tests performed by the SPAWAR

5d) Who performed these visual inspections on behalf of SPAWAR

5e) What were the results of this inspection performed by SPAWAR

5f) What documentation exists in regards to this inspection by SPAWAR

6a) On what dates did SPAWAR subject the (insert name) cutter to any kind of instrumented TEMPEST inspection

6b) On what dates did SPAWAR provide any additional instrumented TEMPEST inspections

6c) What were the results of each of these instrumented tests performed by SPAWAR

6d) Who performed these instrumented inspections for SPAWAR

6e) What were the results of this inspection by SPAWAR

6f) What documentation exists in regards to this inspection by SPAWAR

7a) What date was the (fill in the name and number) cutter subjected to it's first visual TEMPEST inspection by other U.S. Government agency or contractor to include, but not be limited to the Navy, Army, Department of State, Central Intelligence Agency, DISA, NSA, or any contractor or employee.

7b) On what dates did any other contractor or government agency provide any additional visual TEMPEST inspections

7c) What were the results of each of these visual tests performed by the any other contractor or government agency

7d) Who performed these visual inspections on behalf of any other contractor or government agency

7e) What were the results of this inspection performed by any other contractor or government agency

7f) What documentation exists in regards to this inspection by any other contractor or government agency

8a) On what dates did any other contractor or government agency subject the (insert name) cutter to any kind of instrumented TEMPEST inspection

8b) On what dates did any other contractor or government agency provide any additional instrumented TEMPEST inspections

8c) What were the results of each of these instrumented tests performed by any other contractor or government agency

8d) Who performed these instrumented inspections for any other contractor or government agency

8e) What were the results of this inspection by any other contractor or government agency

8f) What documentation exists in regards to this inspection by any other contractor or government agency

9a) On what date did this ship pass it's latest visual TEMPEST inspection

9b) On what date did this ship pass it's latest instrumented inspection

9c) On what date was the interim authority to operate (IATO) granted

9d) On what date was classified ciphering materials in any form brought on board the ship

9e) On what date was classified keys or ciphering materials loaded into cryptographic equipment, or loaded into radios or other devices capable to utilizing ciphering and/or keying materials.

9f) On what was the classified software loaded onto any computer, radio, or device that may have not been included in the prior question.

9g) One what date was classified testing initiated on this ship, by whom

9h) On what date was classified testing completed on this ship, by whom, and what were the results

9i) On what dates was the NONSTOP evaluation performed on this ship, what countermeasures where performed, and by whom.

9j) One what date was the first authority to operate issued or granted.

9k) After the first authority to operate (ATO) was granted, what was the date of the ciphering materials being changed, from whom, and under what COMSEC account number.

9l) Please list the names and contact information for all COMSEC custodians who provided cipher, COMSEC, or other classified software, firmware, or hardware items to this ship since the USCG took possession from the contractor. This includes all time prior to the IATO, the time between the IATO and the ATO, and all time up to the present date.

9m) Provide the date when the ship last passed any classified traffic though any shipboard communications, C4ISR, navigation, cell phone, or other mechanism of security of communications.

9n) Provide a date(s) of any TSCM inspection performed on this ship, by whom, what were the results

9o) Provide the dates of any COMSEC equipment being removed from the ship

9p) Provide the dates that ciphering materials were last removed from the ship

9q) Provide the dates that the COMSEC or classified operating software was last removed from the ship

9r) Does this ship currently contain any classified COMSEC, Ciphering, or other communications equipment

9s) Has any member of the USCG (or any other branch of the military) crew of this ship lost their security clearance, or had it revoked or suspended, or been involved in any judicial or non-judicial disciplinary action. What position did these people serve in, what was the final disposition?

9t) What was the highest level of classified information that was ever processed by way of the on-board communications (C4) system, SBU, Confidential, Secret, Top Secret?

9u) What date was the ARC-210 removed or decommissioned

9v) What date was the IFF or UPX-28 removed or decommissioned

9w) What date was the C4ISR system decommissioned, disconnected, or removed.

9x) What is the date that the contractor, SPAWAR, or USCG loaded or updated the C4ISR software

9y) On what date was the MF/HF or RT-9000 or other elements or the HF system removed or decommissioned

10a) Has this ship or other asset traveled into the littoral waters of any nation other then that of the United State, if so when, and what country

10b) Has this ship traveled within 250 miles of the coast line of any other nation, if so, when, and what country.

10c) Since taking possession of the ship (after the acceptance date noted on the DD250) have any foreign nationals been on this ship, who, for what reason, why, and what access where they allowed on the ship, and where did they go or visit while on-board.

11a) What is the date when the first classified email message or other correspondence of an electronic nature was transmitted or received on this ship

11b) What is the power level on the output of the power amplifier of the IFF system.

11c) What is the power level on the output of the power amplifier of the ARC-210 line of sight system.

11d) What is the power level on the output of the power amplifier of the ARC-210 SATCOM system.

11e) What is the power level on the output of the power amplifier of the MF/HF system.

11f) What is the power level on the output of the power amplifier of the VHF Marine communications system.

11g) What is the power level on the output of the power amplifier of the UHF paging system.

11h) What is the power level on the output of the power amplifier of the RADAR system.

11i) What is the frequency range on the RADAR system.

11j) What is the pulse rate of the RADAR system, what is the pulse rise time, and what is the pulse repetition rate

12a) Has any radio or system on-board this ship been loaded with HAVE QUICK waveforms, related COMSEC keys, ciphering materials, or integrated or external ECM/ECCM modules. If so when where they installed, when where they removed, and by whom.

12b) Has any radio or system on-board this ship been loaded with HAVE QUICK II waveforms, related COMSEC keys, ciphering materials, or integrated or external ECM/ECCM modules. If so when where they installed, when where they removed, and by whom.

12c) Has any radio or system on-board this ship been loaded with SINCGARS waveforms, related COMSEC keys, ciphering materials, or integrated or external ECM/ECCM modules. If so when where they installed, when where they removed, and by whom.

12d) Has any radio or system on-board this ship been loaded with DAMA waveforms, related COMSEC keys, ciphering materials, or integrated or external ECM/ECCM

modules. If so when where they installed, when where they removed, and by whom.

12e) Has any radio or system on-board this ship been loaded with TALON waveforms, related COMSEC keys, ciphering materials, or integrated or external ECM/ECCM modules. If so when where they installed, when where they removed, and by whom.

12f) Has any radio or system on-board this ship been loaded with SATURN waveforms, related COMSEC keys, ciphering materials, or integrated or external ECM/ECCM modules. If so when where they installed, when where they removed, and by whom.

13a) What was this ship first approved for full connection to SIPRNET, to what level

13b) When was this ship last approved for full connection to SIPRNET, what is the current status

13c) At any time was connectivity to SIPRNET ever revoked, denied, or suspended for any reason.

14a) Has any communications system onboard this ship or this asset ever been considered "high risk" by any other government agency such as the Navy or any other agency or contractor.

14b) Has any government agency ever refused or declined to provide classified information to this ship or asset due to the risk level presented by the posture or condition of the TEMPEST inspections, COMSEC systems, or C4ISR systems.

Attachments

The following attached documents are completely unclassified, and provide TEMPEST and COMSEC details of how the Coast Guard accepted defective equipment, then how the vessels failed TEMPEST evaluations, how a small number of the TEMPEST problems were resolved, and how the rest were quietly covered up, waivered, or ignored to get these cutters rushed into service before it was safe to do so.

This small number of documents is by no means inclusive of those, which were available, but merely those involving the TSCM, TEMPEST, EMI, EMC, COMSEC, C4ISR, and related areas of study.

I strongly recommend that this committee compel the Coast Guard to open a candid and timely release of all unclassified documents relative to all elements of all USCG TEMPEST, TSCM, COMSEC, and C4ISR systems that may involve the Bluewater program, ICGS, and Lockheed Martin.

MATERIAL INSPECTION AND RECEIVING REPORT

Form Approved OMB No. 0704-0248

The public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0248), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ADDRESS.
SEND THIS FORM IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE DFARS, APPENDIX F-401.

1. PROCUREMENT INSTRUMENT IDENTIFICATION (CONTRACT) NO.	ORDER NO.	6. INVOICE NO./DATE	7. PAGE	OF	8. ACCEPTANCE POINT
DTCG23-02-2DW001	F-2DW079	ICGS0300-0008/ 03/01/04	1	2	D

2. SHIPMENT NO.	3. DATE SHIPPED	4. B/L	5. DISCOUNT TERMS
NA	1 Mar 04	NA TCN NA	None

9. PRIME CONTRACTOR CODE 1UYZ2	10. ADMINISTERED BY CODE
Integrated Coast Guard Systems, 1530 Wilson Blvd., Suite 400, Arlington, VA 22209, USA	Commandant (G-ACS-6) U.S. Coast Guard Deepwater SIPO, 1530 Wilson Blvd., Suite 400, Arlington, VA 22209
11. SHIPPED FROM (If other than 9) CODE / FOB:	**12. PAYMENT WILL BE MADE BY CODE**
Bollinger Shipyards Lockport, L.L.C. PO Box 250 8365 Highway 308 Lockport, LA. 70374-0250	Commandant (G-ACS-6) U.S. Coast Guard Headquarters, 2100 Second St. SW, Room 5208, Washington, DC 20591-0001, USA
13. SHIPPED TO CODE WPB - 1303	**14. MARKED FOR CODE**
USCGC Matagorda (WPB - 1303), C/O Coast Guard 8365 Highway 308 Lockport, LA. 70374-0250	LCDR Driscoll

16. ITEM NO.		15. STOCK/PART NO. DESCRIPTION (Indicate number of shipping containers - type of container - container number.)	17. QUANTITY SHIP/REC'D*	18. UNIT	19. UNIT PRICE	20. AMOUNT
0055	D	Services and Supplies: Matagorda, WPB 123 conversion. Item short shipped of the following components: Details on Certificate of Conformance	1/1	Lot	$14,875,235.00	$14,875,235.00
	01	Trial Cards	1	Lot	$196,815.00	$196,815.00
	02	Provisioning and Spares	1	Lot	$71,000.00	$71,000.00
	03	Training	1	Lot	$10,000	$10,000.00
	04	CDRL Exceptions	1	Lot	$243,500.00	$243,500.00

21. CONTRACT QUALITY ASSURANCE

a. ORIGIN
☐ CQA ☐ ACCEPTANCE of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents.
DATE | SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME: Certificate of Conformance
TITLE:
MAILING ADDRESS:
COMMERCIAL TELEPHONE NUMBER:

b. DESTINATION
☐ CQA ☐ ACCEPTANCE of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents.
DATE | SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME:
TITLE:
MAILING ADDRESS:
COMMERCIAL TELEPHONE NUMBER:

22. RECEIVER'S USE

Quantities shown in column 17 were received in apparent good condition except as noted.
DATE RECEIVED 3/1/04 | SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME: Catherine Martindale
TITLE: Contracting Officer
MAILING ADDRESS: U.S. Coast Guard Deepwater SIPO
1530 Wilson Blvd., Suite 400, Arlington, VA
COMMERCIAL TELEPHONE NUMBER: 571-218-3293

** If quantity received by the Government is the same as quantity shipped, indicate by (✓) mark; if different, enter actual quantity received below quantity shipped and encircle.*

23. CONTRACTOR USE ONLY

DD FORM 250, AUG 2000 PREVIOUS EDITION IS OBSOLETE.

MATERIAL INSPECTION AND RECEIVING REPORT - *CONTINUATION SHEET*

PAGE 2 OF 2

Form Approved OMB No. 0704-0248

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0248), Washington DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES.
SEND THIS FORM IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE DFARS, APPENDIX F-401.

SHIPMENT NO.	DATE SHIPPED	PROC INSTRUMENT IDEN. (CONTRACT)	(ORDER) NO.	INVOICE NO.
NA	20040301	DTCG23-02-2DW001	F-2DW079	ICGS0300-0008/ 03/01/04

ITEM NO.	STOCK/PART NO. DESCRIPTION (Indicate number of shipping containers - type of container - container number)	QUANTITY SHIP/REC'D	UNIT	UNIT PRICE	AMOUNT
55	Continued				$0.00
5	Tempest and Classified Testing	1	lot	$121,000.00	$121,000.00
6	LIMS Testing	1	lot	$10,000.00	$10,000.00
7	Low Smoke Cable	1	lot	$10,000.00	$10,000.00
8	C005 3.2 Verification	1	lot	$500.00	$500.00
9	Control Cable for Engine	1	lot	$1,000.00	$1,000.00
	Total Invoice Amount Due	1	lot	$14,211,420.00	$14,211,420.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00

DD Form 250C, NOV 92 (EG) *Previous edition may be used.* Designed using Perform Pro, WHS/DIOR, Nov 94

DEEPWATER 1530 Wilson Boulevard, Suite 400, Arlington, Virginia 22209

ICGS Certificate of Conformance:

Contract Number: DTCG23-02-C-2DW001
DTO Number: DTCG23-02-F-2DW079, CLIN 0055D
Asset: CGC Matagorda, WPB 1303, 1 of 1

Description: This DTO provides the detailed design and construction for major modification of the 110-foot patrol boat Matagorda, including completion of all design, analyses, construction, and testing to deploy the lead vessel of the proposed 123-Ft Cutter Class, and to demonstrate compliance with requirements. Included in the modifications was an extensive ultrasonic survey of the hull was conducted resulting in the replacement of over 800 square feet of wasted hull plate; a new deckhouse providing an enlarged, 360-degree bridge and berthing for a dual-gender crew; a stern extension with a stern ramp and door for launch and recovery of the Short-Range Prosecutor; an upgraded C4ISR suite to ensure interoperability with the IDS; and all related logistics and training.

I certify that on 1 March 2004, the ICGS Deepwater Program furnished the supplies and/or services called for in accordance with all applicable requirements. I further certify that the supplies and/or services are of the quality specified and conform in all respects with the contract requirements, including specifications, drawings, preservation, packaging, packing, marking requirements, and physical item identification, and are in the quantity shown on the attached acceptance document.

Comment: This Certificate of Conformance is based upon;

- LM/MS2 Certificate of Conformance and supporting records.
- NG/SS Certificate of Conformance and supporting records
- Waiver W001 – Superstructure Aluminum Extrusion ABS Test Results
- ICGS audits of LM/MS2, NG/SS, Chand, and Bollinger (BSI).
- Functional Configuration Audit and Physical Configuration Audit performed on 27 Feb 04
- 123 Cutter Certification Matrix

www.ICGSDeepwater.com

A Limited Liability Company Owned by Northrop Grumman Ship Systems and Lockheed Martin

DEEPWATER

Exception(s):

1) Trial Cards (Attachment A)
2) Provisioning and Spares
   - On Board (estimated date of delivery 30 Mar 04)
   - Shore Side (estimated date of delivery 30 Mar 04)
   - Insurance (estimated date of delivery 30 Mar 04)
3) Training for the Matagorda crew
   - Common Operating Picture (COP estimated completion 30 Mar 04)
4) CDRL Exceptions (Attachment B)
5) Tempest and Classified Testing, (Attachment C)
6) LIMS Testing
7) Low Smoke Cable RFD
8) C005 3.2 Verification
9) Engine Control Cable

Date of Execution: 1 March 2004

Signature:

Kevin J. O'Neill
Director of Contracts, ICGS LLC

DEEPWATER

Attachment C
Tempest and Classified Testing

ICGS will review the outstanding TEMPEST discrepancies described in the final SPAWAR Instrumented TEMPEST Report conducted on CGC MATAGORDA during the week of 18Feb-24Feb 2004 and correct discrepancies if the required changes are clearly defined within the scope of the contract. ICGS will demonstrate the proper operation of C4ISR systems in a real-world classified environment. Agreed to MATAGORDA TEMPEST discrepancies to be resolved and classified testing to be successfully performed prior to June 24, 2004 (90 days after the receipt of the instrumented survey report). This effort shall be completed in the following phased manner, as each step is successfully completed that portion of the withholding listed will be released:

Step 1 Develop POA&M: Prepare and deliver Plan of Action and Milestones (POA&M) document which describes the schedule, locations, and resources needed to implement the following activities: (upon completion, ICGS receives 40% of the withholding)

- ☐Development of design solutions to correct within scope MATAGORDA TEMPEST discrepancies outlined in the final SPAWAR TEMPEST Report.
- ☐Installation of within scope design solutions to correct TEMPEST discrepancies aboard a 123 WPB class vessel
- ☐Support of a SPAWAR Instrumented TEMPEST Survey to validate correction of TEMPEST discrepancies scheduled and executed via the CG program office.
- ☐Conduct of Classified Testing aboard a 123 WPB class vessel per AT procedures
- ☐Installation of TEMPEST corrections aboard MATAGORDA.

Step 2 Installation and Test of Tempest solution for 123 Class: (30% of total withholding)

- ☐Install design solutions to correct identified and agreed upon Instrumented TEMPEST discrepancies (from USCG Tempest Report) aboard 123 WPB class vessel in accordance with the design solution.
- ☐Support SPAWAR's Instrumented TEMPEST Survey to validate correction of TEMPEST discrepancies.
- Install approved design solutions to correct identified and agreed upon Instrumented TEMPEST report discrepancies on the Matagorda.

Step 3 Demonstration of Tempest solution for CGC MATAGORDA prior to Matagorda OT&E: (30% of total withholding)

DEEPWATER

- Conduct of Classified Testing aboard MATAGORDA to validate classified systems are properly installed and configured for operation in an actual (non simulated) classified environment
- Conduct Classified Testing aboard a 123 WPB class vessel to validate classified C4ISR system design in an actual (non simulated) classified environment

TEMPEST re-inspections will not be required if MATAGORDA's C4ISR configuration is the same as the 123 class vessel tested in Step #2)

EXTERNAL CERTIFICATION OF CONFORMANCE

LOCKHEED MARTIN CORPORATION
MARITIME SYSTEMS & SENSORS

Page 1 of 2

It is hereby certified that the material supplied on the referenced purchase order/Contract Number fully conforms to all applicable specifications and requirements. The material supplied is in compliance with the latest ECN's / Revision noted. All material supplied under this order was originally purchased or manufactured by Lockheed Martin Maritime Systems and Sensors (MS2). All original purchasing and/or incoming inspection data is on file at MS2 and available for review upon request.

Date: **3/1/2004**

Customer: **Integrated Coast Guard Systems (ICGS)**

Purchase Order/Contract Number: **DTCG23-02-F-2DW079**

P. O. Line Item Number/Level Code: **N/A**

Part Revision:

Part Number: **C4ISR Equipment for CGC Matagorda -123**

Part Description: **C4ISR Equipment Integration, Installation, Testing & Training for the CGC Matagorda 123.**

Quantity: **N/A**

Shipping Notice Number: N/A

3-1-04
Authorized Quality Representative/Date

Authorized Contract's Representative/Date
D. Willett 3/1/04

Comment:
The WPB-110 class cutters are receiving extensive upgrades under the USCG Integrated Deepwater System (IDS). Aside from extending the cutter to 123' for a stern boat launch ramp and other physical/mechanical upgrades, these patrol boats are receiving Command, Control, Communication and Computer, Intelligence, Surveillance and Reconnaissance (C4ISR) upgrades.
In accordance with the C4ISR Framework Architecture, IDS CONOP and IDS Requirements, Integrated Coast Guard Systems (ICGS) is providing the following C4ISR upgrades making this asset more capable in performance its missions.

This CoC is based on completion of: Design, Installation & Testing of the C4ISR Equipment for the Matagorda. Review of system operational /verification test results were completed. On-site LM Quality surveillance performed; 100% inspection on LM cabinets assemblies 1 through 5, 100% inspection of MES equipment performed, QA checklist completed, 30% spot inspection on cable installation. Receipt of subcontractors' CoC including PROSOFT, FLIR, NGIT, & MES. Conducting training services and material to the USCG personnel. FCA & PCA audit completed. Software Version Description Document (VDD) including password and license keys transferred.

Exceptions:

SP-841 DEM 5020 (02/02/2004) **DRAFT**

EXTERNAL CERTIFICATION OF CONFORMANCE

LOCKHEED MARTIN CORPORATION
MARITIME SYSTEMS & SENSORS

1.) PROSOFT CoC will be submitted at the completion of COP training, completion of training is dependent upon successful implentation of classified system by 3/17/04.
2.) Open Trial Cards EL0121001,CC0011001,CC0015001,CC0016001,CC0007001 & DC0002001.
3.) Submittal of C006 for final as build CBDs, CRSs, Cabinet Rack Drawings , CSEL and Software Capabilities and Limitation Document to be supplied by May 30, 2004
4) Delivery of C005 with section 3.2 attached, May 30, 2004.
5) Delivery of C005 section 3.2 requirements verification matrix, May 30, 2004.
6.) S016:CCM compliance analysis by May 30, 2004.
7.) Test Report to be submitted by March 31, 2004
8.) Tempest corrections in accordance with the final instrumented tempest survey report provided by the USCG, and completion of classified testing.
9) Delivery of L016 data input to Northrop Grumman
10) Delivery of I026
11) Submittal of low Smoke Cables request for Deviations/Waivers

Note:
USCG will provide Iridium phone; reference 123 end item P-spec negotiations.

SMH DGW

SP-841

DEM 5020 (02/02/2004) DRAFT

Enclosure 1

U.S. Department of Homeland Security
United States Coast Guard

Commander
U.S. Coast Guard
Telecommunication & Information Systems Command (isd-3b)

7323 Telegraph Road
Alexandria, VA 23115
Staff Symbol: TISCOM (isd-3b)

Phone: 703.313.5631
Fax: 703.313.5640

Email: rporter@tiscom.uscg.mil

2241
05 March 2004

MEMORANDUM

From: Mr. Ronald T. Porter
CG TISCOM (isd-3b)

Reply to Attn of: TISCOM (isd-3b)
Ronald T. Porter
703.313.5631

To: DIRECTOR, TISCOM Deepwater Systems

Subj: USCGC MATAGORDA VISUAL TEMPEST INSPECTION

Ref: (a) NSTISSAM TEMPEST 2-95
(b) IA PUB 5239-31 INFORMATION ASSURANCE SHIPBOARD RED/BLACK INSTALLATION PUBLICATION

1. The Secure Electrical Information Processing System (SEIPS) on CGC MATAGORDA was inspected by Ronald Porter (TISCOM) on 19 and 21 February 2004. The inspection was conducted using criteria listed in references (a) and (b), and the SEIPS was found not to be in compliance. Discrepancies are listed in the enclosure.

2. This summary provides a record of the installation at the time of inspection. The correction of installation discrepancies is required as specified in reference (a) and (b); however, other modifications or changes to the SEIPS shall not be made without approval of Commander, TISCOM (isd-3d) or the appropriate MLC.

3. This summary and amendments to this summary shall be retained in the unit's SEIPS (TEMPEST) documentation file.

#

Enclosure: Visual Tempest Inspection Report

Copy: Maintenance and Logistics Command Atlantic (t)
Maintenance and Logistics Command Pacific (t)

Page 1 of 5

Enclosure 1

Subject: Visual TEMPEST Inspection Summary

1. This Visual TEMPEST Inspection Summary is for the FTA Visit.

2. The entire Secure Electrical Information Processing System was inspected.

3. List of spaces with secure processing equipment inspected by the visual TEMPEST inspector.

   A. Visited space

4. Discrepancy form legend:

Column A:	Sequential discrepancy number
Column B:	
SF	Correction of the discrepancy is within the capability of ship's force.
IAC	Correction of the discrepancy was completed by ships force prior to completion of inspection visit.
IA	Indicates that the assistance of an industrial activity is probably required to properly correct the discrepancy.
IAC	Indicates that an industrial activity corrected the discrepancy.
SA	Indicates that the assistance of a support activity is probably required to properly correct the discrepancy.
SAC	Indicates that a support activity corrected the discrepancy.
CA	Indicates that the Contractor Activity is probably required to properly correct the discrepancy.
Column C:	Reference of the paragraph in designated manuals to which the installation does not conform.
Narrative:	A brief description of the discrepancy found.

Enclosure 1

5. Discrepancy

A	B	C	Narrative
01	CA	NSTISSAM TEMPEST 2/95 PG 27 Para 2a/pg16 para 5 IA Pub 5239-31 A.1.1 1 a, b	Cabinet 3: Black RF transmitter (RT-1794) in same rack as Red Processors. Recommend moving 3 meters away or in adjacent Black Equipment Room. Explore option of putting on Bridge. If so, then distributive Key scheme may pose a problem.
02	CA	NSTISSAM TEMPEST 2/95 pg 27 Para 2a/pg16 para 5 IA Pub 5239-31 A.1.1.1 a, b	Cabinet 2: RF transmitter (PCRP 211/802) in same rack as Red Processors. Recommend moving 3 meters away or in adjacent Black Equipment Room.
03	CA	NSTISSAM TEMPEST 2/95 PG 27 Para 2b	Cabinet 3: Red processor less than one meter away from power line to black transmitter (RT-1794 p/o ARC-210)
04	CA	NSTISSAM TEMPEST 2/95 pg 27 Para 2a	Cabinet 3: Red processor less than one meter away from black signal lines connected to RF transmitter (RT-1794)
05	CA	NSTISSAM TEMPEST 2/95 pg 27 Para 4 IA PUB 5239-31 Para A.1.7.1 IA PUB 5239-31 MIL-STD 188-124B Para 5.2.12	Signal cable used with RED processors, BLACK processors, ISDN telephones, and not terminated. Request additional information on CAT 5E cable. Red data cables for RED Lan contain questionable shielding. Manufacturer data: DARKA COMTEQ (F) ShipLan Cable 4PR 24 AWG Screened 307650. Cable contains what seems to be mylar foil. A TEMPEST hazard exists if RED cables are run with BLACK cables, or with wirelines or power lines connected to an RF transmitter. NSTISSAM 2-95. RED processors meeting the requirements of NSTISSAM TEMPEST/1-92 (Levels I, II, or III) must use optical or shielded wire cables if specified as part of the manufacturer's installation specification, or if specified for compliance with TEMPEST certification IA Pub 5239-31: RED Shielded Metallic Wire Cable RED metallic wire cables in all locations shall be shielded, with the exception of desktop computer cables that are provided by the manufacturer, where there is not an offered shielded cable option. This requirement is not applicable to RED fiber optic cables. B.1.2.5 (5239). Approved cables. Mil-C-17 (ref k), or MIL-C-915 (reference(l)), MIL-C-24640(reference(n)) or MIL-C-24643 (reference (o)). MIL-STD-188 "Foil shiels are not acceptable for peripheral bonding and do not provide mechanical durability" IA Pub 5239-31 pg B-9 Para d. Note: "If both ends of the cable will not have the shield taken to ground, approval by the cognizant

Page 3 of 5

Enclosure 1

			CTTA should be obtained prior to installation."
06	CA	NSTISSAM TEMPEST 2/95 pg 28 Para 6	RED processors and RF transmitters in Cabinet RED processors should not be powered from the same circuits as RF transmitters.
07	CA	IA Pub 5239-31 Para B.1.2.6.16 pg B-8 and B-9	Missing pins on CRYPTO cable to KYV-5. Missing ground terminal connection on backshell.
08	CA	IA Pub 5239-31 Para B.1.2.6.16 pg B-8 and B-9	ANDVT cable has no ground terminal connection on backshell. Strain relief clamp is not on outer coating of cable. Redo connection.
09	CA	IA Pub 5239-31 Para B.1.2.6.10	AN/UPX-28 has inadequate green wire ground. Replace with Class C bond strap.
11	CA		Install ground cables per IA 5239-31. Where required, use soldered connectors vice crimping.
12	CA	IA Pub 5259-31	Remove external tooth washers on ground connectors to cabinets. Use lock washers and lug nuts per IA Instruction 5239-31 Figure B-5.
13	CA	IA Pub 5239 B.1.2.6.12	Keyboard and Monitor in Cabinet #1 has non -manufacturer supplied power cable. Bond shelf to rack.
14	CA	NSTISSAM 2-95 Para 3 Notes 3	RED/BLACK cable separation. Two inch minimum separation requirement. Six inch separation requirement for RED/BLACK cables that run in parallel for 100 ft runs. No way to physically identify RED/BLACK data cables from each other or from the ISDN phone lines.
15	CA	NSTISSAM TEMPEST 2/95 Recommendation 1 Pg 27	PCRP (Model 211/802) is Black transmitter in RED Cabinet #3 PCRP (RADAR) is less than three meters away from RED processing equipment. Recommend moving outside of C4ISR Classified Room.
16	CA	IA Pub 5239-31 Para B.1.2.6.10	Remove green wire grounds from CRYPTO rack and replace with Class C solid bond strap.
17	CA	IA Pub 5239-31 Para A 1.1.3	Telephone cables connected to shore tie via telephone switch cannot be routed with red cables. More info on MARCOM switch required.
18	CA	IA Pub 5239-31 Para A 1.1.7.	ARC-210 Secure voice cables. Transmit and receive audio lines need to be shielded.
19	CA		Request info on Marcom Compact IVCS Switch with PABX. Issue is port isolation for RED/BLACK connections. All ISDN phones, cellular wireless, shore connection box and KITEs have inputs to MARCOM. TISCOM TEMPEST program manager will check on configuration on SIPRNET. Wireline inputs to MARCOM in current configuration appear to be unshielded.
20	CA	NSTISSAM 2-95 Recommendation 1 Pg 27 Para 3 Notes: 2	Operator position in Classified C4ISR room has cables from two UNCLAS LAN and three CLASSIFIED LAN connections. Require 2 inch (5 cm) separation.

Page 4 of 5

Enclosure 1

Bridge

21	CA	NSTISSAM TEMPEST 2/95 PG 27 Para 2a	Motorola VHF FM DES transceiver less than three meters from C2 Network flat panel display monitors LC 06-04-16, LC 06-04-72 and LC 06-04-84. Pending Instrumented Test.
22	CA	NSTISSAM TEMPEST 2/95 PG 27 Para 2a	Ross VHF FM transceiver less than three meters from C2 Network flat panel display monitors LC 06-04-16, LC 06-04-72 and LC 06-04-84. Pending Instrumented Test
23	CA	NSTISSAM TEMPEST 2/95 PG 27 Para 2a	Cel phone next to Secure Lan junction box less than three meters from LC 06-04-82 and LC 06-04-72. Request composition of enclosure.
24	CA	IA Pub 5239-31 Para B 1.2.6 13	No metal-to-metal contact for ground strap from ARC 210 Tray to ground on shelf. Recommend use Class C ground strap and remove paint for proper bonding.
25	CA	IA Pub 5239 A.1.1.7.2a	Not clear if Shielded Twisted Pair is used for voice and control wirelines.
26	CA	IA Pub A.1.1.7.2 Pg A-3	Unshielded cable connected to connector J3 on ARC-210 Tray. Twisted red wires (four) runs to C4ISR Cabinet #3.
27	CA	NSTISSAM TEMPEST 2/95	Wireless bridge for RHIB comms is RF transmitter?? Is this just a radio with mic on cutter?? PDAs??

Other:

28	CA	NSTISSAM 2-95 Recommendation I Pg 27 Para 3 Notes: 2	CO's cabin. RED and BLACK LAN ports have no cable separation. Recommend 2 inch separation.
29	CA	NSTISSAM 2-95 Recommendation I Pg 27 Para 1	CO's cabin. Proposed RED laptop on desk top less than 20 inches (20 cm) apart.

Cabinet #3

Derived From: NSTISSAM TEMPEST 2/95

Department of the Navy (DoN) Information Assurance (IA) Publication Module 5239-31

MIL-STD-188-124B Grounding Bonding Shielding for Common Long Haul/Tactical Communications Systems

MATERIAL INSPECTION AND RECEIVING REPORT

Form Approved OMB No. 0704-0248

The public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0248), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ADDRESS.
SEND THIS FORM IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE DFARS, APPENDIX F-401.

1. PROCUREMENT INSTRUMENT IDENTIFICATION (CONTRACT) NO.	ORDER NO.	6. INVOICE NO./DATE	7. PAGE	OF	8. ACCEPTANCE POINT
DTCG23-02-C-2DW001	03-F-2DW196	ICGS0300-0016/ 05/13/04	1	2	D

2. SHIPMENT NO.	3. DATE SHIPPED	4. B/L NA / TCN NA	5. DISCOUNT TERMS
NA	13 May 04		None

9. PRIME CONTRACTOR	CODE 1UYZ2	10. ADMINISTERED BY	CODE
Integrated Coast Guard Systems, 1530 Wilson Blvd., Suite 400, Arlington, VA 22209, USA		Commandant (G-ACS-6) U.S. Coast Guard Deepwater SIPO, 1530 Wilson Blvd., Suite 400, Arlington, VA 22209	

11. SHIPPED FROM (If other than 9)	CODE / FOB:	12. PAYMENT WILL BE MADE BY	CODE
Bollinger Shipyards Lockport, L.L.C. PO Box 250 8365 Highway 308 Lockport, LA. 70374-0250		Commandant (G-ACS-6) U.S. Coast Guard Headquarters, 2100 Second St. SW, Room 5208, Washington, DC 20591-0001, USA	

13. SHIPPED TO	CODE WPB - 1323	14. MARKED FOR	CODE
USCGC Metompkin (WPB - 1323), C/O Coast Guard 8365 Highway 308 Lockport, LA. 70374-0250		LT. Carter	

15. ITEM NO.	16. STOCK/PART NO. DESCRIPTION (Indicate number of shipping containers - type of container - container number.)	17. QUANTITY SHIP/REC'D*	18. UNIT	19. UNIT PRICE	20. AMOUNT
0055 EA	Services and Supplies: Metompkin, (thru/mod 5w/o lock) WPB 123 conversion, Item short shipped of the following components: Details on Certificate of Conformance	1/1	Lot	$7,288,106.00	$7,288,106.00
01	Trial Cards	1	Lot	$51,950.00	$51,950.00
02	Provisioning and Spares	1	Lot	$33,583.50	$33,583.50
03	Training	1	Lot	$10,000	$10,000.00
04	CDRL Exceptions	1	Lot	$18,200.00	$18,200.00

21. CONTRACT QUALITY ASSURANCE

a. ORIGIN
☐ CQA ☐ ACCEPTANCE of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents.
DATE | SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME: Certificate of Conformance
TITLE:
MAILING ADDRESS:
COMMERCIAL TELEPHONE NUMBER:

b. DESTINATION
☐ CQA ☐ ACCEPTANCE of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents.
DATE | SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME:
TITLE:
MAILING ADDRESS:
COMMERCIAL TELEPHONE NUMBER:

22. RECEIVER'S USE
Quantities shown in column 17 were received in apparent good condition except as noted.
5-14-04 | SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
DATE RECEIVED
TYPED NAME: Carl McGill
TITLE: Contracting Officer
MAILING ADDRESS: U.S. Coast Guard Deepwater SIPO, 1530 Wilson Blvd., Suite 400, Arlington, VA
COMMERCIAL TELEPHONE NUMBER: 571-218-3289
* If quantity received by the Government is the same as quantity shipped, indicate by (✓) mark, if different, enter actual quantity received below quantity shipped and encircle.

23. CONTRACTOR USE ONLY

DD FORM 250, AUG 2000 PREVIOUS EDITION IS OBSOLETE.

MATERIAL INSPECTION AND RECEIVING REPORT - *CONTINUATION SHEET*

PAGE 2 OF 2

Form Approved OMB No. 0704-0248

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0248), Washington DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES.
SEND THIS FORM IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE DFARS, APPENDIX F-401.

SHIPMENT NO.	DATE SHIPPED	PROC INSTRUMENT IDEN. (CONTRACT)	(ORDER) NO.	INVOICE NO.
NA	20040513	DTCG23-02-C-2DW001	03-F-2DW196	ICGS0300-0016/ 05/13/04

ITEM NO.	STOCK/PART NO. DESCRIPTION (Indicate number of shipping containers - type of container - container number.)	QUANTITY SHIP/REC'D	UNIT	UNIT PRICE	AMOUNT
55	Continued				$0.00
5	Tempest POA&M	1	lot	$5,000.00	$5,000.00
6	Classified Testing	1	lot	$3,000.00	$3,000.00
7	LM/MS2 C4ISR Problem Sheets/ECN/TFRs	1	lot	$3,000.00	$3,000.00
8	Resolution Of Non-Std WS III software image	1	lot	$1,200.00	$1,200.00
9	CGDN connectivity	1	ea	$1,200.00	$1,200.00
10	UHF paging system / FCC licence Authorization	1	lot	$4,000.00	$4,000.00
11	Emergent Work Requests	1		$1,077.61	$1,077.61
12	SRP POA&M (priced as trial card)	1		$0.00	$0.00
13	LIMS POA&M Execution	1		$600.00	$600.00
	Mod 2 yard service (de-obligate unexpended OE funds)	1		$34,869.85	$34,869.85
	Major Mod 110/123 (de-obligate unexpended CA funds)	1		$185,852.51	$185,852.51
	Amount Paid to Date	1		$5,752,765.00	$5,752,765.00
	Total Invoice Amount Due	1		$1,181,807.53	$1,181,807.53
					$0.00
					$0.00

DD Form 250C, NOV 92 (EG) *Previous edition may be used.* Designed using Perform Pro, WHS/DIOR, Nov 95

DEEPWATER 1530 Wilson Boulevard, Suite 400, Arlington, Virginia 22209

ICGS Certificate of Conformance:

Contract Number: DTCG23-02-C-2DW001
DTO Number: DTCG23-03-F-2DW196, CLIN 0055EA
Asset: CGC Metompkin, WPB 1323, 1 of 1

Description: This DTO provides the detailed design and construction for major modification of the 110-foot patrol boat Metompkin, including completion of all design, analyses, construction, and testing to deploy the lead vessel of the proposed 123-Ft Cutter Class, and to demonstrate compliance with requirements. Included in the modifications was an extensive ultrasonic survey of the hull was conducted resulting in the replacement of over 200 square feet of wasted hull plate; a new deckhouse providing an enlarged, 360-degree bridge and berthing for a dual-gender crew; a stern extension with a stern ramp and door for launch and recovery of the Short-Range Prosecutor; an upgraded C4ISR suite to ensure interoperability with the IDS; and all related logistics and training.

I certify that on 13 May 2004, the ICGS Deepwater Program furnished the supplies and/or services called for in accordance with all applicable requirements. I further certify that the supplies and/or services are of the quality specified and conform in all respects with the contract requirements, including specifications, drawings, preservation, packaging, packing, marking requirements, and physical item identification, and are in the quantity shown on the attached acceptance document.

Comment: This Certificate of Conformance is based upon;

- LM/MS2 Certificate of Conformance and supporting records.
- NGSS Certificate of Conformance and supporting records
- ICGS audits of LM/MS2, NG/SS, Chand, and Bollinger (BSI).
- Functional Configuration Audit and Physical Configuration Audit performed on 15 Apr 04
- 123 Cutter Certification Matrix

COMDAC INS navigation system, gyrocompass, and Radar engineering changes have been installed in the CGC Metompkin. ICGS is in receipt of Amendment of Solicitation / Modification of Contract, Modification 003, requisition/Purchase Reg. No. 24-03-2332DW196, signed by Catherine A Martindale, Contracting Officer, United States Coast Guard, Date Signed, 26 April 2004, providing USCG unilateral determination of contract value to incorporate the COMDAC INS navigation system, gyrocompass, and Radar engineering changes into the installation for the USCG 110'/123' conversion cutter METOMPKIN. ICGS reserves its right to submit a Request for Equitable Adjustment (REA) to the value associated with the contracting officer's unilateral determination.

www.ICGSDeepwater.com

A Limited Liability Company Owned by Northrop Grumman Ship Systems and Lockheed Martin

DEEPWATER

Exception(s):

1) Trial Cards (Attachment A)
2) Provisioning and Spares (Attachment B)
   - Propeller, right hand
3) Training for the Metompkin crew
   - Common Operating Picture (COP estimated completion 30 days after Classified System IATO)
4) CDRL Exceptions (Attachment C)
5) Tempest POA&M, (Attachment D, with Enclosure 1)
6) Classified Testing (Attachment D)
7) LM/MS2 C4ISR Problem Sheets/ECN/TFRs (Attachment E)
8) Resolution of Non-standard Workstation III Software image (9 June 04)
9) CGDN connectivity (Attachment F)
10) UHF paging system/FCC License Authorization (9 Jul 04)
11) Outstanding emergent work requests (CFRs)
    - CFR 25-2332-0029, STBD pre-lube pump starter, $552.57
    - CFR 25-2332-0033, Fuel oil priming pump STBD main engine, $525.04
12) SRP launch and retrieval system POA&M from Trial Card OH0012001 (Attachment G)
13) LIMS POA&M from Trial Card SP0001001, closed (Attachment H)

Date of Execution: 5/13/2004

Domain Program Manager:

Quality Assurance Manager:

ICGS Signature:

Kevin J. O'Neill
Director of Contracts, ICGS LLC

DEEPWATER

Attachment D
Metompkin Tempest and Classified Testing
POA&M

Metompkin TEMPEST Issue Resolution & Classified Testing

TEMPEST Visual Inspection Discrency Resolution. (Holdback $2,000)
- ICGS to resolve all visual TEMPEST discrepancies as described in the Visual Inspection report (enclosure 1) date for closure is 60 days post DD250 sign-off.

TEMPEST Hardware Discrepancy. (Holdback $3,000)
- ICGS will correct outstanding SPAWAR instrumented TEMEPEST survey hardware discrepancy on Metompkin.

Conduct Classified Testing. (Holdback $3,000)
Conduct classified systems testing on CGC Metompkin. Target date for completion of classified testing is 15 days post USCG IATO for Metompkin. Prerequisite actions:
- ICGS to resolve all outstanding physical security discrepancies. This must completed in order to hold the necessary classified keymat.
- ICGS to resolve all visual TEMPEST discrepancies
- Prior to performing any classified testing on a 123 WPB, the USCG must provide an IATO to allow transmit/receive of classified communications.
- ICGS will execute 123 classified tests (from AT procedures), with support as required from USCG personnel.

Enclosure 1

Visual TEMPEST Inspection Summary

The entire Secure Electrical Information Processing System was inspected.

List of spaces with secure processing equipment inspected by the visual TEMPEST inspector:

1. Radio Room
2. State Rooms
3. Bridge

Discrepancy form legend:

Column A: Sequential discrepancy number

Column B:

SF	Correction of the discrepancy is within the capability of ship's force.
SFC	Correction of the discrepancy was completed by ships force prior to completion of inspection visit.
IA	Indicates that the assistance of an industrial activity is probably required to properly correct the discrepancy.
IAC	Indicates that an industrial activity corrected the discrepancy.
SA	Indicates that the assistance of a support activity is probably required to properly correct the discrepancy.
SAC	Indicates that a support activity corrected the discrepancy.
CA	Indicates that the Contractor activity is required to correct the discrepancy.

Column C: Document Reference to which the installation does not conform.

Narrative: A brief description of the discrepancy found.

Enclosure 1

Discrepancies and Corrective Action Report

1. Radio Room 2-28-O-Q ("TEMPEST Room")

A	B	C	Narrative
001	CA	NSTISSAM 2-95 Recommendation 1, Paragraph 2.B	The printer (red) along with Classified LAN line runs parallel with IFF antenna line. There is no separation of these lines.
002	CA	IA PUB 5239-31 Paragraph B.1.2.6.2	Ground for IFF transmitter (UPX-28) needs to be cleaned. Removal of paint and dirt removed from ground.
003	CA	IA PUB 5239-31 Paragraph A.1.1.7.3.1.B	There is not a secure Protected Distribution System (PDS) leaving Radio Room. LE Locker behind Secure Space. Red cables should be in a PDS.
004	CA	IA PUB 5239-31 Paragraph A.1.1.7.2	Fabrication cables to RT-1794 are not shielded.

Note: Separation of IFF antenna line and Class LAN line may be part of an upcoming groom.

Discrepancies and Corrective Action Report

2. State Rooms 1-16-1-L / 1-16-2-L

001	CA	NSTISSAM 2-95 Rec I Paragraph 3.A	There is no separation between Classified LAN line and MF/HF line.

Discrepancies and Corrective Action Report

3. Bridge

A	B	C	Narrative
001	CA	IA PUB 5239-31 Paragraph B.1.2.6.2	Ground needs to be cleaned on the Kite handset. Surface must be free of paint.
002	CA	IA PUB 5239-31 Paragraph A.1.1.7.2	ARC 210, J8 has no shielded cable.

Enclosure 1

		NSTISSAM 2-95 Para 4.4.1	
003	CA	IA PUB 5239-31 Paragraph B.1.2.6.2	There is no clean ground for the power supply 03-15-20. Surface must be free of paint and foreign material.
004	CA	IA PUB 5239-31 Paragraph B.1.2.6.2	Need to remove paint for clean ground on RCU-9310 radio.
005	CA	IA PUB 5239-31 Paragraph A.1.1.7.2	Fabricated cables to the ARC-210 are not shielded.

MATERIAL INSPECTION AND RECEIVING REPORT

Form Approved OMB No. 0704-0248

The public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0248), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ADDRESS.
SEND THIS FORM IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE DFARS, APPENDIX F-401.

1. PROCUREMENT INSTRUMENT IDENTIFICATION (CONTRACT) NO.	ORDER NO.	6. INVOICE NO./DATE	7. PAGE	OF	8. ACCEPTANCE POINT
DTCG23-02-C-2DW001	03-F-2DW247	ICGS030023 06/24/04	1	2	D

2. SHIPMENT NO.	3. DATE SHIPPED	4. B/L	5. DISCOUNT TERMS
NA	24 Jun 04	NA TCN NA	None

9. PRIME CONTRACTOR CODE 1UYZ2
Integrated Coast Guard Systems, 1530 Wilson Blvd., Suite 400, Arlington, VA 22209, USA

10. ADMINISTERED BY CODE
Commandant (G-ACS-6) U.S. Coast Guard Deepwater SIPO, 1530 Wilson Blvd., Suite 400, Arlington, VA 22209

11. SHIPPED FROM (If other than 9) CODE FOB:
Bollinger Shipyards Lockport, L.L.C.
PO Box 250
8365 Highway 308
Lockport, LA. 70374-0250

12. PAYMENT WILL BE MADE BY CODE
Commandant (G-ACS-6) U.S. Coast Guard Headquarters, 2100 Second St. SW, Room 5208, Washington, DC 20591-0001, USA

13. SHIPPED TO CODE WPB - 1328
USCGC PADRE (WPB - 1328), C/O Coast Guard
8365 Highway 308
Lockport, LA. 70374-0250

14. MARKED FOR CODE
LT. Hammond

15. ITEM NO.	16. STOCK/PART NO. DESCRIPTION (Indicate number of shipping containers - type of container - container number.)	17. QUANTITY SHIP/REC'D*	18. UNIT	19. UNIT PRICE	20. AMOUNT
0055 EB	Services and Supplies: Padre, (thru/mod 2)	1/1	Lot	$7,080,060.00	$7,080,060.00
	WPB 123 conversion,				
	Item short shipped of the following components: Details				
	on Certificate of Conformance				
01	Trial Cards	1	Lot	$114,850.00	$114,850.00
02	Provisioning and Spares	1	Lot	$35,433.50	$35,433.50
03	Training	1	Lot	$10,000	$10,000.00
04	CDRL Exceptions	1	Lot	$17,500.00	$17,500.00

21. CONTRACT QUALITY ASSURANCE

a. ORIGIN
☐ CQA ☐ ACCEPTANCE of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents.
DATE SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME: Certificate of Conformance
TITLE:
MAILING ADDRESS:
COMMERCIAL TELEPHONE NUMBER:

b. DESTINATION
☐ CQA ☐ ACCEPTANCE of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents.
DATE SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME:
TITLE:
MAILING ADDRESS:
COMMERCIAL TELEPHONE NUMBER:

22. RECEIVER'S USE
Quantities shown in column 17 were received in apparent good condition except as noted.
DATE RECEIVED 6-24-2004 SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME: Daniel Hartinger
TITLE: Contract Officer
MAILING ADDRESS: U.S. Coast Guard Deepwater SIPO
1530 Wilson Blvd., Suite 400, Arlington, VA
COMMERCIAL TELEPHONE NUMBER: 571-218-3253
* If quantity received by the Government is the same as quantity shipped, indicate by (✓) mark, if different, enter actual quantity received below quantity shipped and encircle.

23. CONTRACTOR USE ONLY

DD FORM 250, AUG 2000 PREVIOUS EDITION IS OBSOLETE.

MATERIAL INSPECTION AND RECEIVING REPORT - *CONTINUATION SHEET*

PAGE 2 OF 2

Form Approved OMB No. 0704-0248

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0248), Washington DC 20503.
PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES.
SEND THIS FORM IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE DFARS, APPENDIX F-401.

SHIPMENT NO.	DATE SHIPPED	PROC INSTRUMENT IDEN. (CONTRACT)	(ORDER) NO.	INVOICE NO.
NA	20040624	DTCG23-02-C-2DW001	03-F-2DW247	ICGS030023 6/24/04

ITEM NO.	STOCK/PART NO. DESCRIPTION (Indicate number of shipping containers - type of container - container number.)	QUANTITY SHIP/REC'D	UNIT	UNIT PRICE	AMOUNT
55	Continued				$0.00
5	Tempest POA&M	1	lot	$5,000.00	$5,000.00
6	Classified Testing	1	lot	$3,000.00	$3,000.00
7	LM/MS2 C4ISR TRFs / Problem Sheets	1	lot	$3,000.00	$3,000.00
8	FCC License Authorization	1	lot	$4,000.00	$4,000.00
9	SRP Launch and Retrieval POAM	1	ea	$0.00	$0.00
10	LIMS POAM	1	lot	$600.00	$600.00
11	Dual Service Inmarsat POAM	1		$600.00	$600.00
12	IPF Cable Replacement	1		$3,000.00	$3,000.00
13	P-Spec Adjustment	1		$8,062.00	$8,062.00
14	Credit for Secure Comm Lock	1		-$2,000.00	-$2,000.00
15	Credit for Move to New Orleans	1		-$8,467.00	-$8,467.00
	0055EBB (de-obligate unexpended OE funds)	1		$21,496.29	$21,496.29
	0055EBA (de-obligate unexpended CA funds)	1		$2,803.42	$2,803.42
	Amount Paid to Date	1		$5,746,348.00	$5,746,348.00
	Total Invoice Amount Due	1		$1,114,834.29	$1,114,834.29

DD Form 250C, NOV 92 (EG) *Previous edition may be used.* Designed using PerForm Pro, WHS/DIOR, Nov 95

DEEPWATER 1530 Wilson Boulevard, Suite 400, Arlington, Virginia 22209

ICGS Certificate of Conformance:

Contract Number: DTCG23-02-C-2DW001
DTO Number: DTCG23-03-F-2DW247, CLIN 0055EB
Asset: CGC Padre, WPB 1328, 1 of 1

Description: This DTO provides the detailed design and construction for major modification of the 110-foot patrol boat Padre, including completion of all design, analyses, construction, and testing to deploy the lead vessel of the proposed 123-Ft Cutter Class, and to demonstrate compliance with requirements. Included in the modifications was an extensive ultrasonic survey of the hull was conducted resulting in the replacement of over 75 square feet of wasted hull plate; a new deckhouse providing an enlarged, 360-degree bridge and berthing for a dual-gender crew; a stern extension with a stern ramp and door for launch and recovery of the Short-Range Prosecutor; an upgraded C4ISR suite to ensure interoperability with the IDS; and all related logistics and training.

I certify that on 24 June 2004, the ICGS Deepwater Program furnished the supplies and/or services called for in accordance with all applicable requirements. I further certify that the supplies and/or services are of the quality specified and conform in all respects with the contract requirements, including specifications, drawings, preservation, packaging, packing, marking requirements, and physical item identification, and are in the quantity shown on the attached acceptance document.

Comment: This Certificate of Conformance is based upon;

- LM/MS2 Certificate of Conformance and supporting records.
- NGSS Certificate of Conformance and supporting records
- ICGS audits of LM/MS2, NG/SS, Chand, and Bollinger (BSI).
- Functional Configuration Audit and Physical Configuration Audit performed on 4 June 2004
- 123 Cutter Certification Matrix

COMDAC INS navigation system, gyrocompass, and Radar engineering changes have been installed in the CGC Padre. ICGS is in receipt of Amendment of Solicitation / Modification of Contract, Modification 002, requisition/Purchase Reg. No. 24-03-2332DW247, signed by Catherine A Martindale, Contracting Officer, United States Coast Guard, Date Signed, 9 June 2004, providing USCG unilateral determination of contract value to incorporate the COMDAC INS navigation system, gyrocompass, and Radar engineering changes into the installation for the USCG 110'/123' conversion of Padre. ICGS reserves its right to submit a Request for Equitable Adjustment (REA) to the value associated with the contracting officer's unilateral determination.

www.ICGSDeepwater.com

A Limited Liability Company Owned by Northrop Grumman Ship Systems and Lockheed Martin

DEEPWATER

Exception(s):

1) Trial Cards (Attachment A)
2) Provisioning and Spares (Attachment B)
3) Training for the Padre crew
   - Common Operating Picture (COP estimated completion 30 days after Classified System IATO)
4) CDRL Exceptions (Attachment C)
5) Tempest POA&M, (Attachment D, with Enclosure 1)
6) Classified Testing (Attachment D)
7) LM/MS2 C4ISR TFR/ Problem Sheets (Attachment E)
8) UHF paging system/FCC License Authorization (9 Jul 04)
9) SRP launch and retrieval system POA&M, (Attachment F)
10) LIMS POA&M, (Attachment G)
11) Dual Service INMARSAT POAM (Attachment H)
12) IFF Cable Replacement
13) P-Spec Adjustment
14) Credit for Secure Comm Space Lock
15) Credit for Move to New Orleans

Date of Execution: 24 June 04

Domain Program Manager:

Quality Assurance Manager:

ICGS Signature:

Kevin J. O'Neill
Director of Contracts, ICGS LLC

DEEPWATER

Attachment D
Padre Tempest and Classified Testing
POA&M

TEMPEST Visual Inspection Discrepancy Resolution. (Holdback $2,000)

- ICGS to resolve all visual TEMPEST discrepancies as described in the Visual Inspection report (enclosure 1) date for closure is 60 days post DD250 sign-off.

TEMPEST Hardware Discrepancy. (Holdback $3,000)

- ICGS will correct outstanding SPAWAR instrumented TEMEPEST survey hardware discrepancy on Padre.

Conduct Classified Testing. (Holdback $3,000)
Conduct classified systems testing on CGC Padre. Target date for completion of classified testing is 15 days post USCG IATO for Padre. Prerequisite actions:

- ICGS to resolve all outstanding physical security discrepancies on the 123 to be used to execute classified testing. This must completed in order to hold the necessary classified keymat.
- ICGS to resolve all visual TEMPEST discrepancies
- Prior to performing any classified testing on a 123 WPB, the USCG must provide an IATO to allow transmit/receive of classified communications.
- ICGS will execute 123 classified tests (from AT procedures), with support as required from USCG personnel.

Enclosure: Visual TEMPEST Inspection Summary

DEEPWATER

Enclosure 1 to Padre Tempest and Classified Testing POA&M

Visual TEMPEST Inspection Summary

The entire Secure Electrical Information Processing System was inspected.

List of spaces with secure processing equipment inspected by the visual TEMPEST inspector:

1. Radio Room
2. State Rooms
3. Bridge

Discrepancy form legend:

Column A: Sequential discrepancy number

Column B:

SF Correction of the discrepancy is within the capability of ship's force.

SFC Correction of the discrepancy was completed by ships force prior to completion of inspection visit.

IA Indicates that the assistance of an industrial activity is probably required to properly correct the discrepancy.

IAC Indicates that an industrial activity corrected the discrepancy.

SA Indicates that the assistance of a support activity is probably required to properly correct the discrepancy.

SAC Indicates that a support activity corrected the discrepancy.

Column C: Document Reference to which the installation does not conform.

Narrative: A brief description of the discrepancy found.

DEEPWATER

Discrepancies and Corrective Action Report

1. Radio Room 2-28-O-Q

A	B	C	Narrative
001	IA/SA	NSTISSAM 2-95 Rec I Paragraph 3 B Note 2	There is no separation between Classified LAN and Unclassified LAN outlets.
002	IA/SA	NSTISSAM 2-95 Rec I Paragraph 3 B Note 2	Classified LAN lines are run with 120VAC power lines (no separation).
003	IA/SA	NSTISSAM 2-95 Rec I Paragraph 3.B Note 2	Coax TV line runs along with Classified LAN line.
004	IA/SA	NSTISSAM 2-95 Rec I Paragraph 3.B Note 2	There is no separation between alarm panel line and Classified LAN line.
005	IA/SA	NSTISSAM 2-95 Rec I Paragraph 2.B	The printer (red) along with Classified LAN line runs parallel with IFF antenna line. There is no separation of these lines.
006	IA/SA	IA PUB 5239-31 Paragraph A.1.1.2	The printer (red) uses black power. The printer router (red) uses black power.
007	IA/SA	NSTISSAM 2-95 Rec I Paragraph 6	There is no 3-meter separation between printer (red) and IFF transmitter.
008	IA/SA	NSTISSAM 2-95 Rec I Paragraph 6	In Rack #3, there is no 3-meter separation between red and black cables before entering the Marcom switch.

DEEPWATER

009	IA/SA	NSTISSAM 2-95 Rec I Paragraph 6	In Rack #3, there is no 3-meter separation between cryptographic equipment and RT9000 transceiver.
010	IA/SA	IA PUB 5239-31 Paragraph A.1.1.7.3.1.B	There is not a secure Protected Distribution System (PDS) leaving Radio Room. LE Locker behind Secure Space.
011	IA/SA	NSTISSAM 2-95 Paragraph 4.9.6	Cable TV system needs to use an amplifier/attenuator at the point of entry into the secure space and needs to be of a type that provides one-way filtration.

Discrepancies and Corrective Action Report

2. State Rooms 1-16-1-L / 1-16-2-L

001	IA/SA	IA PUB 5239-31 Paragraph B.1.2.6.2	There is no separation between Classified LAN outlets and 117 VAC, Unclassified LAN, and TV Jack outlets.
002	IA/SA	NSTISSAM 2-95 Rec I Paragraph 3.A	There is no separation between Classified LAN line and MF/HF line.
003	IA/SA	NSTISSAM 2-95 Rec I Paragraph 3.	In State Room 1-16-2-L, Classified LAN line runs parallel with horn generator line.

Discrepancies and Corrective Action Report

3.Bridge

A	B	C	Narrative
001	IA/SA	NSTISSAM 2-95 Rec I Paragraph 6	There is no 3meter separation between red output and black lines for the Kite handset #1 and #2.
002	IA/SA	IA PUB 5239-31 Paragraph B.1.2.6.2	Classified LAN line runs parallel with 117 VAC, Black Data lines, and cellular antenna line.

MATERIAL INSPECTION AND RECEIVING REPORT

Form Approved OMB No. 0704-0248

The public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0248), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ADDRESS.
SEND THIS FORM IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE DFARS, APPENDIX F-401.

1. PROCUREMENT INSTRUMENT IDENTIFICATION (CONTRACT) NO.	ORDER NO.	6. INVOICE NO./DATE	7. PAGE	OF	8. ACCEPTANCE POINT
DTCG23-02-C-2DW001	03-F-2DW302	ICGS010030 08/02/04	1	2	D

2. SHIPMENT NO.	3. DATE SHIPPED	4. B/L NA / TCN NA	5. DISCOUNT TERMS
NA	02 Aug 04		None

9. PRIME CONTRACTOR CODE 1UYZ2
Integrated Coast Guard Systems, 1530 Wilson Blvd., Suite 400, Arlington, VA 22209, USA

10. ADMINISTERED BY CODE
Commandant (G-ACS-6) U.S. Coast Guard Deepwater SIPO, 1530 Wilson Blvd., Suite 400, Arlington, VA 22209

11. SHIPPED FROM (if other than 9) CODE FOB:
Bollinger Shipyards Lockport, L.L.C.
PO Box 250
8365 Highway 308
Lockport, LA. 70374-0250

12. PAYMENT WILL BE MADE BY CODE
Commandant (G-ACS-6) U.S. Coast Guard Headquarters, 2100 Second St. SW, Room 5208, Washington, DC 20591-0001, USA

13. SHIPPED TO CODE WPB - 1328
USCGC Attu (WPB - 1317), C/O Coast Guard
8365 Highway 308
Lockport, LA. 70374-0250

14. MARKED FOR CODE
LT. Eggert

15. ITEM NO.	16. STOCK/PART NO. DESCRIPTION (Indicate number of shipping containers - type of container - container number.)	17. QUANTITY SHIP/REC'D*	18. UNIT	19. UNIT PRICE	20. AMOUNT
0055 FA	Services and Supplies: Attu, (thru/mod 3)	1/1	Lot	$7,016,731.80	$7,016,731.80
	WPB 123 conversion,				
	Item short shipped of the following components: Details				
	on Certificate of Conformance				
01	Trial Cards	1	Lot	$54,250.00	$54,250.00
02	Training	1	Lot	$10,000.00	$10,000.00
03	CDRL Exceptions	1	Lot	$16,350.00	$16,350.00
04	Tempest POA&M	1	Lot	$5,000.00	$5,000.00

21. CONTRACT QUALITY ASSURANCE

a. ORIGIN
☐ CQA ☐ ACCEPTANCE of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents.
DATE SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME: Certificate of Conformance
TITLE:
MAILING ADDRESS:
COMMERCIAL TELEPHONE NUMBER:

b. DESTINATION
☐ CQA ☐ ACCEPTANCE of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents.
DATE SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME:
TITLE:
MAILING ADDRESS:
COMMERCIAL TELEPHONE NUMBER:

22. RECEIVER'S USE
Quantities shown in column 17 were received in apparent good condition except as noted.
DATE RECEIVED 8-3-2004 SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME: Daniel Hartinger
TITLE: Contracting Officer
MAILING ADDRESS:
U.S. Coast Guard Deepwater SIPO
1530 Wilson Blvd., Suite 400, Arlington, VA
COMMERCIAL TELEPHONE NUMBER 571-218-3253
* If quantity received by the Government is the same as quantity shipped, indicate by (X) mark; if different, enter actual quantity received below quantity shipped and encircle.

23. CONTRACTOR USE ONLY

DD FORM 250, AUG 2000 PREVIOUS EDITION IS OBSOLETE.

MATERIAL INSPECTION AND RECEIVING REPORT - *CONTINUATION SHEET*

PAGE 2 OF 2

Form Approved OMB No. 0704-0248

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0248), Washington DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES.
SEND THIS FORM IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE DFARS, APPENDIX F-401.

SHIPMENT NO.	DATE SHIPPED	PROC INSTRUMENT IDEN. (CONTRACT)	(ORDER) NO.	INVOICE NO.
NA	20040802	DTCG23-02-C-2DW001	03-F-2DW302	ICGS030030 8/02/04

ITEM NO.	STOCK/PART NO. DESCRIPTION (Indicate number of shipping containers - type of container - container number.)	QUANTITY SHIP/REC'D	UNIT	UNIT PRICE	AMOUNT
SS	Continued				$0.00
5	Classified Testing	1	lot	$3,000.00	$3,000.00
6	LM/MS2 C4ISR TRFs / Problem Sheets	1	lot	$2,400.00	$2,400.00
7	FCC License Authorization	1	lot	$4,000.00	$4,000.00
8	SRP Launch and Retrieval POAM	1	lot	$0.00	$0.00
9	Dual Service Inmarsat POAM	1	ea	$600.00	$600.00
10	P-Spec Adjustment	1	lot	$8,062.00	$8,062.00
11	Credit for Secure Comm Lock	1		-$2,000.00	-$2,000.00
12	Credit for Move to New Orleans	1		-$8,467.00	-$8,467.00
13	Emergent Work Requests	1		$14,200.39	$14,200.39
	Amount Paid to Date	1		-$5,746,168.00	$5,746,168.00
	Total Invoice Amount Due	1		$1,163,168.41	$1,163,168.41
					$0.00
					$0.00
					$0.00
					$0.00

DD Form 250C, NOV 92 (EG) *Previous edition may be used.* Designed using Perform Pro, WHS/DIOR, Nov 95

DEEPWATER 1530 Wilson Boulevard, Suite 400, Arlington, Virginia 22209

ICGS Certificate of Conformance:

Contract Number: DTCG23-02-C-2DW001
DTO Number: DTCG23-03-F-2DW302, CLIN 0055FA
Asset: CGC ATTU, WPB 1317, 1 of 5

Description: This DTO provides the detailed design and construction for major modification of the 110-foot patrol boat Attu, including completion of all design, analyses, construction, and testing to deploy the lead vessel of the proposed 123-Ft Cutter Class, and to demonstrate compliance with requirements. Included in the modifications was an extensive ultrasonic survey of the hull was conducted resulting in the replacement of wasted hull plate; a new deckhouse providing an enlarged, 360-degree bridge and berthing for a dual-gender crew; a stern extension with a stern ramp and door for launch and recovery of the Short-Range Prosecutor; an upgraded C4ISR suite to ensure interoperability with the IDS; and all related logistics and training.

I certify that on 2 August 2004, the ICGS Deepwater Program furnished the supplies and/or services called for in accordance with all applicable requirements. I further certify that the supplies and/or services are of the quality specified and conform in all respects with the contract requirements, including specifications, drawings, preservation, packaging, packing, marking requirements, and physical item identification, and are in the quantity shown on the attached acceptance document.

Comment: This Certificate of Conformance is based upon;

- LM/MS2 Certificate of Conformance and supporting records.
- NGSS Certificate of Conformance and supporting records
- ICGS audits of LM/MS2, NG/SS, Chand, and Bollinger (BSI).
- Functional Configuration and Physical Configuration Audit performed on 29 July 2004.
- 123 Cutter Certification Matrix

COMDAC INS navigation system, gyrocompass, and Radar engineering changes have been installed in the CGC Attu. ICGS is in receipt of Amendment of Solicitation / Modification of Contract, Modification P0003, requisition/Purchase Req. No. 24-03-2332DW302, signed by Daniel Hartinger, Contracting Officer, United States Coast Guard, Date Signed, 2 August 2004, providing USCG unilateral determination of contract value to incorporate the COMDAC INS navigation system, gyrocompass, and Radar engineering changes into the installation for the USCG 110'/123' conversion. ICGS reserves its right to submit a Request for Equitable Adjustment (REA) to the value associated with the contracting officer's unilateral determination.

www.ICGSDeepwater.com

A Limited Liability Company Owned by Northrop Grumman Ship Systems and Lockheed Martin

DEEPWATER

Exception(s):

1) Trial Cards (Attachment A)
2) Training for the Attu crew
   - Common Operating Picture (COP estimated completion 30 days after Classified System IATO)
3) CDRL Exceptions (Attachment B)
4) Tempest POA&M, (Attachment C, with Enclosure 1)
5) Classified Testing (Attachment C)
6) LM-MS2 C4ISR Problem Resolution Sheet (Attachment D)
7) FCC License Authorization (30 November 2004)
8) SRP launch and retrieval system POA&M, (Attachment E)
9) Dual Service INMARSAT POAM (Attachment F)
10) Performance Specification Adjustment
11) Credit for Secure Communications Lock
12) Credit for Move to New Orleans
13) Emergent Work Requests and Condition Found Reports (Attachment G)

Date of Execution: 2 Aug 04

Domain Program Manager: C4ISR

Quality Assurance Manager:

ICGS Signature:

Kevin J. O'Neill
Director of Contracts, ICGS LLC

DEEPWATER 1530 Wilson Boulevard, Suite 400, Arlington, Virginia 22209

Attachment A

Disputed Attu Trial Cards

Number	Title	ECD	Amount	Note
EL0001001	P25 VHF and P25 UHF not available for recording	9/3/2004	$3,000	Issue addressed previous DD250's
EL0010001	Cable labeling throughout ship does not follow GENSPEC labeling requirements. Some cables have partial GENSPEC	9/3/2004	$5,000	Issue addressed previous DD250's
		Disputed Attu Trial Cards	$8,000	

Open Attu Trial Cards

Number	Title	ECD	Amount	Note
AX0001001	Fin stabilizer control head damaged Missing knob on speed setting, missing light cover and missing bulbs.	9/3/2004	$2,500	
AX0003001	Aft R/O water maker is inoperable.	9/3/2004	0	GA to purchase new unit
CC0003001	KITE display is incorrectly displaying ARC-210 CT/PT mode. Also, can not switch from PT to CT through KITE	9/3/2004	$2,500	
CC0006001	KITE shows cipher when ARC-210 is in PT mode. This negatively impacts ARC-210. Also, KITE comm. to loudhailer working intermittingly - ping heard but voice has been inconsistent	9/3/2004	$1,000	
CC0007001	KITE does not switch between cipher and plain on ARC-210, so unable to verify step 5 of dockside C4ISR, Rev. "G"	9/3/2004	$500	
CC0009001	HFDX system not verified.	9/3/2004	$1,250	
DK0001001	Steering room bilge plates are mounted with sheets metal screws vice threaded bolt connection to facilitate repeated removal.	9/3/2004	$1,000	
EL0002001	Pilot house security cameras are missing	9/3/2004	$7,000	
EL0005001	IFF cables are incorrect (1 antenna)	9/3/2004	$3,000	
EL0009001	Positive DC ground light visible in both battery chargers indicating an unsatisfactory condition	9/3/2004	$500	
EL0012001	Tones are incorrect for general, chemical and collision alarms	9/3/2004	0	Issue addressed

www.ICGSDeepwater.com

A Limited Liability Company Owned by Northrop Grumman Ship Systems and Lockheed Martin

DEEPWATER

				previous DD250's
EL0014001	Dama/Milsatcom, Step 15 for BT event C4ISR-5a was not tested	9/3/2004	$3,000	
EL0015001	RDF failed test (step 25BT event 4b)	9/3/2004	$3,000	
EL0020001	CAPAC system does not operate.	9/3/2004	$10,000	
EL0028001	Ground visible on both 24v DC panels	9/3/2004	$1,000	
EL0029001	460 v Breaker panel #5 is tagged out.	9/3/2004	0	
EL0038001	Antennas, No rad. Haz. Signs or pel boundaries posted.	9/3/2004	$500	
EL0046001	Steering space and lazarette two-way loudspeaker did not have two way functionality while underway. Bridge could not hear in the loud spaces	9/3/2004	$1,000	
EL0055001	HF messenger data modem has Ethernet cables not wrapped with other cables. Terminal board wires not labeled.	9/3/2004	$500	
MP0005001	Port and Stbd exhaust flaps not changing over, this was observed during power trials	9/3/2004	$5,500	
MP0012001	Oil leak on aft end of STBD red gear. Leak is coming from base of hydraulic actuator	9/3/2004	$500	
MP0013001	Stbd tachometer on EMI system not working	9/3/2004	$500	
OH0018001	Deck plates in lazarette not secured. Are now secured with sheet metal screws	9/3/2004	$1,500	
		Open Attu Trial Cards	**$46,250**	

DEEPWATER

Attachement B
Attu CDRL Exceptions

ELIN #	Title	Cost to Complete	ECD
I033-01	123 WPB Test Reports	$1,500	10/1/2004
L016	Technical Manuals	$4,000	10/1/2004
S016	123 Cutter Certification Documents	$10,000	10/1/2004
S025	Acceptance Trial Agenda and Certification	$350	10/1/2004
S034	FCCS Software Update	$500	10/1/2004
	Attu CDRLTotal	**$16,350**	

DEEPWATER

Attachment C
Attn Tempest and Classified Testing
POA&M

TEMPEST Visual Inspection Discrepancy Resolution. (Holdback $2,000)

- ICGS to resolve all visual TEMPEST discrepancies as described in the Visual Inspection report (enclosure 1) date for closure is 60 days post DD250 sign-off.

TEMPEST Hardware Discrepancy. (Holdback $3,000)

- ICGS will correct outstanding SPAWAR instrumented TEMPEST survey hardware discrepancy.

Conduct Classified Testing. (Holdback $3,000)
Conduct classified systems testing. Target date for completion of classified testing is 15 days post USCG IATO. Prerequisite actions:

- ICGS to resolve all outstanding physical security discrepancies on the 123 to be used to execute classified testing. This must completed in order to hold the necessary classified keymat.
- ICGS to resolve all visual TEMPEST discrepancies
- Prior to performing any classified testing on a 123 WPB, the USCG must provide an IATO to allow transmit/receive of classified communications.
- ICGS will execute 123 classified tests (from AT procedures), with support as required from USCG personnel.

Enclosure: Visual TEMPEST Inspection Summary

DEEPWATER

Enclosure to Attu Tempest and Classified Testing POA&M

Visual TEMPEST Inspection Summary

The entire Secure Electrical Information Processing System was inspected.

List of spaces with secure processing equipment inspected by the visual TEMPEST inspector:

1. Radio Room
2. State Rooms
3. Bridge

Discrepancy form legend:

Column A: Sequential discrepancy number

Column B:

SF Correction of the discrepancy is within the capability of ship's force.

SFC Correction of the discrepancy was completed by ships force prior to completion of inspection visit.

IA Indicates that the assistance of an industrial activity is probably required to properly correct the discrepancy.

IAC Indicates that an industrial activity corrected the discrepancy.

SA Indicates that the assistance of a support activity is probably required to properly correct the discrepancy.

SAC Indicates that a support activity corrected the discrepancy.

Column C: Document Reference to which the installation does not conform.

Narrative: A brief description of the discrepancy found.

DEEPWATER

Discrepancies and Corrective Action Report

1. Radio Room 2-28-O-Q

A	B	C	Narrative
001	IA/SA	NSTISSAM 2-95 Rec I Paragraph 3.B Note 2	There is no separation between Classified LAN and Unclassified LAN outlets.
002	IA/SA	NSTISSAM 2-95 Rec I Paragraph 3.B Note 2	Classified LAN lines are run with 120VAC power lines (no separation).
003	IA/SA	NSTISSAM 2-95 Rec I Paragraph 3.B Note 2	Coax TV line runs along with Classified LAN line.
004	IA/SA	NSTISSAM 2-95 Rec I Paragraph 3.B Note 2	There is no separation between alarm panel line and Classified LAN line.
005	IA/SA	NSTISSAM 2-95 Rec I Paragraph 2.B	The printer (red) along with Classified LAN line runs parallel with IFF antenna line. There is no separation of these lines.
006	IA/SA	IA PUB 5239-31 Paragraph A.1.1.2	The printer (red) uses black power. The printer router (red) uses black power.
007	IA/SA	NSTISSAM 2-95 Rec I Paragraph 6	There is no 3-meter separation between printer (red) and IFF transmitter.
008	IA/SA	NSTISSAM 2-95 Rec I Paragraph 6	In Rack #3, there is no 3-meter separation between red and black cables before entering the Marcom switch.

DEEPWATER

009	IA/SA	NSTISSAM 2-95 Rec I Paragraph 6	In Rack #3, there is no 3-meter separation between cryptographic equipment and RT9000 transceiver.
010	IA/SA	IA PUB 5239-31 Paragraph A.1.1.7.3.1.B	There is not a secure Protected Distribution System (PDS) leaving Radio Room. LE Locker behind Secure Space.
011	IA/SA	NSTISSAM 2-95 Paragraph 4.9.6	Cable TV system needs to use an amplifier/attenuator at the point of entry into the secure space and needs to be of a type that provides one-way filtration.

Discrepancies and Corrective Action Report

2. State Rooms 1-16-1-L / 1-16-2-L

001	IA/SA	IA PUB 5239-31 Paragraph B.1.2.6.2	There is no separation between Classified LAN outlets and 117 VAC, Unclassified LAN, and TV Jack outlets.
002	IA/SA	NSTISSAM 2-95 Rec I Paragraph 3.A	There is no separation between Classified LAN line and MF/HF line.
003	IA/SA	NSTISSAM 2-95 Rec I Paragraph 3.	In State Room 1-16-2-L, Classified LAN line runs parallel with horn generator line.

Discrepancies and Corrective Action Report

3.Bridge

A	B	C	Narrative
001	IA/SA	NSTISSAM 2-95 Rec I Paragraph 6	There is no 3meter separation between red output and black lines for the Kite handset #1 and #2.
002	IA/SA	IA PUB 5239-31 Paragraph B.1.2.6.2	Classified LAN line runs parallel with 117 VAC, Black Data lines, and cellular antenna line.

MATERIAL INSPECTION AND RECEIVING REPORT

Form Approved OMB No. 0704-0248

The public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0248), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ADDRESS.
SEND THIS FORM IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE DFARS, APPENDIX F-401.

1. PROCUREMENT INSTRUMENT IDENTIFICATION (CONTRACT) NO.	ORDER NO.	6. INVOICE NO./DATE	7. PAGE	OF	8. ACCEPTANCE POINT
DTCG23-02-C-2DW001	03-F-2DW302	ICGS030042 02/14/05	1	2	D

2. SHIPMENT NO.	3. DATE SHIPPED	4. B/L NA / TCN NA	5. DISCOUNT TERMS
NA	14 Feb 05		None

9. PRIME CONTRACTOR CODE 1UYZ2	10. ADMINISTERED BY CODE
Integrated Coast Guard Systems, 1530 Wilson Blvd., Suite 400, Arlington, VA 22209, USA	Commandant (G-ACS-6) U.S. Coast Guard Deepwater SIPO, 1530 Wilson Blvd., Suite 400, Arlington, VA 22209
11. SHIPPED FROM (if other than 9) CODE / FOB:	**12. PAYMENT WILL BE MADE BY CODE**
Bollinger Shipyards Lockport, L.L.C. PO Box 250 8365 Highway 308 Lockport, LA. 70374-0250	Commandant (G-ACS-6) U.S. Coast Guard Headquarters, 2100 Second St. SW, Room 5208, Washington, DC 20591-0001, USA
13. SHIPPED TO CODE WPB - 1306	**14. MARKED FOR CODE**
USCGC Nunivak (WPB - 1306), C/O Coast Guard 8365 Highway 308 Lockport, LA. 70374-0250	COMMANDING OFFICER

15. ITEM NO.	16. STOCK/PART NO. DESCRIPTION (Indicate number of shipping containers - type of container - container number.)	17. QUANTITY SHIPPED/*	18. UNIT	19. UNIT PRICE	20. AMOUNT
0055 FA	Services and Supplies: Nunivak, (thru/mod 9) WPB 123 conversion. Item short shipped of the following components: Details on Certificate of Conformance	1/1	Lot	$6,866,302.00	$6,866,302.00
01	Trial Cards	1	Lot	$10,000.00	$10,000.00
02	Training	1	Lot	$10,000.00	$10,000.00
03	CDRL Exceptions	1	Lot	$33,500.00	$33,500.00
04	Demonstrate C4 system meets ATO requirements	1	Lot	$3,000.00	$3,000.00

21. CONTRACT QUALITY ASSURANCE

a. ORIGIN
☐ CQA ☒ ACCEPTANCE of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents.
1/31/05 [signature]
DATE / SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME: Certificate of Conformance
TITLE:
MAILING ADDRESS:
COMMERCIAL TELEPHONE NUMBER:

b. DESTINATION
☐ CQA ☐ ACCEPTANCE of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents.
DATE / SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME:
TITLE:
MAILING ADDRESS:
COMMERCIAL TELEPHONE NUMBER:

22. RECEIVER'S USE
Quantities shown in column 17 were received in apparent good condition except as noted.
DATE RECEIVED / SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME: Pamela Bible
TITLE: Contracting Officer 11/15/05
MAILING ADDRESS: U.S. Coast Guard Deepwater SIPO 1530 Wilson Blvd., Suite 400, Arlington, VA
COMMERCIAL TELEPHONE NUMBER: 571-218-3246
* If quantity received by the Government is the same as quantity shipped, indicate by (✓) mark; if different, enter actual quantity received below quantity shipped and encircle.

23. CONTRACTOR USE ONLY

DD FORM 250, AUG 2000 PREVIOUS EDITION IS OBSOLETE

Feb 15 05 03:09p Steve Administrator 5555555 p.1

MATERIAL INSPECTION AND RECEIVING REPORT - CONTINUATION SHEET

PAGE 2 OF 2

Form Approved OMB No. 0704-0248

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0248), Washington DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES.
SEND THIS FORM IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE DFARS, APPENDIX F-401.

SHIPMENT NO.	DATE SHIPPED	PROC INSTRUMENT IDEN. (CONTRACT)	(ORDER) NO.	INVOICE NO.
NA	20050214	DTCG23-02-C-2DW001	03-F-2DW302	ICGS030030 02/14/05

ITEM NO.	STOCK/PART NO. DESCRIPTION (Indicate number of shipping containers - type of container - container number.)	QUANTITY SHIP/REC'D	UNIT	UNIT PRICE	AMOUNT
55	Continued, Nunivak				$0.00
5	LM/MS2 C4ISR TRFs / Problem Sheets	1	lot	$600.00	$600.00
6	P-Spec Adjustment	1	lot	$8,062.00	$8,062.00
	Amount Paid to Date	1	lot	$5,746,168.00	$5,746,168.00
	Total Invoice Amount Due	1	lot	$1,052,972.80	$1,052,972.80
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00

DD Form 250C, NOV 92 (EG) *Previous edition may be used.* Designed using Perform Pro, WHS/DIOR, Nov 95

DEEPWATER 1530 Wilson Boulevard, Suite 400, Arlington, Virginia 22209

ICGS Certificate of Conformance:

Contract Number: DTCG23-02-C-2DW001
DTO Number: DTCG23-03-F-2DW302, CLIN 0055FA
Asset: CGC NUNIVAK, WPB 1306, 2 of 5

Description: This DTO provides the detailed design and construction for major modification of the 110-foot patrol boat Nunivak, including completion of all design, analyses, construction, and testing to deploy the vessels of the 123-Ft Cutter Class, and to demonstrate compliance with requirements. Included in the modifications was an extensive ultrasonic survey of the hull was conducted resulting in the replacement of wasted hull plate; a new deckhouse providing an enlarged, 360-degree bridge and berthing for a dual-gender crew; a stern extension with a stern ramp and door for launch and recovery of the Short-Range Prosecutor; an upgraded C4ISR suite to ensure interoperability with the IDS; and all related logistics and training.

I certify that on 14 February 2005, the ICGS Deepwater Program furnished the supplies and/or services called for in accordance with all applicable requirements. I further certify that the supplies and/or services are of the quality specified and conform in all respects with the contract requirements, including specifications, drawings, preservation, packaging, packing, marking requirements, and physical item identification, and are in the quantity shown on the attached acceptance document.

Comment: This Certificate of Conformance is based upon;

- LM/MS2 Certificate of Conformance and supporting records.
- NGSS Certificate of Conformance and supporting records
- ICGS audits of LM/MS2, NG/SS, Chand, and Bollinger (BSI).
- Functional Configuration and Physical Configuration Audit performed on 10 Feb. 2005.
- 123 Cutter Certification Matrix

Exception(s):

1) Trial Cards (Attachment A)
2) Training for the Nunivak crew
   - Common Operating Picture (COP estimated completion 30 days after Classified System IATO)
3) CDRL Exceptions (Attachment B)
4) Demonstrate C4System meets ATO requirements. (Attachment C)

www.ICGSDeepwater.com

A Limited Liability Company Owned by Northrop Grumman Ship Systems and Lockheed Martin

DEEPWATER

Exception(s):

1) Trial Cards (Attachment A)
2) Training for the Nunivak crew
   - Common Operating Picture (COP estimated completion 30 days after Classified System IATO)
3) CDRL Exceptions (Attachment B)
4) Demonstrate C4System meets ATO requirements.
5) LM-MS2 C4ISR Problem Resolution Sheet (Attachment C)
6) Performance Specification Adjustment

Date of Execution: 15 FEB 2005

Domain Program Manager:

Quality Assurance Manager:

ICGS Signature:

Kevin J. O'Neill
Director of Contracts, ICGS LLC

G-ACS PAYMENT APPROVAL

CONTRACTOR NAME: ICGS — CONTRACT NO: DTCG23-02-C-2DW001
INVOICE VOUCHER NO.: ICGS030048 — ORDER NUMBER: DTCG23-03-F-2DW302
INVOICE/VOUCHER AMT: $1,004,738.50 — MIPR NUMBER: N/A
DATE RECVD PROPER: 3/09/05

TYPE OF PAYMENT: ☒ INVOICE PAYMENT *(Interest Penalty)* ☒ CONTRACT FINANCING PAYMENT *(No Interest Penalty)* ☐ MIPR (Category I) PAYMENT *(No Interest Penalty)*

For a Contract, Order, or MIPR (Category II), select one of the following:

Fixed Price:	☐ ADVANCE	☐ PROGRESS	☒ PARTIAL	☐ FINAL	☒ OTHER DD-250
Cost/Letter (Undefinitized):	☐ ADVANCE	☐ INTERIM	☐ FINAL		
T&M/Labor-Hour:	☐ ADVANCE	☐ INTERIM	☐ FINAL		

For a MIPR (Category I), select one of the following:

Reimbursement:	☐ ADVANCE	☐ PARTIAL	☐ FINAL

Prompt Payment: ☒ 30 days ☐ Other: N/A days Discount For Prompt Payment: ☐ Days: 10 20 30 ____ Discount: ____% ____% ____% ____%

Assignment of Claims: ☐ Yes ☒ No ☐ No Discount

FROM: Pamela Bible . G-ACS-6 . Contracting Officer 571-218-3246
TO: GSCG FINANCE CENTER . TEAM 3B . Accounts Payable — Initials & Date
VIA: LT Ben Fleming . G-D . COTR/Project Officer — to COTR

FIRST ENDORSEMENT *(Optional: Block 1 may serve as other written evidence in lieu of a receiving report.)*

1. ☒ Approve payment of Invoice/Voucher No. ICGS030048 for the amount of $1,004,738.50
   Amount withheld: 0 (See attached justification)
   ☐ The supplies/services were received, inspected, and acceptance is recommended.
   Delivery Date 3/09/05 ; or
   ☐ The supplies/services were received, inspected, and accepted.
   Delivery Date 3/09/05 Acceptance Date 3/09/05 ; or
   ☐ The contractor's progress is commensurate with the payment requested.
2. ☐ Disapprove payment of Invoice/Voucher No. _____ for the following reasons: (See attachment).
3. ☒ Charge the following accounting line(s) for payment:

Document	DAFIS Number	Accounting & Appropriation Data	Amount
Basic thru	24032332DW302	2 2 6G 099 00 0 56B200 70509 251G	$1,004,738.50
P00009		0	
		0	
		0	

COTR/Project Officer

SECOND ENDORSEMENT

1. ☒ Invoice/Voucher No. ICGS030048 is approved for payment in the amount of $1,004,738.50 Amount withheld
2. After payment, the contract, order, or MIPR balance is
3. Delivery Date Acceptance Date
   (Complete if not provided in First Endorsement)

Comments:

Name: Pamela Bible (571-218-3246) Date: 3/10/05
Title: Contracting Officer

MATERIAL INSPECTION AND RECEIVING REPORT

Form Approved OMB No. 0704-0248

The public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0248), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ADDRESS.
SEND THIS FORM IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE DFARS, APPENDIX F-401.

1. PROCUREMENT INSTRUMENT IDENTIFICATION (CONTRACT) NO.	ORDER NO.	6. INVOICE NO./DATE	7. PAGE	OF	8. ACCEPTANCE POINT
DTCG23-02-C-2DW001	03-F-2DW302	ICGS030048 03/07/05	1	2	D

2. SHIPMENT NO.	3. DATE SHIPPED	4. B/L	5. DISCOUNT TERMS
NA	07 Mar 05	NA TCN NA	None

9. PRIME CONTRACTOR CODE 1UYZ2	10. ADMINISTERED BY CODE
Integrated Coast Guard Systems, 1530 Wilson Blvd., Suite 400, Arlington, VA 22209, USA	Commandant (G-ACS-6) U.S. Coast Guard Deepwater SIPO, 1530 Wilson Blvd., Suite 400, Arlington, VA 22209
11. SHIPPED FROM (If other than 9) CODE / FOB:	**12. PAYMENT WILL BE MADE BY CODE**
Bollinger Shipyards Lockport, L.L.C. PO Box 250 8365 Highway 308 Lockport, LA. 70374-0250	Commandant (O-ACS-6) U.S. Coast Guard Headquarters, 2100 Second St. SW, Room 5208, Washington, DC 20591-0001, USA
13. SHIPPED TO CODE WPB - 1308	**14. MARKED FOR CODE**
USCGC Vashon (WPB - 1308), C/O Coast Guard 8365 Highway 308 Lockport, LA. 70374-0250	COMMANDING OFFICER

16. ITEM NO.	16. STOCK/PART NO. DESCRIPTION (Indicate number of shipping containers - type of container - container number)	17. QUANTITY SHIPPED/REC'D*	18. UNIT	19. UNIT PRICE	20. AMOUNT
0055 FA	Services and Supplies: Nunivak, (thru/mod 9)	1/1	Lot	$6,866,302.00	$6,866,302.00
	WPB 123 conversion, shipset #3				
	Item short shipped of the following components: Details				
	on Certificate of Conformance				
01	Trial Cards	1	Lot	$16,750.00	$16,750.00
02	COP/COE Training	1	Lot	$10,000.00	$10,000.00
03	CDRL Exceptions	1	Lot	$44,000.00	$44,000.00
04	Demonstrate C4 system meets ATO requirements	1	Lot	$3,000.00	$3,000.00

21. CONTRACT QUALITY ASSURANCE

a. ORIGIN
☐ CQA ☐ ACCEPTANCE of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents.

DATE / SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME: Certificate of Conformance
TITLE:
MAILING ADDRESS:
COMMERCIAL TELEPHONE NUMBER:

b. DESTINATION
☐ CQA ☐ ACCEPTANCE of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents.

DATE / SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME:
TITLE:
MAILING ADDRESS:
COMMERCIAL TELEPHONE NUMBER:

22. RECEIVER'S USE

Quantities shown in column 17 were received in apparent good condition except as noted.

DATE RECEIVED: 3/8/05 / SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME: Pamela Bible
TITLE: Contracting Officer
MAILING ADDRESS: U.S. Coast Guard Deepwater SIPO
1530 Wilson Blvd., Suite 400, Arlington, VA
COMMERCIAL TELEPHONE NUMBER: 571-218-3246

* If quantity received by the Government is the same as quantity shipped, indicate by (✓) mark; if different, enter actual quantity received below quantity shipped and encircle.

23. CONTRACTOR USE ONLY

DD FORM 250, AUG 2000 PREVIOUS EDITION IS OBSOLETE.

MATERIAL INSPECTION AND RECEIVING REPORT - *CONTINUATION SHEET*

PAGE 2 OF 2

Form Approved OMB No. 0704-0248

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0248), Washington DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES.
SEND THIS FORM IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE DFARS, APPENDIX F-401.

SHIPMENT NO.	DATE SHIPPED	PROC INSTRUMENT IDEN. (CONTRACT)	(ORDER) NO.	INVOICE NO.
NA	20050307	DTCG23-02-C-2DW001	03-F-2DW302	ICGS030048 03/07/05

ITEM NO.	STOCK/PART NO. DESCRIPTION (Indicate number of shipping containers - type of container - container number.)	QUANTITY SHIP/REC'D	UNIT	UNIT PRICE	AMOUNT
55	Continued, Vashon				$0.00
5	Insurance Spares	1	lot	$33,583.50	$33,583.50
6	P-Spec Adjustment	1	lot	$8,062.00	$8,062.00
	Amount Paid to Date	1	lot	$5,746,168.00	$5,746,168.00
	Total Invoice Amount Due	1	lot	paid $1,056 -51.80 $1,004,758.50	$1,004,758.50 $1.00 paid gov't:
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00

DD Form 250C, NOV 92 (EG) *Previous edition may be used.* Designed using Perform Pro, WHSDIOR, Nov 95

DEEPWATER 1530 Wilson Boulevard, Suite 400, Arlington, Virginia 22209

ICGS Certificate of Conformance:

Contract Number: DTCG23-02-C-2DW001
DTO Number: DTCG23-03-F-2DW302, CLIN 0055FA
Asset: CGC VASHON, WPB 1308, 3 of 5

Description: This DTO provides the detailed design and construction for major modification of the 110-foot patrol boat Vashon, including completion of all design, analyses, construction, and testing to deploy the vessels of the 123-Ft Cutter Class, and to demonstrate compliance with requirements. Included in the modifications was an extensive ultrasonic survey of the hull was conducted resulting in the replacement of wasted hull plate; a new deckhouse providing an enlarged, 360-degree bridge and berthing for a dual-gender crew; a stern extension with a stern ramp and door for launch and recovery of the Short-Range Prosecutor; an upgraded C4ISR suite to ensure interoperability with the IDS; and all related logistics and training.

I certify that on 09 March 2005, the ICGS Deepwater Program furnished the supplies and/or services called for in accordance with all applicable requirements. I further certify that the supplies and/or services are of the quality specified and conform in all respects with the contract requirements, including specifications, drawings, preservation, packaging, packing, marking requirements, and physical item identification, and are in the quantity shown on the attached acceptance document.

Comment: This Certificate of Conformance is based upon;

- LM/MS2 Certificate of Conformance and supporting records.
- NGSS Certificate of Conformance and supporting records
- ICGS audits of LM/MS2, NG/SS, Chand, and Bollinger (BSI).
- Functional Configuration and Physical Configuration Audit performed on 02 Mar. 2005.
- 123 Cutter Certification Matrix

Exception(s):

1) Trial Cards (Attachment A)
2) Training for the Vashon crew
   - Common Operating Picture (COP estimated completion 30 days after Classified System IATO)
3) CDRL Exceptions (Attachment B)
4) Demonstrate C4System meets ATO requirements.

DEEPWATER

5) Insurance spares, Right Hand Propeller

6) Performance Specification Adjustment

Date of Execution: 9 May 05

Domain Program Manager:

Quality Assurance Manager:

ICGS Signature:

Kevin J. O'Neill
Director of Contracts, ICGS LLC

MATERIAL INSPECTION AND RECEIVING REPORT

Form Approved OMB No. 0704-0248

This public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0248), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ADDRESS.
SEND THIS FORM IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE DFARS, APPENDIX F-401.

1. PROCUREMENT INSTRUMENT IDENTIFICATION (CONTRACT) NO.	ORDER NO.	6. INVOICE NO./DATE	7. PAGE	OF	8. ACCEPTANCE POINT
DTCG23-02-C-2DW001	03-F-2DW302	ICGS0300102 10/03/05	1	2	D

2. SHIPMENT NO.	3. DATE SHIPPED	4. B/L NA / TCN NA	5. DISCOUNT TERMS
NA	03 Oct 05		None

9. PRIME CONTRACTOR CODE 1UYZ2
Integrated Coast Guard Systems, 1530 Wilson Blvd., Suite 400, Arlington, VA 22209, USA

10. ADMINISTERED BY CODE
Commandant (G-ACS-6) U.S. Coast Guard Deepwater SIPO, 1530 Wilson Blvd., Suite 400, Arlington, VA 22209

11. SHIPPED FROM (if other than 9) CODE FOB:
Bollinger Shipyards Lockport, L.L.C.
PO Box 250
8365 Highway 308
Lockport, LA 70374-0250

12. PAYMENT WILL BE MADE BY CODE
Commandant (G-ACS-6) U.S. Coast Guard Headquarters, 2100 Second St. SW, Room 5208, Washington, DC 20591-0001, USA

13. SHIPPED TO CODE WPB - 1305
USCGC Monhegan (WPB - 1305), C/O Coast Guard
8365 Highway 308
Lockport, LA. 70374-0250

14. MARKED FOR CODE
COMMANDING OFFICER

15. ITEM NO.	16. STOCK/PART NO.	DESCRIPTION (Indicate number of shipping containers - type of container - container number.)	17. QUANTITY SHIP/REC'D*	18. UNIT	19. UNIT PRICE	20. AMOUNT
0055	FA	Services and Supplies: Monhegan, (thru/mod 9)	1/1	Lot	$6,760,196.80	$6,760,196.80
		WPB 123 conversion, shipset #7				
		Item short shipped of the following components: Details				
		on Certificate of Conformance				
	01	Bridge Group Discrepancies	1	Lot	$139,500.00	$139,500.00
	02	Technical Data	1	Lot	$150,000.00	$150,000.00
	03	Power Group Discrepancies	1	Lot	$150,000.00	$150,000.00
	04	COP Training	1	Lot	$10,000.00	$10,000.00

21. CONTRACT QUALITY ASSURANCE

a. ORIGIN
☐ CQA ☐ ACCEPTANCE of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents.
DATE SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME: Certificate of Conformance
TITLE:
MAILING ADDRESS:
COMMERCIAL TELEPHONE NUMBER:

b. DESTINATION
☐ CQA ☒ ACCEPTANCE of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents.
04OCT05
DATE SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME: C Jacoby
TITLE: PM
MAILING ADDRESS:
COMMERCIAL TELEPHONE NUMBER:

22. RECEIVER'S USE
Quantities shown in column 17 were received in apparent good condition except as noted.
10/4/05
DATE RECEIVED SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME: Dan Hartinger
TITLE: Contracting Officer
MAILING ADDRESS: U.S. Coast Guard Deepwater SIPO 1530 Wilson Blvd., Suite 400, Arlington, VA
COMMERCIAL TELEPHONE NUMBER: 571-218-3253
* If quantity received by the Government is the same as quantity shipped, indicate by (X) mark; if different, enter actual quantity received below quantity shipped and encircle.

23. CONTRACTOR USE ONLY

DD FORM 250, AUG 2000 PREVIOUS EDITION IS OBSOLETE.

MATERIAL INSPECTION AND RECEIVING REPORT - *CONTINUATION SHEET*

PAGE 2 OF 2

Form Approved OMB No. 0704-0248

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0248), Washington DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES.
SEND THIS FORM IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE DFARS, APPENDIX F-401.

SHIPMENT NO.	DATE SHIPPED	PROC INSTRUMENT IDEN. (CONTRACT)	(ORDER) NO.	INVOICE NO.
NA	20051003	DTCG23-02-C-2DW001	03-F-2DW302	ICG9030102 10/03/05

ITEM NO.	STOCK/PART NO. DESCRIPTION (Indicate number of shipping containers - type of container - container number.)	QUANTITY SHIP/REC'D	UNIT	UNIT PRICE	AMOUNT
	Continued, Monhegan WPB-1305				$0.00
5	SRP Training	1	lot	$3,000.00	$3,000.00
6	ARC 210 Training	1	lot	$1,000.00	$1,000.00
7	AS-Built Drawings	1	lot	$15,000.00	$15,000.00
8	Selected Record Drawings	1	lot	$5,000.00	$5,000.00
9	Cutter Specification Certification Documentation	1	lot	$5,000.00	$5,000.00
10	C4 Demonstration	1	lot	$3,000.00	$3,000.00
11	De-Ratting Certificate	1	lot	$500.00	$500.00
12	Cable Labels	1	lot	$5,000.00	$5,000.00
13	P-Spec Adjustment	1	lot	$8,062.00	$8,062.00
	Amount Paid to Date	1		-5,746,168.00	$5,746,168.00
	Total Invoice Amount Due	1		$518,966.80	$518,966.80
					$0.00
					$0.00
					$0.00
					$0.00

DD Form 250C, NOV 92 (EG) *Previous edition may be used.* Designed using Perform Pro, WHS/DIOR, Nov 96

DEEPWATER 1530 Wilson Boulevard, Suite 400, Arlington, Virginia 22209

ICGS Certificate of Conformance:

Contract Number: DTCG23-02-C-2DW001
DTO Number: DTCG23-03-F-2DW302, CLIN 0055FA
Asset: CGC Monhegan, WPB 1305, 4 of 5

Description: This DTO provides the detailed design and construction for major modification of the 110-foot patrol boat Monhegan, including completion of all design, analyses, construction, and testing to deploy the vessels of the 123-Ft Cutter Class, and to demonstrate compliance with requirements. Included in the modifications was an extensive ultrasonic survey of the hull was conducted resulting in the replacement of wasted hull plate; a new deckhouse providing an enlarged, 360-degree bridge and berthing for a dual-gender crew; a stern extension with a stern ramp and door for launch and recovery of the Short-Range Prosecutor; an upgraded C4ISR suite to ensure interoperability with the IDS; and all related logistics and training.

I certify that on 3 October 2005, the ICGS Deepwater Program furnished the supplies and/or services called for in accordance with all applicable requirements. I further certify that the supplies and/or services are of the quality specified and conform in all respects with the contract requirements, including specifications, drawings, preservation, packaging, packing, marking requirements, and physical item identification, and are in the quantity shown on the attached acceptance document.

Comment: This Certificate of Conformance is based upon;

- LM/MS2 Certificate of Conformance and supporting records.
- NGSS Certificate of Conformance and supporting records
- ICGS audits of LM/MS2, NG/SS, Chand, and Bollinger (BSI).

Exception(s):

1) Bridge Group Discrepancies (Attachment A)
2) Technical Manuals, Updated FCCS, and Stability Booklet (L018 & S034)
3) Power Group Discrepancies (Attachment B)
4) Common Operating Picture Training (COP estimated completion 30 days after Classified System IATO)
5) SRP Operational Training (estimated completion 30 days after delivery)
6) ARC-210 Operational Training (estimated completion 30 days after delivery)
7) As Built Drawings (S037)

www.ICGSDeepwater.com

A Limited Liability Company Owned by Northrop Grumman Ship Systems and Lockheed Martin

DEEPWATER

6) ARC-210 Operational Training (estimated completion 30 days after delivery)
7) As Built Drawings (S037)
8) Selected Records Drawings (S038)
9) Cutter Specification Certification Documentation (S016)
10) Demonstrate C4 Meets ATO Requirements
11) De-ratting Certificate
12) Cable Lables
13) P-Spec Adjustment

Date of Execution: 3 Oct 05

Quality Assurance Manager:

Finance/Business Manager

Domain Program Manager: for

ICGS Signature:

Kevin J. O'Neill
Director of Contracts, ICGS LLC

NORTHROP GRUMMAN
Ship Systems

Northrop Grumman Corporation
Ship Systems
Avondale Operations
P. O. Box 60280
New Orleans, LA 70150-0280

NGSS Certificate of Conformance:

Contract Number: DTCG23-02-C-2DW001
DTO Number: DTCG23-03-F-2DW302, CLIN 0055FA
Asset: CGC MONHEGAN, WPB 1305, 4 of 5

Description: This DTO provides the construction for major modification of the 110-foot patrol boat Monhegan, including completion of all construction, and testing to deploy the vessel and to demonstrate compliance with requirements. Included in the modifications was an ultrasonic survey of the hull which resulted in the replacement of portions of the hull plate; a new deckhouse providing an enlarged, 360-degree bridge and berthing for a dual-gender crew; a stern extension with a stern ramp and door for launch and recovery of the Short-Range Prosecutor; an upgraded C4ISR suite to ensure interoperability with the IDS; and all related logistics and training.

I certify that on 3 October 2005, the ICGS Deepwater Program furnished the supplies and/or services called for in accordance with all applicable requirements. I further certify that the supplies and/or services are of the quality specified and conform in all respects with the contract requirements, including specifications, drawings, preservation, packaging, packing, marking requirements, and physical item identification, and are in the quantity shown on the attached acceptance document.

Comment: This Certificate of Conformance is based upon;

- Bollinger Shipyards Certificate of Conformance
- NGSS Q.A. Source Inspections
- Functional Configuration Audit and Physical Configuration Audit completed April 2005
- 123 Cutter Certification Matrix

NORTHROP GRUMMAN
Ship Systems

Northrop Grumman Corporation
Ship Systems
Avondale Operations
P. O. Box 80280
New Orleans, LA 70160-0280

Exception(s):

1) Monhegan - Attachment A, Trial Cards
2) Monhegan- Attachment B, Training for the Crew
3) Monhegan- Attachment C, CDRL's
4) Monhegan- Attachment D, Open Items not Trial Cards

Date of Execution: 10/03/05

*** Signature:**

Gerald Good

* In my opinion, 5029, Decating Cert should not be withheld. The Gov. is not issuing certs to the New Orleans area.

EXTERNAL CERTIFICATION OF CONFORMANCE

LOCKHEED MARTIN CORPORATION
MARITIME SYSTEMS & SENSORS

Page 1 of 2

It is hereby certified that the material supplied on the referenced purchase order/Contract Number fully conforms to all applicable specifications and requirements. The material supplied is in compliance with the latest ECN's / Revision noted. All material supplied under this order was originally purchased or manufactured by Lockheed Martin Maritime Systems and Sensors (MS2). All original purchasing and/or incoming inspection data is on file at MS2 and available for review upon request.

Date: 10/3/2004 (Delivery 10/3/2005)

Customer: Integrated Coast Guard Systems (ICGS)

Purchase Order/Contract Number: DTCG23-03-F-2DW302 (CLIN 9056FA)

P. O. Line Item Number/Level Code: N/A

Part Revision:

Part Number: C4ISR Equipment for CGC MONHEGAN -123

Part Description: C4ISR Equipment Integration, Installation, Testing & Training for the CGC MONHEGAN -123.

Quantity: N/A

Shipping Notice Number: N/A

J. Griscom
Authorized Quality Representative/Date 10/3/05

Sean Higgins
Authorized Contract's Representative/Date 10/3/05

SP-841

DEM 5020 (02/02/2004)

EXTERNAL CERTIFICATION OF CONFORMANCE

LOCKHEED MARTIN CORPORATION
MARITIME SYSTEMS & SENSORS

Comment:
The WPB-110 class cutters are receiving extensive upgrades under the USCG Integrated Deepwater System (IDS). Aside from extending the cutter to 123' for a stern boat launch ramp and other physical/mechanical upgrades, these patrol boats are receiving Command, Control, Communication and Computer, Intelligence, Surveillance and Reconnaissance (C4ISR) upgrades.
In accordance with the C4ISR Framework Architecture, IDS CONOP and IDS Requirements, Integrated Coast Guard Systems (ICGS) is providing the following C4ISR upgrades making this asset more capable in performance its missions.

This CoC is based on completion of (unless noted in exceptions):

- Design, Installation & Testing of the C4ISR Equipment.
- Review of system operational verification test results were completed.
- On-site LM Quality surveillance performed; 100% inspection on LM cabinet assemblies 1 through 5, inspection of MEB equipment performed & QA checklist completed.
- Receipt of subcontractors' CoC including PROSOFT, FLIR, & MES.
- Conducting training services and material to the USCG personnel.
- Functional & Physical assessments completed.
- Software Version Description Document (VDD) including password and license keys transferred.

Exceptions:

1) SUBCONTRACTOR CoCs:
1a) NGIT CoC.
1b) LM IS&S CoC.

2) OPEN TRIAL EARCOs:

[redacted]	BT Event C4ISR Steps not Demo
[redacted]	PA Speaker
[redacted]	24V Power Panel
[redacted]	Cable Labels
[redacted]	AIS Term Box
[redacted]	Bridge Console Cable Labels

3) LIMS Connectivity Test to be completed at BBU in New Orleans, LA.

4) Cable Tag RFD: Cable labeling remains an open issue. RFD is approved.

5) Conduct classified testing.

6) Conduct ARC-210 Training

7) Conduct Common Operating Picture (COP) training

8) Submit CDRL (L016) Technical Manual

Notes:

1. USCG will provide Iridium phone; reference 123 end item P-spec negotiations.

2. Lockheed Martin Maritime Systems & Sensors has submitted a proposal for the incorporation of COMDAC on the MONHEGAN. It is expected the parties will negotiate the price and terms associated with this added scope and will formally incorporate this effort into the contract via supplemental agreement.

SP-841 DEM 5020 (02/02/2004)

DEEPWATER 1530 Wilson Boulevard, Suite 400, Arlington, Virginia 22209

ICGS Certificate of Conformance:

Contract Number: DTCG23-02-C-2DW001
DTO Number: DTCG23-03-F-2DW302, CLIN 0055FA
Asset: CGC Manitou, WPB 1302, 5 of 5

Description: This DTO provides the detailed design and construction for major modification of the 110-foot patrol boat Manitou, including completion of all design, analyses, construction, and testing to deploy the vessels of the 123-Ft Cutter Class, and to demonstrate compliance with requirements. Included in the modifications was an extensive ultrasonic survey of the hull was conducted resulting in the replacement of wasted hull plate; a new deckhouse providing an enlarged, 360-degree bridge and berthing for a dual-gender crew; a stern extension with a stern ramp and door for launch and recovery of the Short-Range Prosecutor; an upgraded C4ISR suite to ensure interoperability with the IDS; and all related logistics and training.

I certify that on 13 January 2006, the ICGS Deepwater Program furnished the supplies and/or services called for in accordance with all applicable requirements. I further certify that the supplies and/or services are of the quality specified and conform in all respects with the contract requirements, including specifications, drawings, preservation, packaging, packing, marking requirements, and physical item identification, and are in the quantity shown on the attached acceptance document.

Comment: This Certificate of Conformance is based upon;

- LM/MS2 Certificate of Conformance and supporting records.
- NGSS Certificate of Conformance and supporting records
- ICGS audits of LM/MS2, NG/SS, Chand, and Bollinger (BSI).
- Physical Configuration Audit.
- 123 Cutter Certification Matrix

Exception(s):

1) Bridge Group Discrepancies (Attachment A)

2) Power Group Discrepancies (Attachment B)

3) Trial Cards, general (Attachment C)

4) Common Operating Picture Training (COP estimated completion 30 days after Classified System IATO)

5) CDRL Items (Attachment D)

www.ICGSDeepwater.com

A Limited Liability Company Owned by Northrop Grumman Ship Systems and Lockheed Martin

DEEPWATER

6) Demonstrate C4 System meets ATO Requirements
7) P-Spec Adjustment
8) CLIN 055FA Closeout (Attachment E)

Date of Execution: 13 Jan 2006
Quality Assurance Manager:
Finance/Business Manager 1/13/06
Domain Program Manager
ICGS Signature:
Kevin J. O'Neill
Director of Contracts, ICGS LLC

MATERIAL INSPECTION AND RECEIVING REPORT

Form Approved OMB No. 0704-0248

The public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0248), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ADDRESS.
SEND THIS FORM IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE DFARS, APPENDIX F-401.

1. PROCUREMENT INSTRUMENT IDENTIFICATION (CONTRACT) NO.	ORDER NO.	6. INVOICE NO./DATE	7. PAGE	OF	8. ACCEPTANCE POINT
DTCG23-02-C-2DW001	03-F-2DW302	ICGS0300136 01/13/06	1	2	D

2. SHIPMENT NO.	3. DATE SHIPPED	4. B/L	5. DISCOUNT TERMS
NA	13 Jan 06	NA TCN NA	None

9. PRIME CONTRACTOR CODE 1UYZ2	10. ADMINISTERED BY CODE
Integrated Coast Guard Systems, 1530 Wilson Blvd., Suite 400, Arlington, VA 22209, USA	Commandant (G-ACS-6) U.S. Coast Guard Deepwater SIPO, 1530 Wilson Blvd., Suite 400, Arlington, VA 22209
11. SHIPPED FROM (if other than 9) CODE / FOB:	**12. PAYMENT WILL BE MADE BY CODE**
Bollinger Shipyards Lockport, L.L.C. PO Box 250 8365 Highway 308 Lockport, LA. 70374-0250	Commandant (G-ACS-6) U.S. Coast Guard Headquarters, 2100 Second St. SW, Room 5208, Washington, DC 20591-0001, USA
13. SHIPPED TO CODE WPB - 1302	**14. MARKED FOR CODE**
USCGC Manitou (WPB - 1302), C/O Coast Guard 8365 Highway 308 Lockport, LA. 70374-0250	COMMANDING OFFICER

15. ITEM NO.		16. STOCK/PART NO. DESCRIPTION (Indicate number of shipping containers - type of container - container number.)	17. QUANTITY SHIP/REC'D*	18. UNIT	19. UNIT PRICE	20. AMOUNT
0055	FA	Services and Supplies: Manitou, (thru/mod 16)	1/1	Lot	$7,719,003.80	$7,719,003.80
		WPB 123 conversion with dry-dock package, shipset #8				
		Item short shipped of the following components: Details				
		on Certificate of Conformance				
	01	Bridge Group Discrepancies	1	Lot	$150,000.00	$150,000.00
	02	Power Group Descrepancies	1	Lot	$150,000.00	$150,000.00
	03	Trial Cards, General	1	Lot	$150,000.00	$150,000.00
	04	COP/COE Training	1	Lot	$10,000.00	$10,000.00

21. CONTRACT QUALITY ASSURANCE

a. ORIGIN
☐ CQA ☐ ACCEPTANCE of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents.
DATE / SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME: Certificate of Conformance
TITLE:
MAILING ADDRESS:
COMMERCIAL TELEPHONE NUMBER:

b. DESTINATION
☐ CQA ☐ ACCEPTANCE of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents.
13 JAN 06
DATE / SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME: C Jacoby
TITLE: PM
MAILING ADDRESS:
COMMERCIAL TELEPHONE NUMBER:

22. RECEIVER'S USE

Quantities shown in column 17 were received in apparent good condition except as noted.
13 Jan 06
DATE RECEIVED / SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
TYPED NAME: Pam Bible
TITLE: Contracting Officer
MAILING ADDRESS: U.S. Coast Guard Deepwater SIPO, 1530 Wilson Blvd., Suite 400, Arlington, VA
COMMERCIAL TELEPHONE NUMBER: 571-218-3246

* If quantity received by the Government is the same as quantity shipped, indicate by (✓) mark; if different, enter actual quantity received below quantity shipped and encircle.

23. CONTRACTOR USE ONLY

DD FORM 250, AUG 2000 PREVIOUS EDITION IS OBSOLETE.

MATERIAL INSPECTION AND RECEIVING REPORT - *CONTINUATION SHEET*

PAGE 2 OF 2

Form Approved OMB No. 0704-0248

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0248), Washington DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES.
SEND THIS FORM IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE DFARS, APPENDIX F-401.

SHIPMENT NO.	DATE SHIPPED	PROC INSTRUMENT IDEN. (CONTRACT)	(ORDER) NO.	INVOICE NO.
NA	20060113	DTCG23-02-C-2DW001	03-F-2DW302	ICGS030136 01/13/06

ITEM NO.	STOCK/PART NO. DESCRIPTION (*Indicate number of shipping containers - type of container - container number.*)	QUANTITY SHIP/REC'D	UNIT	UNIT PRICE	AMOUNT
	Continued, Manitou WPB-1302				$0.00
5	CDRL Items	1	lot	$34,000.00	$34,000.00
6	Demonstrate C4 System meets Requirements	1	lot	$3,000.00	$3,000.00
7	P-Spec Adjustment	1	lot	$8,062.00	$8,062.00
8	CLIN 0055FA close-out	1		$253,000.00	$253,000.00
	Amount Paid to Date	1		-6,960,941.80	$6,960,941.80
	Total Invoice Amount Due	1		$958,238.80	$958,238.80
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00

DD Form 250C, NOV 92 (EG) *Previous edition may be used.* Designed using Perform Pro, WHS/DIOR, Nov 95

DEPARTMENT OF THE NAVY
COMMANDER OPERATIONAL TEST AND EVALUATION FORCE
7970 DIVEN STREET
NORFOLK, VIRGINIA 23505-1498

3980
Ser 76/
APR 2 7 2005

From: Commander, Operational Test and Evaluation Force
To: Commandant, United States Coast Guard

Subj: UPDATE OF THE 123-FOOT PATROL BOAT (123' WPB) OPERATIONAL ASSESSMENT ANALYSIS (OAA) OF 29 SEP 04

Ref: (a) COMDT COGARD WASHINGTON DC 101706Z Mar 05
(b) COMOPTEVFOR ltr 3980 Ser 76/580 of 29 Sep 04
(c) COMOPTEVFOR ltr 3980 Ser 91/494 of 18 Jul 03

Encl: (1) OAA Update Matrix and Comments

1. **PURPOSE.** Reference (a) requested COMOPTEVFOR to provide an update to the 123' WPB upgrade OAA report (reference (b)).

CAVEAT: This observation does not constitute a formal phase of operational testing (OT), but rather a demonstration in which OT testers are actively involved, providing operational perspective and gaining valuable hands-on familiarity with the system. Data and findings from this observation may be used to supplement formal OT data, provided certain criteria are met. This observation does not resolve critical operational issues (COI) and does not reach conclusions regarding effectiveness or suitability.

2. **BACKGROUND.** COMOPTEVFOR conducted a review and update of the 123' WPB Upgrade OAA, including the supporting command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) and Logistics Information Management System (LIMS) as they applied to both the cutter and the supporting operational and maintenance organizations. Observations were conducted in cutters MATAGORDA, METOMPKIN, PADRE, and NUNIVAK at U.S. Coast Guard Sector Key West and included observations at all immediate supporting organizations. This update period was not planned or coordinated by a program test and evaluation master plan and was not part of the 123' WPB OAA test plan (reference (c)). A separate test plan was not developed for this update. A review of the significant risks and associated recommendations provided in reference (b) was conducted and will provide the Deepwater program with current operational assessment of these significant risks to operational effectiveness and suitability, whose associated recommendations should be implemented prior to operational evaluation (OPEVAL).

Subj: UPDATE OF THE 123-FOOT PATROL BOAT (123' WPB)
OPERATIONAL ASSESSMENT ANALYSIS OF 29 SEP 04

3. **RISK SUMMARY**. The following table depicts the current level of risk assessed to be associated with the successful resolution of COIs prior to OPEVAL. Risk assessment is based upon a comparison of previously reported risks with 123' WPB and associated support system program improvements since completion of the OAA.

COI Assessments	OAA (9/29/04)	OAA Update (4/29/05)	Note
Surveillance, Detection, Classification, Identification and Prosecution (SDCIP)			
Tactics			
Survivability			
Joint Interoperability	White		1
Connectivity			
Information Assurance (IA)			2
Electromagnetic Environmental Effects (E^3)			3
Reliability			
Maintainability			4
Availability			
Logistic Supportability			
Compatibility			5
Interoperability			
Training			
Human Factors			
Safety			
Documentation			6

Color codes for OAAs are:

- High level of risk identified.
- Moderate level of risk identified.
- Little or no risk identified.

White - Not evaluated or assessed as a result of system immaturity or lack of information.

Notes:

1. Risk increase due to C4ISR system displaying no improvement in obtaining interface with other service/agency systems. There was no capability for track input, sharing, or for email/chat.
2. Risk increase due to decertification of the capability of the C4ISR installation to meet IA requirements on any cutters.
3. Risk mitigation due to TEMPEST certification and continuing resolution of identified discrepancies.
4. Risk increase due to insufficient progress on developing or updating training and certification programs, operating manuals, technical manuals, maintenance procedures, etc.
5. Although outside the scope of this assessment, it appears that the modifications to the 123' WPB may have contributed to the degradation of the structural integrity of the hull and overall compatibility with the operating environment.
6. Risk increase due to continued lack of operational and maintenance documentation despite significant program experience and cutter delivery.

Subj: UPDATE OF THE 123-FOOT PATROL BOAT (123' WPB)
OPERATIONAL ASSESSMENT ANALYSIS OF 29 SEP 04

4. RISK UPDATE COMMENTS. Enclosure (1) provides recommendations from reference (b) and the associated risks that provided the foundation for those initial recommendations. The last column of enclosure (1) provides comments resulting from this update period.

5. SIGNIFICANT OBSERVATIONS

a. 123' WPB

(1) Command and Control (C2). The C2 equipment and associated software packages provided with the modification have not demonstrated the capability to generate a local tactical picture (LTP), contribute to a collective tactical picture, or receive the Atlantic Area managed common operational picture (COP). Interoperability on classified voice circuits was limited to USCG shore stations, cutters, and aircraft. The C4ISR system was not working as designed and the systems were not capable of operating or maintaining a basic capability in accordance with the CONOPS.

(2) LIMS. The LIMS logistics system (including both the ELLIPSE in-port functionality and the Fleet Logistics Management System (FLMS) underway) has had a negative impact on the maintenance and supply functions of the cutters. Of the twelve projected "iteration zero" capabilities, eleven have not yet been provided.

(3) Short Range Prosecutor (SRP) Recovery. SRP recovery evolutions in higher sea states are being conducted without proven or validated procedures and have the potential to be done at levels of risk beyond what is acceptable for personnel and equipment safety. Decrease in communications capability of the SRP and resulting degradation of C2 between the cutter and the SRP impact operational effectiveness and safety during recovery operations.

(4) Documentation. LIMS operating manuals, C4ISR system technical and operating manuals, training and personal qualification program documentation, towing and SRP recovery equipment certifications, and system operating procedures were either not provided or are incomplete.

(5) Situational Awareness. Various new installations on the cutters provided improvements individually. As a collection of standalone capabilities, they included the digital global positioning system, automated identification system, and the infrared camera system. The crews were able to combine some of the individual outputs of

Subj: UPDATE OF THE 123-FOOT PATROL BOAT (123' WPB)
OPERATIONAL ASSESSMENT ANALYSIS OF 29 SEP 04

these equipments and obtain an increased situational awareness during patrols. These equipments were not integrated and were not capable of contributing to a networked tactical picture.

b. The following observations and recommendations are deemed significant beyond the 123' WPB upgrade in that the associated risks may impact other Deepwater program assets, C4ISR and logistics domains, or the Integrated Deepwater System overall.

(1) LIMS/ELLIPSE/FLMS lack of functionality and increased level of effort is currently isolated to the cutters in Sector Key West. The capability to deal with the deficiencies of the system is only possible as a result of tremendous effort by the ICGS on site representative and the District and Sector maintenance organizations. Extension of the LIMS program in its current state to other USCG locations should be carefully considered pending a near complete development and validation of LIMS capability and functionality.

(2) The C4ISR equipment and software installed in the 123' WPB are initial production iteration installations for all subsequent Deepwater program assets. The inability to generate a LTP and to contribute to the COP or to receive and display the COP need to be resolved by equipment/software grooms, improved maintenance capability, and better training.

(3) The SRP recovery system in the 123' WPB serves as a bellwether for future design and installations in the national security cutter, offshore patrol cutter, and the fast response cutter. The critical equipment and safe and effective procedures for conducting astern recoveries in higher sea states for both the SRP and the long range interceptor should be developed and proven by an effective and integrated test and evaluation process prior to continued program development.

6. RECOMMENDATIONS. Within the scope of this assessment, I recommend formal and documented validation of correction of deficiencies be conducted for those risks identified in reference (a) prior to conducting the operational test readiness review for OPEVAL. If the major effectiveness and suitability risks associated with the 123' WPB modification can not be mitigated, continued conversion of operationally capable 110' WPBs is not recommended. Current mitigation efforts, if not pursued more aggressively, will adversely impact the effectiveness and safety of operations. For those Deepwater program assets who share the critical components

Subj: UPDATE OF THE 123-FOOT PATROL BOAT (123' WPB)
OPERATIONAL ASSESSMENT ANALYSIS OF 29 SEP 04

operations, continued program development for those assets should include a comprehensive test program that is structured to provide timely risk assessment and recommendations to the program manager.

DAVID ARCHITZEL

Copy to:
COMDT HQ (G-O, G-D, G-OC, G-OCU, G-OCD)
COMLANTAREA (AOF)
CCGDSEVEN MIAMI
COMCOGARD SECTOR KEY WEST FL

123' WPB OAA Update Matrix and Comments

Recommendation from OAA Report	Risk #	Associated Risk from OAA Report	OAA Report Update Comments
The following must be implemented prior to OPEVAL:		High Risks associated with prior to OPEVAL recommendations	
1.1 Develop and publish detailed procedures, including tabular reference, for recovery of the SRP aboard the cutter in all potential sea states from 0 through 4. Procedures should include the recommended ships course relative to the seas and the recommended ordered speed. Procedures should also address the shaft engagement/disengagement considerations (see page 13, par. 4.3.3). (Tactics)	4.3.3	The propeller wash and "rooster tail" of the 123' WPB created a potentially unsafe environment for boat operations in sea states 1 and higher. In order to recover the SRP, the cutter was required to establish a procedure to provide the dynamic conditions at the ramp for each sea state that provided acceptable conditions for boat recovery. Recovery with no way on was difficult in any sea state, as the stability of the cutter and the SRP jet drive maneuverability was dependent on movement. Higher speed meant more control. The 123' WPB was required to clutch in on one or both shafts in order to establish steerageway and obtain the best relative seas. When clutched in, the 123' WPB generated a significant propeller wash which could not be overcome by the SRP, requiring the 123' WPB to declutch to engine(s) just prior to the commitment of the SRP coxswain to a recovery. Timing was critical. The 123' WPB would lose steerageway and provide an unsafe condition if the SRP was not immediately recovered. This process in heavier seas resulted in a smaller time window for the coxswain to make his approach into the ramp, subjecting the SRP to increased propeller wash during recovery. (This may have significant implications for similar recovery processes in the larger cutter classes (WMSL, WMSH, WPC)).	SRP draft recovery procedures were developed by the contractor subsequent to the OAA report. These procedures were generic, unserised, and had not been demonstrated by the developer on any of the delivered cutters. None of the four cutters observed during this assessment review period had been provided with a copy of the procedures for review or possible implementation. Each cutter was developing its own unique set of recovery procedures. Some recovery procedures varied significantly in fundamental processes and each with its own unique safety considerations. While there may be more than one set of procedures developed by individual cutters in order to safely recover the SRP in lower sea states, there was significant risk to personnel and equipment because tested and proven procedures were not developed for this evolution in higher sea states. Safety of recovery remains a significant risk to the effectiveness of the stern notch recovery system.
1.2 Test, certify, and provide documentation validating the safety of all components of the SRP recovery system (see page 53, par. 18.2.1.1). (Safety)	18.2.1.1	The SRP recovery line and securing equipment were unsafe. The cutter's recovery line parted during a recovery attempt and the default solution was to "use a larger line" without a tested and certified replacement. Results of a dynamic study and certification were not available identifying the proper size and length of line for SRP capture. The bits that terminate the securing line had no test certification. The winch assembly (drum, line, and recovery hook) had no certification. Upon completion of the SRP recovery, while the weight of the boat stresses the winch line, the on deck line handler was required to attach the securing cable to the prow of the SRP heel which required reaching between the life rails and under the bow of the SRP and the tensioned recovery line in order to attach the securing hook.	There was no standard SRP recovery line on the cutters. Each of the cutters was delivered a different line and there were no specifications provided for line composition, size, or length. Three of the cutters had replaced the line provided by the developer after they had been evaluated by the cutter as unsuitable or unsafe for use. The length and elasticity of the recovery line are critical design parameters impacting the operational loads that will be experienced by the SRP recovery system components. Risks associated with the large forces generated during SRP recovery compounded by the variation in recovery equipment configurations remain high. None of the bits that are used to recover the SRP had been certified for the function they are performing.
1.3 Replace the prescribed 4-inch nylon tow line (breaking strength of 38,400 lb) on the 123' WPB with a tow line of breaking strength below the safe working load of the tow bit (currently 14,400 lb). This is essential to eliminate the reality of bit failure before line failure (see page 53, par. 18.2.1.3). (Note that	18.2.1.3	The tow bit static load test report certified a safe working load which was less than the safe working load of the tow line. This is a significant safety hazard as the bit is subject to failure before the line.	There were three different sized tow lines provided to four of the cutters, each one with a breaking strength that significantly exceeds the safe working load of the towing bit. Two of the tow lines have a breaking strength that is over twice the 150% static test load of the towing bit. There is no documentation provided to the cutters that provides the static and dynamic forces expected to result from a 500 long ton tow that will be transferred to the unusually high tow post and tall railing. The potential heeling moments and

CGC METOMPKIN was provided with a 5-inch tow line of 60,000 lb safe working load.) (Safety)			stability documentation was not available for cutter use and there was no certification date for any of the towing tackle. This remains a significant safety issue.
1.4 Require the immediate installation of equipment, software, security, and certifications necessary for implementation, testing, and operation of the COP. This is a significant increase in advertised capability that has not been demonstrated after four deliveries (see page 11, par. 3.3.1). (SDCIP)	3.3.1	The sensor suite equipment (including receivers, processing units, and display equipment) was installed but was not delivered by the contractor in a configuration capable of providing a COP. The first two cutters of the 123' WPB class were observed during this test period and were delivered without a secure communications capability or the authority to operate via tactical circuits and were in the same condition 3 months after delivery. The cutters were severely restricted in their capability to conduct SDCIP in accordance with the CONOPS. As delivered, they were limited to use of generic on-board sensors. The new 123' WPB integrated sensor suite was designed to have the capability to provide a significant level of tactical awareness to the 123' WPB crew. The complete sensor suite has an undemonstrated potential for significant capability. It was determined that it may not be possible to effectively employ the suite due to the physical location of equipment and the resulting modifications required of watch stander responsibilities in order to support the equipment.	The equipment and software designed for generation of a local tactical picture (LTP) and contribution to and display of a common operational picture (COP) had been installed and loaded in each cutter. However, the installation had not been groomed for operations and was unable to be certified by SPAWAR. There still was no authority to operate the required C4ISR systems and the COP was not available in the cutters. There were no cutters capable of demonstrating the ability to generate a LTP or that could receive and display a COP. The inability to provide input to and receive a COP in accordance with the CONOPS remains a significant risk. Limited connectivity was demonstrated one time on one cutter, but this was conducted as a focused and dedicated proof of concept requiring significant effort and time. While there was limited equipment familiarity training provided at delivery, there had been no training provided that established a baseline of operator proficiency.
1.5 Resolve the reliability and availability of the modifications to the 123' WPB systems, including the C4ISR equipments and network, logistics support system, and the SRP recovery system, to reduce or eliminate the impact on overall cutter availability. The lack of a functioning C4ISR system, a reliable SRP and SRP recovery system, and a reliable logistics support system has the potential for significant impact on not just cutter, but Group/Sector availability to respond to mission tasking (see page 36, par. 12.3.1). (Availability)	12.3.1	The inability of the 123' WPB and its new systems to be ready for test event tasking provides a significant risk to the cutter being supportive of single asset or overall system readiness for real world mission tasking. The reliability and readiness of the various equipments and software supporting the C4ISR, logistics system, and the SRP and its recovery system contributed to an overall lack of availability of the 123' WPB.	The reliability and availability of C4ISR equipments and software applications for both C4ISR and LIMS systems continued to be significant in the lack of overall cutter availability to perform missions in accordance with the CONOPs. During installation grooms, significant software instability required frequent reboot which was very time consuming. When on station, mission performance continued to be limited by unreliable and unavailable software systems and certifications. Even in its limited state of functionality, the LIMS functionalities embedded in ELLIPSE and FLMS were unable to be manipulated by the crews due to availability or deficiencies in system operation manuals and a lack of operator training. SRP and recovery system component reliability and availability displayed some improvement. The cutters were generally capable of meeting mission sortie and on station requirements, although they were significantly limited in their effectiveness by operational speed and sea state restrictions imposed as a result of structural defects, which could be attributed to the hull modifications.

1.6 Obtain damage control plates and stability diagrams, as well as the documentation and certifications that the cutter is capable of handling potential upsetting forces that may be encountered during operations. Those forces include the pulls applied to the elevated tow bit and the resulting moments towards instability during the static and dynamic forces applied by a 500 ton tow, and the potential moments encountered with the addition of the weight of 150 migrants distributed across the main deck in a standing position (see page 54, par. 18.2.1.5). (Safety)	18.2.1.5	There were no stability calculations, plans or damage control plates available to validate the stability of the 123' WPB in the following situations:- response to the lateral force potentially applied to the elevated tow bit and the resulting moment towards instability during the static and dynamic forces applied by a 500 ton tow - response to the additional weight of 150 migrants on deck for 24 hours while in sea state 3 or higher. Partial deck loading was conducted pier side with 75 personnel on the main deck which had obvious impact on cutter trim and list conditions. During the test period, all 75 personnel were shifted to the right of centerline which resulted in a 12 degree list on the cutter while pierside.	Damage control plates and stability documentation have not been provided to the cutters. The stability and loading data report generated by the shipyard did not specifically address the stability impacts of a 7 foot high towing point nor the impact of 150 migrants on the main deck. Interpolation of diagrams included in the stability and loading data report did not provide the detail required for operational decisions that will result in significant impacts on shifts in the center of gravity.
1.7 Relocate the SRP recovery winch so that it is not subject to impact from the SRP upon recovery and subsequent loss of capability (see page 18, par. 5.5.1). (Survivability)	5.5.1	The impact of the SRP into the recovery winch could put the winch out of commission. Should this occur, the recovered SRP will be secured by the recovery line but the SRP stern will extend beyond the length of the ramp and the ship's stern door will not be able to be closed. The SRP can not be secured in the ramp without winching it in from the recovered position and there is no back up winch system.	The winch remained susceptible to being struck by the SRP during recovery and had been rendered inoperable at least once on each of three cutters. One cutter had reduced the risk of winch strike by lengthening the SRP recovery line which captured the SRP further away from the end of the notch and the winch mounting location. However, this modified procedure resulted in the SRP being in a captured condition while not completely contained in the notch of the ship with the increased potential of the SRP coming "alive" in the notch with the right sea condition. The winch was required to retrieve the SRP into the notch rather than serving as the final few feet of the securing process. Documentation certifying that the winch is rated or designed for the purpose was not available.
1.8 Eliminate the potential for electrical shock underneath the bridge console (see page 56, par. 18.2.2.9). (Safety)	18.2.2.9	The video recorder operator on the bridge was subject to electrical shock when accessing the computer mouse from its storage location inside the ship control console via an access panel.	This risk has been eliminated by redesign of the installation.
1.9 Install a second egress for main deck berthing and the electronics work spaces. The condition of a single egress from both situations could be corrected by installation of escape scuttles to the main deck (see page 54, par. 18.2.1.6). (Safety)	18.2.1.6	A single point of egress from berthing and working spaces is a significant survivability and safety issue. There are two such instances on the modified 123' WPB. There is only one egress route from the main deck berthing spaces (CO, XO, and three other staterooms). An internal fire on the main deck blocking the ladder to the bridge would trap personnel in their staterooms. A second instance is from the COMSEC and electronics working spaces aft. Escape is not possible in the event of an electronics or engine room fire which restricts egress through the forward part of the electronics work space. (Uncorrected from COMOPTEVFOR letter of concern, reference (e).)	Unchanged. Recommend USCG validate the safety requirement for secondary egress route from berthing and working spaces to the main deck.

1.10 Obtain TEMPEST and COMSEC certifications for all cutters. Require certifications prior to acceptance of future cutters, including crypto installation, software load, and authority to operate for all equipments (see page 22, par. 7.11.1.1). (Connectivity)	7.11.1.1	The complete C4ISR suite was either not functioning or the functionality was inaccessible due to installation faults, COMSEC problems, or incomplete documentation/training. The identification, friend or foe (IFF) equipment was not functional. MILSATCOM was not available as the ARC-210 had TEMPEST problems and was not programmable. The FT7 primary underway INMARSAT data path and the Coast Guard data network (plus) (CGDN+) were not available due to an expired interim authority to connect (IATC). There was no SIPRNET path since the cutter did not meet TEMPEST and COMSEC requirements and there was no IATC. MILSATCOM voice communications were not available because a FORTEZZA card was not loaded after cutter delivery.	TEMPEST and COMSEC certifications are now being conducted satisfactorily within a few months after delivery. Additionally, equipment operational problems have been corrected for IFF, MILSATCOM, and SIPRNET installations.
1.11 Verify the ability of the networks architecture to provide security to all classified information prior to cutter delivery/acceptance (see page 26, par. 5.21.1). (Information Assurance)	5.21.1	The inability of the cutter to pass TEMPEST and to verify secure communications operational capabilities made it impossible to verify the network's capability of securing sensitive information.	Defense Information System Agency (DISA) information assurance security standards were not able to be achieved. As a result, the cutters are not being granted the required authority to operate.
1.12 Develop the tactics and associated checklists for the effective launch of the SRP for all mission requirements in the CONOPS (see page 13, par. 4.3.1). (Tactics)	4.3.1	There were no procedures for SRP launch or associated operating tactics developed or published for the cutter to support the mission requirements of the CONOPS. Although the crews of the two delivered cutters were developing their own procedures for various sea states, the design concept for a stern launch in support of various mission scenarios had not been operationally validated by the developer prior to delivery. The lack of a proven process provides high risk to the safety of the crew while experimenting with options for boat operations.	While SRP recoveries remain a significant risk, the tactics and procedures for SRP launches, although not specifically developed, presented a less severe risk to operational effectiveness of the 123' WPB. Numerous launches of the SRP in many operational situations have demonstrated that the launching procedure is relatively uncomplicated and safely executed when positive control is properly exercised by the bridge watch team and the fantail. Documented procedures and checklists for SRP launches in all sea states are still recommended.
1.13 Resolve access deficiencies with ELLIPSE and validate software and system performance on all delivered cutters. Require program/contractor validation and demonstration of FLMS and ELLIPSE software and system performance prior to acceptance of all future cutters, including the interface with the shore and deployable tool sets (see page 31, par. 10.4.1.1). (Reliability)	10.4.1.1	The ELLIPSE logistics management program was delivered to the cutter with serious access deficiencies. Crew members, working with the Integrated Coast Guard System (ICGS) site representative, were able to resolve access and password discrepancies. However, the capability to display a common product structure that combines legacy and IDS data was not demonstrated. Configuration of the on-board asset by loading information from maintenance and inventory software was not demonstrated. Interface with the shore and deployable tool sets has not been demonstrated.	LIMS software is installed on all cutters but is unable to provide the required functionalities, either in port with ELLIPSE or underway with FLMS. ELLIPSE capabilities were limited to work order generation and shore side PMS. This is only about 10% of the twelve projected "iteration zero" ELLIPSE system capabilities. The following ELLIPSE functionalities were not able to be demonstrated: shipboard PMS (due to the lack of the scheduling module being available), financial tracking, report generation, configuration management, parts requisitioning, man-hour tracking, inventory management, work order alert notification, MILSTRIP processing, PHS&T management and purchasing management. FLMS operational functionality could not be demonstrated by any of the cutters.
1.14 Resolve the inability of the cutters to create logistics work orders via the ELLIPSE system. The capability to conduct inventory management, maintenance scheduling, and finance interfaces must also be resolved (see page	10.4.1.3	The capability to push mobile requisitions to the operations support center was demonstrated with limited success. During the test period, only one requisition was successfully processed. The crew has reverted to the casualty reporting process to fill requisitions for critical parts. The system did not demonstrate the capability to conduct inventory management, maintenance scheduling, and finance interfaces. The system was able to	All four cutters were using ELLIPSE to generate work orders on their local terminals, but manual intervention was required at the next level (Sector, District, or ICGS site rep) to make documents visible on the shore maintenance side of the system. All four cutters observed in Key West remained unable to conduct inventory management and maintenance scheduling using ELLIPSE. They were also

32, par. 10.4.1.3). (Reliability)		generate internal work orders after several days of on-the-job training by the site representatives; however, those work orders are not available to be accessed within the ELUPSE system.	unable to track any financial data that is a requirement for not only Deepwater supported parts, but for legacy equipment as well. Also, in order to print a work order, the text had to be copied to a word document and then printed, which was an extra step that added time to the work day when compounded by each cutter and their individual work orders. ELUPSE did not provide any financial accounting, so the MAT reverted to using paper logs. There was no capability for the project engineers of Lockheed Martin in Moorestown to participate or observe any work done against a work order due to firewall issues with CGDN+ connectivity in Moorestown. Accordingly, all Lockheed Martin work order responses were being accomplished by either e-mail or telephone.
1.15 Provide ELUPSE system functionality to all delivered cutters, enabling them to generate supply requisitions. Require system capability prior to acceptance of all future cutters (see page 32, par. 10.4.1.5). (Reliability)	10.4.1 .5	The supply department at Group Key West received no requisitions during the test period. The one requisition processed, was handled by the IOGS site representative, therefore this capability has not been demonstrated. Legacy requisitions could not be generated by ELUPSE. Numerous legacy requisitions were attempted, but all attempts failed.	Supply requisitions were not being generated by the cutters because of difficulties in using the catalog function of ELUPSE. Locating the ELUPSE-required "stock code" was a tedious and time-consuming effort that had too little return for the amount of work required. Parts requisition function was not possible as it required a "stock code" which could not be found by the crew in the ELUPSE catalog. The Site Rep had become the single source of Deepwater supply for the Sector Key West cutters. Sector Key West personnel had received LIMS training but were still unable to process requisitions using ELUPSE. The permissions and approval processes were not clear to all users. The lack of financial tracking capability rendered the tool ineffective to the shore side supply activity. As a result of the cumbersome requisition processes, many items were being procured commercially.
1.16 Install, test and exercise the FLMS at-sea portion of LIMS. Require FLMS system capability prior to acceptance of all future cutters (see page 32, par. 10.4.1.6). (Reliability)	10.1.4 .6	The fleet logistics management system (FLMS) portion of LIMS was not demonstrated during the test period.	FLMS software was installed and basic connectivity was demonstrated with limited success amongst the cutters. However, FLMS was not able to demonstrate an at sea operational capability.
1.17 Establish a billet capable of managing the new C4ISR computer suite and to perform COP track data management, including required training for operation, system administration, and operational maintenance (see page 40, par. 13.7.1.5). (Logistic Supportability)	13.7.1 .5	The new upgrade contains a networked C4ISR suite including navigation, radar, and a COP. This enterprise contains six servers, two UNIX based and four Windows based. This points to a strong requirement for either DS or ET functionality to manage the computer suite and to perform track data management. There are no billets or training identified to support the system on board. All system administration functions are planned to reside ashore in the electronic support units/detachments. The level of C4ISR expertise for current 110' WPB crew and shore support facilities is minimal and the planned training in support of the 123' WPB upgrade appears insufficient. (Uncorrected from COMOPTEVFOR letter of concern, reference (e).)	The proposed changes to the Master Training List for the 123' WPB include the recommendations for adding CG-C2 equipment operation and bridge watch standing courses of instruction for the CO, XO, and four BMs. An undefined but limited portion of the C2 maintenance and management course of instruction has been recommended for the XO and a BM1. There appears to be a misalignment between required tasks to operate and support the C4ISR system and the practical factors of the billets assigned to the 123' WPB.

5 Encl (1)

1.18 Conduct a thorough review of formal training courses being developed to support the new cutter systems. Ensure that appropriate training courses and lesson plans, for both schoolhouse and self-study, are adequate for formal training and shipboard study and are being provided to the USCG training commands for implementation (see page 46, par. 16.3.1). (Training)	16.3.1	IDS training was not compatible with legacy training systems for an experienced 110 crew who transferred to the 123' WPB (CGC NANTUCKET to CGC MATAGORDA). Training for ELUPSE/COMDAC INS/EO/IR Surveillance System was found to be severely inadequate and there were many areas where the crew received no training at all. There were no formal training course handouts, no electronic on-board training programs, no revised or new personnel qualification standards documents, and no formal lesson plans provided to USCG training commands to support current operators and maintainers. Delivery training may prove adequate for current crews, but there is no pipeline training planned for follow-on crew members or support personnel.	A draft 123' WPB Master Training List (MTL) is in the early stages of development as well as identification of possible courses of instruction that may be possible for inclusion in the TRACEN training architectures. The processes required to create the required courses and develop the administrative and personnel infrastructure to support their effectiveness will take time. Nine new courses of instruction are currently included in the draft 123' WPB MTL. In the interim, there are no self study courses, no electronic on-board training courses, no updated POS booklets, or other training systems developed to fill the period until and if formal courses of instruction can be developed. While the current crews of delivered cutters were provided some introductory level of training by the developer at delivery, that training was not sufficient to give even these new experienced crews the ability to effectively operate and maintain their new equipments. There is no process in place to train the relieving crewmembers arriving this summer for those cutters already delivered. Because of this, the long-term sustainability of current/qualified crews for the 123' WPB in the Coast Guard's existing personnel accession, training, and assignment process is at risk.
1.19 Install a second ARC-210 UHF transceiver so that the 123' WPB can conduct simultaneous line-of-sight and satellite communications (see page 22, par. 7.11.1.2). (Connectivity)	7.11.1 .2	The 123' WPB was provided with a single ARC-210 UHF transceiver which replaced two UHF transceivers currently in use on the 110'. During representative missions, a WPB routinely requires both UHF radios to be in simultaneous use. The 123' WPB ARC-210 can function in either line-of-sight or satellite communications (SATCOM) mode but not simultaneously. This represents a loss of functionality and a single point of failure with respect to UHF communications.	This remains a reduction in capability from the 110' WPB. The current performance of the ARC-210 was hampered by lack of training for both operations and the programming and loading of crypto material. With the elimination of UHF satellite radio redundancy, there was a single point of failure in satellite comms that impacts the capability for both voice and tactical data (COP) connectivity.
1.20 Incorporate special emergency operations training and onboard team training including update of drill and grade sheets based on revised navigation standards and main space fire doctrine (see page 48, par. 16.3.1) (Training)	16.3.1	IDS training was not compatible with legacy training systems for an experienced 110 crew who transferred to the 123' WPB (CGC NANTUCKET to CGC MATAGORDA). Training for ELUPSE/COMDAC INS/EO/IR Surveillance System was found to be severely inadequate and there were many areas where the crew received no training at all. There were no formal training course handouts, no electronic on-board training programs, no revised or new personnel qualification standards documents, and no formal lesson plans provided to USCG training commands to support current operators and maintainers. Delivery training may prove adequate for current crews, but there is no pipeline training planned for follow-on crew members or support personnel.	An updated main space fire doctrine had been drafted and was being exercised by the crews, and satisfactory execution was part of the ready for operations certification by Sector Key West. No other updates were observed that modified other onboard operational procedures, training packages and drill sheets for ship evolutions that have been impacted by the modifications.

6 Encl (1)

USCG Q&A 631

QUESTION: When (if) was the MATAGORDA visual TEMPEST test redone and by whom (the last date of testing) and can you tell (or is it classified) the result of the instrumented test conducted in February 2004? We don't need the data - just the result (which the IG already ostensibly reported).

Or is February 2004 the last date of TEMPEST testing - implying that the Matagorda at least was never TEMPEST certified (because the visual was not passed and we know it is not certified in September 2004 and the Coast Guard has not provided the date of any other re-testing when it could have passed visual).

ANSWER: The MATAGORDA had TEMPEST waivers for any visual discrepancies that were not corrected. There was not a re-test. MATAGORDA Visual TEMPEST Inspection (VTI) was conducted 19-21 February 2004 and produced a list of discrepancies. The Instrumented TEMPEST Survey (ITS) for CGC MATAGORDA was conducted 18 to 24 February 2004 and the result of the survey is classified SECRET.

MATAGORDA was first given Interim Authority to Operate (IATO) on 14 October 2004 and Authority to Operate (ATO) on 19 January 2005. (Note: IATO followed the COMOPTEVFOR Operational Analysis Assessment (OAA) by approximately 3 weeks.) IATO or ATO cannot be granted if there are any compromising emanations. Specific results cannot be discussed as they are documented in the classified instrumented survey report.

In October 2004, when IATO was granted, MATAGORDA had outstanding discrepancies from her VTI. Visual inspection discrepancies may be waived if, in fact, there are no compromising emanations noted by the ITS. The Secure Electrical Information Processing System was again inspected by Mr. Ronald T. Porter of the Coast Guard Telecommunications and Information Command on 19 December 2004.

The Coast Guard 123 WPB class TEMPEST waivers were established by TISCOM on 12 July 2005. (TISCOM Memorandum 2241). An example of a waiver was for an unclassified radio located within 3 meters of classified servers. This was identified as a discrepancy during visual inspection. The waiver is appropriate since a WPB is a small ship and does not have a large communications room or combat information center (as you would find on a Navy ship or larger Coast Guard cutter) – the size of the communications room on a WPB-123 is only approximately 3 meters by 2.5 meters. This physical size makes it impractical to provide the 3 meter separation. The TEMPEST instrumented survey results were sufficient so the visual inspection discrepancy should be (and was) waived.

USCG Q&A 632

QUESTION: Also, was TEMPEST a requirement from the beginning of this contract? If so, please provide the document from the contract showing that explicit requirement.

ANSWER: The requirement for TEMPEST was part of the original Delivery Task Order for MATAGORDA (the first 110 converted to 123), as part of the Cutter Specific Certification Matrix, copied below:

Sort	SWBS	Title	Topic	Std	Amplification of Standard	Adjudication of Standard	Method of Verification	Date Modified / NA
582	402	Electronics Systems	Installation Standard	MIL-HDBK-232A (1998)*	Red/Black Engineering Installation Guidelines added as a result of the modification to the vessel.	Required	Examination	09/07/01

* MIL-HDBK-232A (1998) provides fundamental guidance to engineer and install electronic systems that process or communicate classified information. It contains guidance which will, when used in conjunction with department/agency directives, aid in the protection of such information by reducing the probability of hostile interception and exploitation.

APR 1 3 2007

The Honorable Elijah E. Cummings
Chair, Subcommittee on Coast Guard
and Maritime Transportation
Committee on Transportation and Infrastructure
2235 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Cummings,

Thank you for the opportunity to address the concerns expressed in your letter dated April 13, 2007. I am committed to providing you with a full accounting of these issues. Enclosed is the information you requested. With respect to the test results from the second visual inspection on MATAGORDA, there is no formal test report. Rather, a list was generated and forwarded for corrective action to the appropriate personnel. The list and transmittal email string is enclosed for your review.

The Coast Guard takes Information Assurance and TEMPEST testing very seriously. Throughout the entire process, all procedures were conducted in accordance with accepted guidelines and by fully qualified personnel. The TEMPEST waiver process is also a rigorous process, with strict guidelines regarding when and under what conditions waivers may be granted.

In addition to the information that you have specifically requested, I have also included a copy of the 123' WPB Class TEMPEST Waiver. Normal procedures are to conduct an instrumented test on the first vessel in a class, with visual inspections conducted on subsequent vessels to ensure compliance with the approved configuration. As such, and in response to your question requesting the dates of any instrumented tests performed on 123' WPBs other than MATAGORDA and PADRE, no other instrumented tests were performed. The second test conducted on PADRE was an anomaly in the normal TEMPEST testing process.

I am happy to answer any further questions you may have, or your staff may contact my House Liaison office at (202) 225-4775.

Sincerely,

Thad W. Allen
Commandant
United States Coast Guard

Encl: (1) USCGC MATAGORDA second visual TEMPEST inspection results and email string
(2) Visual TEMPEST inspection report for PADRE
(3) Visual TEMPEST inspection reports for MATAGORDA, MONHEGAN, METOMPKIN, NUNIVAK, ATTU, VASHON, and MANITOU
(4) 123' WPB Class Tempest Waiver

ELIJAH E. CUMMINGS
7TH DISTRICT, MARYLAND

COMMITTEE ON
TRANSPORTATION AND INFRASTRUCTURE
Chairman, Subcommittee on Coast Guard and Maritime Transportation
Subcommittee on Highways and Transit
Subcommittee on Aviation, Pipelines and Hazardous Materials

COMMITTEE ON
GOVERNMENT REFORM
Subcommittee on Domestic Policy
Subcommittee on Federal Workforce, Post Office and the District of Columbia

COMMITTEE ON ARMED SERVICES
Subcommittee on Air and Land Forces

WHIP

Congress of the United States
House of Representatives
Washington, DC 20515

[illegible]

[illegible]

[illegible]

[illegible]

April 13, 2007

Admiral Thad Allen
Commandant, United States Coast Guard
US Coast Guard Headquarters
2100 2nd Street, SW
Washington DC, 20593

Dear Admiral Allen:

I write today to thank you for the tour you provided of the 110/123-foot cutters and for your candid discussion both of the problems that plagued the 110/123 conversion and of the future of the Deepwater program.

I also thank you for your willingness to immediately address the delays that the staff of the Committee on Transportation and Infrastructure and of the Subcommittee on Coast Guard and Maritime Transportation have encountered in receiving requested documents from the Coast Guard. To ensure that we are able to complete our investigation of the 123 program prior to the hearing to be held on April 18 on compliance with the requirements of the Deepwater contract, I write today to ask that the following documents be provided to my office no later than 1:00 p.m. on April 13:

1) All test results from the second visual TEMPEST inspection conducted of the USCGC MATAGORDA on December 19, 2004;
2) All test results from any visual TEMPEST inspections conducted at any time on the USCGC PADRE;
3) All test results from any other visual TEMPEST examination conducted on any of the 110/123 cutters; and,
4) The dates of any instrumented tests performed on any 110/123 other than MATAGORDA in February 2004 and PADRE in July 2006.

On March 20, 2007, I requested all "reports and analysis pertaining to the C4ISR testing done on the MATAGORDA." In response to that request, I received information on the visual and instrumented TEMPEST exams performed on the MATAGORDA in February 2004. However, my office learned yesterday that a second visual TEMPEST exam was performed on MATAGORDA on December 19, 2004. As records associated with that exam (including a list of any deficiencies identified during that exam) have not yet been provided and time is running short, it is urgent that we receive the records today.

Page 2
Admiral Allen
April 13, 2007

Importantly, as the DD-250 for MATAGORDA appears to make MATAGORDA's compliance with TEMPEST requirements following its February 2004 test contingent on the results of TEMPEST testing of at least one ship in the 110/123 class, we urgently need any non-classified records associated with the PADRE or any other 110/123 that was subjected to any TEMPEST testing of any kind by any agency.

I thank you again for your hospitality during my visit to the Baltimore Coast Guard Yard on April 12 and for your continued cooperation with my requests for information. Please do not hesitate to contact me whenever I may be of assistance.

Sincerely,

Elijah E. Cummings
Chair, Subcommittee on Coast Guard and Maritime Transportation

From: Porter, Ronald
Sent: Wednesday, December 22, 2004 9:10 AM
To: Jones, David L.; Wright, Richard; Prokes, Terrence; Wharton, Rick; Wilhelm, Douglas G; Buford, Danny D. (Ship Systems); Calvin, Wally (Ship Systems); Colella, Harry (EXT); Conrad, Robert D. (Ship Systems); Driscoll, John LCDR; Frei, Kevin R; Hajduk, Philip J; Lang, Donald H; McLaverty, Brian; Meredith, Lawrence O; Mihelic, Joseph; Payne, Jeffrey LTJG; Talley, Shonda; Adkins, Steve; Alto, Alan ; Ayala, Hala; Bassolino, John; Bauer, Sarah; Boyd, Barry ELC2; Boyd, Jay; Boyd, Jay; Brewer, George M ENG3; Cownie, Brodie LCDR; Figueroa, Nylsa; Fleming, Benjamin LT; Fontana, Richard CDR; Hartinger, Dan; Harwood, Fred; Henke, Douglas; Hernandez, Glenn LCDR; Hested, Jim; Illuminate, Dave; Jacoby, Chad LCDR; Driscoll, John LCDR; Leeper, Hank; Leeper, Henry; McLaughlin, Daniel CDR; Mitchell, Sean LT; Pearson, Steve; Powers, Geoffrey; Prokes, Terry; Reynolds, James LT; Rishar, David; Russell, Douglas CAPT; Sconiers, Thomas CWO; Walz, Michael CDR; Wood, John CDR
Cc: Carter, Justin LT; Carter, Justin LT
Subject: RE: MATAGORDA_122004_2200, METOMPKIN_122004_2200

Attachments: CGC MATAGORDA.doc

CGC
.TAGORDA.doc (27)

All,

Attached is pending TEMPEST discrepancy list for Matagorda.

ron
Ronald T. Porter
USCG TISCOM (iad-3b)
TEMPEST Program Manager
703-313-5631 (STU-III)
703-313-5640 (FAX)

From: Jones, David L.
Sent: Wednesday, December 22, 2004 8:32 AM
To: 'Wright, Richard'; Prokes, Terrence; Wharton, Rick; Wilhelm, Douglas G; Buford, Danny D. (Ship Systems); Calvin, Wally (Ship Systems); Colella, Harry (EXT); Conrad, Robert D. (Ship Systems); Driscoll, John LCDR; Frei, Kevin R; Hajduk, Philip J; Lang, Donald H; McLaverty, Brian; Meredith, Lawrence O; Mihelic, Joseph CAPT; Payne, Jeffrey LTJG; Porter, Ronald; Talley-Green, Shonda; Adkins, Steve; Alto, Alan; Ayala, Hala; Bassolino, John; Bauer, Sarah LTJG; Boyd, Barry CWO; Boyd, Jay; Boyd, Jay P.; Brewer, George CWO; Cownie, Brodie LT; Figueroa, Nylsa; Fleming, Benjamin LT; Fontana, Richard CDR; Hartinger, Dan; Harwood, Fred; Henke, Doug; Hernandez, Glenn; Hested, Jim; Illuminate, Dave; Jacoby, Chad CDR; Driscoll, John LCDR; Leeper, Hank; Leeper, Henry; McLaughlin, Daniel CDR; Mitchell, Sean LT; Pearson, Steve; Powers, Geoffrey; Prokes, Terry; Reynolds, James LT; Rishar, David; Russell, Douglas CAPT; Sconiers, Thomas CWO; Walz, Michael CDR; Wood, John CDR
Cc: Carter, Justin LT; Carter, Justin LT
Subject: RE: MATAGORDA_122004_2200, METOMPKIN_122004_2200

I confirmed this morning that a copy of the scan results was left with LM engineers on the ship.

From: Wright, Richard [mailto:Richard.Wright@dwicgs.com]

ENCLOSURES(1)

1

Sent: Tuesday, December 21, 2004 9:50 PM
To: Prokes, Terrence; Wharton, Rick; Wilhelm, Douglas G; Buford, Danny D. (Ship Systems); Calvin, Wally (Ship Systems); Colella, Harry (EXT); Conrad, Robert D. (Ship Systems); Driscoll, John LCDR; Frei, Kevin R; Hajduk, Philip J; Lang, Donald H; McLaverty, Brian; Meredith, Lawrence O; Mihelic, Joseph CAPT; Payne, Jeffrey LTJG; Porter, Ronald; Talley-Green, Shonda; Adkins, Steve; Alto, Alan; Ayala, Hala; Bassolino, John; Bauer, Sarah LTJG; Boyd, Barry CWO; Boyd, Jay; Boyd, Jay F.; Brewer, George CWO; Cownie, Brodie LT; Figueroa, Nylsa; Fleming, Benjamin LT; Fontana, Richard CDR; Hartinger, Dan; Harwood, Fred; Henke, Doug; Hernandez, Glenn; Hested, Jim; Illuminate, Dave; Jacoby, Chad CDR; Jones, David L.; Driscoll, John LCDR; Leeper, Hank; Leeper, Henry; McLaughlin, Daniel CDR; Mitchell, Sean LT; Pearson, Steve; Powers, Geoffrey; Prokes, Terry; Reynolds, James LT; Rishar, David; Russell, Douglas CAPT; Sconiers, Thomas CWO; Walz, Michael CDR; Wood, John CDR
Cc: Carter, Justin LT; Carter, Justin LT
Subject: RE: MATAGORDA_122004_2200, METOMPKIN_122004_2200

Any new status on Matagorda (scans, etc)

Rich

Richard Wright
ICGS C4ISR Domain Program Manager

US Coast Guard Integrated Deepwater System
office: 571.218.3426 / mobile: 571.214.5508

richard.wright@dwicgs.com
"... Mission success IS customer satisfaction!"

-----Original Message-----
From: Prokes, Terrence [mailto:TProkes@comdt.uscg.mil]
Sent: Tuesday, December 21, 2004 4:14 PM
To: Wharton, Rick; Wilhelm, Douglas G; Buford, Danny D. (Ship Systems); Calvin, Wally (Ship Systems); Colella, Harry (EXT); Conrad, Robert D. (Ship Systems); Driscoll, John LCDR; Frei, Kevin R; Hajduk, Philip J; Lang, Donald H; McLaverty, Brian; Meredith, Lawrence D; Mihelic, Joseph CAPT; Payne, Jeffrey LTJG; Porter, Ronald; Talley-Green, Shonda; Wright, Richard; Adkins, Steve; Alto, Alan; Ayala, Hala; Bassolino, John; Bauer, Sarah LTJG; Boyd, Barry; Boyd, Jay; Boyd, Jay F.; Brewer, George CWO; Cownie, Brodie LT; Figueroa, Nylsa; Fleming, Benjamin LT; Fontana, Richard; Hartinger, Dan; Harwood, Fred; Henke, Doug; Hernandez, Glenn; Hested, Jim; Illuminate, Dave; Jacoby, Chad; Jones, David; Driscoll, John LCDR; Leeper, Hank; Leeper, Henry; McLaughlin, Daniel; Mitchell, Sean LT; Pearson, Steve; Powers, Geoffrey; Prokes, Terry; Reynolds, James LT; Rishar, David; Russell, Douglas; Sconiers, Thomas CWO; Walz, Michael; Wood, John
Cc: Carter, Justin LT; Carter, Justin LT
Subject: RE: MATAGORDA_122004_2200, METOMPKIN_122004_2200
Importance: High

Rick,

Metompkin schedule needs some major re-writes so the dates align (i.e. SSAA package not delivered to SMO until 2/8/05 - Testing conducted 1/19/05?). Recommend we review it at the meeting.

2

Some items I noted:

Line # 21: Vessel schedule to depart BSI on 1/10/05

Line # 41: Vessel will not be launched until 1/4/05

Line #42: Suspect this date will be 1/5/05
Line #?: Need to add update Phone System
Line #90: Re-inspection not required - change to "Notify D7 Security MGR of corrections" & "D7 Security MGR issues letter"

Line # ??: Add line to Visual Tempest Inspection "Install screen in LE Locker Door"
Line #121 & 122: Apply for and ATO approved on 1/26-2/1 conflict with lines 123 thru 130 SSAA package dates 2/2-8/05 (SSAA package must be submitted before ATO is approved).

Lines # 131-138: Dates do not match SSAA Package dates (lines 123-130) and Software Vulnerability dates (lines 106-122)

Line #154: Testing dates are scheduled before all requirements are completed (i.e. Software Vulnerability - line 106, SSAA package - line 123, SIPRNET ATO - line 131.

Thanks,

Terry Prokes
ILS Transition Manager
Commandant (G-DTM)
U.S. Coast Guard
Deepwater Transition Management
e-mail: tprokes@comdt.uscg.mil
PH: 202.267.0445
Cell: 202.498.2591

-----Original Message-----
From: Wharton, Rick [mailto:Rick.Wharton@dwicgs.com]
Sent: Monday, December 20, 2004 11:21 PM
To: Wilhelm, Douglas G; Buford, Danny D. (Ship Systems); Calvin, Wally (Ship Systems); Colella, Harry (EXT); Conrad, Robert D. (Ship Systems); Driscoll, John LCDR; Frei, Kevin R; Hajduk, Philip J; Lang, Donald H; McLaverty, Brian; Meredith, Lawrence O; Mihelic, Joseph CAPT; Payne, Jeffrey LTJG; Porter, Ronald; Talley-Green, Shonda; Wright, Richard; Adkins, Steve; Alto, Alan; Ayala, Hala; Bassolino, John; Bauer, Sarah LTJG; Boyd, Barry CWO; Boyd, Jay; Boyd, Jay F.; Brewer, George CWO; Cownie, Brodie LT; Figueroa, Nylsa; Fleming, Benjamin LT; Fontana, Richard CDR; Hartinger, Dan; Harwood, Fred; Henke, Doug; Hernandez, Glenn; Hested, Jim; Illuminate, Dave; Jacoby, Chad CDR; Jones, David; Driscoll, John LCDR; Leeper, Hank; Leeper, Henry; McLaughlin, Daniel CDR; Mitchell, Sean LT; Pearson, Steve; Powers, Geoffrey; Prokes, Terry; Reynolds, James LT; Riahar, David; Russell, Douglas CAPT; Sconiers, Thomas CWO; Prokes, Terrance; Walz, Michael CDR; Wharton, Rick; Wood, John CDR
Subject: MATAGORDA_122004_2200, METOMPKIN_122004_2200

Matagorda departed BSI today, one day earlier than planned to avoid weather later in the week. All warranty items corrected with the exception of the steering system breather cap, which will be shipped to the boat in Key West. Several C4ISR items being tested enroute Key West. Low Smoke Cable and Cable Tag DD-250 items pend resolution, but have no operational impact on the cutter. Solid door to LE locker was modified to an expanded metal cage-type door, eliminating the need for a protected distribution system for red cables in the space. If CATV filter/attenuator cannot be obtained in time to support TEMPEST final cert, cable will be disconnected (already discussed with Ron Porter) Talked with Dave Jones this morning - TISCOM personnel were onboard performing a scan of the

3

C4ISR software enroute New Orleans. Plan for SPAWAR to scan 27 Dec. ATO remains on track to be completed before 12 Jan.

BSI and on-site LM personnel turning their attention to Metompkin. Plan is to complete most of the outstanding warranty/DD-250 items before holiday shutdown. Fins have been removed and port lower bearing housing being replaced. Damaged prop being replaced with props (replaced as a pair) originally intended for Manitou - next set, intended to be spares, will be available early January in plenty of time to support Manitou launch.

<<MATAOGORDA_122004_2200.pdf>> <<MATAOGORDA_122004_2200.mpp>> <<METOMPKIN_122004_2200.pdf>> <<METOMPKIN_122004_2200.mpp>>

--
Rick Wharton
Northrop Grumman Ship Systems
123 WPB Asset Manager
Integrated Coast Guard Systems, LLC
US Coast Guard Deepwater Program
Ph: (571) 218-3221
Cell: (703) 627-0048
Fax: (571) 218-3342

USCGC MATAGORDA – SECOND VISUAL TEMPEST INSPECTION
December 19, 2004

CGC MATAGORDA

1. Secure ground for ARC-210. Ground is loose. Recommend removing nut on front of braid to ensure maximum contact with equipment shelf.
2. Hand-held radios less than one meter from STE. Recommend unit SOP be worded to turn radios off prior to charging. Post sign to emphasize same.

CO's STATEROOM

3. Separate CLASSIFIED and UNCLASSIFIED LAN cables by two inches.

XO's STATEROOM

4. Separate CLASSIFIED and UNCLASSFIED LAN cables by two inches.

CLASSIFIED SERVER ROOM

5. CATV isolator required on cable prior to exiting ship. Recommend placing isolator in Cabinet 5 of UNCLAS Server rack.

6. Recommend CLASSIFED and UNCLASSIFIED stickers on LAN outlet boxes in view of the fact that the connectors and jacks are interchangeable.

U.S. Department of Homeland Security
United States Coast Guard

Commander
Maintenance and Logistics Command Atlantic

300 East Main Street, Suite 700
Norfolk, VA 23510-9105
Staff Symbol: (tp-1)
Phone: (757) 628-4051
Fax: (757) 628-4035

2241
05.0041
8 March 2005

MEMORANDUM

From: B.J. O'Keefe CAPT
MLCLANT (t)

Reply to Attn of: (tp-1)
Ernestine Cook
(757) 628-4051

To: CGC PADRE (WPB 1328)

Subj: TEMPEST INSPECTION OF USCGC PADRE (WPB 1328)

Ref: (a) NSTISSAM 2-95 Red/Black Installation Guidance
(b) DOD IA PUB 5239-31 Information assurance Shipboard Red/Black
(c) COMDT COGARD Washington DC//CG-62//042137Z Mar 04

1. ET2 Timothy Cole, ESD New Orleans, conducted a re-inspection of the Secure Electrical Information Processing System (SEIPS) on CGC PADRE on 28 January 2005. The re-inspection was conducted as required by references (a), (b), and (c).

2. Enclosure (1) is a summary of minor discrepancies with the SEIPS. No serious TEMPEST hazards were noted; therefore, you may continue normal operations. In accordance with reference (c), discrepancies must be corrected within 90 days. You should contact Ms. Ernestine Cook to schedule a re-inspection. This summary also provides a record of the installation at the time of inspection. Modifications or changes to the SEIPS shall not be made without approval of TISCOM (isd-3d) or MLCA.

3. This summary and amendments to this summary shall be retained in the unit's SEIPS (TEMPEST) documentation file.

#

Enclosure: (1) Visual Tempest Inspection Summary

Copy: COMDT (CG-6, G-DPM-3)
LANTAREA (Ao82)
TISCOM (isd-3b)
ESU New Orleans
ESD New Orleans
ESU Miami
ESD Key West

ENCLOSURE (2)

Visual TEMPEST Inspection Summary

The entire Secure Electrical Information Processing System was inspected.

List of spaces with secure processing equipment inspected by the visual TEMPEST inspector:

1. Radio Room
2. State Rooms
3. Bridge

Discrepancy form legend:

Column A: Sequential discrepancy number

Column B:

SF Correction of the discrepancy is within the capability of ship's force.

SFC Correction of the discrepancy was completed by ships force prior to completion of inspection visit.

IA Indicates that the assistance of an industrial activity is probably required to properly correct the discrepancy.

IAC Indicates that an industrial activity corrected the discrepancy.

SA Indicates that the assistance of a support activity is probably required to properly correct the discrepancy.

SAC Indicates that a support activity corrected the discrepancy.

Column C: Document Reference to which the installation does not conform.

Narrative: A brief description of the discrepancy found.

Enclosure (1)

Discrepancies and Corrective Action Report

1. Radio Room 2-28-O-Q

A	B	C	Narrative
001	IA/SA	NSTISSAM 2-95 Rec 1 Paragraph 3.B Note 2	There is no separation between Classified LAN and Unclassified LAN outlets. CORRECTED
002	IA/SA	NSTISSAM 2-95 Rec 1 Paragraph 3.B Note 2	Classified LAN lines are run with 120VAC power lines (no separation). CORRECTED
003	IA/SA	NSTISSAM 2-95 Rec 1 Paragraph 3.B Note 2	Coax TV line runs along with Classified LAN line. CORRECTED
004	IA/SA	NSTISSAM 2-95 Rec 1 Paragraph 3.B Note 2	There is no separation between alarm panel line and Classified LAN line. WAIVED
005	IA/SA	NSTISSAM 2-95 Rec 1 Paragraph 2.B	The printer (red) along with Classified LAN line runs parallel with IFF antenna line. There is no separation of these lines. WAIVED
006	IA/SA	IA PUB 5239-31 Paragraph A.1.1.2	The printer (red) uses black power. The printer router (red) uses black power. WAIVED
007	IA/SA	NSTISSAM 2-95 Rec 1 Paragraph 6	There is no 3-meter separation between printer (red) and IFF transmitter. WAIVED
008	IA/SA	NSTISSAM 2-95 Rec 1 Paragraph 6	In Rack #3, there is no 3-meter separation between red and black cables before entering the Marcom switch. WAIVED
009	IA/SA	NSTISSAM 2-95 Rec 1 Paragraph 6	In Rack #3, there is no 3-meter separation between cryptographic equipment and RT9000 transceiver. WAIVED
010	IA/SA	IA PUB 5239-31 Paragraph A.1.1.7.3.1.B	There is not a secure Protected Distribution System (PDS) leaving Radio Room. LE Locker behind Secure Space. WAIVED
011	IA/SA	NSTISSAM 2-95 Paragraph 4.9.6	Cable TV system needs to use an amplifier/attenuator at the point of entry into the secure space and needs to be of a type that provides one-way filtration. CORRECTED
012	SA	IA PUB 5239-31 Paragraph B.1.2.6.2	IFF transmitter needs ground. Removal of paint and dirt from ground. NEEDS TO BE COMPLETED

2

2. State Rooms 1-16-1-L / 1-16-2-L

001	IA/SA	IA PUB 5239-31 Paragraph B.1.2.6.2	There is no separation between Classified LAN outlets and 117 VAC, Unclassified LAN, and TV Jack outlets. WAIVED
002	IA/SA	NSTISSAM 2-95 Rec 1 Paragraph 3.A	There is no separation between Classified LAN line and MF/HF line. CORRECTED
003	IA/SA	NSTISSAM 2-95 Rec 1 Paragraph 3.	In State Room 1-16-2-L, Classified LAN line runs parallel with horn generator line. CORRECTED

3. Bridge

A	B	C	Narrative
001	IA/SA	NSTISSAM 2-95 Rec 1 Paragraph 6	There is no 3meter separation between red output and black lines for the Kite handset #1 and #2. WAIVED
002	IA/SA	IA PUB 5239-31 Paragraph B.1.2.6.2	Classified LAN line runs parallel with 117 VAC, Black Data lines, and cellular antenna line. CORRECTED
003	SA	IA PUB 5239-31 Paragraph B.1.2.6.2	Need to remove paint and add clean ground for RCU-9310 radio. NEEDS TO BE COMPLETED

U.S. Department of Homeland Security
United States Coast Guard

Commander
U.S. Coast Guard
Telecommunication & Information Systems Command

7323 Telegraph Road
Alexandria, VA 23115
Staff Symbol: TISCOM (isd-3b)
Phone: 703.313.5631
Fax: 703.313.5640
Email: rporter@tiscom.uscg.mil

2241
July 12, 2005

MEMORANDUM

Ronald T. Porter

From: Mr. Ronald T. Porter
CG TISCOM (isd-3b)

Reply to TISCOM (isd-3b)
Attn of: Ronald T. Porter
703.313.5631

To: Commander, Maintenance and Logistics Command Atlantic (t)
DIRECTOR, Deepwater Integrated Coast Guard Systems

Subj: 123 WPB CLASS TEMPEST WAIVER

Ref: (a) NSTISSAM TEMPEST 2-95
(b) IA PUB 5239-31 INFORMATION ASSURANCE SHIPBOARD RED/BLACK INSTALLATION PUBLICATION

1. The Secure Electrical Information Processing System (SEIPS) on CGC MATAGORDA was inspected by Ronald Porter, USCG TEMPEST Program Manager on 14 December 2004. The inspection was conducted using criteria listed in references (a) and (b), and below is the list of discrepancies waived. If there is a configuration change which includes, but is not limited to replacement of Classified server(s) with different model(s) or addition of equipment in the Secure Communications space, an Instrumented TEMPEST Survey will be required. DWICGS shall identify funding for future Instrumented Testing.

2. Below waivers are class-wide and should be considered when reviewing Visual TEMPEST Inspection Reports.

3. A waiver is granted for the location of the RT-1794 (p/o AN/ARC-210) transceiver within three meters of Classified servers. This waiver is based on the results of the Instrumented TEMPEST Test

4. A waiver is granted for three meter separation between RED and BLACK cables entering the MARCOM switch. Subject switch provides adequate isolation and is approved for multi-level signal switching.

5. A waiver is granted for three meter separation between cryptographic equipment and RT9000 transceiver. The distance is approximately one meter, however a bulkhead separates the Unclassified and Classified equipment racks. Due to a favorable Instrumented TEMPEST test, and the fact that the RT-9000 transceiver is enclosed in its original metallic enclosure, and there are metal side panels on the equipment racks.

6. A waiver is granted for three meter separation between RED printer and IFF Transmitter (UPX-28). Subject equipment is also less than three meters from Classified Servers. Subject transmitter is enclosed in its original enclosure and there is a metallic barrier on the side of the RED server rack adjacent to the UPX-28.

#

ENCLOSURES(4)

Enclosure 1

Subject: Visual TEMPEST Inspection Summary

1. This Visual TEMPEST Inspection Summary is for the FTA Visit

2. The entire Secure Electrical Information Processing System was inspected.

3. List of spaces with secure processing equipment inspected by the visual TEMPEST inspector:

   A. Visited space

4. Discrepancy form legend:

Column A:	Sequential discrepancy number
Column B:	
SF	Correction of the discrepancy is within the capability of ship's force.
IAC	Correction of the discrepancy was completed by ships force prior to completion of inspection visit.
IA	Indicates that the assistance of an industrial activity is probably required to properly correct the discrepancy.
IAC	Indicates that an industrial activity corrected the discrepancy.
SA	Indicates that the assistance of a support activity is probably required to properly correct the discrepancy.
SAC	Indicates that a support activity corrected the discrepancy.
CA	Indicates that the Contractor Activity is probably required to properly correct the discrepancy
CAC	Indicates that the Contractor Activity corrected the discrepancy.
Column C:	Reference of the paragraph in designated manuals to which the installation does not conform.
Narrative:	A brief description of the discrepancy found.

Page 1 of 4

Enclosure 1

5. Discrepancy

A	B	C	Narrative
01	CA	NSTISSAM TEMPEST 2/95 PG 27 Para 2a/pg16 para 5 IA Pub 5239-31 A.1.1.1 a, b	BLACK RF Transmitter (RT-1794) is in the same rack as RED Processors. This item is waived as the result of the Instrumented TEMPEST Inspection. Any reconfiguration of equipment, which includes new equipment or replacement of existing CPUs with a different model would require another Instrumented Inspection.
02	CA	NSTISSAM TEMPEST 2/95 PG 27 Para 2b	Cabinet 3: Red processor less than one meter away from power line to black transmitter (RT-1794 p/o ARC-210). Refer to item #1.
03	CA	NSTISSAM TEMPEST 2/95 pg 27 Para 2a	Cabinet 3: Red processor less than one meter away from black signal lines connected to RF transmitter (RT-1794) Refer to item #1.
04	CA	NSTISSAM TEMPEST 2/95 pg 27 Para 4, Para 4.4.1.1, 4.1.1.2 IA PUB 5239-31 Para A.1.7.1 IA PUB 5239-31 MIL-STD 188-124B Para 5.2.12	Red data cables for RED LAN have aluminum/mylar shielding. Manufacturer data: DRAKA COMTEQ (F) ShipLan Cable 4PR 24 AWG Screened 307650. Subject cable may pose a TEMPEST hazard. B.1.2.5 (5239): Approved cables. Mil-C-17 (ref'k), or MIL-C-915 (reference(l)), MIL-C-24640(reference(n)) or MIL-C-24643 (reference (o)). Researched cable and found that it does NOT meet any of the above MIL-SPECs. Draka sells data cables that are MIL-DTL-24643 compliant. Subject cables are CAT 5e Shiplan '59W', '59' and '595' Marine data cables. The cables listed all have a braided shield in addition to the aluminum mylar tape. The braided shield allows for a flexible ground. Resolved. Subject cable passed Instrumented TEMPEST test. Both RED and BLACK cables are grounded to the aluminum mylar shield. Recommend use shielded braid cable.
05	CA	NSTISSAM TEMPEST 2/95 PG 27 Para 2a/pg16 para 5 IA Pub 5239-31 A.1.1.1 a, b	BLACK transmitters (RT-9000) within 3 meters of RED processors. Waived. Subject transmitters are enclosed in metallic case and bulkhead separates the cabinets containing the transmitters and RED processors.
06	CAC	IA Pub 5239-31 Para B.1.2.6.16 pg B-8 and B-9	Missing pins on CRYPTO cable to KYV-5. Missing ground terminal connection on backshell. Completed.
07	CAC	IA Pub 5239-31 Para B.1.2.6.16 pg B-8 and B-9	AN/DVT cable has no ground terminal connection on backshell. Strain relief clamp is not on outer coating of cable. Redo connection. Completed.
08	CAC	IA Pub 5239-31 Para B.1.2.6.10	AN/UPX-28 has inadequate green wire ground. Replace with Class C bond strap. Completed.
09	CAC	IA Pub 5259-31	Remove external tooth washers on ground connectors to cabinets.

Page 2 of 4

Enclosure 1

			Use lock washers and lug nuts per IA Instruction 5239-31 Figure B-5. Completed
10	CAC	NSTISSAM TEMPEST 2/95 PG 27 Para 2a/pg16 para 5 IA Pub 5239-31 A.1.1.1 a, b	UPX-28 is less than 3 meters from RED printers and processors. Waived. UPX-28 is in original enclosed cabinet and favorable instrumented test.
11	CAC	IA Pub 5239-31 Para B.1.2.6.10	Remove green wire grounds from CRYPTO rack and replace with Class C solid bond strap. Completed.
12	CA	IA Pub 5239-31 Para A.1.1.3	Telephone cables connected to shore tie via telephone switch cannot be routed with red cables.. Resolved. Marconi switch provides adequate isolation.
13	CA	IA Pub 5239-31 Para A.1.1.7.	ARC-210 Secure voice cables. Transmit and receive audio lines need to be shielded. Resolved.. Subject lines are shielded per TISCOM TEMPEST PM communication Harris Corp. Only unshielded cables are BLACK
14	CAC	NSTISSAM 2-95 Recommendation 1 Pg 27 Para 3 Notes: 2	Operator position in Classified C4ISR room has cables from two UNCLAS LAN and three CLASSIFIED LAN connections. Require 2 inch (5 cm) separation. Completed.

Bridge

15	CAC	NSTISSAM TEMPEST 2/95 PG 27 Para 2a	Motorola VHF FM DES transceiver less than three meters from C2 Network flat panel display monitors LC 06-04-16, LC 06-04-72 and LC 06-04-84. Completed. Monitors replaced by TEMPEST compliant models.
16	CAC	NSTISSAM TEMPEST 2/95 PG 27 Para 2a	Cellular phone next to Secure LAN junction box less than three meters from flat panel display monitors LC 06-04-82 and LC 06-04-72. If a RED laptop uses the Secure LAN junction box, it will be less than three meters from cellular phone Resolved. RED LAN cables rerouted and LAN box relocated.
17	CAC	IA Pub 5239-31 Para B.1.2.6.13	No metal-to-metal contact for ground strap from ARC 210 Tray to ground on shelf. Recommend use Class C ground strap and remove paint for proper bonding. Completed.
18	CA	IA Pub 5239-31 Para A.1.1.7.2 Pg A-3	Unshielded cable connected to connector J3 on ARC-210 Tray. Twisted red wires (four) runs to C4ISR Cabinet #3. Replace cable run with proper cable. Resolved. Wires are used for control circuitry only.
19	CA	NSTISSAM TEMPEST 2/95	Issue of wireless bridge for RHIB comms. RESOLVED. Wireless connectivity is via exterior antenna. PDAs will not use wireless connectivity

Other:

Page 3 of 4

Enclosure 1

20	CAC	NSTISSAM 2-95 Recommendation 1 Pg 27 Para 3 Notes: 2	CO's cabin. RED and BLACK LAN ports have no cable separation. Recommend 2 inch separation. RED/BLACK cable is tied together Corrected.
21	CA	NSTISSAM 2-95 Recommendation 1 Pg 27 Para 1	CO's cabin. Proposed RED laptop on desk top less than 20 inches (20 cm) from black phone. Waived due to space limitations.
22	CAC	IA Pub 5239-31 Para A.1.1.7.3.1.b	RED fiber optic cable goes through space adjacent to black racks that contains hasp for locking. If the cable passes though normally locked spaces (for example, voids, staterooms, etc), that portion of the cable shall be contained in a metallic conduit (PDS). Completed. Cage will be constructed that will provide complete viewing of the space.
23	CAC	NSTISSAM 2-95 PARA 4.9.6	Television and shipboard video (external cameras) can be viewed from the same VIDEO output jack. The shipboard video has been designated RED. Corrected. CATV isolator will be installed in Rack #5 to prevent compromising emanations from exiting inspectable space.

Derived From: NSTISSAM TEMPEST 2/95 with Amendment 2-95A

Department of the Navy (DoN) Information Assurance (IA) Publication Module 5239-31

Page 4 of 4

U.S. Department of Homeland Security
United States Coast Guard

Commander
Maintenance and Logistics Command Atlantic

300 East Main Street, Suite 700
Norfolk, VA 23510-9103
Staff Symbol: (tp-1)
Phone: (757) 628-4051
Fax: (757) 628-4035
E-mail: Ernestine.N.Cook@uscg.mil

2241
05.0381

OCT 28 2005

MEMORANDUM

From: B.J. O'Keefe CAPT
MLCLANT (t)

Reply to: (tp-1)
Attn of: Ernestine Cook
(757) 628-4051

To: CGC MATAGORDA (WPB 1303)

Subj: VISUAL TEMPEST INSPECTION OF USCGC MATAGORDA (WPB 1303)

Ref: (a) DON IA PUB 5239-31 Information Assurance Shipboard Red/Black Installation Publication
(b) NSTISSAM TEMPEST 2-95 Red/Black Installation Guidance

1. Mr. Timothy Neary of ESU Miami conducted an inspection of the Secure Electrical Information Processing System (SEIPS) onboard CGC MATAGORDA on 3 August 2005. The inspection was conducted as required by references (a) and (b). A summary of corrected discrepancies is listed in enclosure (1). No new discrepancies were found.

2. This summary provides a record of the installation at the time of inspection. Modifications or changes to the SEIPS shall not be made without approval of TISCOM (isd-3b) or MLCA. This summary and amendments to this summary shall be retained in the unit's SEIPS TEMPEST documentation file.

#

Enclosure: (1) Visual TEMPEST Inspection Report

Copy: LANTAREA
TISCOM (isd-3b)
ESU Miami
ESD Key West

ENCLOSURES(3)

Visual TEMPEST Inspection Summary

USCGC MATAGORDA (WPB 1303)
3 August 2005

This Visual TEMPEST Inspection is for the FTA Visit

The entire Secure Electrical Information Processing System was inspected.

List of spaces with secure processing equipment inspected by the visual TEMPEST inspector:

1. Electronic space
2. Bridge

Discrepancy form legend:

Column A: Sequential discrepancy number

Column B:

SF	Correction of the discrepancy is within the capability of ship's force.
IAC	Correction of the discrepancy was completed by ships force prior to completion of inspection visit.
IA	Indicates that the assistance of an industrial activity is probably required to properly correct the discrepancy.
IAC	Indicates that an industrial activity corrected the discrepancy.
SA	Indicates that the assistance of a support activity is probably required to properly correct the discrepancy.
SAC	Indicates that a support activity corrected the discrepancy.
CA	Indicates that the Contractor Activity is probably required to properly correct the discrepancy.

Column C: Reference of the paragraph in designated manuals to which the installation does not conform.

Narrative: A brief description of the discrepancy found.

Enclosure (1)

Discrepancies and Corrective Action Report

1. Electronic Space:

A	B	C	Narrative
01	CA	NSTISSAM TEMPEST 2/95 PG 27 Para 2a/pg16 para 5 IA Pub 5239-31 A.1.1.1 a, b	Cabinet 3: Black RF transmitter (RT-1794) in same rack as Red Processors. Recommend moving 3 meters away or in adjacent Black Equipment Room. Recommend placing entire ARC-210 system on Bridge. Waived.
02	CA	NSTISSAM TEMPEST 2/95 PG 27 Para 2b	Cabinet 3: Red processor less than one meter away from power line to black transmitter (RT-1794 p/o ARC-210). Waived.
03	CA	NSTISSAM TEMPEST 2/95 pg 27 Para 2a	Cabinet 3: Red processor less than one meter away from black signal lines connected to RF transmitter (RT-1794). Waived.
04	CA	NSTISSAM TEMPEST 2/95 pg 27 Para 4, Para 4.4.1.1, 4.1.1.2 IA PUB 5239-31 Para A.1.7.1 IA PUB 5239-31 MIL-STD 188-124B Para 5.2.12	Signal cable used with RED processors, BLACK processors, ISDN telephones are not terminated. Red data cables for RED LAN have aluminum/mylar shielding. Manufacturer data: DRAKA COMTEQ (F) ShipLan Cable 4PR 24 AWG Screened 307650. Subject cable may pose a TEMPEST hazard. B.1.2.5 (5239): Approved cables. MIL-C-17 (ref k), or MIL-C-915 (reference(l)), MIL-C-24640(reference(a)) or MIL-C-24643 (reference (o)). Researched cable and found that it does NOT meet any of the above MIL-SPECs. Draka sells data cables that are MIL-DTL-24643 compliant. Subject cables are CAT 5e Shiplan '59W' , '59' and '59S' Marine data cables. The cables listed all have a braided shield in addition to the aluminum mylar tape. The braided shield allows for a flexible ground. NSTISSAM 2-95: RED processors meeting the requirements of NSTISSAM TEMPEST/1-92 (Levels I, II, or III) must use optical or shielded wire cables if specified as part of the manufacturer's installation specification, or if specified for compliance with TEMPEST certification. Paragraphs 4.4.1.1, and 4.1.1.2 defines cable characteristics and shield termination. IA Pub 5239-31: RED Shielded Metallic Wire Cable. RED metallic wire cables in all locations shall be shielded, with the exception of desktop computer cables that are provided by the manufacturer, where there is not an offered shielded cable option. This requirement is not applicable to RED fiber optic cables. MIL-STD-188 "Foil shields are not acceptable for peripheral bonding and do not provide mechanical durability" IA Pub 5239-31 pg B-9 Para d. Note: "If both ends of the cable will not have the shield taken to ground, approval by the cognizant CTTA should be obtained prior to installation." Other source (AFMAN33-214V2 DATED 21SEP2001) states that foil shielding is intended for voice or digital signals less than 5Kbps. CG must assume risks associated with using subject cable. This is also documented in Instrumented Test Report. Acceptable risk. No discrepancy.

2

05	CA	NSTISSAM TEMPEST 2/95 pg 28 Para 6	RED processors and RF transmitters in Cabinet 3. RED processors should not be powered from the same circuits as RF transmitters. Waived.
06	CA	IA Pub 5239-31 Para B.1.2.6.10	AN/UFX-28 has flexible ground strap with crimped ends. Replace with Class C bond strap. Corrected.
07	CA	IA Pub 5239-31	On racks, install ground cables per IA 5239-31. Where required, use soldered connectors vice crimping. Waived.
08	CA	IA Pub 5259-31	Remove external tooth washers on ground connectors to cabinets. Use lock washers and hex nuts per IA Instruction 5239-31 Figure B-5. Corrected
09	CA	IA Pub 5239 B.1.2.6.12	Keyboard and Monitor in Cabinet #1 has non –manufacturer supplied power cable. Bond shelf to rack. Contends it is manufacturer's cable. Waived.
10	CA	NSTISSAM 2-95 Para 3 Notes 3	RED/BLACK cable separation. Two inch minimum separation requirement. Six inch separation requirement for RED/BLACK cables that run in parallel for 100 ft runs. The only way to ID is via cable tags. Waived.
11	CA	IA Pub 5239-31 Para B.1.2.6.10	Remove flexible ground strap with crimped ends from ANDVT rack and replace with Class C solid. Strap. Corrected.
12	CA	IA Pub 5239-31 Para A.1.1.7.	ARC-210 Secure voice cables. Transmit and receive audio lines need to be shielded. Resolved. See 2. Bridge item #4.
13	CA	NSTISSAM 2-95 Recommendation 1 Pg 27 Para 3 Notes: 2	Operator position in Classified C4ISR room has cables from two UNCLAS LAN and three CLASSIFIED LAN connections. Require 2 inch (5 cm) separation. Waived.

2. Bridge:

01	CA	NSTISSAM 2-95 Recommendation 1 Pg 27 Para 3 Notes: 2	LAN (RED) and GPS (BLACK) use common junction box. No RED/BLACK separation. Corrected, moved BLACK LAN and GPS to separate junction boxes. RED LAN is routed in common cable run. Does not have minimum separation. See item #10.
02	CA	IA Pub 5239-31 Para B.1.2.6.13	No metal-to-metal contact for ground strap from ARC 210 Tray to ground on shelf. Recommend use SOLID Class C ground strap vice crimped wire. Corrected.
03	CA	IA Pub 5239-31 A.1.1.7.2a	Not clear if Shielded Twisted Pair is used for voice and control wirelines. SPAWAR will inspect and test during Instrumented TEMPEST test. NOTE: No discrepancy noted by SPAWAR testing. Reference to ARC-210. Informed by Harris Corp that kit provided included shielding of all RED cables. Corrected.
04	CA	IA Pub 5239-31 Para A.1.1.7.2 Pg A-3	Unshielded cable connected to connector J3 on ARC-210 Tray. Twisted red wires (four) runs to ARC-210 Control head mounted in the forward console of the bridge. This is the Control and Status of the ARC-210. All data is by channel/mode/power only, no audio is routed to the Control head. Replace cable run with proper cable. This cable should be shielded. Corrected.

3

3. Other:

01	CA	NSTISSAM 2-95 Recommendation I Pg 27 Para 3 Notes: 2	CO's cabin. RED and BLACK LAN ports have no cable separation. Recommend 2 inch separation. RED/BLACK cable is tied together. Acceptable risk while underway. No discrepancy.
02	CA	NSTISSAM 2-95 Recommendation I Pg 27 Para 1	CO's cabin. Proposed RED laptop on desk top less than 20 inches (20 cm) from black phone. Acceptable risk while underway. No discrepancy.
03	CA	IA Pub 5239-31 Para A.1.1.7.3.1.b	RED Fiber optic cable goes through space adjacent to black racks that contains hasp for locking. If the cable passes through normally locked spaces (for example, voids, staterooms, etc), that portion of the cable shall be contained in a metallic conduit. This space is the cutters armory and is considered a restricted area. Corrected.

TEMPEST 2/95

Department of the Navy (DoN) Information Assurance (IA) Publication Module 5239-31

MIL-STD-188-124B Grounding Bonding Shielding for Common Long Haul/Tactical Communications Systems

Air Force Manual 33-214, Volume 2, Communications and Information Emission Security Countermeasures Review

U.S. Department of Homeland Security
United States Coast Guard

Commander
Maintenance and Logistics Command Atlantic

300 East Main Street, Suite 700
Norfolk, VA 23510-9103
Staff Symbol: (tp-1)
Phone: (757) 628-4051
Fax: (757) 628-4226
E-mail: Ernestine.N.Cook@uscg.mil

2241
06.0362

DEC 26 2006

MEMORANDUM

From: B. J. Oakes, CAPT
MLCLANT (t)

Reply to: (tp-1)
Attn of: Ernestine Cook
(757) 628-4051

To: CGC MONHEGAN (WPB 1305)

Subj: VISUAL TEMPEST INSPECTION OF USCGC MONHEGAN (WPB 1305)

Ref: (a) DON IA PUB 5239-31 Information Assurance Shipboard Red/Black Installation
(b) NSTISSAM TEMPEST 2-95A Red/Black Installation Guidance
(c) COMDT COGARD Washington DC//CG-62//042137Z Mar 04

1. Mr. Brian Meetze of ESD Miami Beach, LT Jim Cabase of COMDT (CG-623), and ET2 Michael Harrison of ESD Key West conducted a Visual Tempest Inspection (VTI) of the Secure Electrical Information Processing System (SEIPS) onboard CGC MONHEGAN on 2 November 2006. The inspection was conducted as required by references (a) and (b).

2. A summary of minor discrepancies is listed in enclosure (1). No serious TEMPEST hazards were noted; therefore, you may continue normal operations. In accordance with reference (c), discrepancies must be corrected within 90 days. You should contact Ms. Ernestine Cook to schedule a re-inspection. This summary also provides a record of the installation at the time of inspection. Modifications or changes to the SEIPS shall not be made without approval of TISCOM (isd-3b) or MLCLANT.

3. This summary and amendments to this summary shall be retained in the unit's SEIPS TEMPEST documentation file.

Enclosure: (1) Visual TEMPEST Inspection Summary

Copy: COMDT (CG-623)
LANTAREA
TISCOM (isd-3b)
ESU Miami
ESD Key West

Visual TEMPEST Inspection Summary

USCGC MONHEGAN (WPB 1305)
2 November 2006

This Visual TEMPEST Inspection is for the FTA Visit.

The entire Secure Electrical Information Processing System was inspected.

List of spaces with secure processing equipment inspected by the visual TEMPEST inspector:

1. Electronic space
2. Bridge
3. Other

Discrepancy form legend:

Column A: Sequential discrepancy number

Column B:

Waived	Discrepancies granted a waiver as a result of instrumented testing and per TISCOM ltr of 12 Jul 05.
SF	Correction of the discrepancy is within the capability of ship's force.
IAC	Correction of the discrepancy was completed by ships force prior to completion of inspection visit.
IA	Indicates that the assistance of an industrial activity is probably required to properly correct the discrepancy.
IAC	Indicates that an industrial activity corrected the discrepancy.
SA	Indicates that the assistance of a support activity is probably required to properly correct the discrepancy.
SAC	Indicates that a support activity corrected the discrepancy.
CA	Indicates that the Contractor Activity is probably required to properly correct the discrepancy.

Column C: Reference of the paragraph in designated manuals to which the installation does not conform.

Narrative: A brief description of the discrepancy found.

Enclosure (1)

Discrepancies and Corrective Action Report

1. Electronic Space:

A	B	C	Narrative
01	Waived	NSTISSAM TEMPEST 2/95A PO 27 Para 2a/pg16 para 5 IA Pub 5239-31 A.1.1.1 a, b	Cabinet 3: Black RF transmitter (RT-1794) in same rack as Red Processors. Recommend moving 3 meters away or in adjacent Black Equipment Room. Recommend placing entire ARC-210 system on Bridge.
02	Waived	NSTISSAM TEMPEST 2/95A PO 27 Para 2b	Cabinet 3: Red processor less than one meter away from power line to black transmitter (RT-1794 p/o ARC-210).
03	Waived	NSTISSAM TEMPEST 2/95A pg 27 Para 2a	Cabinet 3: Red processor less than one meter away from black signal lines connected to RF transmitter (RT-1794).
04	Waived	NSTISSAM TEMPEST 2/95 pg 28 Para 6	RED processors and RF transmitters in Cabinet 3. RED processors should not be powered from the same circuits as RF transmitters.
05	CA	NSTISSAM 2-95A Para 3 Notes: 3	RED/BLACK cable separation. Two inch minimum separation requirement. Six inch separation requirement for RED/BLACK cables that run in parallel for 100 ft runs. The only way to ID is via cable tags.
06	CA	IA Pub 5239-31 Para A.1.1.7.	ARC-210 and ANDVT Secure voice cables. Transmit and receive audio lines need to be shielded.
07	CA	NSTISSAM 2-95A Recommendation 1 Pg 27 Para 3 Notes: 2	Operator position in Classified C4ISR room has cables from two UNCLAS LAN and three CLASSIFIED LAN connections. Require 2 inch (5 cm) separation.
08	CA	IA 5239-31 Para A.1.1.7.2.a.	Outer shield missing on KIV-7 db connector.
09	Waived	IA 5239-31 Para B.1.2.6	Cabinet 1: Not grounded properly to ship's hull (i.e. Spring coils do not constitute a Class C bond).
10	Waived	IA 5239-31 Para B.1.2.6	Cabinet 2: Not grounded properly to ship's hull (i.e. Spring coils do not constitute a Class C bond).
11	Waived	IA 5239-31 Para B.1.2.6	Cabinet 3: Not grounded properly to ship's hull (i.e. Spring coils do not constitute a Class C bond).
12	CA	IA 5239-31 Para B.1.2.6	KG-175/TACLANE in Cabinet 3 missing grounding hardware.

2

2. Bridge:

01	Waived	NSTISSAM 2-95A Recommendation I Pg 27 Para 3 Notes: 2	LAN (RED) cable is routed in conjunction with common cable run. No RED/BLACK separation.
02	CA	IA 5239-31 Para B.1.2.6	Starboard KITE 1: Replace ground wire with Class C bonding.
03	CA	NSTISSAM 2-95A Pg 30 Para 4.4.1	Starboard KITE 1: Cable shielding not grounded at connector (J1).
04	CA	NSTISSAM 2-95A Pg 30 Para 4.4.1	Port KITE 2: Cable shielding not grounded at connector (J1).
05	CA	NSTISSAM 2-95A Recommendation I	Starboard KITE 1: Missing 3 meter separation between RF transmitter and Red processor.
06	CA	NSTISSAM 2-95A Recommendation I	Port KITE 2: Missing 3 meter separation between RF transmitter and Red processor.

3. Other:

01	Waived	NSTISSAM 2-95A Recommendation I Pg 27 Para 3 Notes: 2	CO's and XO's cabin. RED cables of associated LAN drops are routed through a common cable run (i.e. black signal and power lines). Recommend 2 inch separation.

NSTISSAM TEMPEST 2/95A

Department of the Navy (DoN) Information Assurance (IA) Publication Module 5239-31

U.S. Department of Homeland Security
United States Coast Guard

Commander
Maintenance and Logistics Command Atlantic

300 East Main Street, Suite 700
Norfolk, VA 23510-9103
Staff Symbol: (tp-1)
Phone: (757) 628-4051
Fax: (757) 628-4035
E-mail: Ernestine.N.Cook@uscg.mil

2241
05.0380
OCT 14 2005

MEMORANDUM

From: B. J. O'Keefe CAPT
MLCLANT (t)

Reply to: (tp-1)
Attn of: Ernestine Cook
(757) 628-4051

To: CGC METOMPKIN (WPB 1325)

Subj: VISUAL TEMPEST INSPECTION SUMMARY OF USCGC METOMPKIN (WPB 1325)

Ref: (a) DON IA PUB 5239-31 Information Assurance Shipboard Red/Black Installation Publication
(b) NSTISSAM TEMPEST 2-95 Red/Black Installation Guidance
(c) TISCOM (isd-3b) Memo 2241 of 12 Jul 05
(d) COMDT COGARD Washington DC//CG-62//042137Z Mar 04

1. Mr. Timothy Neary of ESU Miami conducted an inspection of the Secure Electrical Information Processing System (SEIPS) onboard CGC METOMPKIN on 4 August 2005. The inspection was conducted as required by references (a) and (b). Reference (c) cites waivers that have been given and will not be reported. A summary of a minor discrepancy is listed in enclosure (1).

2. No serious TEMPEST hazards were noted; therefore you may continue normal operations. In accordance with reference (d), discrepancies must be corrected within 90 days. You should contact Ms. Ernestine Cook to schedule a re-inspection. This summary also provides a record of the installation at the time of inspection. Modifications or changes to the SEIPS shall not be made without approval of TISCOM (isd-3b) or MLCA.

3. This summary and amendments to this summary shall be retained in the unit's SEIPS TEMPEST documentation file.

#

Enclosure: (1) Visual TEMPEST Inspection Report

Copy: LANTAREA
TISCOM (isd-3b)
ESU Miami
ESD Key West

Visual TEMPEST Inspection Summary

USCGC METOMPKIN
4 August 2005

The entire Secure Electrical Information Processing System was inspected.

List of spaces with secure processing equipment inspected by the visual TEMPEST inspector:

1. CIC
2. Radio

Discrepancy form legend:

Column A: Sequential discrepancy number

Column B:

SF	Correction of the discrepancy is within the capability of ship's force.
SFC	Correction of the discrepancy was completed by ships force prior to completion of inspection visit.
IA	Indicates that the assistance of an industrial activity is probably required to properly correct the discrepancy.
IAC	Indicates that an industrial activity corrected the discrepancy.
SA	Indicates that the assistance of a support activity is probably required to properly correct the discrepancy.
SAC	Indicates that a support activity corrected the discrepancy.

Column C: Document Reference to which the installation does not conform.

Narrative: A brief description of the discrepancy found.

ENCLOSURE (1)

Discrepancies and Corrective Action Report

1. CIC:

A	B	C	Narrative
001	SA	IA Pub 5239-31 Para A.1.1.7.3.1.b	RED fiber optic passes through armory, which has a solid metal door. If the cable passes through locked spaces, it shall be contained in PDS. The TISCOM compromise, a mesh door to permit physical inspection, is scheduled to be installed during the next shipyard period.

U.S. Department of Homeland Security
United States Coast Guard

Commander
Maintenance and Logistics Command Atlantic

300 East Main Street, Suite 700
Norfolk, VA 23510-9103
Staff Symbol: (tp-1)
Phone: (757) 628-4051
Fax: (757) 628-4036

2241
05.0043
SEP 13 2005

MEMORANDUM

From: B. [illegible] CAPT
MLCLANT (d)

Reply to: (tp-1)
Attn of: Ernestine Cook
(757) 628-4051

To: CGC NUNIVAK (WPB 1306)

Subj: VISUAL TEMPEST INSPECTION SUMMARY FOR USCGC NUNIVAK (WPB 1306)

Ref: (a) NSTISSAM 2-95 Red/Black Installation Guidance
(b) DON IA PUB 5239-31 Information Assurance Shipboard Red/Black Installation Publication
(c) COMDT COGARD Washington DC//CG-62//042137Z Mar 04

1. ET2 Timothy Cole of ESD New Orleans conducted an inspection of the Secure Electrical Information Processing System (SEIPS) on CGC NUNIVAK on 7 January 2005. The inspection was conducted as required by references (a) and (b).

2. Enclosure (1) is a summary of minor discrepancies with the SEIPS. No serious TEMPEST hazards were noted; therefore, you may continue normal operations. In accordance with reference (c), discrepancies must be corrected within 90 days. You should contact Ms. Ernestine Cook to schedule a re-inspection. This summary also provides a record of the installation at the time of the inspection. Modifications or changes to the SEIPS shall not be made without the approval of TISCOM (isd-3b) or MLCA.

Subj: VISUAL TEMPEST INSPECTION SUMMARY 2241
FOR USCGC NUNIVAK (WPB 1306) SEP 13 2005

3. This summary and amendments to this summary shall be retained in the unit's SEIPS (TEMPEST) documentation file.

#

Enclosures: (1) Visual Tempest Inspection Summary
(2) TISCOM (iad-3b) Memo 2241 of 12 Jul 05

Copy: COMDT (CG-6, G-DPM-3)
LANTAREA
TISCOM (iad-3b)
ESU New Orleans
ESD New Orleans
ESU Miami
ESD Key West

2

Visual TEMPEST Inspection Summary

The entire Secure Electrical Information Processing System was inspected.

List of spaces with secure processing equipment inspected by the visual TEMPEST inspector:

1. Radio Room
2. State Rooms
3. Bridge

Discrepancy form legend:

Column A: Sequential discrepancy number

Column B:

SF	Correction of the discrepancy is within the capability of ship's force.
SFC	Correction of the discrepancy was completed by ships force prior to completion of inspection visit.
IA	Indicates that the assistance of an industrial activity is probably required to properly correct the discrepancy.
IAC	Indicates that an industrial activity corrected the discrepancy.
SA	Indicates that the assistance of a support activity is probably required to properly correct the discrepancy.
SAC	Indicates that a support activity corrected the discrepancy.
CA	Indicates that a Contractor activity is required to correct the discrepancy.

Column C: Document Reference to which the installation does not conform.

Narrative: A brief description of the discrepancy found.

Enclosure (1)

Discrepancies and Corrective Action Report

1. Radio Room 2-28-O-Q

A	B	C	Narrative
001	IA/SA	IA PUB 5239-31 Paragraph A.1.1.2	The printer (red) uses black power. The printer router (red) uses black power. Recommend plugging printer into UPS.
002	*Waived	NSTISSAM 2-95 Rec I Paragraph 6	There is no 3meter separation between printer (red) and IFF transmitter. Transmitter is enclosed in metal case. Prototype passed RED LAN instrumented test. WAIVED
003	*Waived	NSTISSAM 2-95 Rec I Paragraph 6	In Rack #3, there is no 3meter separation between red and black cables before entering the Marcom switch. Tested and evaluated by SPAWAR previously. WAIVED
004	*Waived	NSTISSAM 2-95 Rec I Paragraph 6	In Rack #3, there is no 3meter separation between cryptographic equipment and RT9000 transceiver. Tested and evaluated by SPAWAR. WAIVED
005	CA	IA PUB 5239-31 Paragraph A.1.1.7.3.1.B	There is not a secure Protected Distribution System (PDS) leaving Radio Room. LE Locker behind Secure Space. Issue to be corrected by Contractor. LE locker will have full length locking cage to allow viewing of the subject cables.

Note: Separation of IFF antenna line and Class LAN line may be part of an upcoming GROOM

* Per TISCOM (isd-3b) ltr of 12 Jul 05

2

U.S. Department of Homeland Security
United States Coast Guard

Commander
Maintenance and Logistics Command Atlantic

300 East Main Street, Suite 700
Norfolk, VA 23510-9103
Staff Symbol: (tp-1)
Phone: (757) 628-4051
Fax: (757) 628-4035
E-mail: Ernestine.N.Cook@uscg.mil

2241
05.0382
OCT 27 20

MEMORANDUM

From: B. J. O'Keefe CAPT
MLCLANT (t)

Reply to: (tp-1)
Attn of: Ernestine Cook
(757) 628-4051

To: USCGC ATTU (WPB 1317)

Subj: VISUAL TEMPEST INSPECTION SUMMARY OF USCGC ATTU (WPB 1317)

Ref: (a) DON IA PUB 5239-31 Information Assurance Shipboard Red/Black Installation Publication
(b) NSTISSAM TEMPEST 2-95 Red/Black Installation Guidance

1. Mr. Timothy Neary of ESU Miami conducted a visual TEMPEST inspection of the Secure Electrical Information Processing System (SEIPS) onboard CGC ATTU on 3 August 2005. The inspection was conducted as required by references (a) and (b). A summary of corrected discrepancies is listed in enclosure (1). No new discrepancies were found.

2. This summary provides a record of the installation at the time of inspection. Modifications or changes to the SEIPS shall not be made without approval of TISCOM (isd-3b) or MLCA. This summary and amendments to this summary shall be retained in the unit's SEIPS TEMPEST documentation file.

#

Enclosure: (1) Visual TEMPEST Inspection Summary

Copy: LANTAREA
TISCOM (isd-3b)
ESU Miami
ESD Key West

Visual TEMPEST Inspection Summary

USCGC ATTU (WPB 1317)
3 August 2005

This Visual TEMPEST Inspection is for the FTA Visit

The entire Secure Electrical Information Processing System was inspected.

List of spaces with secure processing equipment inspected by the visual TEMPEST inspector:

1. Electronic space
2. Bridge

Discrepancy form legend:

Column A: Sequential discrepancy number

Column B:

SF	Correction of the discrepancy is within the capability of ship's force.
IAC	Correction of the discrepancy was completed by ships force prior to completion of inspection visit.
IA	Indicates that the assistance of an industrial activity is probably required to properly correct the discrepancy.
IAC	Indicates that an industrial activity corrected the discrepancy.
SA	Indicates that the assistance of a support activity is probably required to properly correct the discrepancy.
SAC	Indicates that a support activity corrected the discrepancy.
CA	Indicates that the Contractor Activity is probably required to properly correct the discrepancy.

Column C: Reference of the paragraph in designated manuals to which the installation does not conform.

Narrative: A brief description of the discrepancy found.

Enclosure (1)

Discrepancies and Corrective Action Report

1. Electronic Space:

A	B	C	Narrative
01	CA	NSTISSAM TEMPEST 2/95 PG 27 Para 2a/pg16 para 5 IA Pub 5239-31 A.1.1.1 a, b	Cabinet 3: Black RF transmitter (RT-1794) in same rack as Red Processors. Recommend moving 3 meters away or in adjacent Black Equipment Room. Recommend placing entire ARC-210 system on Bridge. Waived.
02	CA	NSTISSAM TEMPEST 2/95 PG 27 Para 2b	Cabinet 3: Red processor less than one meter away from power line to black transmitter (RT-1794 p/o ARC-210). Waived.
03	CA	NSTISSAM TEMPEST 2/95 pg 27 Para 2a	Cabinet 3: Red processor less than one meter away from black signal lines connected to RF transmitter (RT-1794). Waived.
04	CA	NSTISSAM TEMPEST 2/95 pg 27 Para 4, Para 4.4.1.1, 4.1.1.2 IA PUB 5239-31 Para A.1.7.1 IA PUB 5239-31 MIL-STD 188-124B Para 5.2.12	Signal cable used with RED processors, BLACK processors, ISDN telephones are not terminated. Red data cables for RED LAN have aluminum/mylar shielding. Manufacturer data: DRAKA COMTEQ (P) ShipLan Cable 4PR 24 AWG Screened 307650. Subject cable may pose a TEMPEST hazard. B.1.2.5 (5239): Approved cables. Mil-C-17 (ref k), or MIL-C-915 (reference(l)), MIL-C-24640(reference(n)) or MIL-C-24643 (reference (o)). Researched cable and found that it does NOT meet any of the above MIL-SPECs. Draka sells data cables that are MIL-DTL-24643 compliant. Subject cables are CAT 5e Shiplan '59W' , '59' and '59S' Marine data cables. The cables listed all have a braided shield in addition to the aluminum mylar tape. The braided shield allows for a flexible ground. NSTISSAM 2-95: RED processors meeting the requirements of NSTISSAM TEMPEST/1-92 (Levels I, II, or III) must use optical or shielded wire cables if specified as part of the manufacturer's installation specification, or if specified for compliance with TEMPEST certification. Paragraphs 4.4.1.1, and 4.1.1.2 defines cable characteristics and shield termination. IA Pub 5239-31: RED Shielded Metallic Wire Cable. RED metallic wire cables in all locations shall be shielded, with the exception of desktop computer cables that are provided by the manufacturer, where there is not an offered shielded cable option. This requirement is not applicable to RED fiber optic cables. MIL-STD-188 "Foil shields are not acceptable for peripheral bonding and do not provide mechanical durability" IA Pub 5239-31 pg B-9 Para d. Note: "If both ends of the cable will not have the shield taken to ground, approval by the cognizant CTTA should be obtained prior to installation." Other source (AFMAN33-214V2 DATED 21SEP2001) states that foil shielding is intended for voice or digital signals less than 5Kbps. CG must assume risks associated with using subject cable. This is also documented in Instrumented Test Report. Acceptable risk. No discrepancy.

2

05	CA	NSTISSAM TEMPEST 2/95 pg 28 Para 6	RED processors and RF transmitters in Cabinet 3. RED processors should not be powered from the same circuits as RF transmitters. Waived.
06	CA	IA Pub 5239-31 Para B.1.2.6.10	AN/UPX-28 has flexible ground strap with crimped ends. Replace with Class C bond strap. Corrected.
07	CA	IA Pub 5239-31	On racks, install ground cables per IA 5239-31. Where required, use soldered connectors vice crimping. Waived.
08	CA	IA Pub 5259-31	Remove external tooth washers on ground connectors to cabinets. Use lock washers and lug nuts per IA Instruction 5239-31 Figure B-5. Corrected
09	CA	IA Pub 5239 B.1.2.6.12	Keyboard and Monitor in Cabinet #1 has non-manufacturer supplied power cable. Bond shelf to rack. Contends it is manufacturer's cable. Waived.
10	CA	NSTISSAM 2-95 Para 3 Notes 3	RED/BLACK cable separation. Two inch minimum separation requirement. Six inch separation requirement for RED/BLACK cables that run in parallel for 100 ft runs. The only way to ID is via cable tags. Waived.
11	CA	IA Pub 5239-31 Para B.1.2.6.10	Remove flexible ground strap with crimped ends from AN/DVT rack and replace with Class C solid. Strap. Corrected.
12	CA	IA Pub 5239-31 Para A.1.1.7.	ARC-210 Secure voice cables. Transmit and receive audio lines need to be shielded. Resolved. See 2. Bridge item #4.
13	CA	NSTISSAM 2-95 Recommendation I Pg 27 Para 3 Notes: 2	Operator position in Classified C4ISR room has cables from two UNCLAS LAN and three CLASSIFIED LAN connections. Require 2 inch (5 cm) separation. Waived.

2. Bridge:

01	CA	NSTISSAM 2-95 Recommendation I Pg 27 Para 3 Notes: 2	LAN (RED) and GPS (BLACK) use common junction box. No RED/BLACK separation. Corrected, moved BLACK LAN and GPS to separate junction boxes. RED LAN is routed in common cable run. Does not have minimum separation. See item #10.
02	CA	IA Pub 5239-31 Para B.1.2.6.13	No metal-to-metal contact for ground strap from ARC 210 Tray to ground on shelf. Recommend use SOLID Class C ground strap vice crimped wire. Corrected.
03	CA	IA Pub 5239-31 A.1.1.7.2a	Not clear if Shielded Twisted Pair is used for voice and control wirelines. SPAWAR will inspect and test during instrumented TEMPEST test. NOTE: No discrepancy noted by SPAWAR testing. Reference to ARC-210. Informed by Harris Corp that kit provided included shielding of all RED cables. Corrected.
04	CA	IA Pub 5239-31 Para A.1.1.7.2 Pg A-3	Unshielded cable connected to connector J3 on ARC-210 Tray. Twisted red wires (four) runs to ARC-210 Control head mounted in the forward console of the bridge. This is the Control and Status of the ARC-210. All data is by channel/mode/power only, no audio is routed to the Control head. Replace cable run with proper cable. This cable should be shielded. Corrected

3

3. Other:

01	CA	NSTISSAM 2-95 Recommendation 1 Pg 27 Para 3 Notes: 2	CO's cabin. RED and BLACK LAN ports have no cable separation. Recommend 2 inch separation. RED/BLACK cable is tied together. Acceptable risk while underway. No discrepancy.
02	CA	NSTISSAM 2-95 Recommendation 1 Pg 27 Para 1	CO's cabin. Proposed RED laptop on desk top less than 20 inches (20 cm) from black phone. Acceptable risk while underway. No discrepancy.
03	CA	IA Pub 5239-31 Para A.1.f.7.3.1.b	RED Fiber optic cable goes through space adjacent to black racks that contains hasp for locking. If the cable passes through normally locked spaces (for example, voids, staterooms, etc), that portion of the cable shall be contained in a metallic conduit. This space is the cutters armory and is considered a restricted area. Corrected.

TEMPEST 2/95

Department of the Navy (DoN) Information Assurance (IA) Publication Module 5239-31

MIL-STD-188-124B Grounding Bonding Shielding for Common Long Haul/Tactical Communications Systems

Air Force Manual 33-214, Volume 2, Communications and Information Emission Security Countermeasures Review

U.S. Department of Homeland Security
United States Coast Guard

Commander
Maintenance and Logistics Command Atlantic

300 East Main Street, Suite 700
Norfolk, VA 23510-9103
Staff Symbol: (tp-1)
Phone: (757) 628-4051
Fax: (757) 628-4036

2241
05.0098

SEP 13 2005

MEMORANDUM

From: B. [illegible] Keefe CAPT
MLCLANT (t)

Reply to (tp-1)
Attn of: Ernestine Cook
(757) 628-4051

To: USCGC VASHON (WPB 1308)

Subj: VISUAL TEMPEST INSPECTION SUMMARY OF USCGC VASHON (WPB 1308)

Ref: (a) DON IA PUB 5239-31 Information Assurance Shipboard Red/Black Installation
(b) NSTISSAM TEMPEST 2-95 Red/Black Installation Guidance

1. ETC David Cooper and ET2 James Bennett of ESD New Orleans conducted an inspection of the Secure Electrical Information Processing System (SEIPS) onboard CGC VASHON on 17 March 2005. The inspection was conducted as required by references (a) and (b). A list of discrepancies is noted in enclosure (1).

2. This summary provides a record of the installation at the time of inspection. Enclosure (2) provides the basis for waiver statements in enclosure (1). Modifications or changes to the SEIPS shall not be made without the approval of TISCOM (isd-3d) or MLCA.

3. This summary shall be retained in the unit's SEIPS (TEMPEST) documentation file.

#

Enclosures: (1) Visual Tempest Inspection Report
(2) TISCOM (isd-3b) Memo 2241 of 12 Jul 05

Copy: COMDT (CG-6, G-DPM-3)
LANTAREA
TISCOM (isd-3b)
ESU New Orleans
ESD New Orleans

Visual TEMPEST Inspection Summary

The entire Secure Electrical Information Processing System was inspected.

List of spaces with secure processing equipment inspected by the visual TEMPEST inspector:

1. Radio Room
2. State Rooms
3. Bridge

Discrepancy form legend:

Column A: Sequential discrepancy number

Column B:

SF Correction of the discrepancy is within the capability of ship's force.

SFC Correction of the discrepancy was completed by ships force prior to completion of inspection visit.

IA Indicates that the assistance of an industrial activity is probably required to properly correct the discrepancy.

IAC Indicates that an industrial activity corrected the discrepancy.

SA Indicates that the assistance of a support activity is probably required to properly correct the discrepancy.

SAC Indicates that a support activity corrected the discrepancy.

Column C: Document Reference to which the installation does not conform.

Narrative: A brief description of the discrepancy found.

ENCLOSURE (1)

Discrepancies and Corrective Action Report

1. Radio Room 2-29-2-Q

A	B	C	Narrative
001	WAIVED	NSTISSAM 2-95 Rec I Paragraph 1.A	The printer (red) is closer than 1 M to black IFF power lines. Waived as result of Instrumented Test on prototype.
002	WAIVED	NSTISSAM 2-95 Rec I Paragraph 2.A	The printer (red) along with Classified LAN line runs parallel with IFF transmitter antenna line. There is no separation of these lines. Waived as result of Instrumented Test on prototype.
003	WAIVED	NSTISSAM 2-95 Rec I Paragraph 6	There is no 3-meter separation between printer (red) and IFF transmitter. Waived as result of Instrumented Test and IFF metal enclosure.

2. State Rooms 1-16-1-L/1-16-2-L

A	B	C	Narrative
001	WAIVED	NSTISSAM 2-95 Rec I Paragraph 2.A Note 2	RED LAN Line is in same distribution panel with RF transmission lines. Waived as result of Instrumented Test on prototype.

3. Bridge

A	B	C	Narrative
001	WAIVED	NSTISSAM 2-95 Rec I Paragraph 2.A Note 2	RED LAN Line is in same distribution panel with RF transmission lines. Waived as result of Instrumented Test on prototype.

U.S. Department of Homeland Security
United States Coast Guard

Commander
Maintenance and Logistics Command Atlantic

300 East Main Street, Suite 700
Norfolk, VA 23510-9103
Staff Symbol: (p-1)
Phone: (757) 628-4051
Fax: (757) 628-4036
E-mail: Ernestine.N.Cook@uscg.mil

2241
06.0042

MAR - 2 2006

MEMORANDUM

From: B. J. O'Keefe, CAPT
MLCLANT (p)

Reply to: (p-1)
Attn of: Ernestine Cook
(757) 628-4051

To: COMDT (G-DPM-3)

Subj: VISUAL TEMPEST INSPECTION FOR USCGC MANITOU (WPB 1302)

Ref: (a) NSTISSAM TEMPEST 2-95 Red/Black Installation Guidance
(b) DON IA PUB 5239-31 Shipboard Red/Black Installation
(c) COMDT COGARD Washington DC 042137Z Mar 04

1. ITC Kevin Priddy and ELC2 David Beaver of ESU St. Louis conducted a Visual TEMPEST Inspection (VTI) of the Secure Electrical Information Processing System (SEIPS) onboard CGC MANITOU on 23 January 2006. The inspection was conducted as required by references (a) and (b). A summary of minor discrepancies is listed in enclosure (1).

2. No serious TEMPEST hazards were noted; therefore you may continue normal operations. In accordance with reference (c), discrepancies must be corrected within 90 days. You should contact Ms. Ernestine Cook to schedule a re-inspection. This summary also provides a record of the installation at the time of inspection. Modifications or changes to the SEIPS shall not be made without the approval of TISCOM (isd-3b) or MLCA.

3. This summary and amendments to this summary shall be retained in the cutter's SEIPS TEMPEST documentation file.

#

Enclosure: (1) Visual TEMPEST Inspection Summary

Copy: COMDT (CG-6)
TISCOM (isd-3b)
LANTAREA
ESU St. Louis
ESU New Orleans
ESU Miami
CGC MANITOU

Visual TEMPEST Inspection Summary

CGC MANITOU

The Secure Electrical Information Processing System was inspected.

List of spaces with secure processing equipment inspected by the visual TEMPEST inspector:

1. Radio Room (Secure space)
2. State Rooms (Port & Starboard)
3. Bridge

Discrepancy form legend:

Column A: Sequential discrepancy number

Column B:

SF Correction of the discrepancy is within the capability of ship's force.

SFC Correction of the discrepancy was completed by ships force prior to completion of inspection visit.

IA Indicates that the assistance of an industrial activity is probably required to properly correct the discrepancy.

IAC Indicates that an industrial activity corrected the discrepancy.

SA Indicates that the assistance of a support activity is probably required to properly correct the discrepancy.

SAC Indicates that a support activity corrected the discrepancy.

CA Indicates that a Contractor activity is required to correct the discrepancy.

Column C: Document Reference to which the installation does not conform.

Narrative: A brief description of the discrepancy found.

Enclosure (1)

Discrepancies and Corrective Action Report

1. Radio Room (Secure Space) 2-29-2-Q:

A	B	C	Narrative
001	WAIVED	NSTISSAM 2-95 Rec I Paragraph 1.A	Red printer less than 1M separation from IFF transmitter.
002	CA	NSTISSAM 2-95 Rec I Paragraph 2.A Note 2	Classified LAN in same wire bundle as black signal cables.
003	IAC	NSTISSAM 2-95 Paragraph 4.9.6	Commercial Television cable entering a secure space requires use of an amplifier/attenuator at the entry point of the space to provide one way filtering of electronic signals. Corrected. Filter is in rack.
004	WAIVED	NSTISSAM 2-95 Rec I Paragraph 2.A	The printer (red) along with Classified LAN line runs parallel with IFF antenna line. There is no separation of these lines.
005	WAIVED	NSTISSAM 2-95 Rec I Paragraph 1.B	There is no 1 meter separation between printer (red) and IFF transmitter RF cable.
006	WAIVED	NSTISSAM 2-95 Rec I Paragraph 1.B	There is no 1 meter separation between printer (red) and IFF transmitter black power line.

2. State Rooms 1-16-1-L/1-16-2-L:

001	CA	NSTISSAM 2-95 Rec I Paragraph 2.A Note 2	Classified LAN lines are run with BLACK wire lines (no 5 centimeter separation).
002	CA	NSTISSAM 2-95 Rec I Paragraph 2.B Note 2	Classified LAN lines are run with 120VAC power lines (no separation).
003	CA	NSTISSAM 2-95 Rec I Paragraph 2.A	Class LAN box located adjacent to BLACK LAN box.

2

3. Bridge 03-14-01:

001	CA	NSTISSAM 2-95 Rec I Paragraph 1. A & B	RED processor less than 1 meter from BLACK power lines and BLACK equipment. KITE-1 handset (2 each) physically cannot separate the lines. KITE-1 is an integrated remote hand set for RED and BLACK equipment.
002	CA	NSTISSAM 2-95 Rec I Paragraph 1. A	Less than 1 meter of separation between RED processor and BLACK equipment on STBD side.
003	CA	NSTISSAM 2-95 Rec I Paragraph 1. B	Less than 1 meter of separation between RED processor and BLACK wire lines on STBD side.
004	CA	NSTISSAM 2-95 Rec I Paragraph 1.A	Less than 1 meter of separation between RED processor and BLACK power on STBD side.
005	CA	NSTISSAM 2-95 Rec I Paragraph 2. B	Less than 5 centimeters of separation between RED wire line and BLACK wire line on STBD side.

Mr. Mark Rupprecht
Code 70B/x3150
13 APR 07

Issue: Request for clarification on COTF 27 APR 05 Letter: Update of the 123 Foot Patrol Boat Operational Assessment Analysis (OAA) of 29 SEP 04. E-mail from LCDR Shue requesting clarification.

Background: At the request of the USCG (COMDT COGARD 101705Z MAR 05), COMOPTEVFOR provided an update to the initial OAA that reviewed 20 issues assessed as greatest risk to a successful Operational Evaluation. The update was conducted between 11 March and 5 April 2005. It was based upon underway observations of USCGC MATAGORDA and USCGC PADRE as well as visits to USCG Sector Key West and cutters METOMPKIN and NUNIVAK in port.

Discussion: Paragraph 1.4 of the OAA Update Matrix focused on the installation of equipment, software, and certifications required for the exchange of the Common Operational Picture (COP) in a secure environment. The Navy's SPAWARSYSCOM evaluates whether Naval/Coast Guard systems meet the minimum requirements to connect to DOD classified networks. The USCG designated authority then uses that information in determining whether to issue an Interim Authority to Operate (IATO). An IATO is granted when sufficient measures have been taken to prevent unauthorized access to a C4 system. This is based on the cumulative result of physical equipment installations, required inspections (e.g. TEMPEST, Communications Security (COMSEC), etc.), doctrine, documentation, functionality, and training. At the time of the update, several positive events were noted. TEMPEST discrepancies (bonding and cabling) and COMSEC discrepancies (classified space physical access) were corrected in USCGC MATAGORDA. In addition, the requisite software had been loaded. However, there were unresolved installation discrepancies which precluded a SPAWARSYSCOM recommendation for USCG (CG-62) to release an IATO. Without the IATO, cutters were not authorized to transmit and receive classified information, significantly limiting their participation in USCG tactical operations.

The comments in paragraph 1.10 pertain to the Connectivity Critical Operational Issue (COI) (the ability to send data to/from the cutter). The cutter's ability to obtain satisfactory TEMPEST inspection reports and COMSEC certifications was a significant milestone. A satisfactory TEMPEST report is granted by an accredited TEMPEST inspector when sufficient physical measures (equipment positioning and protection) are taken to prevent unauthorized electronic emanations.

The corrections made in MATAGORDA were reported as installed in the follow-on cutters (PADRE and METOMPKIN) via USCG message traffic and email, leading COMOPTEVFOR to observe that the remaining cutters should be capable of meeting the standards. In spite of this progress, physical connectivity was still assessed as high risk, based upon the inability to establish and maintain classified two-way data exchanges with other USCG and Naval vessels.

Recommendation: None. For Information Only.

U. S. Department of Homeland Security

United States Coast Guard

Commandant
United States Coast Guard

2100 Second Street, S.W.
Washington, DC 20593-0001
Staff Symbol: G-ICA
Phone: (202) 366-4280
FAX: (202) 366-7124

DEPARTMENT OF HOMELAND SECURITY

U. S. COAST GUARD

STATEMENT OF

RADM GARY BLORE

ON THE

COMPLIANCE WITH REQUIREMENTS OF THE DEEPWATER CONTRACT

BEFORE THE

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

U. S. HOUSE OF REPRESENTATIVES

APRIL 18, 2007

Chairman Oberstar, Ranking Member Mica, distinguished members of the Committee: I am pleased to appear before you today to discuss the Deepwater program. In particular, I appreciate the opportunity to outline how we are positioning ourselves to move forward to better meet your expectations and to deliver much-needed assets to sustain Coast Guard operations well into the 21st century.

First and foremost, as Deepwater's Program Executive Officer, I would like to establish that my overarching goal–and the top capital priority for the Coast Guard–is the modernization and recapitalization of our aging fleet of cutters, aircraft and sensors. Our ability to save lives, interdict drugs and alien smugglers, and protect ports, waterways and natural resources depends on our successful accomplishment of that goal. We must get this right and I echo the commitment of our Commandant, Admiral Allen, to do just that.

Moreover, I am truly grateful for all that this committee has done to bring attention to our challenges. Your continuing interest in Deepwater has served as a catalyst for the kind of real change needed to promote sound stewardship and effective program management at all levels.

Looking Forward

Yesterday, I completed my first year at the helm of this largest acquisition program in Coast Guard history. Undoubtedly, we've faced our share of challenges these past 12 months and it would be easy to dwell on what's gone wrong. It would be easy—but it wouldn't be fair. As you have just heard from those who preceded me at this table, we have indeed learned some lessons the hard way. But I assure you that education has not been wasted. As a result of those lessons learned and with the full support of the Commandant and the Department of Homeland Security (DHS), we are taking action every day to strengthen program management and execution and to ensure mistakes like those made with the 123-foot patrol boats will not be repeated.

While acknowledging that there remains room for improvement, I hope we won't overlook some significant recent accomplishments. Deepwater assets are in the fleet today, contributing to the successful execution of an array of Coast Guard missions. As of the end of March, all air stations with HH-65 Dolphin helicopters are now flying the "C" model with new Turbomeca Arriel 2C2 engines and upgraded gearboxes, installed as part of our legacy asset modernization program. With a 40 percent power increase and greater reliability, the HH-65C has re-established itself as a workhorse of our helicopter fleet.

Also in late March, the crew of CGC SHERMAN made use of Deepwater-enhanced command and control capabilities while seizing more than 42,000 tons of cocaine from the Motor Vessel GATUN off the coast of Panama. The SHERMAN's commanding officer noted that this largest bust in Coast Guard history would not have been possible before the service's high- and medium-endurance cutters were equipped with upgraded tracking capabilities and the ability to communicate securely over great distances.

This is an exciting time, with two National Security Cutters (NSC) under construction in Mississippi and HC-144A maritime patrol aircraft Nos. 1 and 2—the first new aviation assets acquired under Deepwater—being missionized at the Aviation Repair & Supply Center in North Carolina. Aircraft No. 3 is expected to be delivered for missionization later this year and Nos. 4 and 5 are already in production. Aircraft Nos. 4 and 5 were contracted for in January 2007 at a cost of approx. $34.89 million per aircraft. Earlier this month, we put aircraft Nos. 6 thru 8 on contract, at a price of approx. $33.99

million per aircraft. This is a cost reduction of almost $900,000 per aircraft between Nos. 4 and 5 and Nos. 6 thru 8. These are but a few examples of the program's forward momentum.

Room for Reflection

As I indicated earlier, we are committed to benefiting from lessons learned. Obviously, we are very disappointed with the 123-foot patrol boats. The conversion of these cutters was planned as a bridging strategy until we could deliver the more capable Fast Response Cutter (FRC). The decision to proceed with these conversions was based on consideration of limited resources, a growing gap in patrol boat hours, and identified risk associated with the conversion design. At the time, the conversion was seen as the lowest risk option given available resources and operational requirements.

But, as has been discussed in detail before this Committee, early hull deformation led the Coast Guard to re-examine the plan for the 123-foot patrol boats and halt conversions in May 2005 at just eight hulls, instead of 46 as originally planned. When repeated efforts to repair the hulls proved unsuccessful and even more significant structural problems surfaced, Admiral Allen last November suspended operation of the cutters until a comprehensive engineering solution was identified. I commit to you today, as the Program Executive Officer for Deepwater, that the type of design and structural program management decisions that occurred with the 123-foot patrol boats will not happen with future Deepwater assets.

I want to clearly state that the decision to suspend operation of these boats was in no way related to C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance) or topside equipment issues. Rather, the decision was based entirely on ongoing structural problems.

That notwithstanding, clarifying and addressing issues with C4ISR and topside equipment on the cutters is of utmost concern to us. I appreciate the cooperative relationship we've had with the Department of Homeland Security Inspector General as his office has looked at these issues. We've benefited from his staff's frank assessments. We're actively addressing both of these areas to ensure the National Security Cutter does not experience the same problems.

We faced significant staffing challenges throughout the 123-foot conversion project. The Coast Guard had only one person working in the Program Manager's Representative Office (PMRO) overseeing the contractor at the shipyard when the first 110-foot patrol boat was delivered for conversion. By the time the stop work order was issued after conversion of the eighth boat, the staff had grown to a still-slim total of seven members. These personnel are essential to a successfully run program, because they provide on-site technical and contract oversight throughout the construction process.

Moving Beyond

As the Deepwater program has evolved, we have reinvigorated our workforce planning process and continue the effort to increase staff to the appropriate level. I appreciate this Com mittee acting to authorize additional billets for this endeavor. As a direct result of these efforts, the Coast Guard will have 52 full-time government personnel at our Gulf Coast PMRO by the end of this fiscal year. The Navy's Supervisor of Shipbuilding Office (SUPSHIP) also assigned 12 people to our PMRO in Pascagoula, Miss., where they are supporting construction of the NSC at Northrop Grumman Ship Systems. During a trip to Pascagoula last week, I had a chance to visit with many of these acquisition and technical professionals and I am confident their active oversight of contractor performance during NSC construction will pay dividends.

Contractor requests demand intense scrutiny from the government prior to any action being taken; to facilitate this, we've developed a new Class I Engineering Change Proposal (ECP)/Request for Deviation (RFD)/Request for Waiver (RFW) review process. This process requires that, prior to implementation; each ECP/RFD/RFW is reviewed in detail by a board of technical experts and contracting officers, based on pre-determined guidelines. It also mandates thorough documentation of each contractor request, the formal review process, and decision of the Coast Guard in regard to each request. This will facilitate timely and consistent handling of each ECP/RFD/RFW.

The Coast Guard will use the American Bureau of Shipping (ABS) to certify Deepwater equipment and vessels according to High Speed Naval Craft (HSNC) rules. Specifically, the Coast Guard is working with industry to maximize the use of HSNC standards for our surface assets. By implementing this certification expectation, we can ensure that equipment and assets meet requirements and that standards are enforced consistently. There is a growing market today for external rules and standards bodies, and we'll use those rules and bodies to assist with certification in the future. But, the government needs to be the final arbiter of those standards.

I would like to spend just a moment addressing the issue of TEMPEST certification for secure communications onboard our cutters. I know that a lot has been said here and elsewhere about this topic, so I want to be very clear in stating that the TEMPEST certification process for the 123-foot patrol boats was consistent with Space and Naval Warfare Systems Center (SPAWAR) and National Security Agency (NSA) standards. The testing protocol included both visual and instrumented assessments, among other activities, and did what it's designed to do; that is, it identified system or equipment discrepancies which were then corrected or mitigated prior to receipt of the Authority to Operate (ATO).

This testing, conducted during the evaluation period for our vessels and by independent, certified experts outside of Deepwater, ensures that national security is not compromised. I assure you that at no time did our 123-foot patrol boats engage in mission operations without first successfully completing standardized testing. I have directed adherence to the same rigorous testing protocols in certifying systems aboard the National Security Cutter and any discrepancies will be resolved prior to its entering active service.

Leading Change

The lessons we have learned through our experience with the 123-foot patrol boats are being applied across the program. In fact, these lessons are improving acquisition management throughout the Coast Guard.

The role of the Coast Guard's technical authority has been reaffirmed and the dynamic relationship between the technical authority and acquisition programs has been strengthened. This means that for all vessel designs and design changes, the Coast Guard will not proceed with contract award or contract changes without agreement from the technical authority. Fatigue enhancements to the National Security Cutter are an illustration of this constructive relationship. While contractors follow direction from program and contracting officers, those officers don't give direction until first consulting and reaching agreement with the Coast Guard technical authority.

We've also talked a lot in recent months about the effectiveness of Integrated Product Teams (IPTs). These teams can serve a useful function by enabling regular oversight of the contractor and providing an avenue for resolution of non-major technical concerns or, where concerns persist, an avenue for them to

be raised to program managers and contracting officers. Our IPTs were previously chaired by Integrated Coast Guard Systems (ICGS) and haven't always functioned as envisioned. That needed to change. So, based on direction to all program managers, each IPT is now led by a government employee and IPT charters are being examined to determine if/where additional changes should be made.

The complexity of the Deepwater program and the diverse missions of planned assets makes design review a crucial element of the successful execution of this program. To ensure that designs and assets will meet Coast Guard needs, we have increased our use of independent, third-party review and analysis for all new starts or substantial design changes. Inherent in this initiative is a renewed commitment to utilize business case analysis for all new acquisition decisions to instill confidence that we are building and buying the right tools for our Coast Guard men and women and at best value for taxpayers.

Of particular note, we recently contracted with the Defense Acquisition University (DAU) to conduct a "quick-look" review of Deepwater to examine the program's key management and technical processes, performance-based acquisition strategy, organizational structure and our contract with ICGS that is supported by a partnering agreement. The Coast Guard's Research and Development Center has also completed a study of the planned Deepwater Vertical-Launch Unmanned Aerial Vehicle; in the study's second phase, we are re-examining the way ahead for unmanned vehicles based on recommendations from that analysis. And, we've initiated an independent review of workload and workforce management issues. Based on findings and recommendations from these and other independent reviews, we will make "course corrections" where needed in order to guarantee successful execution of the Deepwater program.

Based on our ongoing and positive relationship with the Naval Sea and Air Systems Commands, the Coast Guard's preference is to keep these third party assessments within the government whenever possible. Specifically, NAVSEA's Carderock Surface Warfare Center has provided us with valuable design reviews and recommendations. As funding allows, we will continue this exchange to the maximum possible.

In fact, the Coast Guard is leveraging sound principles of systems engineering and integration to derive high levels of sub-system and component commonality, improve interoperability with the U.S. Navy and other agencies, and achieve significant cost avoidances and savings. This approach conforms with and directly supports the National Fleet Policy.

Beginning in 2002, the Program Executive Officer of Deepwater formalized a collaborative partnership with his Navy and Marine Corps counterparts in order to identify common systems, technologies and processes for improved interoperability. By incorporating common and interoperable Navy systems into Deepwater assets, the Coast Guard has also avoided paying unnecessary costs.

As examples, the National Security Cutter will use 75 percent of the Navy's AEGIS Command and Decision System. Deepwater assets also will incorporate Navy Type/Navy Owned systems, including the 57-mm deck gun, selected for major Deepwater cutters and the Navy's Littoral Combat Ship and DD(X) programs. The Operation Center Consoles on the NSC use 70 percent of the design of the Navy's Display Systems (AN/UYQ-70). And, by using more than 23,000 lines of software code from the Navy's Antisubmarine Warfare Improvement Program (AIP) in the CASA Maritime Patrol Aircraft's command and control systems, we are maximizing the use of mission systems that are installed on more than 95 percent of the world's maritime surveillance aircraft. The CASA Maritime Patrol Aircraft will utilize more than 50 percent of the functionality of the Navy's P-3 AIP system.

Navy and Coast Guard personnel even train side-by-side at the Coast Guard's training facility in Petaluma, California.

A Consolidated Coast Guard Acquisition Directorate

One of the most significant changes we are making in the Coast Guard's acquisition community is bringing together all acquisition-related activities–traditional programs as well as system-of-system, policy, and research and development–under one organization. Consolidating our acquisition efforts will provide immediate benefits, including better allocation of human capital assets (such as contracting officers and acquisition professionals) along with an integrated "product line" approach to our management of acquisitions, thereby allowing projects to be handled by knowledgeable and experienced personnel with the same linkages to the technical authorities.

Defense Acquisition University's (DAU) Quick Look study report of the Deepwater program concluded that our recently developed *Blueprint for Acquisition Reform* plan, which outlines many of the change management efforts related here, "is comprehensive and responsive to the human capital, organization, process and governance related findings and recommendations."

Additional efforts are underway within Deepwater and the Coast Guard to develop more appropriate staffing in order to efficiently obligate program funding and to enable affordable and timely delivery of needed assets to the fleet. We're reinvigorating our acquisition training and certification process to ensure that technical and support staff, program managers and contracting officers have the requisite skills and education needed to manage complex acquisitions. Our desired end state is to become the model for mid-sized federal agency acquisition and procurement, in full alignment with the Department of Homeland Security acquisition objectives.

Other Insights from my First Year

Some insights gained over the past year, and during the program's first five years, may not be as intuitive as the need to increase staffing or refine oversight processes. In that vein—and this has particular relevance to the 123-foot Patrol Boats—we must consider the ever-present tension between the trend in government agencies to seek to purchase Commercial Off-the-Shelf (COTS) equipment and the sometimes conflicting requirement to certify that equipment to federal agency standards. While COTS equipment is often less expensive, easier to buy and more available, it may not meet the sometimes very long list of federal agency performance requirements. The requirement on the 123-foot patrol boats for low-smoke cabling is one example of this challenge. If COTS equipment contains pre-fabricated circuitry that utilizes non-low smoke cables, the cost to modify that equipment can be very steep– not to mention schedule impacts from such modifications. Often, COTS equipment may even have components that meet certification standards but that lack manufacturer testing data to the needed level of specificity. So, program and contracting officers make decisions based on perceived risk.

We've also learned a great deal about performance-based contracts, especially as they relate to complex acquisitions like a Coast Guard cutter. When Deepwater was developed it was envisioned as a purely performance-based acquisition While there may be some elements of performance-based acquisition that we would wish to retain, we have concluded that our Deepwater ship contracts should be much more specification-based. That means the government has a responsibility to establish specifications, including certification requirements, and to not change them mid-stream without good cause. Requirements are dynamic and the need for detailed specification and constant collaboration and oversight from the government is intense. Based on this realization, we're working with industry to

redefine future procedures and contract development to ensure more adequate, detailed specification and oversight. In fact, Admiral Allen recently signed a joint letter of strategic intent with the CEOs of Lockheed Martin and Northrop Grumman to encourage further alignment as we move toward the new award term.

This leads me to a final, critical point–one which perhaps seems obvious on the face of it, but which has been brought home to me in more ways over the last 12 months than I can enumerate. *The contract is the key to a successful acquisition.* It's while the contract is being developed and negotiated that the government maintains the greatest influence in the acquisition process. Granted, the government must always be heavily involved in contractor oversight to ensure that assets are designed, constructed and delivered to meet requirements. But, those requirements and specifications must be clearly established within the contract document. In fact, while the contract is the key to a successful acquisition – stable requirements are a key to a successful contract. It is absolutely essential that the contract be precise. Specifications must be clear. Requirements must be documented. Construction parameters must be defined. Expectations must be understood. And swift and appropriate action must be taken to enforce contracts when contractor performance falls short of our expectations.

In Summary

All of the program management changes I have described are positioning the Coast Guard to take on more responsibility as the system integrator for the Deepwater program, and to be sound and effective stewards, regardless of who the integrator is.

In conclusion, I want to assure you we are listening to concerns of the Inspector General, the Government Accountability Office, Congress, and this committee, and are benefiting from their recommendations. We've learned from our past and are making changes to successfully step out into the future. Open and honest dialogue between the Coast Guard and our stakeholders is essential and we'll continue to advise you of challenges and successes, and to make additional changes where needed.

This is an exciting time for the Coast Guard and for Deepwater. Our past challenges have made us stronger today. And the need for the assets Deepwater is providing has never been greater. I was convinced of that when, while touring a 110-foot Island Class patrol boat in Key West, the young commanding officer pointed across the pier to a 123-foot patrol boat and told me that what her crew really wanted was the C4ISR system installed on that cutter. Despite the hull buckling issues and operational restrictions, the crews of other Coast Guard cutters recognized the improved capabilities that its sensor package delivered and anxiously looked forward to utilizing those improved capabilities on their own ships.

Together, we're going to deliver those capabilities. We are making the changes necessary to propel the program to ultimate success and provide the critical cutters, aircraft and sensors needed to meet our dynamic mission requirements. We are all anxious for positive results. We are on the path to change and I am confident that it is the correct path.

Thank you for the opportunity to testify before you today. I am happy to answer any questions you may have.

U.S. House of Representatives
Committee on Transportation and Infrastructure

James L. Oberstar
Chairman

David Heymsfeld, Chief of Staff
Ward W. McCarragher, Chief Counsel

Washington, DC 20515

May 1, 2007

John L. Mica
Ranking Republican Member

James W. Coon II, Republican Chief of Staff

Rear Admiral Gary Blore
U.S. Coast Guard Headquarters
2100 2nd Street, S.W.
Washington, D.C. 20593

Dear Admiral Blore:

On April 18, the Committee on Transportation and Infrastructure held a hearing on "Compliance with the Requirements of the Coast Guard's Deepwater Contract."

Attached are questions to answer for the hearing record. I would appreciate receiving written responses to these questions no later than May 9, 2007. Please send your responses to us at 2165 Rayburn House Office Building. If you choose to send your responses by U.S. Mail, please also fax a copy to (202) 226-6012, to be sure that they are not delayed by the House mail screening process and that I receive them by the deadline.

If you have additional questions, please contact Clay Foushee at (202) 226-4697.

Sincerely,

Jim Oberstar

James L. Oberstar, M.C.
Chairman
Committee on Transportation
and Infrastructure

Elijah E. Cummings
Chairman
Subcommittee on Coast Guard
and Maritime Transportation

cc: The Honorable John L. Mica, Ranking Member
The Honorable Steven C. LaTourette, Ranking Member, Subcommittee on Coast Guard and Maritime Transportation

April 18, 2007
Committee on Transportation and Infrastructure Hearing on
Compliance with the Requirements of the Coast Guard's Deepwater Contract

Questions from Chairman James L. Oberstar, and Coast Guard and Maritime Transportation Subcommittee Chairman, Elijah E. Cummings

Rear Admiral Gary Blore
U.S. Coast Guard

Questions for the Record for Rear Admiral Blore

1. How many "Certified Tempest Testing Authorities" (CTTAs) are currently on the CG payroll? Please provide their names.

2. How many are "acting" CTTAs. Please provide their names.

3. Was Ronald Porter an "acting" CTTA at the time the Visual TEMPEST inspection was conducted on MATAGORDA in February 2004?

4. How many CG assets were signed off or certified as TEMPEST-compliant by "acting" CTTAs? Which assets were signed off or certified as TEMPEST-compliant by an "acting" CTTA?

5. In the April 18 hearing, testimony was prepared based upon a review of 123 TEMPEST documents indicating that many of the non-TEMPEST-compliant items identified on the 123s were given waivers and signed off as not posing a hazard. Vice Admiral Sullivan from NAVSEA stated in questioning that this was "highly unusual." What is the CG's position on his statement?

6. The DD-250 Attachment C for Matagorda indicates that after delivery of a POAM and for development of design solutions to correct MATAGORDA TEMPEST discrepancies and installation of within scope designs, the contractor must "support . . . a SPAWAR Instrumented TEMPEST Survey to validate correction of TEMPEST discrepancies."

    a. Why did Attachment C indicate that a SPAWAR Instrumented TEMPEST Survey was required to validate correction of TEMPEST discrepancies?
    b. When was the SPAWAR Instrumented TEMPEST Survey performed on MATAGORDA or any other 123 for the specific purpose of validating corrections to the TEMPEST discrepancies identified in MATAGORDA?
    c. If a SPAWAR Instrumented TEMPEST survey was never performed on MATAGORDA or any other ship to validate the correction of TEMPEST discrepancies, why wasn't it performed?

7. According to the Coast Guard, MATAGORDA received ATO in January 2005. MATAGORDA was then one of four ships sent to the Navy's OPTEVFOR unit in March

and April 2005. In explaining the observations during that second OAA, the Navy wrote in an email to the Committee the following comments:

"TEMPEST discrepancies (bonding and cabling) and COMSEC discrepancies (classified space physical access) were corrected in USCGC MATAGORDA. In addition, the requisite software had been loaded. However, there were unresolved installation discrepancies which precluded a SPAWARSYSCOM recommendation for USCG (CG-62) to release an IATO. Without the IATO, cutters were not authorized to transmit and receive classified information, significantly limiting their participation in USCG tactical operations."

The Navy also wrote:

"In spite of this progress, physical connectivity was still assessed as high risk, based upon the inability to establish and maintain classified two-way data exchanges with other USCG and Naval vessels."

a. Did the Coast Guard issue the MATAGORDA's ATO even though discrepancies had precluded SPAWAR from recommending the release of an IATO? If so, why did Coast Guard issue the MATAGORDA's ATO under this circumstance?
b. Does Coast Guard disagree with the Navy's assessment that in March/April 2005, the physical connectivity of the communications systems on MATAGORDA were still "high risk?" If Coast Guard disagrees with this statement, on what ground does Coast Guard disagree? If Coast Guard agrees with this statement, why did Coast Guard issue the ATO for MATAGORDA in January 2005?
c. Did MATAGORDA perform any missions during which the entire C4ISR was activated and transmitting and receiving classified information between January 1, 2005 and May 1, 2005?

8. How often are current assets (with ATO) rechecked for compliance with TEMPEST certification standards?

9. Does normal in-service usage ("wear and tear") and routine maintenance (repair and replacement) of C4ISR systems pose a risk that systems previously certified as risk-free may post a TEMPEST hazard later?

10. What is the current status or plan for TEMPEST testing on NSC Bertholf? When are the visual and instrumented tests planned?

11. Will Navy SPAWAR play the same or a different role in TEMPEST testing for Bertholf and other NSCs?

Question#:	1
Topic:	CTTAs
Hearing:	Hearing on Compliance with the Requirements of the Coast Guard's Deepwater Contract
Primary:	The Honorable James L. Oberstar
Committee:	TRANSPORTATION (HOUSE)

Question: How many "Certified Tempest Testing Authorities" (CTTAs) are currently on the CG payroll? Please provide their names.

How many are "acting" CTTAs. Please provide their names.

Was Ronald Porter an "acting" CTTA at the time the Visual TEMPEST inspection was conducted on MATAGORDA in February 2004?

How many CG assets were signed off or certified as TEMPEST-compliant by "acting" CTTAs? Which assets were signed off or certified as TEMPEST-compliant by an "acting" CTTA?

Answer:
The Coast Guard does not have anyone on payroll as a Certified Tempest Testing Authority (CTTA). Mr. Porter was the Coast Guard's TEMPEST Program Manager in February 2004 when Visual TEMPEST inspection were conducted on the CGC MATAGORDA. Mr. Porter was never designated as an "acting" Certified Tempest Testing Authority (CTTA) as there is no such designation. Mr. Porter never signed off or certified as TEMPEST-compliant any Coast Guard asset as a CTTA or acting CTTA.

Question#:	2
Topic:	TEMPEST
Hearing:	Hearing on Compliance with the Requirements of the Coast Guard's Deepwater Contract
Primary:	The Honorable James L. Oberstar
Committee:	TRANSPORTATION (HOUSE)

Question: In the April 18 hearing, testimony was prepared based upon a review of 123 TEMPEST documents indicating that many of the non-TEMPEST-compliant items identified on the 123s were given waivers and signed off as not posing a hazard. Vice Admiral Sullivan from NAVSEA stated in questioning that this was "highly unusual." What is the CG's position on his statement?

Answer:

According to the transcript, Admiral Sullivan did not state that the waivers were "highly unusual". Admiral Sullivan's testimony in response to the committee was that 'It's not unheard of, but it's not common.'

Admiral Sullivan, as a navy officer, has a slightly different perspective, specifically, navy ships are generally significantly larger than Coast Guard cutters. Many of the waivers for the 123 stem from the fact that those smaller platforms can not meet all the physical separation requirements.

Question#:	3
Topic:	Matagorda
Hearing:	Hearing on Compliance with the Requirements of the Coast Guard's Deepwater Contract
Primary:	The Honorable James L. Oberstar
Committee:	TRANSPORTATION (HOUSE)

Question: The DD-250 Attachment C for Matagorda indicates that after delivery of a POAM and for development of design solutions to correct MATAGORDA TEMPEST discrepancies and installation of within scope designs, the contractor must "support . . . a SPAWAR Instrumented TEMPEST Survey to validate correction of TEMPEST discrepancies."

Why did Attachment C indicate that a SPAWAR Instrumented TEMPEST Survey was required to validate correction of TEMPEST discrepancies?

When was the SPAWAR Instrumented TEMPEST Survey performed on MATAGORDA or any other 123 for the specific purpose of validating corrections to the TEMPEST discrepancies identified in MATAGORDA?

If a SPAWAR Instrumented TEMPEST survey was never performed on MATAGORDA or any other ship to validate the correction of TEMPEST discrepancies, why wasn't it performed?

Answer:
The DD-250 is a document designed to document delivery of a product, in this case an asset, to the service. The contract only required a cutter that was certifiable, not one that was certified. The statement that the MATAGORDA required an Instrumented TEMPEST Survey (ITS) was correct. It was accomplished between 16-23 February 2004.

Question#:	4
Topic:	Matagorda ATO
Hearing:	Hearing on Compliance with the Requirements of the Coast Guard's Deepwater Contract
Primary:	The Honorable James L. Oberstar
Committee:	TRANSPORTATION (HOUSE)

Question: According to the Coast Guard, MATAGORDA received ATO in January 2005. MATAGORDA was then one of four ships sent to the Navy's OPTEVFOR unit in March and April 2005. In explaining the observations during that second OAA, the Navy wrote in an email to the Committee the following comments:

"TEMPEST discrepancies (bonding and cabling) and COMSEC discrepancies (classified space physical access) were corrected in USCGC MATAGORDA. In addition, the requisite software had been loaded. However, there were unresolved installation discrepancies which precluded a SPAWARSYSCOM recommendation for USCG (CG-62) to release an IATO. Without the IATO, cutters were not authorized to transmit and receive classified information, significantly limiting their participation in USCG tactical operations."

The Navy also wrote:

"In spite of this progress, physical connectivity was still assessed as high risk, based upon the inability to establish and maintain classified two-way data exchanges with other USCG and Naval vessels."

Did the Coast Guard issue the MATAGORDA's ATO even though discrepancies had precluded SPAWAR from recommending the release of an IATO? If so, why did Coast Guard issue the MATAGORDA's ATO under this circumstance?

Does Coast Guard disagree with the Navy's assessment that in March/April 2005, the physical connectivity of the communications systems on MATAGORDA were still "high risk?" If Coast Guard disagrees with this statement, on what ground does Coast Guard disagree? If Coast Guard agrees with this statement, why did Coast Guard issue the ATO for MATAGORDA in January 2005?

Did MATAGORDA perform any missions during which the entire C4ISR was activated and transmitting and receiving classified information between January 1, 2005 and May 1, 2005?

Answer:
TEMPEST certification is a separate and distinct process from the Operational Assessment

Question#:	4
Topic:	Matagorda ATO
Hearing:	Hearing on Compliance with the Requirements of the Coast Guard's Deepwater Contract
Primary:	The Honorable James L. Oberstar
Committee:	TRANSPORTATION (HOUSE)

Analysis (OAA) process conducted by OPTEVFOR, not a subset. While it is well within the scope of OPTEVFOR to predict via OAA what might happen during TEMPEST certification, those comments do not establish any restriction. MATAGORDA successfully passed the SPAWAR Instrumented TEMPEST survey, was TEMPEST certified and given Authority to Operate (ATO) on January 19th, 2005. ATO is based on TEMPEST Certification and not on OAA.

Classified information was not received or transmitted prior to ATO. After January 19th 2005, MATAGORDA carried out missions as assigned.

Question#:	5
Topic:	Compliance
Hearing:	Hearing on Compliance with the Requirements of the Coast Guard's Deepwater Contract
Primary:	The Honorable James L. Oberstar
Committee:	TRANSPORTATION (HOUSE)

Question: How often are current assets (with ATO) rechecked for compliance with TEMPEST certification standards?

Answer:
An Authority to Operate (ATO) lasts a maximum of three years. An asset is checked before that if there is a change in the Secure Electrical Information Processing System (SEIPS). This includes the installation of a new system, replacement of ancillary equipment (RF transmitter), or repair or replacement of the existing Classified Information Processing System.

Question#:	6
Topic:	C4ISR
Hearing:	Hearing on Compliance with the Requirements of the Coast Guard's Deepwater Contract
Primary:	The Honorable James L. Oberstar
Committee:	TRANSPORTATION (HOUSE)

Question: Does normal in-service usage ("wear and tear") and routine maintenance (repair and replacement) of C4ISR systems pose a risk that systems previously certified as risk-free may post a TEMPEST hazard later?

Answer:
Any asset in motion has various forces working on it in a manner that can loosen bonding straps or cause wiring to chafe and fray. Equipment replacement and repair poses minimal risk as equipment generally must be TEMPEST certified before installation, and repairs bring the equipment to its original state. Periodic, preventive maintenance checks are designed and conducted to spot potential problems.

Question#:	7
Topic:	NSC Bertholf
Hearing:	Hearing on Compliance with the Requirements of the Coast Guard's Deepwater Contract
Primary:	The Honorable James L. Oberstar
Committee:	TRANSPORTATION (HOUSE)

Question: What is the current status or plan for TEMPEST testing on NSC Bertholf? When are the visual and instrumented tests planned?

Will Navy SPAWAR play the same or a different role in TEMPEST testing for Bertholf and other NSCs?

Answer:
Based on the installation schedules and other timing factors, the Visual TEMPEST Inspection for NSC1 will occur in June 2007.

An Instrumented TEMPEST Survey is expected to be conducted in July 2007. The survey can not be interrupted by sea trials. It will be done at the shipyard in Pascagoula, MS. The date is subject to change based on NSC1 being ready for the test.

SPAWAR is scheduled to play the same role for the NSC as it did for the 123' WPB. SPAWAR will, as a Certified TEMPEST Testing Authority, conduct the Instrumented TEMPEST Survey. It will, as is normal, survey only the prototype unless a significant configuration change occurs.

Robert K. Braden
Lockheed Martin Corporation
199 Borton Landing Rd. MS 108-201
Moorestown, NJ 08057
856.722.3170

TESTIMONY of
ROBERT K. BRADEN
Before the
COMMITTEE on TRANSPORTATION and INFRASTRUCTUE
APRIL 18, 2007

Mr. Chairman and members of the Committee. My name is Robert K. Braden. I have been an Engineer and Engineering Manager for over 40 years, including nearly 30 years service with Lockheed Martin and predecessors, Martin Marietta, RCA, and GE.

My experience encompasses development of naval, air, space, and land-based advanced technology systems for the Department of Defense. I also have over a decade of commercial computer and communication experience including large-scale systems development, high volume computer system production, and Product Management of a line of secure terminals for classified customers. I am currently employed by Lockheed Martin Corporation (LMCO) as Senior Technical Staff for the Processor and Digital System Design Center at Moorestown, New Jersey. In my management staff position, I am often expected to provide program and project leadership for a variety of contracts and internal R&D programs.

In early 2003, I was requested to join the US Coast Guard (USCG) Deepwater program as Lead System Engineer (LSE) for the Communications Area Master Stations (CAMS) & Legacy Cutter program. The objective of this program was to provide enhanced satellite communications and C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance) systems for existing legacy Coast Guard (CG) assets. The CAMS/Legacy program included upgrades to both Atlantic and Pacific Coast CAMS locations (CAMSLANT and CAMSPAC). A major portion of this program included installation of upgrades and new capabilities for approximately 39 existing Coast Guard 210 foot, 270 foot, and 378 foot Legacy Cutters. These upgrades provided significantly improved satellite bandwidth for both land and ship assets, improved shipboard network infrastructure, expanded Secret communications capabilities, new capabilities for Automatic Identification Systems (AIS), and new law-marine radio equipment. The planned installations added 8-12 additional secure workstations for Officer and Crew access to the NAVY SIPRNET (Secret Internet Protocol Router Network). These improved SIPRNET links would provide the Legacy fleet with the ability to significantly improve coordination of law enforcement and Homeland Security actions with the US Navy and within the CG.

As LSE, my tasks included development of program plans, cost and manpower estimates, system design, equipment and software selection, selection of subcontractors, support of contract and subcontract negotiations, system implementation, integration and test, and physical installation and sell-off of the CAMS and Legacy assets. After completing a total re-plan of the program with my original Moorestown Program Manager, Mr. Tom Guerrasio, we submitted an aggressive, fixed-price proposal to the Coast Guard through the ICGS SIPO organization. Unfortunately, the CG Contracts office continued to extend negotiations to the end of the fiscal year, requiring LMCO to either stop work or independently fund the continued engineering and procurement of long lead material. Admirably, LMCO elected to support the aggressive Deepwater deployment objectives of Admiral Patrick Stillman, and provided several million dollars of internal "Risk Funding" to allow my team to obtain material, integrate the system, and prepare for the first installation of the CAMSLANT facility and the CG 270 foot Cutter, Northland. This was a full 2 to 3 months prior to the CG Contracts Office approving the contract funding.

During this period I was engaged in intensive dialog with my CG Contracts Technical Representative (COTR), John Harris, with the CG ships integration personnel, and with the CG Telecommunications Security organization, TISCOM. The purpose of this dialog was to determine and negotiate all requirements for the CAMS/Legacy system installations and to support Certification and Accreditation (C&A) of the Secret SIPRNET communications. Our objective was to provide secure communications installations that could immediately achieve an Interim Authority To Operate (IATO) followed shortly thereafter with a full Authority To Operate (ATO).

From the onset of my involvement with the Deepwater program, I was engaged in weekly Program Integration Team, or PIT, meetings involving all management of the Deepwater program within Moorestown. These mandatory weekly meetings covered all aspects of the program and included USCG representative(s) and generally included representatives from the Systems Integration Program Office (SIPO) of the Integrated Coast Guard Systems organization (ICGS). During these meetings, all asset program issues and status were discussed. Topics regularly included status of the Systems-of-Systems activities, the CAMS/Legacy Cutter Upgrades, the 123 foot Cutter conversion program, and the Air Assets Upgrades. The purposes of these lengthy and wide-ranging meetings were to ensure coordination of various programs and maintain commonality among assets. Approximately once each month, the PIT meeting would expand to a full Deepwater program review with CG and ICGS management in attendance. On numerous occasions, I presented the design, installation, and security briefings to this audience to ensure concurrence with our CAMS/Legacy plans.

As a result of the PIT meetings and other internal reviews, asset LSE's would become aware of problems and issues faced by their counterparts. We would occasionally 'compare notes' to determine if a common resolution was possible. On a number of occasions, I provided explicit definition of the design, process, and operational approaches utilized by my team to achieve compliance to our CAMS/Legacy asset requirements. Likewise, I received advice from other LSE's.

Unfortunately, the aggressive pace of my own project and the structure of the Deepwater program often required that my team maintain focus on the successful resolution of our design issues. When I was unable to influence changes I felt may be needed, I would normally advise management. In every instance, I endeavored to convey the decisions made by my team to achieve requirements compliance and share the CAMS/Legacy design techniques for the benefit of the entire Deepwater program.

In late August 2003, my team began upgrade of the CAMSLANT facility and installation of the first Deepwater sea-based asset, the CGC Northland. We completed these installations within one month, thereby establishing the milestone of the first successful asset delivery to the USGC Deepwater program. We followed this achievement with the successful installation of the Deepwater C4ISR suite aboard the CGC Tampa by year-end. The subsequent string of successful installations has been a continuing source of personal satisfaction for my original design and installation team personnel. I personally take pride in expeditiously and cost-effectively completing the first successful and compliant Deepwater installations in the history of the program. I continued to manage and guide the installation of the first nine 270 foot cutters, and developed the design and installation procedures for the remaining 210 foot and 378 foot cutters. In March 2004, I was removed from the Deepwater program.

Statement package for Michael DeKort

This document includes;

1. Statement
2. LM Notification Timeline
3. Supporting notification text
4. Response to DHS IG 123 C4ISR report
5. Project Notes
6. Overall Timeline
7. Blind Spot

Statement

Good afternoon Mr. Chairman and members of the subcommittee. I deeply appreciate your taking the time to hear testimony on the C4ISR problems relating to the Deepwater effort. While I will be highlighting the C4ISR issues, I am sure you realize they are only examples of the systemic engineering and management problems associated with this effort. The problems I will be describing are not simply mistakes. They were informed deliberate acts. As I will show, I have been trying to resolve these problems for almost 4 years. After not being able to convince every level of management of every relevant organization in Lockheed Martin through the CEO, Board of Directors and Integrated Coast Guard Systems (ICGS), I turned to the relevant government agencies, public officials, whistleblower organizations, and when all else failed the internet and the press, for help. What needs to be understood here is that every one of these problems was easily resolved with off the shelf products - well before any of the assets were delivered. Additionally, as the contract mandates system commonality, every one of these problems is a candidate for inclusion on every other maritime asset that ICGS delivers for the lifetime of the contract. This plan, if allowed to come to fruition, will literally cripple the entire maritime fleet of the US Coast Guard for decades.

Before delving in to the issues I would like tell you a little about my background.

I was an electronics technician in the US Navy for 6 years. I specialized in communication systems. After my enlistment ended I spent a brief time in the private sector before I joined the US State Department as a communications engineer for embassy and consular duties as well for the counter terrorism group. After leaving that organization, I became a systems engineer in

Lockheed Martin. Through the years I was promoted to project, program and engineering manager. During my last 5 years I was the software project manager for Aegis Baseline 6/3, the lead systems engineer of C4ISR for Deepwater and the software engineering manager for the NORAD efforts. It is the period where I held the C4ISR lead systems engineer position that is the focus of this testimony.

At the point I joined the effort – in the summer of 2003 – the final design review had been completed and most of the equipment had been purchased for the first several boats. In addition to creating a master schedule, I was tasked with identifying the final deliverable requirements and planning the integration of the first boats. It was during this period that several critical safety and security issues came to my attention.

The first problem was the fact that we had purchased non-weatherproof radios for the Short Range Prosecutors or SRPs. The boats are small open air craft that are constantly exposed to the environment. Upon first hearing about this issue, I have to admit, I found it too incredible to believe. Who would put a non-weatherproof radio, the primary means of communication for the crew, on a boat with no protection from the elements? The individual who brought this to my strongly suggested I look in to it no matter how incredible it sounded. I called the supplier of the radio who informed me it was true. We had purchased 4 radios – for the first 4 SRPs – and they were not weatherproof. As a matter of fact, the vendor asked me not to use the radios on any of the SRPs – which would eventually total 91 in all. Upon informing Lockheed management that the radios need to be replaced, I was told there was a "design of record" – this meant the customer had accepted our designs at the conclusion of the critical design review – and that we would make no changes that would cause cost or schedule impacts. As a matter of fact, we ordered 5 more radios after I went to management about the problem in order to prepare for the next set of boats we were contracted to modify. I tried for several months to get the radios replaced. Just before delivery of the first 123 and its associated SRP, the customer asked to test the system. Coincidently, it rained on test day. During the testing several radios shorted out. It should be noted that had we not tested the boats in the rain on that day we would have delivered that system and it would have failed the first time it was used. After this, I was told we would go back to the radio that originally came with the SRPs. I believe that this example, more than any other, demonstrates the lengths the ICGS parties were willing to go to hold schedule and budget while sacrificing the safety and security of the crew.

The next problem uncovered involved the video surveillance system. The Coast Guard wanted a system that would permit watching the boats, when in a Coast Guard port, without someone having to be physically on the boats. Our solution was to provide a video surveillance system that had significant blind spots leaving the bridge vulnerable to penetration. The most frustrating part about this issue was that the simple purchase and installation of a fifth camera would have resolved the problem. Bear in mind we knew about the need for the extra camera several months before the first 123 was delivered.

Another problem we discovered involved low smoke cables. There was a requirement to install low smoke cables so that in case of a fire flames do not spread quickly, equipment is not overly exposed to corrosive smoke, and the crew is not exposed to a large amount of toxic fumes. In a recent report the Inspector General for the Department of Homeland Security confirmed that over 80 of these cables are the wrong type and that the waiver the Coast Guard gave to the contractor so they could avoid having to provide these cables was invalid.

The next issue involved communications security and the standards necessary to ensure those communications are safeguarded from eavesdropping or inadvertent transmission of crosstalk. These standards are known as TEMPEST. We installed non-shielded cables – 101 in total – on all of the 123s; cables that did not meet standard TEMPEST safety and security requirements – as born out by their failing of the visual inspection which was carried out by the appropriate testing authority. This situation could lead to a serious compromise of secure communications not only for the Coast Guard but for other government organizations such as DoD, the FBI and the DEA. I was informed that we had not included these cables in the design because we had not bid the TEMPEST requirements and as such had decided we did not have the money to include them.

The final significant problem was that of the survivability of the externally mounted equipment. I saved this one for last because of how serious the repercussions are for the Coast Guard and the nation, the fact that the DHS IG agreed completely with my allegations relative to this issue, the incredible position Lockheed Martin has taken on this issue, and the fact that the Coast Guard seems to be allowing them to get away with it. Shortly before the first 123 was delivered we finally received the environmental requirements. During the late review of the equipment for compliance, well after the design review and purchase of the equipment, we found the very first item we looked in to would not meet the environmental requirements. Given this failure we

feared the rest of the equipment may not meet the environmental requirements. Let me state this in simple terms. This meant the Coast Guard ships that utilized this equipment would not operate in conditions that could include heavy rain, heavy seas, high winds and extreme temperatures. When I brought this information to Lockheed management, they directed me and my team to stop looking in to whether or not the rest of the equipment met these requirements. This meant that all of the externally mounted equipment being used for critical communication, command and control and navigation systems might fail in harsh environments. Since that time we have learned through the DHS IG report on the 123s that 30 items on the 123s, and at least a dozen items installed on the SRPs did meet environmental requirements. In addition to their technical and contractual findings, the IG also made some of Lockheed Martin's responses on this issue known in the report. Incredibly the IG states that Lockheed Martin incorrectly stated in their self-certification documents that there were no applicable requirements stipulating what the environmental requirements were in regard to weather and they actually stated that they viewed the certification of those requirements as "not really beneficial". In addition, the IG states that the Coast Guard did not know the boats were non-compliant until July of 2005 – 1.5 years after the first 123 delivered. The report also states that none of these problems were fixed. Not on any of the delivered 8 boats. That along with the issue not being called out in the DD-250 acceptance documents supports my supposition that Lockheed Martin purposefully withheld this information from the Coast Guard. Finally, the IG states that Lockheed's position on them passing the self-certification without testing these items was the right thing to do because they thought the tests would be "time consuming, expensive and of limited value". Bear in mind that the contractors have stated time and time again in front of this and other oversight committees that they do not practice self-certification.

Where does this situation leave us? Had the hulls not cracked or the cracks not appeared for some time, ICGS would have delivered 49 123s and 91 SRPs with the problems I describe. In addition to that, the Deepwater project is a "System of Systems" effort. What this means is that the contractor is directed to deliver solutions that would provide common equipment sets for all C4ISR systems. Said differently, all the equipments for like systems need to match unless there is an overwhelming reason not to. This means that every faulty system I have described here will be installed on every other maritime asset delivered over the lifetime of the effort. This includes the FRCs, the OPCs and the NSCs. If we don't stop this from happening ICGS will deliver assets with these and other problems. I believe this could cripple the effectiveness of the Coast Guard and their ability to perform their missions for decades to come.

How have the ICGS parties reacted to the totality of these allegations? At first Lockheed and the US Coast Guard, as stated by the ICGS organization, responded to my allegations by saying they were baseless, had no merit, or that all of the issues were handled contractually. That evolved after the IG report came out to them stating that the requirements had grey areas and later by actually deciding, after the system were accepted and problems were found, that in some cases the Coast Guard exaggerated their needs – as was their comment regarding the environmental survivability problems.

I have heard a lot of talk about changing the ICGS contract structure, fixing the requirements, reorganizing the Coast Guard, and adding more oversight. While all of those things are beneficial, they in no way solve the root problem. Had the ICGS listened to the Engineering Logistics Center (ELC) and my recommendations, there would be no problems on these boats. We wouldn't be talking about more oversight or making sweeping changes. Instead, we would be discussing what a model program Deepwater is. I guarantee you that had the changes that are being made or suggested now been in place 4 or 5 years ago, it wouldn't have mattered. Even with the incestuous ICGS arrangement, the less than perfect requirements, and minimal oversight, there was plenty of structure in place and information available to do the right thing. It is not practical to think one can provide an iron clad set of requirements and an associated contract that will avoid all problems. All that was needed were leaders who were competent and ethical in any one of the key contractor or Coast Guard positions. Any one of dozens of people could have simply done the right thing on this effort and changed the course of events that followed. It is because of this that I strongly suggest your focus shift to one of accountability in an effort to provide a deterrent. No matter what structure these parties put in place. No matter what spin they come up with, or promises they make, no matter how many people you spend tax payer dollars to employ to provide more oversight, it still comes down to people. We wouldn't need more oversight if the ICGS parties would have done as promised when they bid this effort. They told the Coast Guard we know you have a lack of personnel with the right skills. Let us help you. Let us be your trusted agent. Let us help write the requirements so we can provide you cutting edge solutions. Let us write the test procedures and self-certify so we can meet the challenges we all face in a post 9/11 world. In the end, people have to do the right thing and know that when they don't the consequences will be swift and appropriate. I strongly believe that, especially in a time of war, the conduct of these organizations has been appalling. As such, I would hope that this committee, and any other relevant agency with jurisdiction, will do the right thing and hold people and these organizations accountable. All defense contractors and

employees of the government need to know that high ethical standards are not matters of convenience. If you do not hold these people and organizations accountable, you will simply be repackaging the same problems, and have no way of ensuring the problems don't happen again on this or any other effort.

In closing I am offering to help in any way I can to remedy these issues. As I told the Commandant Allen's staff and Lockheed Martin before my employment was terminated, I want to be part of the fix. With the right people in place, in the right positions, this project can be put back on track rapidly.

I believe it at this time that we will be putting up for display the timeline of events relative to my notifications of the appropriate leadership within Lockheed Martin. Before I start that final part of my presentation, I would like to thank you again for the opportunity to testify and look forward to answering your questions.

LM Notification Timeline

Date	Person Notified	Position	Data	Title
10/13/2003	Larry Finnegan	Mgr SW PM-functional manager	Informed Larry that the program was in a chaotic state - deliverable requirements not known/accepted for Inc 0, layering partial solutions on top of each other, were rushing toward install on the Matagorda and we purchased non-waterproof radios for SRP. Also informed Larry that I had raised the issues with Tom Rodgers	123 Headed Down the Wrong Road
12/16/2003	Jay Hansen	Acting Tech Director	Asked for a meeting to discuss the issues	Requesting a private one-on-one
1/7/2004	PJ Messer	Surface Asset Lead	Asked for reassignment to another effort if management was not going to do the right thing - technically and ethically. Issues mentioned were - Cameras - Low Smoke cables - TEMPEST and Non-Waterproof Radio Note-Ext Equipment Survivability Issue had not been raised yet	Requesting Reassignment
	Larry Finnegan	Mgr SW PM-functional manager		
	Jack Ryan	Director SW Org - Larry's manager		
	Joe Villani	DW Chief Eng		
	Jay Hansen	Acting Dir Tech Ops		
	Brian McLaverty	123 DW PM		
	Patrick Ewing	DW Dep PM Director		
	Tom Rodgers	DW PM Director		
	Doug Wilhelm	DW PM		
	Dave Ponticello	DW Former Chief Eng		
2/5/2004	Larry Finnegan	Mgr SW PM-functional manager	Informed Larry that DW management was not keeping it's deal to fix the problems (preferred) or let me provide comments for the DD-250s before delivery of the Matagorda.	123- BT Complete/DD-250before issues resolved

2/9/2004	Joe Cappello	DW QA Lead	Asked for a meeting with Michael Cerrone - QA Director - this eventually lead to QA VP Yvonne Hodge getting involved and calling the org VP Carl Bannar on 2/12/2004 - I told Carl I wanted to give Jay Hansen one more shot before I went to see him	DW Engineering Concerns
2/11/2004	Larry Finnegan	Mgr SW PM-functional manager	Still no resolution on issues. Email with associated document called DW Issues	Still No Commitment from PMO on Issues
2/18/2004	Carl Bannar	VP	Requested a meeting with Carl to ask for issues to be fixed. Carl promised issues would be addressed either through fixes or on DD-250. Said he would direct Chief Eng Joe Villani to meet with me	Request Meeting
2/24/2004	Joe Villani	DW Chief Eng	Chief Eng Joe Villani asking to meet with me after Carl Bannar directed him to (Note that Villani says he has heard about the issues but wants to hear from me directly. Villani had refused every attempt for me to meet with him on these issues prior to this. That included several in person requests and telephone calls over at least a months period)	Issues to be resolved on 123
2/24/2004	PJ Messer	Surface Asset Lead	Ext Equipment Environmental issue show up for the first time. Mentioned those issues as well as my opposition to gaming the requirements document to hide the problems	123-Environmental/Physical spec inconsistencies - testing
2/24/2004	Joe Cappello	DW QA	Asked QA to include Camera, TEMPEST, Ext Equipment and Radio issue on DD-250 as Open Items	123-Open Items DD-250
2/24/2004	PJ Messer	Surface Asset Lead	Thread on my risks being deleted - without my permission- from the official risk system (Problem Sheets) - which ICGS and the CG had access to. Of a dozen or so risks entered only the risks associated with the critical issues I raised were deleted. After some effort I am told they were put back.	123-Several critical Risks/Action Items missing from IDE

Note- removed from DW program end of February 2004. Moved to work NORAD program in Colorado August 2004. Went to see new Tech Ops director Robert Sledgemilch before I left MS2 to discuss issues with him. He turned the issues over to HR who turned them over to John Shelton - Ethics Director for MS2. Investigation started October 2004

9/20/2004	John Shelton	Ethics Director MS2	Setting up meting in Colorado to start investigation. Investigation ended 4 months later with a response of - "no merit - all allegations are baseless" would no provide any explanation for the results. Said I had no need to know.	DeKort- conference room for discussions
2/7/2005	Gail Allen	Ethics investigator-Corporate	After Shelton left me not knowing if the issues were fixed or letting me see the DD-250 text that showed the CG was notified about every issue and accepted the boat. I raised the issues to corporate	DeKort-Deepwater ethics issue
4/12/2005	Fred Moosally	President MS2 org	Wanted to discuss the issue with the MS2 President before I went to the CEO. Have an email response receipt showing he received the message. He never responded. Note- former CO of USS IOWA during 16in gun mishap	Outlook-DW ethics during IS&S
4/28/2005	Robert Stevens	CEO Lockheed Martin	Contacted Mr. Stevens after 2nd ethics investigation completed . Decided too many 123s were being delivered with these problems for me to have to continue to grind though this process	Project Deepwater - issues of Concern
5/4/2005	Maryanne Lavan	Corporate VP of Ethics	Wrote the CEO Bob Stevens after my final meeting with Gail Allen and getting same response from Allen as I did Shelton. He in turn contacted Lavan.	Email to Robert Stevens
1/17/2006	Robert Stevens	CEO Lockheed Martin	Contacted Mr. Stevens again after 3rd ethics investigation ended with an official response of "no merit - baseless". I was told the CG was made aware of every issue and had accepted the boat. They would not show me proof or tell me how each issue was handled.	Deepwater ethics issue please read

After Mr. Stevens asked his corporate council to look in to this and he supported those below him I began contacting organizations outside of Lockheed Martin. Those included - ICGS, GAO, USN, NSA, several senators and congressmen, several whistleblowing organizations and the DHS IG

3/1/2006	Scott MacKay	LM Corp Council	Mr. MacKay responded to my second letter to the CEO. Partial quote from letter - ". . .I have concluded that; (1) the corporation has thoroughly and exhaustively investigated you allegations; (2) I concur with the conclusions reached by prior investigations that your allegations were unsubstantiated; and (3) the corporation considered the matter closed except to the extent it is asked to respond to the Coast guard or other government agencies regarding those allegations..."
4/4/2006	LM Board of Directors		Sent a letter to the Board asking for help on the issues. It included the information I had sent the CEO Robert Stevens
6/26/2006	LM Board of Directors		Received their response. Quote - "The Board considers the issues addressed in your letter and determined that the Corporation's responses to those issues, beginning in October 2004 and continuing to the present, were appropriate and no further action is warranted. Each of the issues has been disclosed to the Coast Guard and the resolution of each issue was coordinated with and was or is being resolved to the satisfaction of the Coast Guard customer."

LM notification supporting text

Text From emails delineated in Notification Timeline

Text from email titled – 123 – Headed Down the Wrong Road – 10/13/2003
Pasted from Outlook – could not paste header
From: Michael DeKort
To: Larry Finnegan

I wanted to make you aware of some problems on the 123. Due to schedule concerns we, in my opinion, are being herded down the wrong road.

We are layering partial solutions on top of each other - all the while our base, the requirements set, is not on solid ground.

Please find a slide set I made for Tom Rodgers.

Some highlights:

We are slipping again. Today was supposed to be test start - we are weeks away. One day after we made a "recovery plan" I find out our design is still very suspect - our installation techs found we called out the wrong connectors on almost half of our cables. We were using the new "QA" data.

We picked a non-marine grade radio, and antennas, for our critical comm suite in the SRP. The SRP is the small rescue boat. This small boat will be inundated with water. It is used to rescue people - it should have environmentally sound communications.

We have told the CG that we do not meet most of the environmental and physical hardware requirements in INC 0. We have no plan/design to ever meet those requirements. No one is working this with the CG.

I believe someone needs to get a hold of this effort before someone else does it for us. I believe we have strayed from our principles - both in quality and engineering discipline. If we continue down the same road we will wind up with even greater schedule slips, customer dissatisfaction and potential safety, ethical and legal problems.

Text from email thread titled – Requesting a private one on one – 12/16/2003
Pasted from Outlook – could not paste header
From: Jay Hansen
To: Michael DeKort

Mike -

I'd be glad to meet with you. Please call Mary Kay to schedule. She will put it down as a private meeting on my calendar so it will remain confidential.

Jay

J. T. Hansen
Director, Systems Engineering and Equipment Engineering
Lockheed Martin, MS2 - Moorestown
(856)722-2730

From: Dekort, Michael
Sent: Tuesday, December 16, 2003 10:00 AM
To: Hansen, Jay T
Subject: Requesting a private one on one

I have some concerns about the Deepwater effort that I would like to discuss with you.

I would appreciate it if you would keep this request and the meeting private.

Michael De Kort

From email thread titled – Request Reassignment – 1/7/2004

-----Original Message-----
From: Hansen, Jay T
Sent: Thursday, January 08, 2004 10:44 AM
To: Messer, Paul J; Finnegan III, Laurence P; Ryan, John E; Villani, Joseph A; Dekort, Michael
Cc: Clifford, Michael F; Ewing, Patrick; McLaverty, Brian; Rodgers, Thomas M; Wilhelm, Douglas G; Ponticello, David D; Haimowitz, Jay S
Subject: RE: Request Reassignment

Mike -

You'll need to firm this up with your immediate functional management and tech ops technical leadership on IDS but my understanding is that we will accommodate your request with the appropriate overlap period. In light of the risk tracking system's status, please make sure that Jay Haimowitz receives a complete write-up on each of these risks for processing through the programs risk/opportunity process. By inserting them into the process they will receive the appropriate technical and programmatic evaluations to produce appropriate mitigation plans.

Jay
J. T. Hansen
Director, Systems Engineering and Equipment Engineering
Lockheed Martin, MS2 - Moorestown
(856)722-2730

From: Dekort, Michael
Sent: Wednesday, January 7, 2004 11:53 AM
To: Messer, Paul J; Finnegan III, Laurence P; Ryan, John E; Villani, Joseph A; Hansen, Jay T
Cc: Clifford, Michael F; Ewing, Patrick; McLaverty, Brian; Rodgers, Thomas M; Wilhelm, Douglas G; Ponticello, David D
Subject: Request Reassignment

Gentlemen

Over the past few months I have become increasingly frustrated with the direction the Deepwater project is following. Based on the examples below I believe we have continually sacrificed MS2's hard earned and well founded engineering and customer focused principles in order to meet the needs of non-realistic schedules. While meeting schedules is a paramount concern I do not believe being herded, by an unrealistic schedule, to the delivery of a substandard product is in our best interest. I strongly believe that this path will lead to, at best, the delivery of a sub-standard product that will harm our reputation and at worst the delivery of a product that hamper our customer's ability to successfully carry out their mission.

As the lead systems engineer for the 123 my primary responsibility is to ensure the integrity of the design and that we meet the customers needs, requirements and fulfill the actual and implied intent of the contract. While I do not expect to convince tech ops or program management that my point of view is correct on every issue I do not expect to be overruled on the greater majority of those issues – especially when they involve safety, security, and the mission success of our customer. As the mission of the customer, the U.S. Coast Guard, is to ensure our nation's security, I take this responsibility very seriously. I truly believe that the decisions we have made and are making will hinder our customer's ability to do their job and by doing so puts them and the general public at risk. I have worked on military projects most of my career – from the U.S. Navy, through the counter terrorism group at the U.S. State Department, through flight simulation for the U.S. Air Force Special Ops and through Aegis Baseline 6. On each and every project that I have worked I have been proud of my contribution and the product we produced. I am sorry to say that I am personally and professionally embarrassed by the product we are producing on this effort. I feel that as an organization we have abandon our principles, let down our processes and besmirched the reputation MS2 has worked so long to establish. I believe MS2 and I are better than this.

Below I have listed some of the most important examples. Each case was and is avoidable. Most of the issues and solutions were known about months ago. As we have chosen not remedy these issues previously there is now a cost and schedule risk to do so. A cost and schedule risk that I believe is worth taking and the right short and long term course.

- SRP VHF Radio

- We are putting a non-marine grade radio on a craft that will be exposed to the harshest of environments. As such the customer, and civilians aboard the craft could be left without their primary long distance communications system in harsh conditions
- This is a safety risk
- Even though there is an option to remedy the situation with a $300 microphone – we have no plans to augment the current design for the first 3 cutters

- Surveillance Cameras

- We have placed 4 fixed mounted cameras on the deck house that do not provide full field of view (there are 2 dead spots), the ability to pan or zoom.
- As such we have degraded the customers existing capabilities. (Current ships and the planned design by Northrop on the NSC provide 2 mast mounted cameras that permit panning and zoom)
- This is a security and safety risk
- There is no plan to remedy this situation on any cutter

- Tempest

- We have not provided an adequate Tempest solution for the secret crypto installed aboard the ship. As such our shielding and grounding solution does not meet the minimum Tempest standards
- We have, in most cases, ignored an internal study conducted in February, on ways to remedy the situation.
- This is a security risk
- There is no plan to remedy this situation for any cutter

- Low Smoke Cables

- We are headed down a path of not providing a low smoke variant of some cabling aboard ship.
- The customer has pointed out cases where we may have missed the opportunity to provide such cables.
- I have been informed that we do not have time to look in to or remedy the situation for the first ship.
- This is a safety risk

It is for the reasons stated above that with great regret I request to be reassigned to another effort. As I have been unsuccessful at changing the direction of the Deepwater effort I have no other choice than to change my own direction. As I cannot rectify my personal ethical standards with the direction we are taking I feel I am left with no choice other than to request to be reassigned. However, if the opportunity should arise I would eagerly and aggressively attack each of these issues should we decide on a change in program direction.

Michael De Kort

From email titled – 123-BT Complete/DD-250 before issues resolved – 2/5/2004
Pasted from outlook – no header
From: Larry Finnegan
To: Michael DeKort

Mike,

I have raised your concern thru Jack to Tom... more to come.

Larry
-----Original Message-----
From: Dekort, Michael
Sent: Thursday, February 05, 2004 7:13 AM
To: Finnegan III, Laurence P
Subject: 123- BT complete/DD-250 before issues resolved?

Larry

I am concerned that BT ends next week, Tom Rodgers has schedule an internal DD-250 meeting Tuesday (to which I am invited) – and we still have not met on the camera, Tempest, SRP radio or Flir Video cable issues. As a matter of fact it is almost a week now since I was told we would open discussions on these items and there hasn't been a meeting even scheduled.

I believe these items should be discussed before sell off and that any time lost is crucial – especially if we seek to find an arrangement to fix this items before the 3/1 delivery.

If we are unable to meet and discuss these items before the DD-250 meeting Tuesday I plan on raising these issues then.

Michael De Kort
Project Manager

From email titled – DW Engineering Concerns – 2/9/2004
Pasted from outlook – no header
From: Joe Cappelo
To: Michael DeKort

We will meet in Mike Cerrone's office on Thursday at 10:00, Mike's office is located in 105 building .

Joe Cappello
Deepwater Quality Manager
mail stop: 13000-E204
tel; 856-638-7465
fax: 856-638-4301
pager: 1-888-894-5276

From email titled – 123 - Still no commitment from PMO -2/11/2004
Pasted from outlook – no header
From: Larry Finnegan
To: Michael DeKort

PJ has informed me that he is working the issues but that they are not a priority.

I asked him if PMO has made a commitment to address the issues and work with the CG on them. He told me he doesn't know what that commitment is.

I am looking for PMO and our organization to commit to solutions and address those with the customer. What are we doing, in what time frame and on what boats? I do not feel comfortable with pursuing a resolution until after we deliver the first boat (with boat 2 over 50% done with cable/hardware installations we are well on our way to a point of no return on that boat as well).

As such I am preparing to take the issue to the next level on Friday by scheduling an appointment with Carl.

As I have stated before I would greatly prefer that we settle this "in house" – between DW PMO, tech ops and the CG before ship 1 is delivered and/or I am no longer working the effort. With only 2 weeks until delivery and my replacement about to be decided on I feel the issue needs to be resolved before next Friday.

Please find the attachment with the draft text of the email I will be sending tomorrow if we are unable to get any more traction on this issue.

Michael De Kort
Project Manager
123 Lead Systems Engineer
856-359-1439
Cell 609-923-6234

Associated document – title- DW Issues

Good Morning

Since my last correspondence on January 7, 2003, I have been unable to find closure involving several design aspects of the 123 effort. Although discussions on the issues have picked up lately I do not yet feel comfortable with where we are. Before I leave the project or the Matagorda delivers I would like to see PMO make some acceptable commitments to the organization and the customer concerning the issues I have brought forward. I have been trying for several months now to keep the issues in house and would greatly prefer to continue to do so. Unfortunately the issues are still open, these commitments have not yet been made and the Matagorda is 2 weeks away from delivery. As such I feel it is necessary for me to seek higher authority for assistance in resolving these issues.

Essentially my position breaks down in to several key points:

- The Coast Guard's fleet is the second oldest in the world. To respond to that need, as well as the new challenges imposed by 9/11, we have been selected a prime contractors, for the C4ISR effort. As such we have been entrusted by our customer with the responsibility to ensure we field the best designs and outfit the Coast Guard fleet accordingly.

a. In supporting that effort I believe it is incumbent upon us to ensure the product we field can meet the customer's mission requirements for decades to come.

b. We not only have an obligation to our customer but to the nation as a whole. The Homeland Security mission of our Coast Guard should be our paramount concern.

c. As such we should be fielding 49, 123 class ships, with fully capable systems and equipment.

d. The rush to deliver at all costs has caused us to forgo some of our corporate values and has put the company, customer and general public at risk.

e. The answer that all of the issues I have raised are currently not planning to be changed because they are the '"design of record" is unacceptable.

- Issues

a. Cameras/Surveillance

- Less than 360 coverage. This is a security risk.

b. Tempest SRP VHF Radio

- The COTS radio we selected is not meant for outdoor use. As the SRP is uncovered and required to operate at sea state the radio will fail at some point and prohibit the crew from communicating when VHF comms are needed. This is a safety risk.

c. Misc Cabling Issues

- There are still open items concerning several Low Smoke cables and a Flir video cable. This is a possible safety risk

---

From email titled – 123 - Still no commitment from PMO -2/11/2004
Pasted from outlook – no header
From: Michael DeKort
To: Carl Bannar

Carl,

I am requesting an opportunity to meet with you on several important issues relating to the Deepwater effort. I assure you the issues are extremely important and that I have exhausted all inter-departmental and project avenues to find a resolution.

Michael De Kort
Project Manager

From email titled – Issues to be resolved on 123s – 2/24/2004

----Original Message-----
From: Villani, Joseph A
Sent: Tuesday, February 24, 2004 6:12 AM
To: Dekort, Michael
Subject: Issues to be resolved on 123

Mike,
When can we get together so you can fill me in on your concerns with the Matagorda. I am aware of them but would like to hear from you directly. Please bring reference material to help me understand the problems. Specifically the requirements that need to be fulfilled, the design problems you are aware of and your suggestions for correction. I can be available of Wednesday if this works for you.

Thanks
Joe

From email titled – 123 - Still no commitment from PMO -2/24/2004
Pasted from outlook – no header
From: Michael DeKort
To: PJ Messer

The perfect world thing is a red herring

We are where we are because bad decisions continue to be made

This will bite us

You can't pull specs fro the 3.1 and leave them in the CCM. This will lead to an inconsistency that we will get caught on.

I guess I should look on the bright side though – I never agreed with pulling anything to begin with. I wanted the INC 0 matrix we delivered to stand. The powers that be changed their mind after we delivered that matrix. Now the 3.1 has no environmental/physical specs – so we don't test them – the CCM keeps those specs but we want to change the data and not test those.

In both docs the EXACT text exists for temp and humidity. This is sophomoric at best – we look like out of control amateurs - this will backfire.

Has anyone informed the CG that we are restricting their missions by tightening the temp requirements? Maybe we should ask for forgiveness the day we try to sign the DD-250?

I plan on making the camera, Tempest, Ross radio and temperature issues open items on the DD-250 unless we get requirements relief relief.

-----Original Message-----
From: Messer, Paul J
Sent: Tuesday, February 24, 2004 8:55 AM
To: Dekort, Michael
Subject: RE: 123- Environmental/Physical spec inconsistencies - testing

Mike - the as built spec is what it is. noone likes it but its there. not approved but we're not proposing to change it now. we all need to move on.

in a perfect world all the CCM reqs would be in the C005, but they arent. again we need to move on.

the best we can do is see where we are against the CCM reqs, and write ECP with what we know.

From email titled – 123 – Open items for DD-250 – 2/24/2004
Pasted from outlook – no header
From: Michael DeKort
To: Joe Cappello

Joe

Unless we get requirements relief please add the following issues as open items on the DD-250 – in addition to any open problem sheets and risk database items

Surveillance cameras – 360 deg viewing restricted by 2 blockage zones

Tempest – Do not meet minimum tempest requirements called out in spec or internal LM report on tempest solutions. Failed several SPAWAR Visual inspection items

SRP VHF radio – radio provided does not meet environmental requirements. Specifically humidity and Sea State 5

123 external temperature/humidity – several C4 equipments do not meet the CG temperature and humidity requirements. Temp -40 to +125 and Humidity 0 to 100%

Michael De Kort
Project Manager

From email thread titled – 123- Several critical Risk/Action items missing from IDE? -2/24/2004

-----Original Message-----
From: Messer, Paul J
Sent: Tuesday, February 24, 2004 2:43 PM
To: Dekort, Michael
Subject: RE: 123- Several critical Risk/Action items missing from IDE?

ok - please re-enter with details (updated if necessary - some of them you may not know about - TEMPEST for ex.)
and mitigation plans - like the Ross radio replacement

-----Original Message-----
From: Dekort, Michael
Sent: Tuesday, February 24, 2004 2:41 PM

To: Messer, Paul J
Subject: RE: 123- Several critical Risk/Action items missing from IDE?

I never got the email. I found out third hand from Cappello

I will re-enter the risks

-----Original Message-----
From: Messer, Paul J
Sent: Tuesday, February 24, 2004 2:37 PM
To: Dekort, Michael
Subject: RE: 123- Several critical Risk/Action items missing from IDE?

do you have the email that kicked it back ?? I dont - I would like to see them if you have them. the process is supposed to be that you get notified

also not attending the weekly 300 pm Surface Risk mtgs has slowed this down

-----Original Message-----
From: Dekort, Michael
Sent: Tuesday, February 24, 2004 2:35 PM
To: Messer, Paul J
Subject: RE: 123- Several critical Risk/Action items missing from IDE?

Never happened

It's real important we do this right. A lot could depend on it.

-----Original Message-----
From: Messer, Paul J
Sent: Tuesday, February 24, 2004 2:34 PM
To: Dekort, Michael
Subject: RE: 123- Several critical Risk/Action items missing from IDE?

I wasnt at the mtg that kicked back the risks

the kick back was supposed to tell you that they were rejected for lack of detail / mitigation - seriously
-----Original Message-----
From: Dekort, Michael
Sent: Tuesday, February 24, 2004 2:32 PM
To: Messer, Paul J
Subject: RE: 123- Several critical Risk/Action items missing from IDE?

Then I want to know what data I am missing and I will re-enter the risks with mitigation plans.

Why weren't all my risks deleted? I believe I supplied no mitigation – to be honest I didn't see that I needed to when first entered. I thought they went from preliminary to accepted and then I did that.

Also – why wasn't I given a shot at correcting the situation?

-----Original Message-----
From: Messer, Paul J
Sent: Tuesday, February 24, 2004 2:26 PM
To: Dekort, Michael
Subject: RE: 123- Several critical Risk/Action items missing from IDE?

you needed to provide the mitigation plans.....and I thought they did notify you that they were rejected

bottom line is that just saying we have a problem is not enough.....we have to come up with a reasonable fix / mitigation plan
-----Original Message-----
From: Dekort, Michael
Sent: Tuesday, February 24, 2004 2:23 PM
To: Messer, Paul J
Cc: Wilhelm, Douglas G; McLaverty, Brian; Cappello Jr, Joseph M; Cerrone, John D
Subject: RE: 123- Several critical Risk/Action items missing from IDE?

What lack of data? Was I supposed to provide mitigation plans or the board saw none possible?

Why was I never informed and/or given a chance to provide data or respond?

Why is it that all of the issues I raised to Carl were the bulk of the deleted items?

-----Original Message-----
From: Messer, Paul J
Sent: Tuesday, February 24, 2004 2:16 PM
To: Dekort, Michael
Cc: Wilhelm, Douglas G; McLaverty, Brian
Subject: RE: 123- Several critical Risk/Action items missing from IDE?

I believe the risks were kicked back by the collective risk board due to lack of data and really, no mitigation plans.

and then we had subsequent risk boards without full representation to address any new issues.

if there are valid risks - with updated status and mitigation plans - then we should ensure the data is complete and get them entered as risks via the formal process

PJM

-----Original Message-----
From: Dekort, Michael
Sent: Tuesday, February 24, 2004 1:34 PM
To: Cappello Jr, Joseph M; Wallace, James M; Messer, Paul J; McLaverty, Brian; Wilhelm, Douglas G
Cc: Cerrone, Michael G; Dunn, Richard A; Hodge, Yvonne O

Subject: RE: 123- Several critical Risk/Action items missing from IDE?
Importance: High

The items deleted were done so without notice to me or my permission

Only half of the total risks were deleted – they all had the same level of supporting data – as such the reasoning for deletion is inconsistent and suspect.

The only notification I had of an issue was 2 months or so ago. I was told there was no supporting data. I inadvertently sent the wrong supporting spreadsheet. I corrected the situation, notified Jim that I did so and heard nothing back. As of a week or so ago they were still there.

All of the issues I have raised through the organization are missing. Tempest, Cameras and the Ross Radio issue/risks are missing.

I suggest these risks be entered back in to the system immediately. If there is insufficient data I would like to be told exactly what is missing – I will immediately supply the data.

-----Original Message-----
From: Cappello Jr, Joseph M
Sent: Tuesday, February 24, 2004 1:27 PM
To: Dekort, Michael; Wallace, James M
Cc: Messer, Paul J; McLaverty, Brian; Cerrone, Michael G; Dunn, Richard A
Subject: RE: 123- Several critical Risk/Action items missing from IDE?

I was told that they were not submitted due to insufficient details. This was the response I received when I asked the same question. Jim Wallace is no longer with LM. We have a meeting at 2:00 to discuss the open issues for the Matagorda. Some of these issues we need to address.

-----Original Message-----
From: Dekort, Michael
Sent: Tuesday, February 24, 2004 1:19 PM
To: Wallace, James M; Cappello Jr, Joseph M
Cc: Messer, Paul J; McLaverty, Brian; Cerrone, Michael G
Subject: 123- Several critical Risk/Action items missing from IDE?
Importance: High

I just did a search in IDE to see the status of the risks I have entered. Several did not show up. Several of these – like the camera 360deg, tempest and Ross radio issue are critical issues, still open and should not be removed.

Could you look to see what, if anything, happened to them?

Subjects missing

Tempest
Cameras
Ross radio
Racks/internal equip not meet environmental req

Flir cable
Future ship schedule/test period shrink
ILS staffing for lifecycle
Pre-Arrival Check
Ship 2/3 replace equip
Problem Report priority scheme

Michael De Kort
Project Manager

From email titled – DeKort- conference room for discussions – 9/20/2004
Pasted from outlook – no header
From: John Shelton
To: Michael DeKort

Mike,
Thanks, I will see you on Thursday and have time on Friday, available also. Would you meet me at the main visitor's entrance at 9:00 am and escort me to the area where we can meet. Is there a web-site where I can get driving directions/locations and facility information?
Thanks again,
John Shelton

From email titled – DeKort- Deepwater ethics issue – 2/7/2005
Pasted from outlook – no header
From: Gail Allen
To: Michael DeKort

Mike,
At this time, I do not have access to the files that you reference. John Shelton is going to forward the investigative report which I expect to have before we talk. I believe we are in the same time zone. Can we go with 3 pm as I will be changing hotels after the Sr. Mgmt meeting ends on Wednesday. I'll call you if that's okay.
Gail

-----Original Message-----
From: DeKort, Michael
Sent: Monday, February 07, 2005 3:24 PM
To: Allen, Gail
Subject: RE: DeKort- Deepwater Ethics issue

How about 2:30 my time Wed?

Did John Shelton forward you the data package I gave him as well as his investigation package?

Michael De Kort
ISC2 Software Engineering Manager
IS&S Colorado Springs
719-277-4257
719-896-0760 cell

-----Original Message-----
From: Allen, Gail
Sent: Monday, February 07, 2005 1:19 PM
To: DeKort, Michael
Subject: Re: DeKort- Deepwater Ethics issue

Michael,
I am in receipt of your email. I am on travel through Thursday. The earliest that I would be able to speak with you is Wednesday afternoon while in Phoenix. Is your time availability flexible for Wednesday pm?

Gail Allen

Sent from my BlackBerry Handheld.

-----Original Message-----
From: DeKort, Michael <michael.dekort@lmco.com>
To: Allen, Gail <gail.allen@lmco.com>
Sent: Fri Feb 04 14:52:33 2005
Subject: DeKort- Deepwater Ethics issue

Good afternoon,

John Shelton informed me on Monday that he has passed the case on to you. He informed me that he told you that I was unsatisfied with the results of the MS2 investigation as well as my suggestions to remedy the situation. I am standing by ready to discuss this matter as soon as you are available.

I would like you to know that I originally intended to contact Bob Stevens about the matter on Monday and that I promised John I would stand down on taking that action until we talk. The reason for my wishing to contact Mr. Stevens is that I feel the matter is critical enough to involve him. I believe that in the 1.5 years this issue has gone on we have delivered several systems with critical safety, security and reliability issues to Homeland Security (the Coast Guard) and with each month that situation grows worse as we continue deliveries and approve designs leveraged against the issues I have raised. I believe that not only are the Coast Guard crew members in jeopardy but so is the general public they serve as well as the overall mission of the US Coast Guard/Homeland Defense.

I look forward to beginning our discussions on these issues.

Michael De Kort
ISC2 Software Engineering Manager

Email delivered receipt to Fred Moosally – 4/12/2005
Your message

To:	Moosally, Fred P
Subject:	Deepwater Ethics Issue
Sent:	4/12/2005 12:57 PM

was delivered to the following recipient(s):

Moosally, Fred P on 4/12/2005 12:57 PM

From email titled – Project Deepwater- Issues of Concern – 4/28/2005
Pasted from outlook – no header
From: Michael DeKort
To: Robert Stevens

Good Afternoon

My name is Michael De Kort. Currently I am the software engineering manager for ISC2/IS&S. Previously, when I was part of the MS2 company I was the lead systems engineer, on the 123 project, for the Deepwater effort. During my assignment to the project I surfaced several significant security and safety issues. Over the past one and a half years I have been trying to rectify those issues through the chain of command. I have been through the MS2 engineering and program management chains, MS2 quality assurance, ethics and finally corporate ethics. While all the parties mentioned believe and have stated that the issues I raised have been closed satisfactorily, I do not believe they have been. As such I am submitting this correspondence of record to you so I may apprize you of the situation and am seeking your help in to rectifying the issues described. In taking this action I will be satisfying my own personal and professional ethical and moral responsibilities. I strongly believe that some of the decisions we have made on the Deepwater project have severally compromised the mission of the US Coast Guard, the Department of Homeland Security and as a result Lockheed Martin. I believe our approach and decisions have put the Coast Guard in a position of accepting a product that will result in severe degradation of their mission capabilities.

As I understand your time is valuable I have included the details in a separate document. That attached document summarizes the issues, history as I have witnessed it, some of my opinions on the matter and my background.

In closing I would like to assure you that the issues I have raised are significant in nature and are important enough to be reviewed and scrutinized at the highest levels. Given the change in the world post 9-11 I think it is imperative that we ensure that even though there may be significant program pressures we ensure that the most rudimentary ethical and professional standards not be compromised.

If there is anything else I can provide or anything I can do to be of any assistance please let me know.

Thank you for your time and consideration.

Associated document – Deepwater Complete 2 .doc

The purpose of this document is to enter in to record a complete account (not day by day) record of my concerns, issues and opinions relative to the Deepwater ethics complaints I have filed. I want to ensure that the majority of the pertinent information has been provided so that there are no misunderstandings and to ensure that all the relevant parties had a complete accounting of my case.

Summary

For the past 1.5 years I have been involved in trying to correct/remedy certain technical problems relative to the 123 class of ships for the U.S. Coast Guard. (As this effort leverages a systems of systems design concept many of these issues would be leveraged in other efforts as well – such as the MSC -Maritime Security Cutter).) These issues involve several key security and safety requirements. The proper resolution of these requirements are imperative as not doing so will endanger the lives of the crew, as well as the general public, and compromise the secure communications capability of the USG as well as that of all of DoD. (As the CG has a requirement to interface/communicate with DoD any communications compromise would affect all of these organizations).

In my pursuit to resolve these issues I have worked through every level of my chain of command - through several iterations.

At the end of the day I would like to ensure the product meets or exceeds all the USCG/Homeland Security mission needs, the MS2 organization properly deals with an organizational pattern of behavior problem and policies are changed so no other employee, or their family, should have to go through what we did.

Issues

1. SRP/Zodiac VHF Radio

a. We had the C4ISR requirement to provide a VHF radio for the SRP/Zodiac boat

b. This craft is used, primarily, for rescues and to board other vessels.

c. We had a sea state 5 environmental requirement. This requirement means the equipment needed to function properly in very rough seas and weather conditions.

d. The vessel has no interior. Other than a small area for storage under the deck – everything was exposed to the elements.

e. The radio we chose to satisfy the requirements was not meant to be used outdoors. (per the vendor)

f. This is a significant safety risk. Without this radio the Zodiac has no other method of communicating beyond a certain range.

g. We purchased 9 radios upfront. (For the first 9 boats)

h. We told the USG we would not use the radio that came with the Zodiac because it did not meet all technical criteria (Which is true. However the ghosting capability was not nearly as crucial as weather survivability)

i. I asked to have the radios replaced and was told we would not do that because it was the "design of record".

j. After several months of trying to get it replaced I convinced management to let me add a 'raincoat" and swap the microphone out for a weather proof one. I said this was only a temporary measure and did not mean the requirement was satisfied. It simply allowed the radio to operate longer before shorting out. I settled to keep the crew as safe as I could for as long as I could. (If management believed the radio met the environmental requirements why would they agree to the raincoat and weather proof microphone solutions? I believe the answer is that they knew they were wrong but didn't want to admit making such a large mistake. The raincoat and microphone we viewed as added protection – going above and beyond)

k. Several months later, the same week I elevated the issues to the VP of QA and the VP of MS2 the USCG asked us to test the radios in the rain without the "raincoat' (which they found understandably annoying to use)

l. We shorted out 4 radios in the rain. The CG witnessed all 4 radios failing in the rain.

m. Had the customer not tested the radio in the rain we would have delivered the boat with that radio and it would have failed the first time in use. This would have put the crew and personnel being rescued in harms way.

n. I consider the decision to keep the Ross radio, before the USCG testing failures, to be negligent on the part of our technical and program management who knowingly and willfully directed we put an unsafe radio on that boat (keep in mind the Zodiac goes on all 49 123s and all of the WSCs). Again – if it were not for the customer testing the radios in the rain just before delivery we would have delivered these radios.

o. See corporate ethics out brief section below for final LM determination

2. Camera Surveillance system

a. Northrop had a requirement to provide 2 mast mounted cameras that could pan, tilt and zoom

b. While the requirement did not specify specific coverage capabilities it does state these are surveillance cameras used to monitor the boat remotely when in port

c. I believe that requirement means we have to provide 360deg coverage. (At the time the USCG had this exact solution implemented on some its older vessels and they had 360 deg coverage. Additionally NG planned on that same implementation on the WSC in the future)

d. Due to a less than productive and cooperative working relationship with NG we argued over who would provide the cameras for several months. As we were supposed to provide all the signaling and control cables I suggested we take the initiative to buy the cameras to make schedule

e. Management agreed and wanted to put them on the mast. NG pushed back and said that would mean a late design change and new center of gravity study. At that point I suggested we tell NG we tried to help them do their job and if they wanted to play that game they could supply the cameras on their own.

f. It turns out that we decided to continue taking the risk and find another way out. Later I found out this because we made another design mistake and did not supply all the control circuitry for the cameras. This meant the cameras would be fixed position.

g. The design we came up with was to mount 4 cameras on the pilot house – 20ft lower than the standard installation. This would, in theory provide them the same viewing capability without having to move the cameras (I actually liked this idea because with moving cameras one can tell where a moving camera is viewing and avoid being seen). My only stipulation was that we have ship's integration do a plot to make sure their were no obstructions or dead zones

h. The study came back and showed 2 dead zones – about 5 deg each- directly over the pilot hose at 10 and 2 o'clock. These dead zones were about 10ft wide on the boat and projected to the horizon were hundreds of yards wide. These dead zones would enable someone to board the ship and enter the pilot house without being seen

i. I immediately told the chief engineer and program management that this was a security issue and needed to be remedied by adding another camera and circuitry. They refused and said we would not alter the "design of record".

j. When I pushed back they said show me the requirement to have 360 deg coverage. My response was:

i. It's common sense

ii. Currently the existing USCG ships with cameras had 360 deg coverage

iii. The current spec was written by us. As such we made a mistake, should have included it and it is, at the very least, it was a derived requirement.

k. PMO and the Chief Eng still refused to make the change. However. .after several weeks of pushing they agreed to let me talk it over with the CG tech rep. Several weeks later that tech rep came back and said he would approve the dead zones because the windows of the pilot house could be locked and we could tell someone had entered because the locks or glass would be broken. I thought this was an incorrect and reckless decision. However we followed with a contracts letter requesting permission to have less than 360 deg coverage. As of March of 04 the CG had yet to grant permission. Based on this course of action, even though I vehemently disagreed, I knew I wouldn't be able to fight this one further.

l. In December of 03 the security inspector for the CG performed an inspection of our boat and said, in his report, that he noticed the implementation, with 4 fixed cameras, was different than he was used to seeing, but it looked like he had 360 deg coverage. I felt this open the issue back up.

m. I immediately went to management and suggested we tell that inspector that we had less than 360 deg coverage and see what he wanted to do.

n. I was then told, in a room with witnesses, that if he thought he had 360 deg we weren't going to tell him otherwise and that it was his fault he made a mistake and ran a faulty test. I told the group I thought that approach was unethical and put the USCG and LM at risk.

o. See corporate ethics out brief section below for final LM determination

3. Tempest cabling

a. In the summer of 03 the environmental/security requirements were finally flowed down to us (as I mentioned before this was several months after the design review and during our supposed installation period). These requirements levied certain tempest requirements on us. (I was aware that requirements of this type would normally exist. I had previously asked for them and spent months trying to get them)

b. In doing my research on the effort I dug up an internal report, from 2/03, that ship's integration created to guide engineering on what to do - specifically relative to tempest issues, cabling, equipment separation, grounding etc. (I should mention here that I have an extensive Tempest background)

c. I later learned that the proposal never costed or scheduled that work and as such engineering had no money to do most of the most basic of tempest designs or buy what needed to be bought. Specifically the chief engineer directed that no shielded cables were to be designed in or purchased. Shielded cabling is the foundation for the most rudimentary Tempest design. Not having those shielded cables compromises the entire secure system and the associated crypto. Since the USCG had a requirement to communicate with all DoD forces this meant that any compromise we had would be a compromise to all of DoD. A compromise here would mean that classified messages could easily be read by someone who should not be reading them. This is a serious security issue.

d. My next move was to change the design and get the Tempest requirements satisfied (now it should be noted that not all tempest requirements can be satisfied on a small vessel. Normally these can be handled by waiver. Not having shield cables is never waived)

e. Management responded to my request by going back to ship's integration and employing a Tempest expert. (Interestingly enough the original report was done with out this gentlemen's help. The people who wrote the report had no background in the area, sought his help, but were not permitted to use him).
f. The expert wrote a report specifying what should be done and what could be waived. He found major discrepancies. One of which was not having shielded cables.
g. Management then said the "design of record" stands and that we would wait until the visual and electronic inspections to see where we failed.
h. The visual inspection came with a list of failures. Of which the cables were included.
i. Management then decided to not fix any visual failures until the electrical test confirmed those failures.
j. It was at about this time that I had, unfortunately, made my way up to the VP (Carl Bannar). The VP agreed that we should fix all the visual/electrical issues (short of items that should be waived)
k. See corporate ethics out brief section below for final LM determination

4. External equipment survivability
a. With the receipt of the late environmental requirements we were notified that we have temperature survivability requirements to satisfy (as I said before I had been asking for this data from the beginning)
b. These requirements said we had to meet external temperature requirements of -40 to +125 deg.
c. I immediately tasked my Sensors tech to research our equipments ability to meet these requirements. The first system he checked was the FLIR (Forward looking Infra Red). He told me it would only survive to -5. This would mean that a crucial navigation system would not function in cold areas where the CG needed to sail. This would pose a safety risk and cause the CG to alter its mission capability for all 49 of these boats. I told the engineer to keep researching and told management about the issue. They proceeded to tell the engineer to stop performing the research I asked him to do and told me we would not fix a thing – we would not alter the "design of record".
d. When I took this issue to VP he agreed that the issue needed to be remedied. He said the chief engineer would handle this. The chief engineer told me it would be handled by telling the CG there were various requirements issues to address. I said this was not specific enough and should be handled by meeting or changing the requirement. I also said we should not be suggesting to the customer that they change their mission requirements because we didn't do our job. He said he would handle it.
e. I believe that those ships will be incapacitated, in extreme hot and cold weather, because several sensor or communications systems will fail. This could result in loss of life.
f. See corporate ethics out brief section below for final LM determination

5. PCA issues
a. LM had the responsibility of verifying the C4ISR HW/cable installations against the drawings.
b. When LM sent out a group from QA to check cables – QA did a sample of about 100 cables and found over ½ to be incorrect.
c. This situation was caused by us giving inaccurate information to BSI during the first round of cable designs.
d. Based on the sample several hundred cables were improperly labeled.

e. This situation could lead to improper connecting of cables in the future – specifically during maintenance. This situation could lead to equipment/system malfunction, ship unavailability and possible harm to the technician.
f. My suggestion was to fix the cables and drawings. (Doing so would also ensure the problems were not implemented on future ships)
g. PMO decided it was NG's responsibility to run the actual PCA for the ship. So we would wait and see what they caught.
h. I told management I believed that to be dishonest and unethical.
i. See corporate ethics out brief section below for final LM determination

6. Issues with future designs/ships
a. Shortly after leaving the DW effort, while still in MS2, I received messages from personnel still on the DW effort. They informed me that we are perpetuating our poor design philosophy on future efforts. For example I am told that the wind sensor on the WSC will not survive the elements. I cannot confirm the accuracy of the report. However given the chain of events described here and the pattern of performance exhibited by program management and engineering I believe this issue has merit and that a complete review of all designs and requirements is warranted.

Resolutions expected/requested
1. A complete programmatic and engineering review of the requirements and engineering solutions factored against what is in the best interest of our customer. I would like each issue, along with all the associated data, to be reviewed in this context. (To date a thorough review of this nature has not been accomplished in my presence). This review should be conducted by an entity outside of MS2 and consists of engineering team members experienced in C4ISR.
2. A complete management assessment of the performance of every technical and program management lead involved in this effort – including me. We need to know if all the proper policies/processes were adhered to and to address any situations where these processes were jot followed, ethics violations were introduced and anyone was handled or dealt with unprofessionally. Anyone who is found to have acted improperly or unprofessionally should be dealt with accordingly. As I believe there was an ongoing effort to withhold information and deceive I believe there are some individuals who should, at the very least, be removed from the DW effort.
3. Given all the technical missteps on this program I believe it is incumbent upon us to see whether or not we need to bring in some external help – specifically C4ISR subject matter experts.
4. I would like a review of my last appraisal as well as the retaliation I believe I experienced. As a result of this retaliation I am my family were forced to move from the NJ area and to Colorado. For a time this put a significant strain on my family.

History
I entered the program in July of 03. Originally my effort consisted of trying to put together and integrated schedule for the 123 effort. As time went on it became apparent to the DW management team that my background and leadership capabilities lent themselves well to my taking on the role of lead systems engineer for the effort. I accepted this position.
During this period (7/03 through 12/03) several threads were becoming apparent:
1. The were no documented/accepted requirements for the Increment 0 effort. As the original requirement was for an Increment 1 there was nothing in place to document the subset of requirements we had agreed to deliver, at an accelerated pace, in Increment 0.

2. The proposal effort severely underestimated the task at hand. Large groups of engineering tasks, such as cable designs, were not costed. These drove the schedule far to the right. As such design reviews were shortchanged and we found ourselves in the summer of 04 expecting to be in the middle of install while we were still figuring out requirements and starting some critical design phases.
3. During this phase the critical items I mention below came to light.
4. We had not adequately prepared for site installation. Until I arrived there was no plan for utilizing trailers on site and no plan detailing the installation steps. Keep in mind we were already supposed to be installing when these issues were brought forward.
5. The culmination of these issues snowballed. It was obvious that in order to remedy the situation we would need to push the schedule several months, incur a significant cost over run and find ourselves in an embarrassing situation.
6. Management seemed to be more worried about our perceived engineering capabilities and reputation and not providing information that Northrop Grumman could use against us than satisfying the requirements to the degree necessary to ensure the USCG/Homeland Security mission. (At the time our relationship was extremely contentious. On several occasions management referred to us "playing chicken" until someone blinked. This meant that we would hold off on announcing publicizing or fixing a problem until NG announced a problem. Wherever possible we would link our issues to them.). As such the mantra used to defend all of their reasons for not addressing the situation was that we had a "design of record' and under no circumstance would we change. They maintained this posture even when the issues involved safety and/or security degradation.
Every attempt I made, within the DW chain of command, to fix the problems was met with the same answer – we will not change the design of record. I pressed for several months within the team before I decided to utilize my engineering chain of command. As such it took me several more months to work through that effort. I went up and down the chain – several times over. At each step I proved my points technically but was unable to enlist support. One manager even told me I was doing the right thing, that it would come back to bite me and said 'good luck" in my efforts to do the right thing. At no point did anyone offer a credible program or technical counter to any of my arguments.

Several of the risks I had entered in the risk management system were purposefully deleted. When I questioned why I was told they did not meet certain data criteria. When I asked them why only the risks associated with the critical issue were deleted – they had no answer. When I asked them why I was given no heads up – I was given no answer. Only after I complained to my director about the situation did the risks show back up in the database.

During the installation period, in the late summer of 03, the environmental and security requirements were finally flowed down from the internal Systems of System group (several months after the design review). For the first time we were able to see if the systems/equipment we bought and designed met requirements. (Keep in mind this is very late in the process and that equipment had been purchased for several ships at that point.)

After this I went to see the QA organization. We went through al of my data and my allegations. They agreed that the issues needed to be addressed. They forwarded the data to the VP of QA who promptly called Carl Banner and told him he should see me. He immediately called me and asked that we meet. I told him I wanted to see the acting tech director one more time before I came to see him. I told him I wanted to do this by the book. He said he understood and that his door was open.

After not receiving the assistance I was looking for I went to see Carl Bannar – VP of MS2. He was the first level of management who actually listened to what I had to say and who didn't dismiss me with management hyperbole. In each of the cases he agreed with my recommended course of action – including letting me see proof of those resolutions before we delivered the first ship. Unfortunately that promise was not kept. The chief engineer of DW actually went so far as to suggest of was mischarging for pushing the issue 2 months after the ship delivered (A couple months later my SW engineering director did sit me down and show me some of the data I had asked for. This was weeks after the ship had been delivered. At that time, after having been removed from the effort against my will, receiving a low appraisal and being assigned to work far beneath my capability, I acquiesced. I told him the data was not sufficient, that I didn't trust it – but that I was getting weary of the fight and retaliation)

After be exposed to what I believe is retaliatory behavior I applied for other jobs. I was offered a position of senior program manager with IS&S and accepted it.
On my way out of the organization I went to the MS2 director of tech ops to tell him the entire story. As he was new to the organization I felt there was a chance he would get involved, look in to the situation, fix what need to be fixed and ensure this kind of thing never happened again. He took no action (at the time) that I know of other than contacting HR who in turn contacted ethics.

MS2 conducted an investigation.

- The MS2 ethics manager came to my location and interviewed me
- The result of that investigation was to find my claims could not be supported. I was not permitted to know where my accusations fell short or were inaccurate and was not permitted to know where the information was not supported. I do not know if the history was found to be in error, if the actual claims were in error or the resultant delivery did not line up with my claims. I stipulated at the time, and maintain now, that I should be permitted to see all contractual and/or engineering data that disputes my claims or information. I believe it is in the company's best interest to do so. If the final results are in keeping with the contractual requirements I should be able to see proof that we met our obligations.
- At no point did anyone ever contact me asking for more detail, to refute some information or to discuss any of my data. Given the importance and complexity of the data as well as the fact that the finding were that none of my claims were substantiated I find this to be very questionable.

Corporate investigation.

- This investigation began a short time after the MS2 ethics investigation conclusion. I had requested an independent engineering review of the situation. That request was granted, at first as a single engineer then as a team. After several weeks had gone by without by being interviewed I requested status. I was told the investigation was almost over and that I would be given a report soon.
- Gail Allen, Carol Boser (the engineer assigned to perform the review) and I have a meeting scheduled for 4/11.
- Gail Allen requested that I provide all copies of the data that I have in my possession. As that data proves each and every one of my allegations to be true I am reluctant to give it up until I am sure the issues have been resolved satisfactorily.
- Outcome of debrief- 5/14

a. Cameras - CG accepted the camera blind spots

i.I believe this puts the CG in a severely compromised position. The original intent of the cameras was to provide the CG the capability to monitor the boat remotely when in a CG port. This would mean no one would need to be on board to monitor the boat. I believe we have put the

CG in the position of now having to man the boat – as the dead spots would permit someone to easily get on board and enter the pilot house without being detected. No other ships, which have cameras, put the CG in this position. We were already adding 2 cameras – adding a 3rd would have been no problem. Additionally – the fact that there are dead spots, and all associated data, should become classified information.

b. Radio – replaced with correct radio

i. What should be looked in to here is the chain of events that lead to this change. I tried for 6 months to get this change. It wasn't until we shorted out 4 radios, in front of the CG, during testing that we replaced these radios. I strongly believe it was our intent to deliver the original radios – which would have resulted in failure the first time used.

c. Temp ext equip – fixed FLIR and agreed to check in to compatibility of all the other equip and get back to me. Chances are most of the other equipment will not pass requirements thereby forcing the CG to change its mission destinations. Carol Boser (and sub sequentially MS2 legal) said no problems have occurred yet on the 5 fields 123s. I asked if any have sailed in extreme environments and she said she didn't know. She said if we find a problem – we will fix it. How is this satisfactory?

d. Tempest – CG passed instrumented tests even though proper cables not used and the original visual A Tempest inspection failed. I doubt that this system actually passed the standard electrical Tempest checks. If this system is not up to standards all the CG and DoD classified communications will be compromised when the CG is involved, even during simple monitoring, of communications.

i. We knew we ordered the wrong cables before we asked Bollinger to run them on the ship. We should have ordered the correct cables and worked the cost issues with the CG.

e. PCA – agreed to fix

f. Pattern of performance by Deepwater program management and engineering leadership

i. Excused performance due to schedule/budget pressures and poor processes

ii. Excused things people said – "people say stupid things"

1. When PJ Messer said "it wasn't our fault the customer didn't catch our camera blind spots" – is this something we dismiss that easily?

g. Retaliation – Carol in formed me that there was no data to support. As my appraisals reflect that sometimes I push too hard on issues she didn't see a problem.

h. Overall – Carol Boser – engineer on investigation – told me that management was under tight schedule and budget constraints and were working in an environment that had poor processes. As such she thought their actions were understandable and acceptable. She did not think management's behavior displayed any patterns of poor judgment or ethical breeches. Carol did mention that if any problems are found down the road they would be fixed.

i. Response

i. Bad process, tight schedules and budget issues are not a get out of jail free cards. Suggesting such- in light of the issues described here – is ridiculous. None of these is enough of an excuse to excuse us from the most basic ethical considerations. I knew these things were wrong and could be fixed – why wouldn't the same standard be applied to program managers and chief engineers? Are my standards too high? Are they too high for homeland Security and the nation?

ii. Why would we put CG in such a difficult and compromising position? They should never have been asked to accept any of this.

iii. All of these issues could have been solved before the first boat delivered with minimal schedule risk. We knew these issues existed 6 months before delivery and weeks before installation began. We created this crisis by making bad decisions and then forcing ourselves and the customer in to a box.

iv. I have been told, in many forums, that Lockheed Martin has an "unyielding" ethics policy. How is the scenario unfolding here not yielding? Are they merely policies of convenience?

v. As these issues were brought up over 6 months before the delivery of the first boat and installation had not yet begun we could and should have rectified these issues before delivery. There would have been cost and schedule impacts but they would have been justified and far cheaper to fix then than now.

vi. Waiting until problems are found later - (per Carol Boser) this meant we would wait until actual system failure. Most likely this would occur during a mission. Is this acceptable?

vii. I believe that the product we are delivering will result in injury to crew members and/or the general public and major security/communications compromises down the road. It is very unfortunate that the customer was put in a position to have to accept this situation. I believe that LM and the CG need to revisit the situation and find a way to rectify it. If we do not there will be severe fallout which both of us will have to answer for.

viii. I believe we have only converted 5 out of 49 123's. We should ensure that future boats are delivered to the originally intended spec and figure out a way to back fit the others.

Opinions/Suggestions/Observations

The information below has been provided so I can put forth an explanation for how and why things occurred. I understand fully that most of these are only my opinions but I believe they are consistent with the facts. I believe it is important to convey these opinions as they might help us understand the depth and root causes of the problem so we can go forward and correct them.

- From the beginning I believe this project suffered from an extensive lack of technical expertise. As such the proposal was recklessly under bid (I say recklessly because it far exceeded any realistic chance of success – far beyond normal proposal challenges we take to be competitive)
  - I believe this lack of expertise stemmed from an organizational arrogance that led to a severe underestimation of the work at hand. What we did was leverage our Aegis success. While this is an excellent strategy we went too far and assumed that since the DW effort was considerably less complicated than Aegis – that it would be easy to do. While I believe it is true that the effort is less technically challenging than the Aegis effort one still needs to know what to do. We did not bring an adequate level of C4ISR expertise on to the job.
  - Additionally I believe these leaders lost their way. I believe that Aegis has a culture that expects/demands the highest ethical standards. That culture makes it virtually impossible to stray. When left on their own these leaders became lost and found they had to think on their own. They made the wrong choices.
- If the organization had chosen to fix all these issues when presented in the summer/fall of 04 we would have been able to do so on the first boat and leverage those fixes forward. Those changes would have caused a cost/schedule impact but those impacts are far less than we would have to experience now because we have fielded several 123's and have completed CDR for the WCS. Additionally we could have been seen as being proactive – now we will be seen as not only making a crucial sophomoric mistake but we were late. Additionally we could be accused of hiding information or misrepresenting the facts.
- I believe the organization compromised its ethical standards in order to save face. I believe that in doing so we put the USCG/Homeland Defense and the general public at risk
- I believe that my management chain, at the time, should have supported me once I made my case technically and/or contractually. I believe it was incumbent upon them to assist me in doing the right thing for the project instead of informing me that I was doing the right thing, wishing me luck and standing on the sideline.
- On several occasions individual contributors as well as program management and tech leads told me they felt I was doing the right thing but they would not get involved out of fear of retribution. One PM, who was just coming on the job during these events, actually told me he thought we were making "stupid" mistakes by taking the course of action we were on and

promised me he would look in to the situation. Two days later, after meeting with senior PM, he told me we would stick with the "design of record' and told me he could no longer help me.

- During the winter of 03 I tried, on several occasions to see the DW chief engineer on these issues. He refused to return 3 phone calls and several emails requesting a meeting. It was not until I got to Carl Bannar and he was directed to see me that he did. When asked why he wouldn't see me he said that he assigned that to another engineer who apparently didn't do his job well. I said that was fine in the beginning but that it was incumbent upon him to see me when he knew I was going to see Mr. Bannar because I was not satisfied with the responses I was getting. I told him I thought he purposefully avoided me and that that was unprofessional and contributed to the problem. He had no response (this is the same chief engineer that refused to send me the data he promised and then insinuated I was mischarging when I kept pushing)
- I believe that the legal and ethics organizations are not acting in the best interest of the company in these matters. I believe that each level of management simply trusts the one below them and that ethics and legal are falling in to the same pattern by defending them. I believe that MS2/Deepwater program and engineering management, MS2 and corporate ethics and legal would be better served by looking for what the right long term solution is and not looking to defend the positions of those who made the decisions they got us where we are. It cannot and should not be in the best interest of LM to continue down the path we are going.
- I believe I have been dealt with unfairly and unethically. I believe I suffered organizational retaliation and that this process – being 1.5 years since the problems came to light, has taken entirely too long.

Background

- Relevant experience
  - US Navy - 6 years as a communications electronics technician. Specialized in the ASW communications area. This involved going through the navy's longest and most extensive 'C' school. The system involved complete C3 systems. Certified in 3 cryptos and Tempest. I then went on to work at the Guam and Diego Garcia communications stations and earned several awards and medals for doing so
  - US State Department – 1.5 years as a Communications Engineer. Spent 6 months of that time as the communications engineer for the counter terrorism group
  - Lockheed Martin
    - Systems Engineer – worked classified LAN/WAN projects as well as aircraft simulation efforts and A/V training suite design. Last SE responsibility was as SE leads for the DW 123 effort
    - Project Lead – lead several aircraft simulator upgrade efforts as well as being the SW project Lead for Aegis baseline 6 Phase III. (For which I earned several Aegis Excellence and business Excellence Awards. Most notably was for successfully completing the baseline 6 Phase III Incentive effort)
    - Currently SW engineering manager for IS&S/ISC2 (predominantly NORAD efforts). Previously I was SW project lead for the NORAD CS2 effort.

In closing I would like to reiterate my commitment to see that the right thing is done for our customer and shareholders and I will pursue every means available to me to ensure that happens. Post 9/11 I believe the mission of the U.S. Coast Guard and Homeland Security has become our nation's highest priority. As such Lockheed Martin should ensure that the products we provide ensure that mission succeeds now and well in to the future.

From email titled – Email to Robert Stevens – 5/4/2005
Pasted from outlook – no header
From: Maryann Lavan
To: Michael DeKort

Mr. De Kort:

Your e:mail to Mr. Stevens of April 28, 2005 was referred to me for review and handling. I appreciate that you have devoted much time and effort in pursuing your concerns about the Deepwater Program. I would like to meet with you in person to hear and respond to your concerns. Are you available for a meeting in Bethesda, Maryland at Lockheed Martin Corporate Headquarters on Tuesday, May 10th, from 11:30-12:30?

Sincerely,

Maryanne R. Lavan
Vice President-Ethics and Business Conduct

From email titled – Deepwater Ethics Issue – Please Read – 1/17/2006
Pasted from outlook – no header
From: Michael DeKort
To: Robert Stevens

Mr. Stevens

First let me say that this will be the last unsolicited correspondence I send you pertaining to Deepwater matters. Given your position and constraints on your time I know I am asking quite a lot of you to indulge me by reading this correspondence. I also realize this letter is long. I wanted to make sure that should you decide to read it you are fully informed.
I have been struggling for some time on how I should formulate this letter. I am fully aware that the odds are stacked very heavily against me. We have 2.5 years of investigations, your VP of Ethics and the MS2 Deepwater organization telling you all is well. Having said that I will endeavor to convince you otherwise by laying out the issues and a brief synopsis on how we got here. What we have here is the questionable competence at the lowest levels and a chain of command which simply wanted to trust the judgment of those below them. In this case that was an incredibly bad decision. This entire episode has snowballed and with every day we lose valuable time needed to turn this around. My background as a communications technician for the US Navy, a communications engineer for the US State Department (embassy/consulate communications and the leading engineer for the counter terrorism group) and as a systems engineer/project manager for Lockheed Martin tell me we have put our company, our customer and the general public at risk by leading our customer in to accepting these systems as designed. There are several critical safety and security issues involved which will lead to severe consequences for Lockheed Martin, Homeland Security, the US Coast Guard and the general public down the road.

Technical issues summary – Deepwater 123 effort

- Exterior equipment survivability – There is a risk that the majority of the equipment will not survive the environmental temperature extremes. Several Nav, Sensor and Communications systems will fail. This will cause serious safety issues.
- Tempest – Shielded Cables – The proper cables were not installed in the secure communication circuits. This will cause serious security issues
- Surveillance Cameras – We installed a video surveillance system with two significant blind spots over the pilot house/bridge. This will cause significant security and safety problems
- FLIR Cable – We installed the wrong cable type in the FLIR system. The cable was not designed to survive environmental extremes. This is a serious safety issue

Issues Detail

Exterior equipment survivability – The majority of the exterior mounted equipment will not survive the environmental temperature extremes

- Late in the project, months after the design was approved and equipment purchased, we received our environmental and Tempest requirements (this in itself is very troubling). One of the requirements was to ensure that all the equipment and cabling we installed on the exterior of the vessel could survive Sea State 5 and temperatures from -40 to +125 deg (f).
- Upon receiving these requirements I immediately asked my IPT Leads to double check all the equipment to see if we had any issues. They were directed to look at all Sensor, Nav and Comm equipment.
- The very first device we looked at – the FLIR – would not survive below -5 deg.
- Management was then informed about the situation senior management directed me and my people to stop looking in to whether or not the rest of the equipment would survive the elements. They also directed that the FLIR design would stand as is. As the "Design of Record".
- After 2.5 years – the organization decided to fix the FLIR. However details were not provided on whether the rest of the equipment met specs or if we convinced the CG to lower the requirement.
- I believe that we either lessened the requirements or gun decked the solution. This could mean that the Sensor, Nav and Communication systems are at risk. (Especially when these boats deploy to Alaska or warm regions such as Guam or even the Persian Gulf area)
- All of the systems the CG currently have met these requirements. We will be severely degrading the performance of these vessels
- Note – The engineer your ethics office assigned to this case, along with your legal department, sent me a letter stating there are no long term issues because several of the boats have been doing fine during their sea trials. Sea trials conducted in the Gulf of Mexico. I hope this gives you serious pause. The Gulf of Mexico is about 80 deg all year around. It never sees any of the extremes called out by the specs. This is exactly the kind of reckless engineering the Deepwater team utilized to get us in the predicament we are in now. The first time these boats get to cold waters and there is significant sea spray – the majority of the systems will fail.
- This situation exists not only for several boats that are modified but for the 41 or so that we haven't even started on yet. (I believe we are not yet on contract for boats 6-49.)

Tempest – Shielded Cables – The proper cables were not installed in the secure communication circuits. This will cause serious security issues

- Again – well after the design review and the equipment was purchased – we received our Tempest requirements. Those requirements called for the standard set of military sea going requirements – shielding, grounding, bonding, separation of equipment etc.
- The Chief Engineer on the effort had directed months before that we not buy shielded cables because they were too expensive. The requirements were never changed.

- Until this point we had not involved anyone who had a Tempest background on the project even though they worked in the organization.
- Note – Ship's Integration had prepared a report on what our Tempest solutions should be. They did an excellent job given the engineer had never worked Tempest before (The Tempest engineer they had on staff was not asked to participate). The report stated shielded cables must be used.
- I have a Tempest background – in the Navy and Department of State – as well as 4 crypto designations. The report made sense to me. Standard ops.
- Management was informed that we needed to buy shielded cables or change requirements (something that I have never seen or heard of being done) they informed me that the design of record would stand.
- Sometime later we brought on the Tempest engineer from Ships Integration to perform a site inspection. He failed us in several areas including shielded cables.
- Management decided to wait until the instrumented test to see if we could pass. No effort was made to buy or install shielded cables based on the visual test failure.
- 2.5 years later. Again I have been given none of the technical details I was promised. However I was able to independently ascertain that shielded cables have not been installed.
- Recently I have contacted several Tempest inspectors around the country. All of them told me the chances of passing a test were extremely unlikely without these cables.
- I believe LM and the USCG have either gun decked the tests or lowered the requirements. (Check every other CG or Navy ship in the fleet now and see if they have shielded cables in their secure comm systems. I guarantee you they do. We took shielded cables off these boats when we installed the non-shielded cables.)
- As the USCG now has a requirement to be able to communicate with DoD and several other agencies this puts all of those agencies at severe risk. Any foreign government monitoring these boats – from shore or from "fishing boats" will be able to pick up all the communications from these boats. Since we have no shielded cables these boats will emanate like an antennae. The communications heard will be in the clear and easily understood. This means that those listening will pick up any and all communications DoD or any other organization has even if these ships are simply monitoring those circuits.
- The CG not only accepted this for the current boats but did so for the 41 boats we haven't touched yet or procured cables for.

Surveillance Cameras – We installed a video surveillance system with two significant blind spots over the pilot house/bridge. This will cause significant security and safety problems.

- LM and ICGS received requirements to install 2 mast mounted movable cameras. (an implementation used for quite some time in the USCG)
- Originally ICGS was supposed to procure the cameras and install them and LM was to provide the video and control circuitry – as well as the shore connection box
- The cameras purpose was to permit remote monitoring of the boat when in a USCG port. No watch standers would be required
- Arguments ensued between us and ICGS on who would buy the cameras.
- I requested that LM to take over this effort to stay on schedule
- A decision was made to install 4 fixed cameras on the pilot house. While I like this idea, as one could not 'sneak' around a moving camera, I knew that management was assuming each camera had a 90 deg field of view. I asked Ships Integration to utilize the camera specs and ships design to plot the views. They came back and said that the cameras did not afford a 90deg field of view and as such there would be blind spots. These blinds spots were are 11 and 2 o'clock – directly over the pilot house/bridge windows. The blind spots were over 10ft wide on

the deck and hundreds of yards wide to the horizon. I told management we needed to install 1 more camera and shift the existing forward camera over to cover the blind spots. Management said the "Design of Record" was 4 cameras. (No cameras had been purchased or installed yet)

- Management responded by telling me there was no 360 deg requirement. My response was that it was common sense and that the USCG currently had ships with 2 masts mounted moving cameras that supplied 360 deg of view.
- Management stuck to their position. But did permit me to talk to the USCG tech rep.
- The CG Tech Rep – feeling the same schedule pressure – relented and said the blind spots would be acceptable because the pilot house/bridge windows could be locked. I told him someone could plant a charge on the boat undetected – for which he had no answer- or get in to the pilot house by breaking a window. The rep said we would detect the broken glass on the floor and perform and inspection.
- Again keep in mind that one more camera would have solved this – at an expense of under $1000. (If you asked for a video surveillance system for your house – would you want a blind spot over your front door?)
- Some time after this the CG security inspector inspected the boat. His report stated the boat didn't have the standard 2 camera mast solution but that he had 4 fixed cameras and it looked like the boat had 360 deg views. (This established that 360 deg view was a requirement)
- After reading this report I informed management that the 360 deg requirement was indeed valid and that we had an obligation to tell that inspector we had 2 blind spots
- Management said it was not our fault the inspector missed the blind spots or that they wrote and conducted a faulty test
- This situation puts the crew of that boat in harms way. Especially if they decide to stick with their original plan of not having a watch stander on board (Ethics told me they might decide to add a watch stander due to this problem. Why would LM permit the USCG to lessen the original requirement? Again – they have 360 deg solutions on other boats. We are severely degrading existing capability)
- 2.5 years later. The CG has accepted the design. All 49 boats will have the blind spots. Even the 41 boats we haven't touched yet or procured equipment for.

FLIR Cable – We installed the wrong cable type in the FLIR system. The cable was not designed to survive environmental extremes. This is a serious safety issue

- Forward looking Infrared – used for foul weather navigation
- We installed a cable that is not meant for outdoor use.
- The direction from senior leadership was that this was the "Design of Record"
- I asked that we swap it out for one meant to survive the elements.
- Management refused to swap out the cable and said we would replace it when it fails.
- This cable is going to fail when the crew needs it most
- All 49 boats are planned to use this cable.

Summary of Issues

Individually each of these problems can, and I believe will, cause serious safety and security problems for the USCG (given that 49 or more of these boats will have one or more of these issues the odds are pretty good there will be a catastrophic failure). Each of these issues could have been solved before the first boat was completed. I do not believe this is what Lockheed Martin is or should be about. It is easy to say we observe the highest ethical standards – but apparently not as easy to do so. It is not a matter if these things happen but when. (The worse part is that we have the talent in the company to do this right and most of the solutions are COTS and not that difficult to engineer.) Ethic's response that the USCG has accepted each one

of these problems is a very weak argument and a cop out in my opinion. I believe the lower level officers of the CG accepted this because we put them in a position of being late or being over budget if they did not do so and thereby put them in a difficult position with their seniors. The USCG and by proxy the public has secured our services to supply a product that ensures the mission of the USCG is paramount. Our actions have put that mission at risk.

How we got here

- LM decided to leverage our Aegis reputation to win this effort. Therefore a decision was made not to have other orgs, who had C4ISR backgrounds, bid this job as prime. While I understand leveraging LM's well deserved Aegis reputation I think this decision laid the groundwork for the problems I described. I believe management thought that as this effort was far easier to engineer than Aegis – we made the mistake of thinking it was so easy we didn't need subject matter experts. As such none of our PM or Senior Technical Leadership team had C4ISR experience (nor did most of our IPT engineering leadership)
- Very early on the team realized they had schedule and budget issues.
- The 123 effort was the first. The design review was held on schedule – but prematurely. Most of the requirements had never been flowed to the design team by Systems of Systems.
- In spite of this the design was completed and equipment purchased. All of the problems described above (as well as several others, with lesser severity, I did not brief you about) were now set in to motion.
- I was brought on board just before install. As I have a C4ISR background and some success at resurrecting red efforts I was made the lead SE for the 123 effort.
- The management team refused to fix the issues described above to stay on schedule, ensure costs would not rise and to make sure Northrop didn't have anything to use against us (this was stated several times by senior management)
- As such everything snowballed. Leadership on the project had no intention of fixing these problems because announcing they existed would demonstrate their questionable competence and the fact that they were ethically challenged. Now they would not only have to explain that they missed some "easy" design decisions but that were late and putting the customer at risk.
- After several years and investigations I am now writing you. I believe we are where we are because management is supposed to be able to trust those below them. You trust your ethics officer to do the right thing and she trusts those below her – and so on. The Deepwater leadership made some very bad decisions. There were pressures put on those people to make schedule. They did not have the background to do the job and had no interests in anyone finding that out. When mistakes were made at the lower levels their management supported them. Then upper management supported them – and so on. Where does that leave us now? Given the severity of the issues and the embarrassment that would ensue due to our incompetence anyone who stepped forward now believes they would be doing so risking their careers and their senior's careers. (I know several members of leadership on that team who have admitted to me we have done the wrong thing). I am fully aware that on the face my accusations – given the opposition and the absurdity of some of the claims – seem preposterous. What are the odds that one guy is right and everyone else is wrong? As I stated before playing the odds in this case is a very big mistake. (Again – these designs are now planned to be used on all 49 of the 123's. Additionally I believe some of them are being used on other vessels as well. This would mean the majority of the new CG fleet will have severe mission capability degradation)
- Lastly – at no point in this process has anyone demonstrated that my position on the original requirements or my suggested solutions is not technically accurate or is not the best option for the customer or Lockheed Martin. Each and every solution I recommend is in keeping with the

original requirements and/or DoD norms. The pushback has centered on the schedule, costs or what the customer would or could accept.

- Case in point
- Let me give you one more example of the teams questionable technical competence, desperation and ethical fortitude
- Issue – VHF radios for the SRP (Zodiac boats)
- The 123 had a requirement to lengthen from the previous 110' to accommodate a Zodiac boat. These are pontoon type diving boats, with no overhead protection, meant to be used by boarding crews and for rescues
- They had the same Sea State 5 and temperature requirements as the 123. (Given your background I am sure you realize these boats go out in very tough conditions and get soaked)
- Our "Design of Record' was to use a Ross VHF radio for their primary communications. Their reason – the CG liked the radio on the 270' boats. Keep in mind that is inside that boat – on the bridge – and not exposed to the elements.
- When I came on board an engineer told me the radio could not be used out of doors. I verified this with the vendor – who told me the radio could not be used outside at all
- When challenged on this management responded by stipulating it was the "Design of Record".
- I pushed on this issue for 6 months. I went through every level of my chain – multiple times – no one would help me (Even though most of my leadership said I was doing the right thing)
- The very week I was scheduled to talk to the MS VP the USCG asked us to test the radios in bad weather. We shorted 4 radios out in front of the customer.
- After that test the decision was made to scrap the radio and use the one that originally came with the Zodiac. This means we had convinced the CG to remove a radio that was meant for foul weather and for them to purchase a new one (In fairness the Ross radio did have one feature the CG wanted. However it was not more important than survivability)
- If it had not been raining that management team would have delivered that boat with the Ross radio. That radio would have failed the first time the CG was using it in the rain or in heavy sea states (sea spray). This could have put the CG and public at risk.
- This episode is a clear example of what the Deepwater management team was all about. They didn't care about the safety or security of the crew; they put their own self interests above that of the CG and general public.

Recommendations

I hope, after reading this, you are asking yourself if it's possible I am correct and if so I hope you then ask yourself - what the hell are we doing?

I am asking you to play against the odds and look in to everything I have stated here. I am asking you to assign someone with an actual C4ISR background to look in to these issues. The question here is not whether we are contractually or legally covered – it is whether or not we are doing the right thing. In the court of public opinion or if reviewed by experts in the industry or under the scrutiny of a federal investigation would it be viewed that we met our moral, ethical and professional obligations? I believe the right course of action here is to work with the USCG fix the current vessels and ensure that the designs for the future vessels are sound. As the CG will be using these vessels for decades performing thousands of missions I believe we have no other choice. Additionally we need to look at each and every position on these teams and see if we have the right individuals in the leadership and technical positions. The Deepwater leadership team took advantage of the system and manipulated the entire program and these investigations

in an effort to cover up their mistakes and shortcomings. They went so far as to convince the customer that these compromises were in no way harmful to their mission – unfortunately the customer went along with this scenario.
I realize these are severe charges and I should and expect to be held accountable for all of them. I believe your ethics team, your engineer, the MS2 ethics director (whose finding after 5 months of investigation was that none of my charges had merit) and the leadership of MS2 all tried very hard and found ways to defend the decisions of those made below them. Everyone was playing the odds and relying on those below them to be competent and ethically sound. This is the essence of how this snowball was created. I am asking you to stop its journey before it becomes an avalanche.

Michael De Kort
ISC2 Software Engineering Manager

Letter from Scott MacKay LM corporate council – 3/1/2006

Retyped and only partial quote

"...I have concluded that; (1) the corporation has thoroughly and exhaustively investigated you allegations; (2) I concur with the conclusions reached by prior investigations that your allegations were unsubstantiated; and (3) the corporation considered the matter closed except to the extent it is asked to respond to the Coast guard or other government agencies regarding those allegations..."

Letter to Board of Directors – 4/4/2006
Included material given to Robert Stevens earlier – will not include again here

Michael DeKort
Principle Engineer
Lockheed Martin IS&S
169 Walters Creek Drive
Monument, Co 80132
719-488-8608 h
719-277-4257 w

Nominating and Corporate Governance Committee
Lockheed Martin Corporation
6801 Rockledge Drive, MP 200-10
Bethesda, MD 20817

To whom it may concern,

I am writing you looking for your assistance in clearing up several critical safety and security issues on the MS2 Deepwater Program. Enclosed is text from one of the emails I have written to Mr. Stevens on the topic. All of the details are enclosed in that email. I should tell you upfront that Lockheed's position to date has been that all of my allegations and assertions are baseless. However, the Inspector General for the Department of Homeland Security is looking in to the matter, at my request, and has recently informed me that they believe, after questioning the Coast Guard and inspecting one of the boats, that all of my allegations and assertions are accurate. In addition to this I have been contacted by the officers who are now in charge of the Deepwater Surface Assets division and they have informed me that they are cooperating fully with the IG, that several of my allegations have merit and that they are very concerned. I am telling you this to avoid your dismissal of my allegations out of hand. As such I ask, for the good of the company, the stockholders and the customer, that you look in to the matter independently and work with the USCG and DHS IG to discover the facts and get Lockheed Martin back on the right track before the IG takes the case to the US senate, as their process dictates, hearings begin and this issue becomes public knowledge.

The text below is from an email I sent to Robert Stevens. This is the same text I sent to the DHS IG, the GAO, the Commandant of the USCG, the Commanding Officer of the 8 boats in question and the congressmen and senators responsible for the relevant appropriations committees. Both the IG and GAO have contacted me and are investigating the issue. If you have any further questions please do not hesitate to contact me.

Response from Board of Directors – 6/26/2006
Scanned – portion retyped here

Dear Mr. DeKort

This responds to your undated letter to the Nominating and Corporate Governance Committee of the Lockheed Martin Corporation Board of Directors, which was received by the Corporate Secretary's office on April 21, 2006.

The Board considers the issues addressed in your letter and determined that the Corporation's responses to those issues, beginning in October 2004 and continuing to the present, were appropriate and no further action is warranted. Each of the issues has been disclosed to the Coast guard and the resolution of each issue was coordinated with and was or is being resolved to the satisfaction of the Coast Guard customer.

Sincerely,

James B. Comey

Response to DHS IG 123 C4ISR Report

My response to the IG findings - notes

Overall

- The IG agreed with all of my points technically and contractually on two of them
- In the past LM and the CG have said that my issues "had no merit", "were baseless" and that the CG had closed all the matters contractually.
- The report states that LM self-certified a known faulty C4ISR system - one that would cause safety and security issues which would put the CG and nation at risk
- The report states that the CG was unaware of some issues and their ramifications as late as 2006. This is incorrect. LM and the CG were notified about every one of these issues by me in 2003. They were notified through official briefings and the shared ICGS problem reporting system.
- I was told by LM before being removed from the program and the Matagorda was accepted that all of my issues would be clearly identified on the acceptance documents – the DD-250s. Given the outcome of the report it appears they did not do so.
- I contend that the ICGS parties conspired to not only deliver all 49 123s and all 91 SRPs in this condition but were, or are, headed down the path of making the same systems match on all of the other sea going assets like the NSC and FRC (dictated contractually by the Systems of Systems approach). I believe they did this knowingly and willfully.
- To this day – as the report sates – none of the issues had been fixed on any of the 123s. While the parties concerned may say this is due to the hull cracks and the ships being taken out of service – they did not know this until after the first two (or more) boats were delivered. (The IG supports this by stating that the parties had no knowledge at the time I raised these issues and they were delivering them on them first couple boats that the hulls would crack and all 8 123s would go to Key West)

Specific report points

Low Smoke

- I submitted the issue to the IG but didn't push it in the video etc because I thought it was going to be waived. Apparently the IG doesn't think it should be- which I agree with.

- The IG agrees with my allegations regarding this issue and believes the waiver should not be approved. There are 80 some of these incorrect cables on the 123s. They are a safety problem.

Ext Equipment

- The IG says that 30 items on each 123 and 12 on each SRP do not meet requirements
- The report states that the requirements for the boats to survive and operate in extreme weather are "not really beneficial". I believe this statement demonstrates their incompetence and willingness to put the CG in harms way in order to further their corporate goals. They made this statement because the first 8 123s went to the Keys where the weather is not as extreme as other places. The IG debunks this by saying the boats were not originally destined for the Keys until hull problems popped up – which was after the first few boats were delivered.

- When I brought this issue up in LM by telling them the first system we looked at, the FLIR, did not meet requirements LM directed me and my IPTs to stop looking in to whether or not the equipment met specs. It was not until over a year later – during the third internal ethics investigation looking in to the matter that LM started looking in to it. (There were three ethics investigations because I kept pushing up the chain after each lower level investigation said none of my issue had merit. I stopped at three because the corporate VP of ethics ran that investigation. Upon receiving the same answer after that investigation I went to the CEO and Board of Directors. Neither of which was satisfactory either) I believe this led to the notification to the CG that a problem may exist (but wasn't important or contractually stipulated according to them) in 2006.
- At the time of the second ethics investigation the LM engineer and council assigned told me in writing that the problem was not severe because the boats were in the Keys. Again – All of the 123s and most of the boats sent to the Keys were not meant to go there. My comment to them at the time was that I never said the boats wouldn't survive in "bath water" and that there suggestion that because of this there was no problem demonstrated their incompetence.
- The report says that the CG did not know about the problem until July 05. This is incorrect. I told them in the winter of 03. Proof - I have an official problem report logged in a system they used as well as LM.
- The IG states that LM incorrectly stated that the entire set of requirements did not exist when they self-certified. LM also states that certifying was a waste of money and time.
- The report says that had the CG read the LM self-certification documents the fact that there were issues would not have escaped their attention. Again- the CG was informed in late 03 and I can prove it

TEMPEST

- The report states that while the cables I suggested are the best option the contractor is not bound to use them and that the cables they did use passed the Instrumented Testing even though the Visual Tests sowed they were wrong
- I have been told that the Instrumented Tests mentioned may have been falsified or never completed
- I have been told by several TEMEPST experts that there is no precedence for this type of cable being used in a TEMPEST environment nor for it to pass the tests
- Compare the cables to what is used in DoD and State Department systems of the same type. I worked in both organizations and know that I the same systems they us the braided shielded cable (or other measure to accommodate other cable types).
- I was told by the IG this summer that the CG refused to honor the IGs request to rerun the tests with them as witnesses
- I was told that LM used the correct cable on the 270' boats effort. I was told we did not use the right cables on the 123s because they were not bid.
- Over 100 of the wrong cables were used on the 123s
- The requirements specifically call out TEMPEST requirements from 1972. There have been dozens of updates since. Why use such an old version?
- I notified LM about this problem months before the first boat delivered. They were clearly informed o the risks as well.
- The WPB-123 OAA Final Report from the Navy COMOPTEVFOR Test Group Sept 29 2004 clearly shows the TEMPEST tests had not passed as of Sept 04 – months after the first 2 boats delivered. Months after LM told me they Instrumented Test had passed (in spite of failing the Visual Test). I believe this clearly demonstrates my allegations were correct. (A Latter addendum showed they passed – based on what?)

- If the TEMPEST environment is not correct these ships will broadcast classified information – which is clearly understandable without crypto equipment – for thousands of miles over HF radio circuits, around the globe on satellite and through the entire internet due to SIPRNET. Every government org who uses these systems – DoD, NSA, CIA, State, FBI, DEA, DHS etc will have their communications compromised. (This will happen because of bleed over between cables. Something the shielding prevents.)
- The Matagorda had shielded cables on the boats before the upgrade began for some of the secure circuits. We put those systems back on the boat with the non-shielded cable. This means we knowingly degraded those existing systems

Cameras.

- The IG agreed there is less than 360 coverage but say 360 degree coverage isn't mandated. They say that 360 deg isn't in the contract nor is the number of cameras. This is factually incorrect. NGs contract calls out 2 cameras that were to mast mounted, remotely controllable and pan-tilt and zoom. Maybe the OIG missed it thinking it was a LM requirement since LM provided the cameras? The CG told me it was written that way to duplicate the exact system already in use on other boats. Those boats had 360 deg coverage with that implementation and Lockheed knew that
- From an LM contract letter to ICGS

Paragraph 3.3.7.1 of the 123 Surface Asset Performance Specifications contains a requirement for the cutter to receive, distribute and display video and that the video cameras shall be remotely viewable and controllable from multiple locations. The work share with respect to this requirement is as follows. Lockheed Martin must include within the C4ISR infrastructure the capability to receive, distribute and display video. The shipyard is required to provide the cameras.

During the proposal, Lockheed Martin understood that the shipyard planned to provide up to four (4) remotely controllable video cameras and included this capability in the proposal documentation. However, in meetings with Lockheed Martin personnel that occurred during the third and fourth quarter of 2003, the shipyard advised that it intended to provide two (2) fixed cameras. In an effort to meet its contractual scope, Lockheed Martin proceeded with a C4ISR infrastructure design that included the capability to accommodate four (4) remotely controllable cameras. At the 123 WPB CDR in December 2003, Lockheed Martin was directed by the USCG to change the design to accommodate two (2) fixed cameras

- The OIG says that it is disturbing that LM would knowingly install a system with blind spots and that the CG would accept it. They mention being concerned about other assets/boats in this area. It also says that the CG should change the contract for future boats. The comments in my doc I sent to you still apply here.
- I have a PowerPoint slide that shows that LM thought that the less than 360 deg implementation was a problem and reported it as such. If there was no requirement why report to the CG there was a problem?
- The security inspector for the CG inspected the system and said we had 360 deg coverage. I have that email. If 360 deg isn't a requirement why was he looking for it and reporting on it? (At that point LM directed me not to tell them he was wrong. After I pushed they allowed me to see the Tech Rep Joe Michel. He said that the blind spots were acceptable because we could lock the windows of the pilot house below the blind spots. He said if anyone gained access we would see broken glass. I challenged that by saying that someone could simply

attach a charge to the side and never go on the boat. He agreed and said LM would need a waiver. If 360 deg wasn't a requirement why would he ask for a waiver?)

- I have the official program trouble reports that were written to document the problems less than 360 deg would cover. If there was no requirement to have 360 deg why was I permitted to write a problem report on that?
- History – why did we go to 4 cameras? When we decided to help NG by buying the cameras we asked to have them install them on the mast. They refused (even though it was their requirement) and said that if we forced them to do so it would require a new center of gravity study for the mast and that would slip schedule and cost money - which Lockheed would be responsible for. After this LM decided to try to find another way instead of simply tell NG to satisfy their own requirement. Why did we do that? We actually neglected to design and install the equipment to control the cameras - we only installed the video circuits. They wanted to hide that fact. At this point LM management decided on installing 4 cameras. Why 4? Because they knew we had a 360 deg requirement and they assumed that 4 cameras – with a 90 deg field of view – would add to 360 deg. (Again – someone needs to ask them why they went with more than 2 and decided on 4). At that point I told them their assumption may not be correct because the field of view on each camera may not be 90 deg and given everything on the pilot house there may not be a place to install all 4 cameras without blockages. I asked them for a week to look in to it. At that point they decided to tell the CG 4 cameras would work. If a fifth camera were purchased and installed there would be no blind spots.
- As Deepwater is a System of Systems design (SoS) are we saying that every ship they build – every FRC, NSC etc – can delivered with a camera surveillance system that has blind spots over the most critical part of the boat – the bridge? Remember the 123 would set a precedent for design and implementation. Every asset is required to have implementations match unless there is an overriding reason not to. The 123s set the precedent for many systems. (I also believe they would repeat the same design/implementation to avoid getting caught. A change would mean violation to SoS which would require explanation and therefore discovery and validation of the problem).

Non-weather proof VHF radios for the SRPs. Not mentioned.

- We bought 9 radios for the first 9 boats and 5 of them after I told them they weren't waterproof and that doing so would put the SRP crews at risk. This issue more than any other demonstrates how far LM intended to go with covering up the issues and knowingly putting the crew at risk in doing so. (I am sure the reason the IG didn't mention this is because we actually didn't deliver the radios. This was due to a coincidental act of god just before the Matagorda delivered. It rained during testing and we shorted 4 of them out. At that point we had to change. Had it not rained I assure you we would have delivered and they would have failed during the first bad weather mission)
- Background
  - When I came on board an engineer told me the radio could not be used out of doors. I verified this with the vendor – who told me the radio could not be used outside at all
  - When challenged on this management responded by stipulating it was the "Design of Record".
  - I pushed on this issue for 6 months. I went through every level of my chain – multiple times – no one would help me (Even though most of my leadership said I was doing the right thing)
  - The very week I was scheduled to talk to the MS VP the USCG asked us to test the radios in bad weather. We shorted 4 radios out in front of the customer.
  - After that test the decision was made to scrap the radio and use the one that originally came with the Zodiac. This means we had convinced the CG to remove a radio that was meant

for foul weather and for them to purchase a new one (In fairness the Ross radio did have one feature the CG wanted. However it was not more important than survivability)

- If it had not been raining that management team would have delivered that boat with the Ross radio. That radio would have failed the first time the CG was using it in the rain or in heavy sea states (sea spray-waves). This could have put the CG and public at risk.

DD-250s

- These are critical documents that are supposed to show deficiencies in the product at delivery. LM told me every one of my issues would be documented in there. If they were that would demonstrate that LM knew I was correct about the requirements. One would not document deficiencies against non-binding requirements. On the other side if none of these issues showed up that would mean LM hid information.

ICGS cooperation

- While the report states that the parties cooperated fully I do not believe this occurred until after the press stories about my video were released or they are not being completely forthcoming here. The IG told me in June of 06 that the CG and LM were not cooperating, that they could not get the data asked for nor could they get access to the boats to rerun the Instrumented TEMPEST tests.

While I agree with some of the overall findings and the Low-Smoke and External Equipment Survivability issues I believe they are factually incorrect in some of their assessment of the TEMPEST and Video Surveillance issues. Additionally I believe they did not show – and should have – the level to which the contractor and the CG colluded to deliver systems with known safety and security issues and to cover that fact up. The C4ISR problems are examples of systemic problems on the program. The ICGS parties involved have demonstrated themselves to be incompetent and ethically, technically and professionally bankrupt. Also – the IG told me very clearly that the CG and LM were not cooperating with their investigation. They could not get data they asked for or run re-tests they asked for. I think they may have simply done the best with what they had. Additionally the IG did not investigate the systems on other assets such as the NSC. As this is a SoS design – all like systems need to be common. As such there are probably design flaws with the FRCs, OPCs and NSCs.

Project Notes

Running Notes

Technical issues summary – Deepwater 123 effort

- Exterior equipment survivability – There is a risk that the majority of the equipment will not survive the environmental temperature extremes. Several Nav, Sensor and Communications systems will fail. This will cause serious safety issues.
- TEMPEST – Shielded Cables – The proper cables were not installed in the secure communication circuits. This will cause serious security issues
  - SIPRNET
- Surveillance Cameras – We installed a video surveillance system with two significant blind spots over the pilot house/bridge. This will cause significant security and safety problems
- FLIR Cable – We installed the wrong cable type in the FLIR system. The cable was not designed to survive environmental extremes. This is a serious safety issue
- Low Smoke cables – none were used. Safety risk. Poisoning of crew during fire
- PCA – 80% of cables mislabeled on ship 1. Will cause maintenance and repair problems. Could result in equipment failure.

Issues Detail

Exterior equipment survivability – The majority of the exterior mounted equipment will not survive the environmental temperature extremes

- Late in the project, months after the design was approved and equipment purchased, we received our environmental and TEMPEST requirements (this in itself is very troubling). One of the requirements was to ensure that all the equipment and cabling we installed on the exterior of the vessel could survive Sea State 5 and temperatures from -40 to +125 deg (f).
- Upon receiving these requirements I immediately asked my IPT Leads to double check all the equipment to see if we had any issues. They were directed to look at all Sensor, Nav and Comm equipment.
- The very first device we looked at – the FLIR – would not survive below -5 deg.(Later fixed?)
- Management was then informed about the situation senior management directed me and my people to stop looking in to whether or not the rest of the equipment would survive the elements. They also directed that the FLIR design would stand as is. As the "Design of Record". This means we do not know if any of the other equipment have any environmental survivability issues (temp, humidity, shock/vibe etc)
- Third ethics investigation – VP of Ethics admitted there was a FLIR problem (even though final report said unsubstantiated). Agreed to fix it and look in to all other equipment. Agreed to provide me specifics on all equipment that failed. Later recanted that agreement. Due to this I did not trust that the FLIR or anything else would be fixed.
- I believe that we either lessened the requirements or gun decked the solution. This could mean that the Sensor, Nav and Communication systems are at risk.
- All of the systems the CG currently have on the 110s met these requirements. We will be severely degrading the performance of these vessels
- Engineer assigned by ethics office, along with the legal department, sent me a letter stating there are no long term issues because several of the boats have been doing fine during their sea trials. Sea trials conducted in the Gulf of Mexico. The Gulf of Mexico is about 80 deg all year around. It never sees any of the extremes called out by the specs. This is exactly the

kind of reckless engineering the Deepwater team utilized to get us in the predicament we are in now. The first time these boats get to cold waters and there is significant sea spray – the majority of the systems will fail.

- This situation exists not only for several boats that are modified but for the 41 or so that we haven't even started on yet.
- Reqs specifically call out Sea States, shock/vibe standards, humidty and temp range.
- I was informed by NG and the IG in 2006 that the FLIR was fixed and that a "top side study" was being on the rest of the externally mounted equipment.
- What did the NSC do? What is the FRCs design?
- IG report backed up my technical and contractual allegations
- Fraud ?
  - LM knew before Matagorda delivered
  - LM said it would be in DD-250
  - Not in DD-250
  - IG said CG didn't know until 7/2005 – 1.5 years after Matagorda delivery
  - 3rd ethics investigation said-verbal- that there was an issue and a topside study would be done. NG told me confidentially the study was done
  - FLIR fixed?
  - Comments LM made about cert not needed – requirement exaggerated

TEMPEST – SIPRNET - Shielded Cables – The proper cables were not installed in the secure communication circuits. This will cause serious security issues for all government organization who use them

- Again – well after the design review and the equipment was purchased – we received our TEMPEST requirements. Those requirements called for the standard set of military sea going requirements – shielding, grounding, bonding, separation of equipment etc.
- The Chief Engineer on the effort had directed months before that we not buy shielded cables because they were too expensive (not bid). The requirements were never changed.
- Until this point we had not involved anyone who had a TEMPEST background on the project even though they worked in the organization.
- Note – Ship's Integration had prepared a report on what our TEMPEST solutions should be. They did an excellent job given the engineer had never worked TEMPEST before (The TEMPEST engineer they had on staff was not asked to participate). The report stated shielded cables must be used.
- I have a TEMPEST background – in the Navy and Department of State – as well as 4 crypto designations. The report made sense to me. Standard ops.
- Management was informed that we needed to buy shielded cables or change requirements (something that I have never seen or heard of being done) they informed me that the design of record would stand.
- Sometime later we brought on the TEMPEST engineer from Ships Integration to perform a site inspection. He failed us in several areas including shielded cables.
- At first management agreed to fix the visual failures. He asked us to do an impact and resolution document. The result was that most of the fixes would add significant cost and schedule. Upon hearing this management decided to wait until the instrumented test to see if we could pass. No effort was made to buy or install shielded cables based on the visual test failure.
- 2.5 years later. Again I have been given none of the technical details I was promised. However I was able to independently ascertain that shielded cables have not been installed.

- I have contacted several TEMPEST inspectors around the country. All of them told me the chances of passing a test were extremely unlikely without these cables.
- I believe LM and the USCG have either gun decked the tests or lowered the requirements.
- We took shielded cables off these boats when we installed the non-shielded cables.
- As the USCG now has a requirement to be able to communicate with DoD and several other agencies this puts all of those agencies at severe risk. Any foreign government monitoring these boats – from shore or from "fishing boats" will be able to pick up all the communications from these boats. Since we have no shielded cables these boats will emanate like an antennae. Additionally – we could retransmit clear bleed over information from other circuits. The communications heard will be in the clear and easily understood. The CG not only accepted this for the current boats but did so for the 41 boats we haven't touched yet or procured cables for.
- I have learned recently that the test results may have been falsified by the test branch of the USCG. They walked away from the cabling until the required reading was obtained. Instead of taking the readings near the cables – they were taken from the pier.
- SIPRNET – DHS IG report states the contractor admitted there were issues but that they could not be fixed without rendering the system inoperable. LM said the system could function or be secure – but not both
- The SIPRNET certification organization, in April 2006 – well after the boats became operational – gave ICGS 45 days to correct the problems or the accreditation would be pulled. I do not believe all the problems have been fixed yet.
- IG told me they asked for an independent test 6/06. CG refused. Did not know at the time the boats were unusable due to cracks. Why not let IG run test?
- Aluminum/Mylar? No precedence for use in TEMPEST
- What did the NSC/FRC do?
- IG said shielded would have been better. No req for shielded? What about all cables failing visual? Instrumented test rigged?

Surveillance Cameras – We installed a video surveillance system with two significant blind spots over the pilot house/bridge. This will cause significant security and safety problems.

- LM and ICGS received requirements to install 2 mast mounted movable cameras. (an implementation used for quite some time in the USCG)
- Originally ICGS was supposed to procure the cameras and install them and LM was to provide the video and control circuitry – as well as the shore connection box
- The cameras purpose was to permit remote monitoring of the boat when in a USCG port. No watch standers would be required
- Arguments ensued between us and ICGS on who would buy the cameras.
- I requested that LM to take over this effort to stay on schedule
- A decision was made to install 4 fixed cameras on the pilot house. While I like the idea of fixed cameras, as one could not 'sneak' around a moving camera, I knew that management was assuming each camera had a 90 deg field of view. (I later learned we went for fixed cameras because LM did not include the control circuitry). I asked Ships Integration to utilize the camera specs and ships design to plot the views. They came back and said that the cameras did not afford a 90deg field of view and mounting in favorable locations would be an issue due other items installed on the pilot house. I was told there would be blind spots. These blinds spots were are 1o and 2 o'clock – directly over the pilot house/bridge windows. The blind spots were over 10ft wide on the deck and hundreds of yards wide to the horizon. I told management we needed to install 1 more camera and shift the existing forward camera over to cover the blind spots.

Management said the "Design of Record" was 4 cameras. (No cameras had been purchased or installed yet)

- Management responded by telling me there was no 360 deg requirement. My response was that it was common sense and that the USCG currently had ships with 2 masts mounted moving cameras that supplied 360 deg of view.
- Management stuck to their position. But did permit me to talk to the USCG tech rep.
- The CG Tech Rep – feeling the same schedule pressure – relented and said the blind spots would be acceptable because the pilot house/bridge windows could be locked. I told him someone could plant a charge on the boat undetected – for which he had no answer- or get in to the pilot house by breaking a window. The rep said we would detect the broken glass on the floor and know someone got on. I then suggested one could attach a charge to the side and not have to be on the boat. He said that was a good point and said we would need a waiver.
- One more camera would have solved this – at an expense of under $1000. (If you asked for a video surveillance system for your house – would you want a blind spot over your front door?)
- Told other boats had 360 with implementation mentioned in spec
- Some time after this the CG security inspector inspected the boat. His report stated the boat didn't have the standard 2 camera mast solution but that he had 4 fixed cameras and the boat had 360 deg views. (This established that 360 deg view was a requirement)
- After reading this report I informed management that the 360 deg requirement was indeed valid and that we had an obligation to tell that inspector we had 2 blind spots
- Management said it was not our fault the inspector missed the blind spots or that they wrote and conducted a faulty test
- Have copy of LM contract letter that quotes the NG requirement for 2 cameras
- This situation puts the crew of that boat in harms way. Especially if they decide to stick with their original plan of not having a watch stander on board (Ethics told me they might decide to add a watch stander due to this problem. Why would LM permit the USCG to lessen the original requirement? Again – they have 360 deg solutions on other boats. We are severely degrading existing capability)
- 2.5 years later. The CG has accepted the design. All 49 boats will have the blind spots. Even the 41 boats we haven't touched yet or procured equipment for.
- What did the NSC do? Plan for FRC?
- IG admonished CG/LM for knowingly installing blind spots. Found no requirement for 2 cameras or 360. IG incorrect see above.

FLIR Cable – We installed the wrong cable type in the FLIR system. The cable was not designed to survive environmental extremes. This is a serious safety issue

- Forward looking Infrared – used for nighttime and foul weather navigation
- We installed a cable that is not meant for outdoor use.
- The direction from senior leadership was that this was the "Design of Record"
- I asked that we swap it out for one meant to survive the elements.
- Management refused to swap out the cable and said we would replace it when it fails.
- This cable is going to fail when the crew needs it most
- All 49 boats are planned to use this cable.

VHF radios for the SRP (Zodiac boats)

- The 123 had a requirement to lengthen from the previous 110' to accommodate a Zodiac boat. These are pontoon type diving boats, with no overhead protection, meant to be used by boarding crews and for rescues
- They had the same Sea State 5 and temperature requirements as the 123. (Given your background I am sure you realize these boats go out in very tough conditions and get soaked)
- Our "Design of Record' was to use a Ross VHF radio for their primary communications. Their reason – the CG liked the radio on the 270' boats. That is inside that boat – on the bridge – and not exposed to the elements.
- When I came on board an engineer told me the radio could not be used out of doors. I verified this with the vendor – who told me the radio could not be used outside at all
- When challenged on this management responded by stipulating it was the "Design of Record".
- I pushed on this issue for 6 months. I went through every level of my chain – multiple times – no one would help me (Even though most of my leadership said I was doing the right thing)
- The very week I was scheduled to talk to the MS VP the USCG asked us to test the radios in bad weather. We shorted 4 radios out in front of the customer.
- After that test the decision was made to scrap the radio and use the one that originally came with the Zodiac. This means we had convinced the CG to remove a radio that was meant for foul weather and for them to purchase a new one (In fairness the Ross radio did have one feature the CG wanted. However it was not more important than survivability)
- If it had not been raining that management team would have delivered that boat with the Ross radio. That radio would have failed the first time the CG was using it in the rain or in heavy sea states (sea spray). This could have put the CG and public at risk.
- This episode is a clear example of what the Deepwater management team was all about. They didn't care about the safety or security of the crew; they put their own self interests above that of the CG and general public.
- IG report did not mention this because it was resolved by going back to the original radio before delivery

PCA

QA sampling demonstrated that 80% of the almost 500 cables were incorrectly labeled. This would cause maintenance and repair problems.

- When notified about this management refused to make corrections. Said it was the shipyards issue even though we gave them the incorrect labels. Management also stated that the problem would only affect LM personnel since we were responsible for depot maintenance and repair.

How we got here

- LM decided to leverage our Aegis reputation to win this effort. Therefore a decision was made not to have other orgs, who had C4ISR backgrounds, bid this job as prime. While I understand leveraging LM's well deserved Aegis reputation I think this decision laid the groundwork for the problems I described. I believe management thought that as this effort was far easier to engineer than Aegis – we made the mistake of thinking it was so easy we didn't need subject matter experts. As such none of our PM or Senior Technical Leadership team had C4ISR experience (nor did most of our IPT engineering leadership)
- Some lower level engineers has experience. Too few – too late. Others worked very hard but deck was stacked against them

- Very early on the team realized they had schedule and budget issues. We under bid drastically
- The 123 effort was the first major effort. The design review was held on schedule – but prematurely. Most of the requirements had never been flowed to the design team by Systems of Systems.
- In spite of this the design was completed and equipment purchased. All of the problems described above (as well as several others, with lesser severity, I did not brief you about) were now set in to motion.
- I was brought on board just before install. As I have a C4 background and some success at resurrecting red efforts I was made the lead SE for the 123 effort.
- The management team refused to fix the issues described above to stay on schedule, ensure costs would not rise and to make sure Northrop didn't have anything to use against us (this was stated several times by senior management)
- As such everything snowballed. Leadership on the project had no intention of fixing these problems because announcing they existed would demonstrate their questionable competence and the fact that they were ethically challenged. Now they would not only have to explain that they missed some "easy" design decisions but that were late and putting the customer at risk.
- I believe we are where we are because management is supposed to be able to trust those below them. You trust your ethics officer to do the right thing and she trusts those below her – and so on. The Deepwater leadership made some very bad decisions. There were pressures put on those people to make schedule. They did not have the background to do the job and had no interests in anyone finding that out. When mistakes were made at the lower levels their management supported them. Then upper management supported them – and so on. Where does that leave us now? Given the severity of the issues and the embarrassment that would ensue due to our incompetence anyone who stepped forward now believes they would be doing so risking their careers and their senior's careers. (I know several members of leadership on that team who have admitted to me we have done the wrong thing).

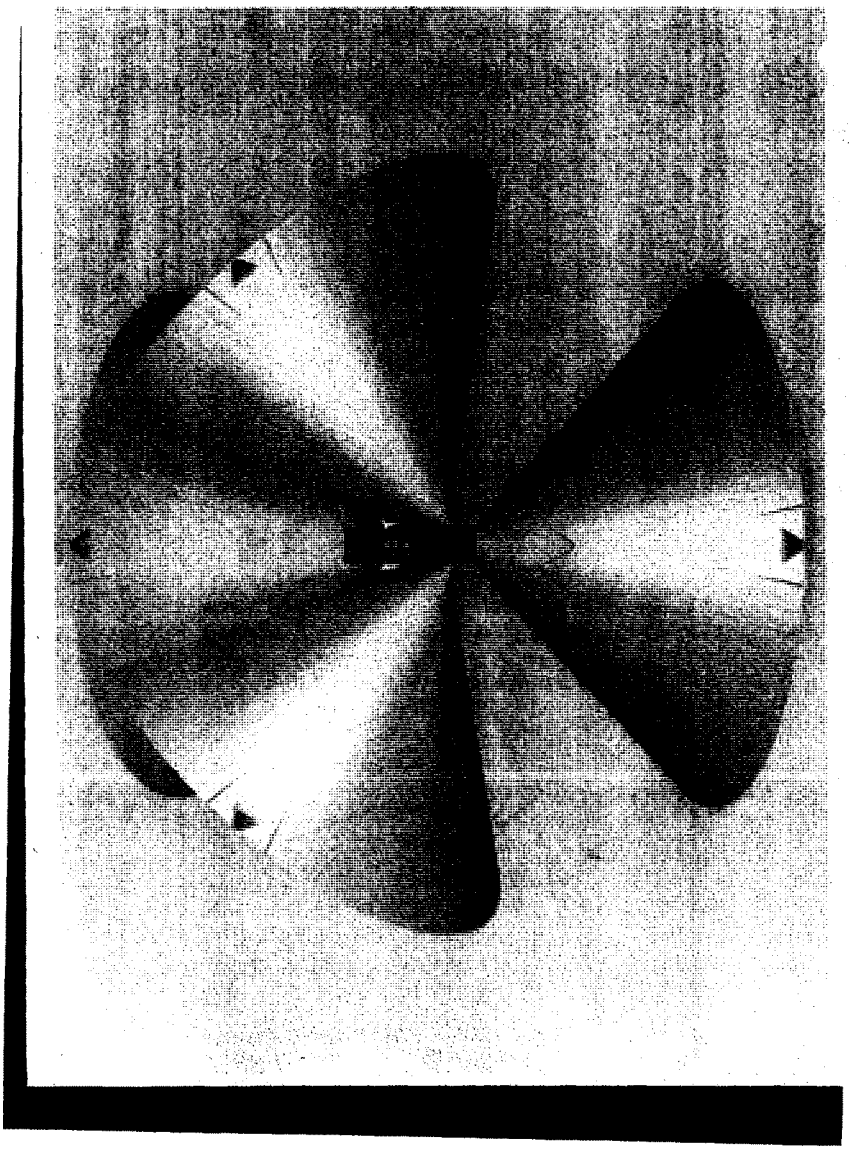
Overall Timeline

Date	System	Doc Title	Author/Org	Data
12/1/2002	Tempest			Second meeting with government on Tempest- see Sheridan item below 12/9/2003
1/1/2003	Overall			Design review complete - estimated date
1/20/2003	Tempest	Quick Look	Jo Agag	Early assessment on major areas of concern. Calls out shielding as necessary
3/15/2003	Tempest		Stan Ralph	Directed team to move on without shielded cables (from email 1/28/04 from Rabinowitz
3/20/2003	Tempest	Eval Tempest Req	Jo Agag	Report delineates her assessment of Tempest requirements and design suggestions - She had no Tempest background - Persons with Tempest background were not asked to be part of the effort
6/18/2003			DeKort	Joined team - as scheduler - estimated date
7/16/2003	Overall		Ponticello	First day as Lead SE
7/23/2003	Overall	123 Req Matrix	DeKort	Started working INC 1 subset INC 0 requirements set
7/23/2003	Overall	MLOI	DeKort-McLaverty	Started sending MLOI out
8/11/2003	Camera Tempest	IDS 123 Status	DeKort-McLaverty	First status (that I have) that we briefed to LM/ICGS/CG - Cameras- shows we would delete the cameras/ Tempest- develop cert plan/ PCA Open Issues risk-
8/25/2003	Cameras		DeKort	Started questioning use of only 4 cameras-
8/28/2003	Cameras	IDS 123 Status	DeKort-McLaverty	Slides say we were going to provide 360 deg coverage with 4 cameras. Found out that 4 cameras had blind spots. Management then backed off 360deg req- stopped mentioning 360deg and camera issue in next 2 reports
9/8/2003	Cameras	IDS 123 Status	DeKort-McLaverty	Matagorda Delivery Date Moved to 15 Dec
9/15/2003	Cameras	IDS 123 Status	DeKort-McLaverty	Status mentions Joe Michel sent CG view pictures to get approval for blind spots. CG said it was OK but as of 2/05 they had not signed off
10/24/2003	Radio		DeKort	Notified manager - Larry Finnegan - that there were problems-slipping and radio
12/4/2003	Overall		Haimowitz	LM org change
12/8/2003	Radio Camera		DeKort	Started notifying my matrix chain of command about issues - asking for help- Cameras, Radios
12/9/2003	Tempest		Sheridan	Sheridan's email states- originally only 1 Secret circuit NETVIS then added SIPRNET and COMDEC. Customer told LM not to worry about Tempest (November) - then in December LM told to do Tempest
12/11/2003	Tempest	Tempest Investigation 2	DeKort	My assessment of the situation. Sent out in emails
12/30/2003	Overall- all issues	Risk email	DeKort	Started entering Risks in database for all issues.
1/7/2004	Overall		DeKort	Had notified entire chain of issues several times - went to Tech Ops director (acting) Jay Hansen several times with no success. Now asked org for reassignment
1/12/2004	Radios		DeKort	Notified management that I had informed CG about issue - after they asked me if there were more risks. PMO now allowed me to get raincoat/mic - not new radios
1/15/2004	Tempest	123 Tempest Report	DeKort-Jones	Our response to the CG findings FAILED Visual Test - management decided to wait to see if we pass Instrumented test
1/16/2004	Tempest	Response to Ron Porter	DeKort-Jones	Our response to Ron porter's assessment - he was ICGS
1/20/2004	Tempest	Response to Ron Porter- PM chop	DeKort-Jones	

1/21/2004	FLIR	DeKort	Started email trail on trying to replace cable after PMO said we would replace it when it broke
1/22/2004	Cameras Tempest Radio Low Smoke	DeKort	Tech Ops Director- Jay Hansen- tells Jay Haimowitz to have me enter issues in risk database- informed Jay I had
1/29/2004	Cameras	DeKort	CG inspector declares that he tested the system and has 360deg coverage. Asked management to inform him we do not and that we need to inform him. Management tells me it's their fault they missed it and wrote a bad test
1/30/2004	Cameras	Iaccio	LM test lead tells me there are blind spots and that CG inspector never looked for them
2/5/2004	Cameras Tempest Radio Low Smoke	DeKort	Sent my manager-Larry Finnegan- email stating I think we are going to get DD-250 signed without resolving issues or declaring them as open items
2/5/2003	Cameras Tempest Radio Low Smoke		Finnegan raises issue to my Director (SW) Jack Ryan who then talked to PMO Tom Rogers
2/9/2003	Cameras Tempest Radio Low Smoke	Cappello	Confirmed meeting with QA to discuss issues
2/11/2003	Radios	DeKort	Told 123 PM-McLaverty that I am not comfortable with raincoat/mic option- explained I settled for compromise instead of getting new radios (Losing battle)
2/11/2003			Boat 2 half way complete with same issues from boat 1
2/11/2003	Cameras Tempest Radio Low Smoke	DeKort	Asked Manager-Finnegan- for help again
2/11/2003	Cameras Tempest Radio Low Smoke	DeKort	PMO Rogers directs PJ Messer, Doug Wilhelm and McLaverty to talk to me about finding way to resolve issues before I go to MS2 VP Carl Bannar
2/12/2003	Cameras Tempest Radio Low Smoke	DeKort	Met with QA who called QA VP Yvonne Hodge - who called MS2 VP Carl Bannar and told him we had serious issues. Agreed with me on all issues
2/12/2003	Cameras Tempest Radio Low Smoke	Bannar	Carl Bannar called me after Hodge called him. I told him I wanted to gave Hansen and 123 leadership until Monday - one more shot
2/13/2003	Cameras Tempest Radio Low Smoke	DeKort	Reported to Finnegan that the 123 leadership group had agreed to my requests - prefer fixing issues but wanted all to be open DD-250 items at very least- agreed to close by 2/16
2/13/2004	Radios		Radios - found out we shorted 4 in the rain while testing with the CG
2/18/2003	Cameras Tempest Radio Low Smoke	DeKort	Requested meeting with Carl Bannar MS2 VP
2/23/2003	Temperature	DeKort	Temp issue for first time - Environmental reqs flowed down - very late - started to question if we met req -40 to + 125 (except radar which had a waiver request-do not know if it was ever accepted)

2/24/2004	Cameras Tempest Radio Temperature		Villani	Joe Villani - DW Chief Engineer sets up appt with me to work issues after Bannar directs him to. In previous 4 months Villani ignored all my emails and phone calls requesting help. Joe agreed to all requests before sell-off DD-250 and agreed to show me closure before sell off. I was removed from the project before self off and never shown the data
2/24/2004	Risk		DeKort	Found out my critical Risks were deleted from the Risk database
2/14/2004	Cameras Tempest Radio Temperature		DeKort	Added Temp to issues
2/28/2004				Removed from project
3/1/2004				Delivery of the Matagorda - 7 months late
4/1/2004	Cameras Tempest Radio Temperature			Estimated date- was removed from effort and given a lower appraisal than standard and told I would not be given the same types of work I had received before
4/1/2004				Put back on other efforts for a year
		One year gap		
5/1/2004	Cameras Tempest Radio Temperature			Estimated date - went to new Tech Ops director Robert Sledgemilch about issues and retribution. He filed report with HR/Ethics (based on retribution not the issues)
5/23/2004				Started working in new org - IS&S Colorado Springs
9/13/2004	Ethics		DeKort	Sent Sledge an email asking when HR/Ethics would be getting to me
9/15/2004	Ethics		DeKort	Started sending data to MS2 HR/Ethics - McIntyre HR
9/17/2004	Ethics		DeKort	Began conversations with MS2 Ethics - John Shelton
9/24/2004	Ethics			John Shelton came to site for meeting
10/20/2004	Ethics		DeKort	Second time asking for investigation status - not complete
12/2/2004	Ethics		DeKort	Sent letter to Shelton - frustrated with progress- noted several ships were now delivered with issues
12/22/2004	Ethics		Shelton	Case Closed- coming to site to debrief me
2/1/2005	Ethics		Shelton	Meeting set for debrief
2/4/2005	Ethics		DeKort	Started discussions with corporate ethics (low level). Shelton had told me that he could not substantiate any of my allegations. Would not give me any data. I did not have the need to know. Told him that wasn't good enough. He contacted Gail Allen
3/16/2005	Ethics		DeKort	Told Gail Allen I was frustrated by lack of progress and that I had not been contacted by engineer investigating the issues yet (Carol Boser)
4/14/2005				Gail Allen/Carol Boser meeting in Colorado. Directed to turn over all docs at that time. Including copies. Earlier Gail Allen had told me I could retain the data
4/28/2005	Ethics		DeKort	Sent email to LM CEO Robert Stevens after meeting with Gail Allen/Carol Boser. Told him that their finding that my allegations were unfounded was not acceptable- no data given - did not have the need to know
5/4/2005	Ethics		Maryanne Lavan	Corporate VP for Ethics contacts me and says she will look in to the matter
5/4/2005	Ethics		Maryanne Lavan	Sets up meeting in Bethesda - directs me to turn over docs (had not done so yet)
5/10/2005				Meeting in Bethesda - Corporate Legal, Ethics and Engineering present. I turn over docs after we agree that a Bates' stamped set will be kept in Colorado. I am promised access to this data - actions promised - -
5/10/2005	Ethics		Maryanne Lavan	Informed I would be fired if I did not turn over data

6/3/2005	Ethics	Maryanne Lavan	Debrief - actions to be taken - review all the cables to see why they aren't shielded-- ask the customer if they want 360 deg camera coverage- check every piece of equipment for environmental compliance - including those on other assets- find out what all the lessons learned are and work with the DW team to fix them- promised to give me all data
9/26/2005	Ethics	Maryanne Lavan	Informed that everything is handled but I would not be given details as promised- "Coast Guard fully informed"- told I no longer had a need to know
10/12/2005	Ethics	Maryanne Lavan	Informed - after objecting to outcome and lack of data- that there are no safety or security concerns- admitted that some of my concerns had been valid (previous 2 ethics investigations spent a year with each saying none of my allegations had merit). Told "corrective actions were taken" but not told what they were
12/12/2005	Ethics	Maryanne Lavan	After pushing for weeks to get details I am informed that the CG does not grant me access
1/12/2006	Ethics	Maryanne Lavan	Responds to me by again saying the case is closed, that there was no retribution, excusing Shelton's actions and giving me permission in writing to seek outside assistance since CG accepted the systems
1/13/2006	Ethics	DeKort	Sent an email to Robert Stevens asking him to get involved and reconsider
1/17/2006	Ethics	DeKort	Trying contacting Robert Stevens again
1/19/2006	Ethics	MacKay	VP Lead Council for LM- looking in to matter



U. S. Department of Homeland Security
United States Coast Guard

Commandant
United States Coast Guard

2100 Second Street, S.W.
Washington, DC 20593-0001
Staff Symbol: G-ICA
Phone: (202) 366-4280
FAX: (202) 366-7124

DEPARTMENT OF HOMELAND SECURITY

U. S. COAST GUARD

STATEMENT OF

DEBABRATA (DEBU) GHOSH

ON THE

COMPLIANCE WITH REQUIREMENTS OF THE DEEPWATER CONTRACT

BEFORE THE

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

U. S. HOUSE OF REPRESENTATIVES

APRIL 18, 2007

Good afternoon Mr. Chairman and distinguished members of the Committee. It is a pleasure to appear before you today to discuss Compliance with Requirements of the Deepwater Contract. I am Debu Ghosh the Executive Officer of the Coast Guard's Asset Project Office (APO) Standard Boats. I am a naval architect with over 33-years of experience specializing in the design of high-speed craft. I have been in the Boat Engineering Branch of the United States Coast Guard for the last 23 years, serving as the Branch Chief for the last 15 years.

I have a Bachelor of Technology degree in Naval Architecture from the Indian Institute of Technology, a Master of Business Administration from Tulane University and a Master of Science degree in National Resource Strategy from the Industrial College of the Armed Forces. I am a full member of the Society of Naval Architects and Marine Engineers and had previously served on the American Bureau of Shipping (ABS) Americas - Small Vessel Committee.

I have been involved with the design of patrol boats since 1977. I have worked on the in-house designs of many Coast Guard boats, including the 47-foot Motor Life Boat, 49-foot Buoy Tender, 120-foot Barge, and 120-foot Heritage Class Patrol Boat. I have participated in all aspects of the acquisition programs for these boats as well as the 110-foot Island Class Patrol Boat, 87-foot Coastal Patrol Boat, 45-foot Response Boat, Medium and have supported the small vessel components of the Deepwater Program; the 123-foot Patrol Boat, the Short Range Prosecutor, the Fast Response Cutter and the Long Range Interceptor.

As the Chief of the Boat Engineering Branch, Equipment Management Division at the Engineering Logistics Center, I assign, direct, coordinate and review the work of an engineering team consisting of eight engineers. I also supervise the Central Engine Overhaul program that is responsible for maintaining a rotable pool of over six hundred diesel engines and reduction gears. In addition to technical support for Deepwater, my naval architecture team has been responsible for overall engineering, maintenance and other non-Deepwater acquisition support for the Coast Guard's fleet of about five hundred standard patrol boats and small cutters, comprising almost two dozen major cutter and boat classes. This support includes technical analyses, changes and modifications, engineering changes, configuration management, maintenance, testing, evaluation, trouble-shooting, and logistics analyses.

The 87-foot Patrol Boat provides the best example of the Boat Engineering Branch's in-depth involvement in the acquisition process during my tenure as Branch Chief. Branch members and I provided acquisition support and advice to the Patrol Boat Replacement Project from the beginning of the project. Before contract award, I supervised development of two notional designs, conducted trade-off studies, both in-house and using contractor support, developed sponsor's requirements, wrote the Request for Proposal, Statement of Work, Proposal Preparations, and Proposal Evaluation Factors, and developed independent government cost estimates. As a technical evaluation team member I developed the technical evaluation plan and evaluated proposals. After contract award, I led a team of engineers and provided technical support to the project resident office by reviewing all deliverables submitted by the contractor, Bollinger Shipyards Ltd. I resolved the structural problems with the mast that failed after the delivery of the first cutter, vibration related structural problems with the skeg, and fuel tank pickup problems.

As a naval architect in the branch, I participated in the technical review of the detail design of the 110-foot Island Class Patrol Boats, which were also built by Bollinger. These patrol boats had severe underwater body panel "dishing" problems that occurred after the delivery. I was a member of the engineering team that solved the problem. Since then the 49 110-foot Island Class Patrol Boats have been in service for close to 20 years with approximately 2 million hours of operation with no significant structural failures.

My branch's participation in the Integrated Deepwater Systems 123-foot Patrol Boat program began in the spring of 2002 following the contract award to Integrated Coast Guard Systems (ICGS). After identifying our initial concerns with possible longitudinal strength problems, I asked both the contracting officer's technical representative (COTR) and the Bollinger members of the Technical Management Information Team to award contracts to the Navy's Combatant Craft Division because of its experience with similar problems that occurred after lengthening the 179-foot Patrol Craft and its earlier involvement with the 110-foot Island Class Patrol Boat. I also suggested that Bollinger consult Vosper Thornycraft because it was the original designer of the Island Class Patrol Boats. I was unable to get support for this. However, as the Deepwater contract was a performance based contract, the contractor was responsible for the success of the design. In addition, the strength calculations submitted by Bollinger showed that the section modulus was more than adequate by about a factor of two. Section modulus is a factor based on the geometry of a section that determines the strength of a beam. The stress in a beam is the bending moment, or load, divided by the section modulus, so the section modulus has to be large enough to ensure the stress is below a level that causes failure. Nonetheless, I advised Bollinger to study this matter more carefully, due to the unusual nature of lengthening a lightweight vessel by adding material aft instead of by adding material midships, which is the normal process. An in depth study of critical buckling strength, torsion, and similar global strength analyses, in my opinion, would have been prudent.

After the *USCGC MATAGORDA* failure, the section modulus calculation of the midship section submitted by Bollinger was found to be in error and did not meet the American Bureau of Shipping (ABS) Guide for Building and Classing High-Speed Craft 1997. However, a peculiarity of small, lightweight ships is that buckling of shell plating in compression can more readily be a dominant mechanism of failure rather than cracking or tearing in tension, as is the case for larger ships. This was the case for the 123, and the side shell and deck buckled at a stress level well below the level that would cause cracking.

Modification One, comprising three straps welded on to each side, was performed after damage was observed on *USCGC MATAGORDA,* post conversion. This raised the section modulus enough to meet the American Bureau of Shipping (ABS) Guide for Building and Classing High-Speed Craft 1997 and to reduce the stress to an acceptable level. The straps also increased the allowable buckling load on the critical plates.

Modification Two was initiated when *USCGC NUNIVAK* subsequently suffered buckling damage at the aft end of the straps added in Modification One. This changed the end details of the straps, staggered the ends, increased the plating thickness in way of the ends and added additional internal stiffeners to better connect the new structure added during lengthening to the existing structure.

These structural modifications eliminated the basic deck and side shell problems, but other problems have since surfaced, most notably problems with reduction gear-to-shaft alignment, buckling of the engine girders, bottom longitudinals and transverse framing, cracks in the aluminum deck, and cracks near the main engine exhaust.

After the *USCGC MATAGORDA* damage, a private contractor, BMT Designers and Planners, Inc, was engaged to perform Finite Element Analyses of the 123-foot Patrol Boat structure. These analytic studies were able to almost exactly duplicate the damage seen. The modifications were also analyzed.

Following these studies, it was decided to perform full scale tests to check the validity of the modifications. Discussions with the Navy's Combatant Craft Division were re-opened, culminating in a meeting between myself and Combatant Craft Division representatives (Mr. Casamassina, Mr. Russell, and Mr. Whitford) at Little Creek, VA on July 8, 2005. Mr. Nappi, from Naval Sea Systems Command (NAVSEA, also participated in our discussion over the phone for a short duration. Based on their studies of the 179-foot Patrol Craft, Combatant Craft Division had suggested starting with an idea that the section modulus was inadequate, causing excessive stress, which in a broad sense, is correct. The 179-foot Patrol Craft problem, though similar in root cause (lengthening the vessel causing increased bending moment) had a different failure mechanism, cracking of the structure in the deck due to tension in hogging, so the initial speculations of Combatant Craft Division were based on this experience. However, the 123-foot Patrol Boat is buckling due to compression in sag, which creates differences in subtleties that Combatant Craft Division has not had the opportunity or funding to study or understand. Shortly afterwards, in response to a request by Combatant Craft Division, I invited Mr. Whitford to visit a damaged cutter at Savannah, GA.

Combatant Craft Division proposed an extensive test program and analysis that cost roughly five times more than a simpler, but comparable program proposed by the BMT Scientific Marine Services, Inc. Even at this point, funding for studying the 123-foot Patrol Boat was limited and I was unable to justify the higher cost. BMT Scientific Marine Services, Inc was also the contractor for testing the 179-foot Patrol Craft, so it was selected for the trials. An additional consideration was that BMT Designers and Planners, Inc had already performed numerous analytic studies of the 123-foot Patrol Boat and would therefore be well-suited for the phase of the contract relating the sea trials data to the analytic results, whereas Combatant Craft Division would have to repeat the process of setting up and validating a Finite Element Analysis model, since it uses different software. There was also concern that Combatant Craft Division would need considerable time and effort to get up to speed on the differences between the 179-foot Patrol Craft cracking and the 123-foot Patrol Boat buckling when BMT Designers and Planners, Inc. had already done this.

Subsequently, a variety of tests, analyses, and reviews have been performed including independent third party verifications and reviews. Assessment of these analyses indicates that the problems are due to some combination of shear, torsion, and "C-channeling" (structural instability of the upper side and deck edge) working together in a complicated manner. Vibration dynamics and transverse loading may also play a role. The mechanisms of failures: buckling of the side shell and deck, buckling of the engine girders, bottom longitudinals and transverse framing and the resultant problems with

reduction gear to shaft alignment, are all interacting in a complex fashion, and even Finite Element Analysis is unable to accurately predict all of these complex interactions. I was directed to consult the original designer of the 110-foot Patrol Boat, VT Shipbuilding, and engaged them as a third party reviewer. I also formally and informally engaged many other experts on this project including experts on ship structure at the U.S. Naval Academy and at University of California, Berkley. Though all of these experts initially thought that this was a simple matter of inadequate section modulus, after extensive study all agreed with me that the problem is not so simple as just increasing section modulus. This is obviously an afterthought, since the very first modification increased the section modulus substantially but problems continue.

Nevertheless, the contractor was advised initially that this was potentially a complex problem, and that extensive study was required to do this safely. It is very important to note that there is as yet no fully quantitative analysis that unequivocally confirms the mechanisms of damage, or their relative importance, other than the initial buckling failure, especially as regards the shaft alignment and bottom internal structure. The argument for each individual mechanism and the relative role of each rests on a combination of circumstantial evidence and a process of elimination. After analyzing all additional information, the Coast Guard's Engineering Logistics Center has developed a solution that might address all of the possible mechanisms of damage; add a stiff beam in a closed tube to the upper edge of the deck. I believe this will address the major structural problems, but I cannot provide complete certainty that this will work, or that there are no other unanticipated problems. Unfortunately, this uncertainty is the result of doing such an unprecedented modification to a light weight, high speed craft.

I believe this shows that the Coast Guard has to have more direct responsibility for, and control of, future acquisitions, and that the Coast Guard has to rely more on the experience of existing, proven vessels, and the experienced designers of these specialized high speed craft. This had been the practice that produced the successful 87-foot Patrol Boat and the original 110-foot Island Class Patrol Boat, and is the strategy that Coast Guard is now following for the Replacement Patrol boat (FRC-B).

Thank you for the opportunity to testify before you today. I will be happy to answer any questions you may have.

U. S. Department of Homeland Security
United States Coast Guard

Commandant
United States Coast Guard

2100 Second Street, S.W.
Washington, DC 20593-0001
Staff Symbol: CG-092
Phone: (202) 366-4280
FAX: (202) 366-7124

DEPARTMENT OF HOMELAND SECURITY

U. S. COAST GUARD

STATEMENT OF

CHAD JACOBY
LIEUTENANT COMMANDER, U.S. COAST GUARD

ON THE

COMPLIANCE WITH REQUIREMENTS OF THE DEEPWATER CONTRACT

BEFORE THE

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

U. S. HOUSE OF REPRESENTATIVES

APRIL 18, 2007

Good afternoon Mr. Chairman and distinguished members of the Committee. It is a pleasure to appear before you today to discuss Compliance with Requirements of the Deepwater Contract.

I am Lieutenant Commander Chad Jacoby. I served as the Program Manager for the 123-foot Patrol Boat (WPB) conversion project from July 2004 to October 2006. In this position I managed the delivery task orders (DTOs) under the U.S. Coast Guard's Integrated Deepwater Systems contract that pertained to the production, delivery, and warranty support of the 123-foot Patrol Boats.

During my tenure as Program Manager, I supervised the delivery of CGC ATTU, CGC NUNIVAK, CGC VASHON, CGC MONHEGAN and CGC MANITOU, managed contracts with engineering firms to diagnose structural issues, administered the one year warranty period on all eight delivered patrol boats, and managed the contract modifications to install structural upgrades on the patrol boats.

Thank you for the opportunity to testify before you today. I will be happy to answer any questions you may have.

Testimony before the U.S. House of Representatives Committee on Transportation and Infrastructure

Wednesday April 18, 2007, at 2:00 pm in Rayburn House Office Building, room 2167

Dr. Leo S. Mackay, Vice President and General Manager, Coast Guard Systems
Lockheed Martin Maritime Systems & Sensors
1530 Wilson Boulevard, Suite 210 Arlington, VA 22209
Telephone: 571 218 3418

Introduction

Thank you for the opportunity to explain the progress we are achieving on the U.S. Coast Guard's Integrated Deepwater System program. We are part of a team accomplishing important work for the nation and we are deeply grateful for your continuing support as the safety of our nation depends on this critical program. Each of us, in accomplishing our daily tasks on the program, has a deep sense of the importance of achieving the very best for the Coast Guard and our nation.

Overview

The capabilities we are providing to the Coast Guard through the Integrated Deepwater System are already enabling US operational forces to perform more effectively, providing increased operational readiness, enhanced mission performance and safer working environment. Recent customer statements show how well the upgrades, equipment and new capabilities are being received:

- HH-65 Helicopter Re-Engining - "Restoring this kind of reliability and stability to our HH-65 fleet is a crucial milestone in improving readiness. The fact that it's being accomplished ahead of schedule reflects a true team effort by industry and our engineers, acquirers and operators."
- Legacy Cutter C4ISR Upgrades – "The Deepwater Upgrade provides vastly improved communications and interoperability. In the past year this ship has operated from above the Arctic Circle to well below the equator. We have enjoyed 24/7 real time links to operational commanders and data base management regardless of our physical location. The upgrades have proven to be tough, dependable, and easily maintained."
- National Security Cutter C4ISR Training Center - "The contrast between our tools of 1983, and the tools of the future ships like the BERTHOLF is significant. I remember analog radar, message traffic by teletype, paper charts and maneuvering boards, Polaroid cameras, and slow criminal history checks by EPIC. No cell phones, no email – imagine that. I remember a true sense of independent operations. We were proud, but probably not as effective as we might have been if we had the tools of today. By contrast, our new National Security cutters will train … on computerized digital sensors, radar and charts, live sharable digital video, message traffic by PC, voice communications with anyone, clear or secure, and real time criminal histories and intelligence checks. They will benefit from a sense of connectedness and systemic information sharing making their days at sea safer and more efficient. The CG

will have increased Maritime Domain Awareness to identify threats, and a Common Operating Picture to act when necessary – all to protect our coastlines and our citizens."

- Maritime Patrol Aircraft - "Today's delivery of the first MRS MPA is a critical milestone in our ongoing efforts to acquire and deliver more capable and interoperable assets and systems to our Coast Guard crews. When this aircraft and others like it enter operational service, they will help to narrow our existing gaps in maritime surveillance in many important ways."

The Deepwater program, which was recently expanded to account for post-9/11 requirements, is delivering and is making a real difference — impacting drug seizures and migrant interdictions and saving lives. At the same time, we understand the Integrated Deepwater System will continue to evolve. To meet this ongoing challenge, Lockheed Martin is applying a disciplined system engineering approach to the program. This will continue to be vital for achieving more robust capabilities given fiscal realities – a one-asset-at-a-time recapitalization approach would be unaffordable. Lockheed Martin is committed to providing our best talent and capabilities for supporting the Coast Guard.

Lockheed Martin is primarily responsible for four Deepwater domains: System Engineering & Integration, C4ISR (the command and control network), Logistics and Aviation (refurbishment of existing assets and production of new assets). We believe maintaining emphasis on the implementation of the Deepwater system-wide command and control network. C4ISR (Command & Control, Computers, Communications, Intelligence, Surveillance and Reconnaissance) is very important. This is the network "glue" that permits various assets including ships, aircraft and shore stations to work together to more effectively and efficiently achieve a common purpose.

Key Achievements

We are making good progress and are delivering significant new and upgraded capabilities. At the same time, we recognize the system level effects of networking are essential to achieving the level of mission performance needed by the Coast Guard. Lockheed Martin is accomplishing high rates of software re-use as well as system commonality and integration by the rigorous application of proven system engineering processes and capabilities. In addition, we are managing implementation of support systems for all Deepwater program domains. The Lockheed Martin team is working closely with our Integrated Coast Guard Systems, LLC (ICGS) joint venture partner, Northrop Grumman, to ensure that electronic equipment developed and produced under the cognizance of the C4ISR domain is appropriately configured for installation on the ships.

Deepwater C4ISR is the enabler for the integrated system and is the major contributor to improved performance. It permits the Coast Guard to operate effectively with DoD, DHS, state and local government agencies. C4ISR establishes the ability to achieve mission success as it provides coordinated tactics, integrated intelligence, multi-agency interoperability and common situational awareness necessary to fulfill the missions with the currently planned force mix. These capabilities are needed for all Deepwater assets including ships, aircraft, and shore site command centers. C4ISR is being introduced to the fleet in three phases.

Every one of the Coast Guard's 12 high-endurance and 27 medium-endurance cutters have received phase one and two command and control system upgrades – giving the fleet markedly improved capability to seize drugs, interdict migrants and save lives. As for shore sites, there are a total of 12 on contract to receive upgrades: two Communication Area Master Stations, eight Districts, one Sector and Headquarters.

Use and reuse of Commercial-Off-The-Shelf, Government-Off-The Shelf and fielded maritime systems are being maximized for commonality and interoperability. The application of off-the-shelf software permits Deepwater to take advantage of the rapid changes in the commercial market place and the investments which commercial firms make in their best of class technologies. This will facilitate Coast Guard interoperability with civil and international systems, a key consideration given their mission mix. The National Security Cutter is using 75 percent of the U.S. Navy's Open Architecture Command & Decision System. The Command & Control System for Maritime Patrol Aircraft employs more than 50 percent of the functionality of the Navy's P-3 Anti-Surface Warfare Improvement Program. The Operations Center consoles on the National Security Cutter utilize more than 70 percent of the design of the Navy's UYQ-70 display systems. Use and reuse of available software and systems is the key to commonality. In addition, this approach takes greatest advantage of the work undertaken with the Navy to establish the best Human System Interface including workspace ergonomics, viewing characteristics, input devices and overall system architecture.

The common architecture deployed across multiple types of assets allows for commonality of equipment and software systems and supportability of the entire Deepwater system. In general, the Deepwater C4ISR architecture ensures an open systems approach for design and implementation, providing a true 'web enabled" infrastructure. The Deepwater architecture adapts to technology insertion and enables the progression to future Coast Guard wide C4ISR architectures. In ports and coastal areas, one of Deepwater's most significant capability enhancements will be its robust C4ISR system. It is a fundamental building block in improving the Coast Guard's ability to maintain maritime domain awareness focused on meeting the needs of decision makers engaged in operations at sea, ashore, and in the air. The network-wide system is being designed to ensure the Coast Guard will possess and maintain seamless interoperability with the forces and agencies of the Department of Homeland Security, the Department of Defense, and other federal and regional agencies—a true force multiplier in the fullest sense. Similarly, the Logistics Information Management System (LIMS) will centralize access logistics processes for Deepwater logistics consumers and providers. LIMS will automatically collect and process logistics data so that embedded decision support tools can be used to project support requirements and trends and provide readiness assessments instantly to operational commanders. With its ability to bring the right information to the right people at the right time, LIMS is expected to provide the backbone and software applications necessary to make Deepwater's vision of network-centric logistics a reality.

Processes

It is important to note how the Deepwater technical approval process operates. As a design matures, it goes through a full set of formal technical review steps – preliminary design review (PDR), critical design review (CDR), test readiness review (TRR), and production readiness

review (PRR) are the main features of the process. At each of these reviews a full complement of government and industry representatives is present. ICGS makes recommendations to the Coast Guard and presents data that confirms how the design achieves all conditions for current step in the process and how it is ready to progress to the next step in the process. The Coast Guard decides and approves or disapproves progressing to the next step in the process. This process has been in place since inception of the program and enables the Coast Guard to decide the technical maturity of all designs.

Off-the-shelf, ruggedized maritime systems were selected for the C4ISR system in accordance with the Coast Guard Cutter Certification Matrix (CCM). The CCM did not require equipment designed and tested to full U.S. Navy military standards and performance specifications (MIL-STDs and MIL-SPECs). We have a long and wide-ranging experience in delivering and maintaining high performance combat systems to the U.S. Navy and allied navies. As such, we believe that extensive testing of off-the-shelf, ruggedized maritime equipment to determine the level of compliance to U.S. Navy military standards and performance specifications would not provide any significant operational benefits to the Coast Guard and would have defeated the benefits of off-the-shelf, ruggedized maritime systems. As such, a recent IG report included a recommendation for the Coast Guard to develop and implement a plan to improve the process for reviewing and adjudicating contractor Requests for Deviations/Waivers (RFD/RFW). We are fully supporting the Coast Guard in this effort. The RFD/RFW process permits the customer to make an informed decision regarding cost-effectiveness and safety considerations. It is not a step of convenience for the contractor. It is a responsible way to allow the customer to make important tradeoffs subject to its own criteria and requirements. The IG further concluded that the plan should ensure that all waiver requests are resolved prior to implementation and that the rationale underlying these decisions is formally documented. It is our understanding that the Coast Guard is in the process of implementing appropriate contractual and program management oversight process improvements.

Industry's performance has been closely supervised by the Coast Guard. All designs and improvements are based on trade studies, analyses, and technical considerations. The Coast Guard is the decision maker and contracting authority and all major acquisition decisions are reviewed and approved by Coast Guard senior leadership. The Deepwater program uses the depth of capabilities and experience of its industry partners to provide solutions in accordance with Coast Guard requirements. The results so far indicate that Deepwater has made a difference in the effectiveness of the Coast Guard with regard to the numbers of drug seizures, migrant interdictions and lives saved.

The Way Ahead

Our overarching goal is to provide more capability to the fleet, sooner. We are dedicated to analyzing and recommending approaches for maximizing the value delivered to the Coast Guard, in accordance with the customer's view of value, not that of industry. This requires the best talent from each corporation. ICGS works closely with Coast Guard personnel to assure constant communications and improved working relationships. The strategic policy changes that have occurred since 9/11 must be factored into problem solving. The Coast Guard and the Department of Homeland Security have needs that can be satisfied by the Deepwater program and its

approach to value delivery. The way forward will be difficult, but given the capabilities of the participants and the strategic imperative to better outfit our Coast Guard so the safety and security of our nation is improved, the Deepwater program is eminently achievable.

Thank you again for the opportunity to present and explain the progress we are achieving on the Deepwater program.

U. S. Department of Homeland Security
United States Coast Guard

Commandant
United States Coast Guard

2100 Second Street, S.W.
Washington, DC 20593-0001
Staff Symbol: G-ICA
Phone: (202) 366-4280
FAX: (202) 366-7124

DEPARTMENT OF HOMELAND SECURITY

U. S. COAST GUARD

STATEMENT OF

CATHERINE MARTINDALE

ON THE

COMPLIANCE WITH REQUIREMENTS OF THE DEEPWATER CONTRACT

BEFORE THE

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

U. S. HOUSE OF REPRESENTATIVES

APRIL 18, 2007

Good Afternoon Mr. Chairman and distinguished members of the Committee. It is a pleasure to appear before you today to discuss Compliance with Requirements of the Deepwater Contract.

I am Catherine Martindale, currently the Chief of the Contracting Office for the Coast Guard's Engineering and Logistics Center located in Baltimore, Maryland. I have been a Contracting Officer for the Coast Guard for 15 years. I hold a Bachelor of Science Degree in Business Administration from the University of Maryland, a Certificate in Procurement and Contract Management from the University of Virginia, and a Defense Acquisition University level III Certification.

I was a Contracting Officer at Coast Guard Headquarters and assigned to the Deepwater program from January 2000 through March 2006. While assigned to this program, I served at various times as a Contracting Officer in both the Surface and Air Domains at the Systems Integration Program Office located in Rosslyn, Virginia. I was one in a series of three Contracting Officers responsible for administering the 110/123-foot conversion of the CGC MATAGORDA. As a Contracting Officer I had responsibility for administering, interpreting and ensuring compliance with the contract requirements. I worked daily with my Contracting Officer Technical Representative (COTR), the Coast Guard's program office, and the Integrated Coast Guard Systems (ICGS); I attended design reviews, participated in Integrated Product Team meetings and accepted contract deliverables.

Thank you for the opportunity to testify before you today. I will be happy to answer any questions you may have.

U. S. Department of Homeland Security

United States Coast Guard

Commandant
United States Coast Guard

2100 Second Street, S.W.
Washington, DC 20593-0001
Staff Symbol: G-ICA
Phone: (202) 366-4280
FAX: (202) 366-7124

DEPARTMENT OF HOMELAND SECURITY

U. S. COAST GUARD

STATEMENT OF

MR. JOE MICHEL

ON THE

COMPLIANCE WITH REQUIREMENTS OF THE DEEPWATER CONTRACT

BEFORE THE

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

U. S. HOUSE OF REPRESENTATIVES

18 APRIL, 2007

Good afternoon Mr. Chairman and distinguished members of the Committee. It is a pleasure to appear before you today to discuss Compliance with Requirements of the Deepwater Contract. I am Joe Michel.

I am currently the Assistant Deputy for Systems Implementation with the Coast Guard's Nationwide Automatic Identification System Project. I have previously held the positions of Engineering Technical Lead with the Coast Guard's Ports and Waterways Safety System Acquisition Project and from December 2001 to March 2004, I was the Coast Guard's Lead C4ISR (Command and Control, Computers, Communications, Intelligence, Surveillance and Reconnaissance) Engineer on the Deepwater 123 Foot Patrol Boat (WPB-123) Integrated Product Team.

During my tenure with Deepwater as the Coast Guard's Lead C4ISR Engineer, I was responsible for:

- Planning and management of electronics systems on the WPB-123. I administered design and construction oversight, to include production surveillance, operational and developmental testing, configuration management, and systems integration;
- Coordination and review of technical work for the design and development of WPB-123 electronic systems such as telecommunications, computers and networks, sensors, radar, and other data systems;
- Coordination of the integration of electronics technical and policy issues between the Deepwater Acquisition organization and Coast Guard Command, Control, Communications, Computer, and Intelligence (C4I) and Naval Engineering organizations;
- Review and providing input on contracts and Statements of Work (SOW), performance specifications, technical evaluations, modeling studies, and test and evaluation reports via the Coast Guard's WPB-123 Contracting Officer's Technical Representative, who was also the Government WPB-123 Integrated product Team (IPT) Lead;
- Review and providing input on team deliverable and Engineering Change Proposals (ECP) for technical content, compliance with contract specifications, concept feasibility, and accuracy of assumptions pertaining to both effectiveness and life cycle cost estimates;
- Facilitating the development of WPB-123 electronics systems and subsystems design and performance changes, and related modeling and simulations for purposes of test or evaluation. I applied open systems standards to WPB-123 electronics systems and provided technical advice and assistance to the WPB-123 IPT in the fields of communication, computation, sensing, control, measurement, and navigation; and
- Serving as the WPB-123 IPT technical liaison and subject matter expert on information assurance (IA) issues, including system certification and accreditation of under the DoD Information Technology Security Certification and Accreditation Process (DITSCAP).

I am an Electrical Engineer, with Department of Homeland Security (DHS) and U.S. Coast Guard Acquisition Level II certifications in Program Management, Test and Evaluation and Systems Planning, Research, Development and Engineering.

Thank you for the opportunity to testify before you today. I will be happy to answer any questions you may have.

Scott C. Sampson

Written testimony for the House Committee on Transportation and Infrastructure

April 15, 2007

Introduction:

I am Scott Sampson, a current civil service employee working for the Coast Guard Maintenance and Logistics Command Atlantic in the Vessel Specifications Branch. There I am a Section Chief of the Development Section. My branch is responsible for technical evaluations and recommended repair procedures for Coast Guard vessels. As such I was extensively involved with the problems and analysis of the 123s. I have been serving in this position since August 2004.

Prior to my job with the Coast Guard, I worked as a Naval Architect for Combatant Craft Division, a detachment of the Naval Surface Warfare Center Carderock Division. The Division exercises total design and engineering authority for U.S. Navy Combatant Craft and Boats and supports other D.O.D., non-D.O.D. activities and private industry. I was the primary point of contact for Coast Guard work within my command. I worked for Combatant Craft Division from October 2001 until August of 2004.

Before starting with Combatant Craft Division (CCD), I worked for the CG in the same branch I am in currently except I was employed as a Naval Architect specializing in structures. I worked there from September of 1996 until October of 2001.

Background:

Combatant Craft Division or CCD had extensive experience with a very similarly constructed vessel, a 170' Cyclone Patrol Coastal Class commonly referred to as a PC. Both the CG's 110 and the Navy's PC were based off similar designs by the same company, Vosper Thorny Craft. The PC experienced damage similar to what the 123s have experienced.

As a result of the PC damage, CCD performed extensive investigations into the hull failures and determined that the 1997 American Bureau of Shipping (ABS) High Speed Craft Rules, which the PCs were built to, under predicted dynamic loading conditions, thus the PC was not built to withstand the forces placed upon it in a seaway and damage occurred. A fix was designed using another classification society's rules in conjunction with other calculations.

Shortly afterward CCD designed an extension to the PCs of nine feet which incorporated a stern launch and recovery system, the same type of modification performed later on the CG conversion of the 110s to 123s. CCD designed the modification using the same method they used for the original fix to determine the amount of additional structure needed to ensure the platforms would not experience damage. Since the modifications and incorporation of 2 tons of additional structure (the PCs weigh approximately 385 tons), none of the PCs have experienced damage and several are in fact on loan to the Coast Guard and serving successfully.

Chronology of Events:

While working at Combatant Craft in February of 2002, Carderock worked with Capt Jeffery Gamble, Chief, Office of Naval Engineering at Coast Guard Headquarters and Capt Kevin Jarvis, Chief, Platform Management Division at ELC to make sure they were aware of a Memorandum of Agreement between the CG and Navy to facilitate the Coast Guard's access and use of Carderock's experience and expertise. This effort was coordinated by a Carderock Employee by the name of William Moss. This MOA was reviewed specifically in anticipation that Carderock would be able to help support the Coast Guard with design efforts and questions associated with the Deepwater program.

In late July or early August of 2002, I became aware of the ICGS proposed modification of the Coast Guard's 110 patrol boat. The described design at that point gave me some grave concern for the success of the modification.

I contacted Debu Ghosh, who is the Branch Chief of the Naval Architecture Boat Branch at the Coast Guard's, Engineering Logistics Center (ELC). I communicated my concerns to Mr. Ghosh based on my understanding of the modification. After our initial conversation, we agreed to have a more purposeful phone conversation.

9 August 2002 – Debu Ghosh and Chris Barry of ELC and Carl Casamassina and myself from CCD had a phone conference to discuss the 110 conversion to the 123. Mr. Casamassina, a Naval Architect, was extensively involved with the PC during the hull failures and subsequent lengthening. During this phone conference ELC described the intended modification of the 110 and we (CCD) indicated to ELC our experience with the Navy's 170/179 conversion. In particular we covered several areas including:

- Longitudinal Bending – It was the understanding of CCD at the time that no additional structure was purposed in the middle of the hull. The PC required additional structure and it had only a 5% length increase as compared to the 12% length increase of the 110. It was clear to CCD that a significant amount of strength would have to be added to the 110's hull to prevent failure. High speed craft such as the 110 generally are not built with reserve strength to handle this significant increase in length. Having familiarity with this platform from my previous job with the Coast Guard, I was extremely concerned that the craft was in jeopardy. CCD emphasized what they considered to be deficiencies in the dynamic load predictions of the 1997 ABS High Speed Craft Rules and cautioned the CG not to use it. We were concerned that this violation of basic naval architecture principals would result in longitudinal failures. No structure was added to the middle of the hulls during the conversion of the 110s.

- Running Trim – It was the understanding of CCD at the time that the extension would be a continuation of the existing shape of the hull. CCD strongly recommended that the bottom of the extension actually curve up to reduce its buoyancy. By doing so the trim of the vessel (fore and aft attitude) would remain the same or be very similar to the 110's. CCD during model testing of the 170/179 discovered that if they continued the hull bottom straight back (as was purposed on the 123) the stern would rise and the front of the cutter would dip down farther than what it does normally increasing the power it needs to push it through the water, it would also make launch and recovery of a small boat more difficult. By curving the aft shape of the hull up, it maintains close to the original trim and could be easily adjusted. The 110 hull was extended straight back. The continuation of the hull shape forced relocation of the potable water tanks from the forward part of the cutter to the extreme stern to shift weight aft to maintain close to the original trim. While this minimized the problem associated with trim, it likely contributed to the failures of the hull.

- Engineering experience – CCD performed all the engineering and design of the PC hull extension and provided it to Bollinger Shipyard. Bollinger provided excellent production details, but they performed none of the design associated with the modification of the PC 170/179. It was CCD's understanding there was a misconception that many in the CG saw little risk associated with this project because Bollinger built the 110's and performed the modification on the PCs and thus were very familiar with the design issues when in fact it was CCD that had performed all the design work for the PC.

Mr. Ghosh indicated at this meeting his desire to hire CCD to provide assistance in reviewing designs on site at Bollinger Shipyard.

19 August 2002 – Per Mr. Ghosh's request I sent him an estimate of $42,000 to provide 14 days of on site technical support at Bollinger Shipyard for 2 naval architects and a sea keeping analysis to show a comparison between the original 110 and the modified hull. CCD's understanding at this time was that Bollinger Shipyard was far along on the project and Mr. Ghosh was questioning some of the engineering/naval architecture aspects on the design and desired our assistance due to our expertise. Later Mr. Ghosh told me that Deepwater denied the funding but gave no reason.

22 August 2002 - I met with a Deepwater Program Manager, (I do not recall his name or exact title) and the Deepwater Surface Technical Director, Diane Burton and addressed CCD's concerns with the proposed approach for modifying the 110s. This was a short briefing with very little discussion.

3 Sept 2002 – Had a meeting with Mr. Ghosh and Carl Casamassina of CCD to discuss actual tests that were performed on the PC 179.

9 September 2002 – Mr. Ghosh told me that he was writing a letter to CG Headquarters to ask why he could not get the support he needed.

Some time after the 3 September meeting, Carl Casamassina and myself called Dennis Fanguy, the head of the Engineering Department at Bollinger Shipyard. CCD had a very

good rapport with Bollinger Shipyard due to the many projects we worked on together and felt comfortable talking openly about the 123 project concerns. We informed him of our design concerns in the hopes that Bollinger Shipyard might take action and attempt to correct the situation. The conversation was short with little discussion.

The MATAGORDA was inducted into Bollinger Shipyard on 2 February 2003. On 5 March 2004, MATAGORDA was delivered back to the CG and on 10 May 2003 entered a Post Delivery Maintenance Availability. Within days of leaving the availability, in the early part of September 2004 MATAGORDA suffered damage in the middle of the cutter, buckling the side shell and deck. This is the type of longitudinal failure that Combatant Craft anticipated seeing and warned the Coast Guard about back in August 2002. This predicted failure occurred not as result of fatigue, but rather from one short period of operation in a sea reported to be 4-6' in height. This longitudinal bending failure was acknowledge in a report issued by ELC entitled "*MATAGORDA* Buckling Incident Analysis" dated 24 September 2004 and verified our concerns expressed during the meeting on 9 August 2002.

As a result of MATAGORDA's hull failure a fix was designed by ELC and installed on all delivered 123s. On March 28, 2005, the NUNIVAK which had the fix installed reported hull damage on her maiden transit from Bollinger Shipyard to home port in Key West. This lead to a visit to Key West from 29 March to April 1, 2005 where three other 123's were home ported. The team inspected the NUNIVAK, PADRE, MATAGORDA, and METOMPKIN. It was my opinion that all 123s experienced similar damage as seen on the NUNIVAK just to a lesser degree. This inspection indicated to me that the fix did not resolve the problem and that longitudinal bending problems still existed.

In July 2005 CCD offered to do a quick analysis of the 123s problems using information provided by Debu Ghosh. CCD remained convinced that the problems were related to inadequate section modulus to support global longitudinal bending loads. On the 8th of July CCD met with Debu Ghosh to share their results of their analysis. Mr. Ghosh did not agree with the basis of the analysis and CCD's investigation into the failure of the 123s did not continue.

On July 12, 2005 my command, the Maintenance and Logistics Command Atlantic paid for the travel of Malcolm Whitford of CCD to investigate the damage sustained to the NUNIVAK while being repaired at Global Shipyard in Savannah, GA. The opinion of Mr. Whitford continued to be that the damage observed on the NUNIVAK was primarily a function of longitudinal bending.

After a second attempt at a fix, the cutters continued to fail structurally. The damage continued to appear in plating, frames and engine girders in the form of deformation. As a result of the continuing distortion of the hull, constant shaft alignments were needed. Eventually in December 2006 the decision was made to lay up all eight 123s at the Coast Guard Yard.

Conclusion:

While engineers continue to discuss whether a solution to the many problems that plague the 123 exists, it is clear to me that the initial problem of not increasing the strength of the 123 was a serious oversight of basic naval architecture and their failure was predicted. Despite

the offering of applicable experience and lessons learned, ICGS and the Coast Guard failed to take advantage of them and suffered a devastating setback to the program and its mission capability. It is my sincerest hope that these issues can be resolved and better interagency relationships can be established.

U.S. Department of Homeland Security
United States Coast Guard

Commandant
United States Coast Guard
Deepwater System Integration
Program Office

1530 Wilson Boulevard, Suite 400
Arlington, VA 22209
Staff Symbol: G-ACS-5/SIPO
Phone: (571) 218-3288
Fax: (571) 218-3341
Email : daniel.olsson@dwicgs.com

Serial #07-128
May 17, 2007

Integrated Coast Guard System (ICGS)
Attn: Mr. Kevin O'Neill
Director Contracts
1530 Wilson Boulevard, Suite 400
Arlington, VA 22209

Subject: Delivery Task Order (DTO) DTCG23-02-F-2DW207 MATAGORDA; DTCG23-02-F-2DW196 METOMPKIN; DTCG23-03-F-2DW247 PADRE; and DTCG23-03-F-2DW302 ATTU, NUNIVAK, VASHON, MOHEGAN, MANITOU 110/123 Conversion Program Revocation of acceptance for the 110/123' Patrol Cutters

Dear Mr. O'Neill,

In accordance with (IAW) Federal Acquisition Regulation (FAR) 52.246-2 Inspection of Supplies – Fixed Price paragraph (l), the USCG hereby revokes acceptance of all eight 123' Patrol Cutters procured under subject DTOs. The revocation is due to hull buckling and shaft alignment issues which resulted in the decommissioning of all 8 cutters on April 17, 2007. The hull and shaft alignment problems emerged after USCG acceptance of the aforementioned 123 Patrol Cutters. These deficiencies were present at the time of acceptance and could not have been discovered by a reasonable inspection at the time of acceptance. The physical integrity of the 123 cutters has been compromised to such a degree the performance specifications under the contract cannot be achieved and sustained.

The USCG has expended time and substantial resources in trying to determine the material causes of these problems. ICGS stated months ago that they would also examine the issues and share their findings with the Government. To that end, the 123 cutter fleet was made available to ICGS engineers. ICGS has yet to provide that analysis to the USCG. The reports and studies that the USCG has authored or commissioned have been provided to ICGS and collectively establish the cause(s) of the failures in question were directly related to ICGS' design flaws for the 123 conversion effort. I am not aware of any contributing USCG actions or activities that had any material impact on these failures. Since the Government has not received any analysis that would effectively exculpate ICGS for these hull and alignment problems, the Government must now revoke our prior acceptance in the interest of timeliness.

The Government has not yet determined the amount of damages due the Government from ICGS. Once the amount has been determined, the Contracting Officer will provide ICGS a letter for payment IAW FAR Part 32.610 Demand For Payment of Contract Debt.

Subject: Delivery Task Order (DTO) DTCG23-02-F-2DW207 MATAGORDA, DTCG23-02-F-2DW196 METOMPKIN, DTCG23-03-F-2DW247 PADRE, and DTCG23-03-F-2DW302 ATTU, NUNIVAK, VASHON, MOHEGAN, MANITOU 110/123 Conversion Program Revocation of acceptance for the 110/123' Patrol Cutters

Serial #07-128
May 17, 2007

If you have any questions or concerns regarding this matter, please do not hesitate to contact Mr. Daniel Olsson at (571) 218-3288 or via electronic mail at daniel.olsson@dwicgs.com or the undersigned at (571) 218-3246 or Pamela.bible@dwicgs.com .

Sincerely,

Pamela K Bible

PAMELA K BIBLE
Contracting Officer
U.S. Coast Guard

Copies:
ICGS: Kevin O'Neil, Dave Illuminate, Rick Wharton, Jack Catalano, Pamela Neumann
USCG: RDML Blore, Michael Tangora, Carl McGill, CAPT Anderson, CAPT Haycock, Lt Pierce, Daniel Olsson

○