NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

THESIS

MANPOWER ISSUES INVOLVING VISIT, BOARD, SEARCH, AND SEIZURE (VBSS)

by

Emory A. Rank

March 2012

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Nearly all Cruiser Destroyer (CRUDES) ships deploy through potential piracy areas in the five-million square mile Fifth Fleet domain, which is why all Navy warships maintain Visit, Board, Search and Seizure (VBSS) shipboard teams. This research analyzed advantages and disadvantages of the VBSS structure including alternative approaches to how the Navy could train, certify and deploy VBSS teams, e.g., Fifth Fleet detachments. Ship's company VBSS teams face an unattractive tradeoff during deployment concentrate on Navy Enlisted Code (NEC) and ratings training, and prioritize VBSS team-training. School-house training and certification are crucial yet insufficient for maintaining team-performance in accordance with required occupational capabilities (ROC) requirements. Using VBSS detachments would reduce the total number of personnel needed to accomplish the VBSS mission. If converting to detachments is improbable, then Navy Commanding Officers could better support their VBSS mission by prioritizing team training before and during deployment. US Marines, already well-trained and embarked on amphibious ships could also accomplish this mission.

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MANPOWER ISSUES INVOLVING VISIT, BOARD, SEARCH AND SEIZURE (VBSS)

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Nearly all Cruiser Destroyer (CRUDES) ships deploy through potential piracy areas in the five-million square mile Fifth Fleet domain, which is why all Navy warships maintain Visit, Board, Search and Seizure (VBSS) shipboard teams. This research analyzed advantages and disadvantages of the VBSS structure including alternative approaches to how the Navy could train, certify and deploy VBSS teams, e.g., Fifth Fleet detachments. Ship's company VBSS teams face an unattractive tradeoff during deployment: concentrate on Navy Enlisted Code (NEC) and ratings training, and prioritize VBSS team-training. School house training and certification are crucial yet insufficient for maintaining team-performance in accordance with required occupational capabilities (ROC) requirements. Using VBSS detachments would reduce the total number of personnel needed to accomplish the VBSS mission. If converting to detachments is improbable, then Navy Commanding Officers could better support their VBSS mission by prioritizing team training before and during deployment. U.S. Marines, already well-trained and embarked on amphibious ships could also accomplish this mission.

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TABLE OF CONTENTS

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LIST OF FIGURES

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LIST OF TABLES

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LIST OF ACRONYMS AND ABBREVIATIONS

AAR	After Action Report
AAV	Approach, Assist, Visit
AEL	Authorized Equipment List
AI	Artificial Intelligence
BOC	Boarding Officer Course
BOPC	Boarding Officer Practical Course
BOQSP	Boarding Officer Qualification Support Program
BRF	Backup Reaction Force
BTM	Boarding Team Member
BTOC	Basic Tactical Operations Course
CG	Guided Missile Cruiser
CNO	Chief of Naval Operations
CO	Commanding Officer
COC	Chain of Command
CRUDES	Cruiser Destroyer
DDG	Guided Missile Destroyer
DON	Department of Navy
EEZ	Exclusion Economic Zone
FFG	Guided Missile Frigate
HVBSS	Helo-borne Visit, Board, Search, Seizure
IBT	Infantry Battalion Training
ICC	International Chamber of Commerce

IET	Information Exploitation Team
IMB	International Maritime Bureau
INSERV	Board of Inspection and Survey
KSA	Knowledge, Skills, and Abilities
LEDET	Law Enforcement Detachment
LPD	Amphibious Transport Dock
LSD	Dock Landing Ship
MESF	Maritime Expeditionary Security Force
MEU	Marine Expeditionary Unit
MEU (SOC)	Marine Expeditionary Unit Special Operations Command
MIO	Maritime Interdiction Operations
MLE	Maritime Law Enforcement
MOS	Military Occupation Specialty
MSST	Maritime Safety and Security Team
NATO	North Atlantic Treaty Organization
NAVMAC	Navy Manpower Analysis Center
NEC	Navy Enlisted Code
NECC	Navy Expeditionary Combat Command
NMS	National Military Strategy
NPS	Naval Postgraduate School
NSS	National Security Strategy
NTTP	Navy Tactical Training Publication
OIC	Officer in Charge

OJT	On-the-Job Training
OUS	Own Unit Support
OPTEMPO	Operational Tempo
POE	Projected Operation Environment
PT	Physical Training
PQS	Personnel Qualification Standards
PRC	Piracy Reporting Centre
RHIB	Rubber Hull Inflatable Boat
ROC	Required Occupational Capabilities
SMD	Ship Manpower Document
SOI	School of Infantry
SRF	Shipboard Reaction Force
TACLET	Tactical Law Enforcement Detachment
USCG	United States Coast Guard
USMC	United States Marine Corps
USN	United States Navy
VBSS	Visit, Board, Search, Seizure
XO	Executive Officer

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I. INTRODUCTION

A. AREA OF RESEARCH

This research analyzed the current structure and process whereby the U.S. Navy conducts Maritime Interdictions Operations (MIO), specifically, the training and certification of shipboard personnel to conduct Visit, Board, and Search and Seizure (VBSS) operations primarily against piracy activities. The study will describe current, U.S. Navy Ship's Manning Documents (SMD) to ascertain the extent to which (primarily) Destroyer (DDG) platforms are best equipped/manned to support the growing mission of Maritime Interdictions Operations. Manpower and working requirements will be analyzed based on the knowledge, skills, and abilities (KSA) needed to operate and conduct MIO and VBSS. A potentially cheaper alternative will be considered, i.e., terminating shipboard teams and creating special VBSS detachments located only within the Fifth Fleet and AFRICOM.

B. RESEARCH QUESTIONS

This thesis focuses on the following objectives:

1. **Primary Question:**
   - What are the current Visit Board Search and Seizure (VBSS) structure and process including work requirements and written representation in the Ship's manpower document (SMD), and could VBSS non shipboard "detachments" be a viable alternative?
2. **Secondary Questions:**
   - What are the strengths, weaknesses, opportunities, and threats when comparing the existing versus the alternative program?

C. DISCUSSION

Maritime Interdiction Operations (MIO) has migrated from a secondary mission to a primary mission of today's surface Navy fleet. Examined will be how the U.S. Navy trains, certifies the shipboard VBSS teams to accomplish emerging piracy and counter-

interdiction requirements. Ships have been conducting VBSS during operations up to level III (non-compliant boardings) since about 2004. These ship's forces teams consist of 18–21 enlisted and officer members from a wide array of ratings and skill-sets. VBSS team member meet specified prerequisites prior to attending the following special schools: Security Reaction Force-Basic (SRF-B), Security Reaction Force-Advanced (SRF-A), and Non-Compliant Boarding (NCB) School. This training pipeline lasts about eight weeks total, with officer and select boarding team members attending an additional two weeks, Boarding Officer School and Breacher School.

The members of VBSS teams are billeted to each ship to fill a requirement and are expected to conduct work in that specific billet per the Navy standard workweek. A concern to be addressed in the study is increasing workload, i.e., the efficacy of standing eight hours of watch per day plus two hours of maintenance, plus other shipboard evolutions, plus VBSS operations. To be accurate, VBSS members are typically removed from watch bills to conduct VBSS boarding requirements. To fill the voids left by VBSS team members, ship's company simply works overtime and/or stands more watches, and/or conducts more maintenance. In short, because the hours lost due to MIO or VBSS are not configured into the Navy's standard work week underway, the amount of work each sailor has to do on average is increased.

Creating VBSS detachments in Fifth Fleet and the Horn of Africa would free ship's company to work in their assigned billets, and more accurately align workload with the Navy's published standard workweek. The quality of using detachments is addressed later.

D. BENEFIT OF STUDY

This study concluded in favor of implementing specialized VBSS detachments in the world's hot spots and relieving shipboard teams of VBSS requirements. In sum, 21 sailors per ship, previously distracted from their primary rating and skill-set would be able to focus on shipboard requirements, and the Navy standard workweek would return to closer accuracy. Fewer numbers of VBSS members will be needed, trained and certified should the Navy decide to switch to a detachment structure. As current

shipboard VBSS teams gradually lose VBSS skills during a deployment (perishable skills if not used regularly), dedicated VBSS detachments may be safer and more effective, i.e., that is all they would do. This study identified additional manpower issues associated with the current MIO and VBSS mission. It is worth noting that an earlier VBSS detachment proposal failed to gain sufficient interest. This study may serve to reactivate that proposal.

E. METHODOLOGY

Various books, magazine articles, CD-ROM systems, and other library information resources on maritime security were reviewed. VBSS protocols and policies, schooling requirements, personal qualifications, and standards were also reviewed. Finally, conducting VBSS requirements at different levels was analyzed.

F. THESIS ORGANIZATION

Chapter I: The introduction identifies the focus and purpose of the research as well as primary and secondary research questions.

Chapter II is an overview of Maritime Interdiction Operations (MIO) and Visit, Board, Search, and Seizure (VBSS) operations. It outlines the current state of the fleet commensurate with Navy maritime and strategic goals. It examined the ROC/POE requirements and compared the hours required to conduct MIO and VBSS missions with the SMD.

Chapter III uses a strategic analysis tool of depicting the Strengths, Weaknesses, Opportunities, and Threats (SWOT) of the current VBSS program versus a proposed VBSS detachments alternative program.

Chapter IV provides a summary, conclusion and recommendations, and suggestions for further research.

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II. OVERVIEW OF MIO AND VBSS

A. MARITIME INTERDICTION OPERATIONS

Maritime Interdiction Operations (MIO) is a major part of the Navy's strategic goals and has been conducting maritime security operations from the birth of the United States Navy. The DoD receives funding from Congress in support of Navy missions as part of the National Security Strategy (NSS) and National Military Strategy (NMS). The Required Operation Capabilities (ROC) and Projected Operational Environments (POE) accomplish these missions by platform. In the 2012 Highlights of the Department of the Navy, from the Budget Office of the Navy, they outlined,

> Our cooperative maritime strategy articulates the six core capabilities of forward presence, deterrence, sea control, power projection, maritime security, and humanitarian assistance/disaster response that our naval forces provide to ensure the security and prosperity of our nation and its people.[1]

Maritime security and sea control are broader categories of MIO. IT appears the current political will continue the Navy's current security role. High Sea piracy the past ten years has become more daring and the United States will lead the global community to deter these attacks in support of free transit lanes for all vessels on the high seas. This idea of free transit across the globe's waterways is not new and has been the foundation which the United States Navy has strived to protect from its beginning.

Maritime Interdiction Operations involve many different operations; they are not just anti-piracy operations. MIO include U.N. sanction enforcement, this keeps countries that have had sanctions imposed against them, and therefore the U.S. Navy assists in the enforcement of illegal smuggling of contraband inbound or outbound to a country. This enforcement often involves numerous boardings by existing VBSS teams. The process of determining which ships to query and board is usually determined by some sort of intelligence but many times simply involves teams approaching countless vessels and

[1] Office of Budget, Department of the Navy, "Highlights of the Department of the Navy FY 2012 Budget," February 2011, http://www.finance.hq.navy.mil/FMB/12pres/Highlights_book.pdf.

conducting queries. These operations named approach operations and intended to build relationships with local fisherman and let them know the U.S. Navy was there to assist. These approach operations often involved the dissemination of various support, first-aid kits, bottle water, food, and other items, the items contained how to contact the U.S. Navy if they were under attack from pirates or in need of assistance. These relationships built with local fisherman by the U.S. Navy, recently came into the media with the freeing of 13 Iranian fishermen from Somalia pirates. The following is a small portion from the article from the Associated Press article by Lolita C. Baldor,

> American forces flying off the guided-missile destroyer USS Kidd responded to a distress call from the Iranian vessel, the Al Molai, which had been held captive for more than 40 days, the U.S. Navy said Friday. The Kidd was sailing in the Arabian Sea, after leaving the Persian Gulf, when it came to the sailors' aid.
>
> A U.S. Navy team boarded the ship Thursday and detained 15 suspected Somali pirates. They had been holding the 13-member Iranian crew hostage and were using the boat as a "mother ship" for pirating operations in the Persian Gulf. [2]

This incident occurred days after the Iranian government threatened to cut off transit of the Strait of Hormuz to the U.S. These kinds of operations are not only a military operation but also serve as civil military relations. These boarding teams also help alleviate the fears among legitimate seafarers and invoke trust and cooperation with the United States.

B. VISIT BOARD SEARCH AND SEIZURE (VBSS)

The Navy has been conducting VBSS operations from its infancy, back in the revolutionary war the fighting was done by all the sailors onboard but later the work was transferred to the United States Marine Corps. The Navy oversaw a select few these sailors with specialized training, later marines, whose primary job was fighting. These Marines were the ones that met the challenges of combat aboard ships upon the high seas. In the modern age of this highly technological, advanced U.S. Navy there are no other

2 Lolita C. Baldor, Associated Press, “USS Kidd rescues Iran boat from pirates,” January 6, 2012,http://www.wlfi.com/dpps/military/uss-kidd-rescues-iran-boat-from-pirates_4033438.

means that the Navy possesses to enforce sanctions and international law and continue to keep open these sea lines on commerce. The ability for countries to transit freely across the waters on our globe has been recently threatened by new age pirates. Later on in this chapter will discuss how this holds true for today's navy as well.

1. Past Boarding Teams

Today's boarding teams training programs are a drastic improvement from those offered a few years ago. Since the 1980s and 1990s sailors from Navy ships volunteered to climb containers while carrying a weapon. These volunteers officially became members of their ship's boarding teams. There was no rhyme or reason to the selection process nor was there any team qualification or school requirement. The ship basically gathered up a mixture of armed sailors, launched a rigged hull inflatable boat (RHIB), and boarded vessels verifying compliance with the prescribed paperwork. There was no hazardous duty pay, allowance equipment list (AEL), or training in place to ensure that these sailors possessed the demanding training required to conduct such a high-risk evolution. The Navy realized that it needed to design a training program to give VBSS more legitimacy. The high seas were becoming a highway for terrorists to move illegal contraband. The terrorists were merciless in completing this mission therefore the U.S. Navy had to begin training its VBSS teams to a higher level to better confront such adversaries. Was training sailors the right people to give this mission to or would there be another group of persons that would be a better fit for this mission? The Navy finally formalized this training,

> Managed by the Center for Security Forces (CENSECFOR) in Norfolk, Va., formal VBSS training was created following the Gulf War in 1990 as a way to standardize and continue the Maritime Interception Operations introduced there as a result of UN resolutions "The course was designed to standardize what was previously done through on-the-job training and pass down," said Kurt Martin, anti-terrorism program manager for CENSECFOR. "We introduced the curriculum in 1998 and updated it in 2005 to reflect what the teams would be facing in the fleet."[3]

[3] Ed Barker, Naval Education and Training Command Public Affairs, "VBSS: Evolving the Mission," Story number: NNS090425-03, April 25, 2009 http://www.navy.mil/search/display.asp?story_id=44692.

The Center for Security Forces developed the current training program for the schoolhouse that is used throughout the fleet.

2. Current Boarding Teams

The Navy has completely changed the training and qualifications process for today's boarding teams since first implemented. The following paragraphs will outline the selection process of boarding team members and the training requirements they will have to complete prior to become a fully-qualified boarding team member for their ship.

a. Security Reaction Force- Basic (SRF-B)

The SRF-B is the first school that sailors who are selected for the VBSS team are sent to. This school is two weeks in length and introduces the sailors to a myriad of non-lethal weapons training, lethal weapons training, and other items outlined by OPNAVINST 3591.1F. This is the official description of Armed Sentry/Security Reaction Force (Basic) (AS/SRF-B) (A-830-0018).

> Course graduates will be able to perform the duties and responsibilities of an armed sentry for controlling access to U. S. Navy assets. Students will learn to implement immediate actions to identify, assess, track and deter potential threats, utilizing and demonstrating the proper tactics, techniques and procedures of the Use of Force Continuum along with proper implementation of Force Protection procedures, watch standing techniques and be capable of interacting with security reaction forces as a basic reaction force team member. This is a High-Risk course of instruction, and training consists of Oleoresin Capsicum (OC) pepper spray as well as live fire of the 9 mm pistol, 12-gauge shotgun, and M-16 rifle. All courses of fire used for this course are specified in OPNAVINST 3591.1F (Attachment K).[4]

SRF-B is now taught onboard ships by ship's company in accordance with OPNAVINST 3591.1F. Upon completion of SRF-B, students are sent to Security Reaction Force—Advanced. The advanced course is not currently offered afloat causing sailors have to go to schools at another site. Security Reaction Force- Advanced (SRF-A).

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4 Statement of work for Instructional support in the Western Region for Navy Forces Training under the Direction of the Center for Security Forces, September 1, 2009http://cryptome.quintessenz.at/mirror/dodi/navsec-sow.pdf.

The SRF-A school is often taught by companies that bid to win the contract and follow the requirements outlined in OPNAVINST 3591.1F. This is the official description of Armed Sentry/Security Reaction Force (Advanced) (AS/SRF-A) (A-830-0396).

> This course allows personnel to perform as a Naval Security Force team member. This team will act to prevent threats, whether from the pier, small boat, or any other means of penetrating a unit. This course will also train personnel to perform as a Naval Security Force team leader. In this position, the Team Leader will manage a security force team through assignment of members, ensure members receive necessary training, and coordinate team responses and perimeters. The Team Leader will also be able to conduct briefs and debriefs for the team and the Chain of Command. Course includes Operational Risk Management; Tactical Team Movements; Tactical Team Leadership; Tactical Communications; Use of Force and Deadly Force; Personnel Restraint Devices; Force Protection Search Procedures; Tactical Team Management; Tactical Mission Planning; and Standard Operating Procedures. Instructors will have to meet the Navy qualifications on the 9mm pistol and re-qualify semi-annually in accordance with OPNAVINST 3591.1F (Attachment K).[5]

The instructors for SRF-A are usually highly skilled individuals with numerous experiences in combat; it is not unusual for the instructors to be former SEALS, Army Rangers, Marine Recon, and other elite military members which offer better instruction because of real-life combat experience. Upon graduation from SFR-A sailors are sent Non-Compliant Boarding school, commands are encouraged to send their sailors in six plus man teams so they will able to train within the teams they will be operating in the Fleet.

b. Non-Compliant Boarding, Visit, Boarding, Search, and Seizure (NCB VBSS)

The NCB VBSS School is taught by the same companies that teach SRF-B, SRF-A and Boarding Officer schools. This school is no different than the previous schools, they follow the requirements outlined in OPNAVINST 3591.1F. This is the official description for of Non-Compliant Boarding, Visit, Boarding, Search, and Seizure (NCB VBSS) (A-830-0395).

[5] Ibid.

> This course is designed to prepare Shipboard Boarding Teams and Boarding Officers (BO) to perform Visit, Board, Search, and Seizure (VBSS) procedures (Compliant and Non-Compliant Low Freeboard) in support of Maritime Interdiction Operations (MIO). The course provides Safety; Water Survival; Use of Force/Deadly Force Policy; Physical Training/Defensive Tactics; Equipment Familiarization/Gear Issue; Compliant Boarding; Non-Compliant Boarding; Knot-Tying Techniques; Service Pistol, Rifle, and Shotgun Tactical Shooting; Caving Ladder Climbing; Rappelling and Containerized Inspection; Tactical Movements; Document Inspection, Verification and Intelligence Gathering; Underway Ship Boarding; Non-Lethal Weapons; Mission Planning; Effective Communications; Combat First Aid; and Prisoner Escort. The culmination of this training is an evaluated non-compliant boarding scenario involving boarding an afloat target. This course is designated as High Risk.[6]

The training evolution is High Risk and the final phase most boarding team members complete in order to become full-fledged members of their ships VBSS team.

c. Boarding Officer Visit Boarding Search Seizure (VBSS BO)

The VBSS Boarding Officer School is taught by the same companies that teach SRF-A and NCB VBSS schools. This school is no different than the previous schools, they follow the requirements outlined in OPNAVINST 3591.1F. This is the official description for Visit, Board, Search, and Seizure Boarding Officer (VBSS BO) (A-2E-0085):

> This course prepares the VBSS Boarding Officer (BO), Assistant Boarding Officer (ABO), Security Team Leaders (STL), Liaison Officer and Intelligence Specialist (IS) to plan, execute, teach the biometrics collection equipment, and debrief VBSS procedures (Compliant and Non-Compliant Low Freeboard) in support of Maritime Interdiction Operations (MIO). This course is designed for the BO/ABO/STL to attend prior to attending the NCB VBSS (A-830-0395) course. The course consists of both classroom and laboratory instruction, and includes: Safety, Documentation Review, Vessel Inspection (Cargo and Personnel), Identification and Management of Threats and Hazards, Evidence and Intelligence Information Collection and Documentation (Chain of Custody), Training Management, Collection of Biometrics, Management of Emergency Medical Incidents and Boarding Team Decontamination

[6] Ibid.

> Procedures, Mission Planning, and New Technology in support of Maritime Interdiction Operations (MIO). Graduates also receive instruction on UN resolutions, pre-boarding procedures to include vessel queries and threat profiles, compliant and non-compliant boarding procedures, construction and submission of an After Action Report (AAR), and procedures for health and comfort inspections. This course requires a SECRET clearance.[7]

The VBSS Boarding Officer School is usually reserved for Chief Petty Officers and above. In the description it specifies who needs to go and Commands choose to send their Boarding Officers, who are first and Second tour divisions officers and maybe a Chief and in some circumstances first class petty officers.

d. Mechanical Breacher Visit Boarding Search Seizure (VBSS BR)

The VBSS Mechanical Breacher School is taught by the same companies that teach SRF-A and NCB VBSS schools. This school is no different than the previous schools, they follow the requirements outlined in OPNAVINST 3591.1F. This is the official description for Visit, Board, Search, and Seizure Boarding Officer (VBSS BO) (A-830-0022):

> The Mechanical Breacher Technician course includes practical applications used currently by U.S. Navy SPECWAR and Non-Compliant Visit Board Search and Seizure Team Mechanical Breaches, as such, this course has an additional emphasis on Maritime Interdiction Operations, also providing practical training in breaching metal doors and walls, bulkheads and hatches, to wooden doors and entry ways. The Mechanical Breaching Technician course will provide training in the use of1) Manual Breaching Tools and Techniques, 2) Mechanical Breaching Tools and Techniques, 3) Ballistic (Shotgun) Breaching Tools and Techniques and 4) Exothermic (Torch) Breaching Tools and Techniques.[8]

The Mechanical Breacher School is usually reserved for Engineering Department sailor that is mechanically inclined. In the description provided by RIPCO

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[7] Ibid.

8 RIPCO, "Specialized Security and Investigation Services, Positive Solutions in an Asymmetrical Environment, Detailed description on Mechanical Breacher Technician course," 2010. http://ripcointernational.com/id4.html.

the graduate will be able to breach many different types of surfaces which will increase the ability of the VBSS team.

Boarding Team Members	
Qualification	**Documentation**
Boarding Officer Course Length:4-days	- Graduation Certificate
Mechanical Breacher Course Length:5-days	- Graduation Certificate
VBSS Course Length:3-weeks	- Graduation Certificate
SRF-A 2-weeks **(all of the following)**	- Armed Sentry/Security Reaction Force-Basic Course (A-830-0018) OR Navy Security Force Sentry (A-830-2216) AND Security Reaction Force Team Member Basic (A-830-2217) Graduation Certificate - Passes Physical Fitness Assessment (PFA) PRIMS Printout - NHQC, PWC, HLLC, RQC, RLLC within the last year
Armed Sentry/SRF-B 3-weeks	- Passes Physical Fitness Assessment (PFA) PRIMS Printout
2nd Class Swim Length: 1 day Completion(annual)	- 2nd Class Swim Certificate
M9 pistol Qualifications **(all of the following)**	- M9 pistol PQS cover page or RADM printout - OPNAV 5530(annual) - DD2760(annual) - Quarterly Use of Force Page 13(quarterly) - NHQC documented on OPNAV3591/1(annual) - HPWC documented on OPNAV3591/1(annual) - HLLC documented on OPNAV3591/1(annual)
M16/M4 rifle Qualifications **(all of the following)**	- M16/M4 rifle PQS cover page or RADM printout - OPNAV 5530(annual) - DD2760(annual) - Quarterly Use of Force Page 13(quarterly) - RQC documented on OPNAV3591/1(annual) - RLLC documented on OPNAV3591/1(annual)
M500 Shotgun Qualifications **(all of the following)**	- M500 pistol PQS cover page or RADM printout - OPNAV 5530(annual) - DD2760(annual) - Quarterly Use of Force Page 13(quarterly) - SPWC documented on OPNAV3591/1(annual)
Non-Lethal Weapons (annual) **(one of the listed items)**	- NLW certificate or, - Message sent with Sailor's name/completion date/DTG or,
Sound and Security **(one of the listed items)**	- PQS cover page or - RADM printout
PFA(Good-Medium) **(all of the following)**	- PRIMS Printout

Figure 1. Boarding Team Members Qualifications Document (From COMNAVSURFOR, 2006)

COURSE	DESCRIPTION	DAYS	Cost	LOCATION	PREREQUISITES	DAYS	Cost
A-2E-0085	Boarding Officer	4	242	Navy Annex, Ches, Va	None		
A-830-0395	VBSS Training Team NCB	19	6500	Navy Annex, Ches, Va	Adv 1st Aid (stretcher bearer level) PQS		
					Class 2 Swimmer (K-060-2138)	4	
					SRF-B (A-830-0018)	19	2804
					SRF-A (A-830-0396)	12	2280
					PQS qual in 9MM and MK-18)		
A-830-0022	Breacher	5	5000	NAB LCREEK	Adv 1st Aid (stretcher bearer level) PQS		
				Navy Annex, Ches, Va	A-830-0395 (VBSS TT)	19	6500
				Navy Annex, Ches, Va	SRF-B (A-830-0018) OR	19	2804
				Navy Annex, Ches, Va	Navy Security Force Sentry (A-830-2216)	4	
				Navy Annex, Ches, Va	SRF Team Mbr Basic (A-830-2217) and	4	
				Navy Annex, Ches, Va	SRF-A (A-830-0396)	12	2280
					PQS qual in M9, M500 Shotgun, and M16)		
K-060-2138	2nd Class Swimmer	4		FTC NORVA	None		
A-830-0018	Security Reaction Force – Basic	19	2804	Navy Annex, Ches, Va	None		
A-830-0396	Security Reaction Force – Adv	12	2280	Navy Annex, Ches, Va	SRF-B (A-830-0018) OR	19	2804
					Navy Security Force Sentry (A-830-2216) and	4	
					SRF Team Mbr Basic (A-830-2217)	4	

Figure 2. VBSS Schools Description (From ATG Norfolk, 2012)

e. Summary of the Current School and Qualification Requirements

The Navy has invested millions training dollars on current sailors to make sure they possess the proper skills required to conduct non-compliant boardings, these sailors often hand-picked by the command due to rigorous qualifications and school requirements. This selection often drains the command of the early promote sailors from their divisions and puts them into a team that is often considered a collateral duty by many commands. This can often divide commands and create tension between divisions and the amount the VBSS team often lies with the discretion of the Commanding Officer and how they feel about the collateral mission of Maritime Interdiction Operations.

2. Levels of Boardings

The center's training covers both VBSS Level I, which focuses on ships that comply with the instructions of the inspection team, and Level II, which addresses the tactics used to board vessels that are non-compliant. Level II ships have freeboard (the

distance between the waterline and the main deck of the ship) of 25 feet or less above the water. Non-compliant vessels that have greater than 25 feet of freeboard, or that are actively opposing the boarding, are handled by teams of Special Operations Forces (SOF).

Level	Compliant	Freeboard	Insertion	Principal Team
I	Yes	N/A	RHIB	Ship
II	No	<25 Feet	RHIB	Ship
III	No	>25 Feet	HELO	MSRON
IV	Hostile	N/A	ANY	SOF

Figure 3. VBSS Levels of Boardings (From Lockheed Martin, 2007)

III. SWOT ANALYSIS

A. BACKGROUND OF SWOT ANALYSIS

Appraising an organization's resource strengths and weaknesses and its external opportunities and threats, commonly known as SWOT analysis, can provide a useful depiction of whether an organization's overall situation is fundamentally healthy or unhealthy. SWOT analysis was further developed by Stanford Research Institute in the 1960's to provide a basis for crafting strategies applicable to many Fortune 500 companies. The logic of the tool is straightforward, i.e., capitalize on existing resources (strengths), systematically consider the most appealing future opportunities, and defend against identified threats (Thompson, Crafting & Executing Strategy, 2007). This study uses the SWOT tool as a framework for assessing a current versus a future alternative structure for the U.S. Navy VBSS program. So, what are the relative strengths, weaknesses, opportunities and threats comparing an existing versus an alternative VBSS program? The following short definitions apply:

- **Strengths** are current characteristics of the organization/program that may give it an advantage over others, including resource strengths.
- **Weaknesses** are current factors within an organization/program that may create disadvantages deterring or impeding it from accomplishing its mission and/or objectives, including the weakness of producing unintended consequences. Although a business example, it is well known that Kodak executives were convinced of the ongoing value of paper film in the photography industry. In hindsight, this internal weakness translated into an inability to adapt in time to a digital world, resulting in their 2012 bankruptcy.
- **Opportunities** are generally conceived of as external factors, forces and trends that should an organization capitalize on, success is likely to follow. Of course the intelligent reader knows that a weakness can often be framed as an opportunity.

- **Threats** are also external factors, forces and/or trends that should an organization fail to anticipate and/or respond to, dysfunction, bankruptcy and/or irrelevancy may predictably follow. Kodak saw the digital movement as a threat to their (paper) photography business. Even though they developed digital cameras early, they could not operationalize them.

The following SWOT analysis provides an overview of the *fit* of the U.S. Navy VBSS program relative to an alternative detachment proposal for conducting Maritime Interdiction Operations. The current VBSS program is considered first followed by the alternative VBSS detachments structure.

Table 1 illustrates the process of SWOT analysis.

Table 1. SWOT Analysis Diagram(From [9])

[9] Xhienne, SWOT analysis diagram, Sept. 30, 2007.

B. CURRENT BOARDING TEAMS

1. Strengths

a. Flexibility

In a 2011 report from International Maritime Bureau the opportunity and occurrence of seaborne Piracy has flourished in the past decade. A previous report by OEF estimated the global cost of piracy for 2010 to be in the range of $7 to $12 billion[10] The U.S. Navy has responded to various allies and friendly shipping agencies to combat piracy by equipping every Navy ship with the capability to conduct Maritime security operations. This added personnel strength and policy focus to maritime security is probably crucial to mitigating piracy, terrorism, weapons proliferation, drug trafficking, and other illicit seaborne activities. Navy ships are required to be certified to conduct VBSS operations prior to going on deployment, e.g., certified personnel. This certification involves a detailed inspection of the ship's boarding team, member's qualifications and school graduate certificates, allowable equipment lists, required publications, and proficient demonstration of the mission with a team present to evaluate the boarding team's performance. Once a ship's boarding team is certified, they are able to conduct missions around the globe. The catch is that many of these types of skills are perishable if not routinely practiced (a weakness), and time-to-practice underway is a scarce commodity.

So the strength would definitely be consistency-of-training and the uniformity and assurance that certification can bring to the process. Although the teams went through the same training pipeline and certification process, there is a clear difference between teams as they conduct missions around the world's waters. This can be attributed to the amount of time certain boarding teams receive from their chain of command (COC) to build this esprit de corps and unit cohesion.

As of January 31, 2012, the composition of the surface fleet consists of the following: Amphibious Transport Docking (LPD) 12, Cruisers (CG) 22, Destroyers

[10] Christopher Alessi, "Combating Maritime Piracy," Council on Foreign Relations, March 23, 2012, http://www.cfr.org/france/combating-maritime-piracy/p18376.

(DDG) 59, Dock Landing Ship (LSD) 12, Frigates (FFG) 26, and Patrol Craft (PC) 10. All of these ships are required to maintain a VBSS team with 12 members except Patrol Crafts having a requirement for six members. This requirement for 12 Boarding Team Members (BTM) is a change from previous requirements of 18 BTM. Therefore, 141 Navy ships having the capability to conduct VBSS operations at sea sounds like strength. Having a global maritime presence may certainly have strengthened and contributed-to a series of successful anti-piracy operations in 2011/2012, some gaining notable media exposure.

b. VBSS Team Diversity as a Strength

Boarding teams are diverse in terms of their capabilities, i.e., as diverse as the multiple skill sets found on every Navy ship, e.g., from carpenters, electricians and radiomen, to ship-fitters, weapons handlers and communication specialists. This highly diverse composition of a typical boarding team is strength in that there is high variability in the VBSS environment, i.e. different scenarios require different skills. Many special operations members (SEALS) are provided a Navy rating, but because SEALS typically do not work and train in their particular rating, their skill-set may actually be more constrained (tailored) compared to a cross-section of comparable Navy sailors. Special forces military members are certainly skilled at what they do, say, forced take-down of armed pirates, yet ironically, a wider skill-set may be needed soon after hostile operations, e.g., troubleshooting a damaged radio or determining if a vessel is sea-worthy. Therefore, VBSS shipboard team capabilities diversity can be framed as strength.

As a certified, experienced boarding officer, I found that team selection and team training results in a strong and motivated team—initially. Not knowing what will happen when conducting VBSS operations, everyone relies on trust of their team members which is developed in the training environment and is therefore strength.

2. Weaknesses

a. Lack of Shipboard Training

If shipboard VBSS team members attend virtually the same schools, then why is there a noticeable degradation in skills after the certification process? This question has been addressed in a prior thesis (Ray, 2010). Findings have attributed skill degradation to a lack of onboard practice and follow-on training, a lack of manpower, and insufficient chain of command support. For example, the boarding team function is labeled as a "collateral-duty," which means that all other primary duties have priority, e.g., VBSS training gets "squeezed-out." After Commanding Officers receive their certification to conduct Maritime Interdiction operations, their focus appears to shift to other matters, e.g., the next ship-wide inspection. The problem is that the array of skills needed to perform well particularly in a potentially hostile boarding environment appears to degrade over time. For example, boarding teams need to be in excellent physical condition for climbing, repelling and practicing close quarters battle (CBQ) movements, including routine communications training. In short, boarding teams either have difficulty getting command approval to train in these areas during normal working hours and/or training gets superseded by other functions. The training before or after working hours is just not particularly viable. Some boarding officers implement after hours physical training sessions to improve physical stamina and esprit de corps, which is probably helpful if it wasn't sporadic. I would personally offer that spirit de corps is vital to team success and could translate into life or death consequences.

b. Manpower

There are a total of 141 Navy ships that retain the capability to conduct VBSS operations anywhere around the world. Multiplying 141 by the number of boarding personnel required (12), results in approximately 1,692 sailors trained to conduct VBSS operations in the Navy's fleet. A majority of these sailors are rated and fulfill mission critical Navy Enlisted Codes (NEC), requiring them to be onboard to focus on mission-critical equipment. There lies the predicament to that sailor's chain of command, i.e., let sailor's leave the ship for hours to practice this high risk mission, or

limit non-critical activities to focus on fulfilling enlisted contract obligations. Boarding officers must routinely change team members, often due to unforeseen repairs usurping boarding personnel.

So maintenance, critical repairs and filling watch bill requirements persistently pull boarding team members in different directions causing role conflict. Some ships remove VBSS team members from the watch bill when facing a MIO environment. This is often determined by the geographical location of the ship, particularly concerning the Persian Gulf or the Horn of Africa. When ships in-chop, and/or change operational commander's, VBSS teams can be called-upon to respond to short notice missions. I experienced one-hour notifications on some boarding missions' commands that leave VBSS teams on the watch bill therefore roll-the-dice on the probability of having a full-up boarding team ready to go. Requirements overload, sleep deprivation and fatigue are not precursors for successful performance in high-risk environments. In the following article taken from October 19, 2008 Navy Times article, Phillip Ewing outlines the issues with this optimal manning concept.

> There were also other forces calling for the Navy to reduce the manpower expense which makes up a majority of the Navy's budget each year. In 2002, Clark's Navy Staff issued a change to the Navy Standard Workweek, the template planners use to assess how sailors use their time and, as such, how many sailors the Navy needs. Manpower requirements shall reflect the minimum quantity and quality of manpower required for peacetime and wartime to effectively and efficiently accomplish the activity's mission," said the message, signed by then-Chief of Naval Personnel Vice Adm. Norb Ryan.
>
> The Navy extended the time allotted for work from 67 hours a week to 70 hours—which, when computed with the fleet's manning formulas, meant the Navy could change its requirements to need fewer people, said retired Cmdr. Bill Hatch, a manning expert who teaches at the Naval Postgraduate School in Monterey, Calif.[11]

The Navy approached optimal manning with these new templates or minimum requirements for peace and war time steaming. I Increasing the work week

[11] Philip Ewing, "Lean Manning saps morale, puts sailors at risk," October 19, 2008, Navy Times, http://www.navytimes.com/news/2009/10/navy_leanmanning_101909w/.

from 67 to 70 hours translates into fewer sailors onboard. The Chief of Naval Operations (CNO) in front of the House Armed Service Committee stated, "Since 2000, our Navy's ship-underway days have increased by approximately 15 percent, yet we have about 10 percent fewer ships in our Fleet. Greater demand for our forces has led to longer deployments and shorter dwell, or turnaround times, which increase stress on our Sailors and drive up maintenance requirements for our ships and aircraft."[12] This illustrates the trend of mission expansion using fewer resources, including manpower and equipment. This trend has been identified as a major problem and has led the Navy to change positions on the optimal manning issue.

Another factor affecting boarding teams is the number of personnel actually filling onboard billets. Just because a ship is authorized to have a specified amount of people as directed by the Ship's Manpower Document (SMD) does not necessarily mean those people are onboard and able to deploy with the ship. NAVMAC recommends the amount of people needed to accomplish 100 percent of the mission, but the Navy typically does not authorize that full amount. For example, a ship containing around 85 percent of its personnel is already over-extended by definition. Multiply this shortcoming year after year and the unintended consequences can degrade maintenance, deter recruiting and retention, and possible cost lives.

[12] Gary, Roughhead, CNO, "STATEMENT OF ADMIRAL GARY ROUGHEAD CHIEF OF NAVAL OPERATIONS BEFORE THE HOUSE ARMED SERVICES COMMITTEE ON FY 2012 DEPARTMENT OF NAVY POSTURE" March 1, 2011, http://www.navy.mil/navydata/people/cno/Roughead/Testimony/CNO%20Roughead_Testimony_030111.pdf.

DDG 51 CLASS	I	III	IV	V
MOS 4—PERFORM INTERDICTION.				
• MOS 4.4 Conduct Maritime Interception Operations (MIO) and or Visit, Board, Search and Seizure (VBSS) operations with naval/combined /joint forces. B. C. NOTE: DDG capable of initial MIO/VBSS operations. However, ship unable to maintain sustained operations or security team without support of MIO Detachment. D. E. I(L) - Requires standing down selected watch stations, unless MIO Detachment is embarked. F. • V(L) - Plan and train.	**L/E**	**F/E**	**F/E**	**L**

Table 2. DDG VBSS/MIO ROC

3. Opportunities

a. Plenty of Work, Expanding AORs

A recent study revealed somewhat shockingly that during 2010, 4,185 seafarers were attacked by pirates using firearms and/or rocket propelled grenades. Over 1,090 were taken hostage, and 516 were used as human shields. Approximately 488 suffered psychological and/or physical abuse.

Moreover, while innocent seafarers bear the brunt of these crimes, the world economy suffers too an annual cost that is now estimated to be between $7 billion and $12 billion U.S. dollars. And, with more than 12 per cent of the total volume of oil transported by sea flowing through it, the Gulf of Aden becomes a strategic choke-point. Additionally, ships electing to divert via the Cape of Good Hope to avoid being attacked by pirates, face substantially longer voyages with accompanying higher fuel costs.

The CNO's recent testimony for the House Armed Forces Committee, discusses the Navy's current posture concerning maritime security concerns.

> Global trends in economics, demographics, resources, and climate change portend an increased demand for maritime power and influence. America's prosperity depends upon the seas: 90 percent of world trade moves on the world's oceans and underwater telecommunications cables facilitate about $3.2 trillion of commerce each year. As new trade patterns emerge, such as those that will result from the expansion of the Panama Canal and the opening of the Arctic, and as disruption and disorder persist in our security environment, maritime activity will evolve and expand.[13]

The Navy is a primary instrument and institution dedicated to maintaining U.S. economic, military, and political leadership and dominance in a fast-changing world. With the expansion of globalization and international trade markets, the sea lanes of commerce cannot be obstructed by modern piracy. This VBSS mission may be with us for quite a while.

In the 2010 Navy Operation Concept stated, "As the 21st century unfolds, we must continue to be effective warriors as well as informed and articulate ambassadors, serving our Nation's interests and facilitating free global interaction from the sea."[14]

The Navy has been confronting irregular challenges since the Age of Sail but in recent years the landscape of these challenges has changed. With the development of many technologies and arms that are able to be purchased off-the-shelve; this has led to more capable, equipped adversaries that have forced the hand of the U.S. Navy to expand their capabilities. Outline in the 2010 Navy Operations Concept they described these issues;

> Many of the threats in today's dynamic security environment are irregular in nature, arising from state and non-state actors that operate from an increasing number of poor, corrupt, lawless, or weakly governed areas in the world. They achieve psychological, economic, and political effects through criminal, insurgent, and terrorist activities that are perpetrated with the help of extended support networks, resilient C2 structures, illegal funding sources, and off-the-shelf technologies and arms. Globalization

13 Gary Roughhead, CNO, "STATEMENT OF ADMIRAL GARY ROUGHEAD CHIEF OF NAVAL OPERATIONS BEFORE THE HOUSE ARMED SERVICES COMMITTEE ON FY 2012 DEPARTMENT OF NAVY POSTURE," page 16, March 1, 2011, http://www.navy.mil/navydata/people/cno/Roughead/Testimony/CNO%20Roughead_Testimony_030111.pdf.

14 U.S. Department of the Navy, "Naval Operations Concept 2010."http://www.navy.mil/maritime/noc/NOC2010.pdf.

and readily available advanced information technologies are accelerating the growth of such unlawful actors and their organizations, and intensifying the global impact they can create.[13]

4. Threats

a. Declining Defense Funding

The January 3, 2012 report "Sustaining U.S. Global Leadership: Priorities for the 21st Century Defense" highlights an assessment of the strategy in regards to a "changing geopolitical environment and our changing fiscal circumstances"15 President Obama addresses the direction the Department of Defense (DoD) is heading to support a call for a reduction in spending while protecting U.S. National Security Interests. This reduction in military spending will further stretch Naval forces depending on sustained funding to accomplish required missions. Various sources have quoted the numbers, 1900 to 2057 man hours for own unit support (OUS) were omitted in the manning determination process. These man hours numbers divided by the Navy Standard work week of 67 hours results in undermanned commands by approximately 30 plus sailors.

b. Extending Deployments

The Navy announced this March (2012) that six month deployments are a thing of the past and to expect no less than eight month deployments until notified. This change in length of deployments comes with the increased request for Navy support around the globe. The Department of the Navy also announced the slowing of shipbuilding and the decommissioning of seven cruisers and two amphibious docking ships over the next five years. In a March 12, 2012 Navy Times article, Rep. Randy Forbes, R- Va., Chairman of the House Armed Services readiness committee said, "We cannot be pushing our men and women this hard, this long. We cannot be pushing our vessels this long, this hard. We have no control of when these crises pop up, but we do

15 Leon E. Panetta, "Sustaining U.S. Global Leadership: Priorities for the 21st Century Defense" p.1, January 2012, https://cle.nps.edu/access/content/group/94e19e36-1332-47a4-922c-a14351fbf7bc/TSDM%2019%3A%20Midterm%20Exam/Defense_Strategic_Guidance.pdf.

have some control of whether or not we are producing more ships."[16] Summarizing Rep. Forbes, the Navy is pushing the Fleet too far and it will degrade the overall performance of ships and their crews. Stretched-thin watchbills combined with the optimal manning policy, combined with eight-month deployments may translate into an over-worked fleet.

C. ALTERNATIVE BOARDING TEAMS

1. USMC Boarding Teams

a. Summary of USMC Boarding Teams

The United States Marine Corps will of course adapt to anticipated personnel cuts over the short and mid-term. In an August 2011 Commandant Gen. Jim Amos stated "Marines form the service's 202,000 active-duty end strength, but political and fiscal realities may require the Corps to cut deeper. There is pressure to go below the 186,800." [17] The Marine Corps has been conducting maritime raids since the age of sail and could play a major role in the future of maritime security operations as they finish up a decade of wars in Afghanistan and Iraq. The Navy's amphibious ships have been deploying with Marines onboard that have skill sets required for the Visit, Board, Search, and Seizure (VBSS) mission. In February 2006 MARSOC was welcomed into SOCOM. This new assignment to USSSOCOM added missions to the MEU (SOC) repertoire.
One of the missions they found themselves training for was the VBSS level IV boarding capabilities. Marines have recently conducted a joint boarding with members of the USS Dubuque LPD-8 boarding team in 2010.

b. Motor Vessel Magellan Star Takedown Summary:

On September 9, 2010 a German flagged cargo ship, the MV Magellan Star was seized approximately 85 miles of the coast of Yemen by nine Somalia pirates. Marine commandos—assigned to the 15th Marine Expeditionary Unit's Maritime Raid

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[16] Sam Fellman, "Pushing the Fleet too far? Routine 8-month deployments part of Navy's plan to meet global demand" Navy Times, March 12, 2012, pg. 18.

[17] Gina Cavallaro, "Larger Drawdown Possible for U.S. Marine Corps." Defense News, August 30, 2011. http://www.defensenews.com/article/20110830/DEFSECT02/108300309/Larger-Drawdown-Possible-U-S-Marine-Corps.

Force and serving in the region as part of an international anti-piracy task force—prepared to intervene. By early Thursday, the pirates found themselves surrounded by two U.S. warships, the Dubuque and the Princeton, as well as a Turkish frigate on patrol for the anti-piracy task force. Navy helicopters also hovered around the hijacked container ship, but the pirates - defiantly waving AK-47s—refused to surrender, Marine and Navy officials said. About 5 a.m., the platoon of Marine commandos climbed on board the Magellan Star from boarding craft that had pulled alongside the ship. They subdued the pirates within minutes. [18]

Take note in this incident there is no mention of any Navy or Coast Guard teams being involved in this opposed boarding even though they participated. This takedown was a joint operation conducted with two elements. Alpha Element took the lead in the apprehension of the pirates, while Bravo Element was in charge of the rescue of the ship's crew below decks. Once the ship was secured, Bravo Element alerted the Coast Guard team and Dubuque's boarding team to come aboard MV Magellan Star to assist in intelligence collection and prisoner affairs[19]. This opposed boarding illustrates the capability and skill-set of the Marines that are a valuable yet possibly under-utilized tool in this area. Marines conducting VBSS operations could improve overall Naval capability in combating irregular warfare at sea.

2. Strengths of USMC Boarding Teams

a. Training

From day one in boot camp the Marines are held to higher, more stringent standards compared to other services. Marine recruits attend boot camp for 12 weeks followed by infantry or combat training. Navy recruits attend boot camp for eight weeks which does not have any follow on combat training except for certain ratings, SEALS, EOD, and Seabees. The physical standards and weapons qualifications are also significantly greater for Marine recruits than their Navy counterparts. This adoption of

[18] Craig Whitlock, "Marines seize ship from pirates" The Washington Post, September 10, 2010, http://www.washingtonpost.com/wp-dyn/content/article/2010/09/09/AR2010090907539.htm.l.

[19] Alexander Martin CAPT, comment on "The Magellan Star: Pirate Takedown, Force Recon Style" USNI US Navy Institute, September 2010, http://blog.usni.org/2010/09/10/the-magellan-star/.

Marine Corps culture creates better warfighters probably needed for optimum VBSS accomplishment. The Navy is at a disadvantage from day one in trying to develop sailors as part-time para-combat forces. The training to kill an enemy is not a top priority in Navy boot camp but is the primary end-state for the recruits at Marine Corps boot camp.

Upon completion of basic training Marines are sent to the United States Marine Corps School of Infantry (SOI). At the SOI Marines are divided up into infantry Military Occupation Specialty (MOS) and non-combatant MOS. The infantry MOS marines attend Infantry Training Battalion (ITB) for 59 days. The IBT mission is, "train and qualify Marines in entry level infantry military occupational specialties [in order to] provide the operating forces and reserve component with Marines capable of conducting expeditionary combat operations."[20] All combatant MOS Marines have the same first two week training which includes: combat marksmanship, identifying and countering improvised explosive devices, convoy operations, Military Operations in Urban Terrain (MOUT), tactical formations, land navigation, and patrolling. After completing this two week introduction Marines are sent to MOS specific training. The general mission statement form the USMC website states ITB as:

> During the training cycle you will receive instruction in Combat Marksmanship, Grenades, Improvised Explosive Devices, Convoy Operations, Military Operations in Urban Terrain (MOUT), Combat Formations, Land Navigation, Patrolling, as well as instruction specific to your Military Occupational Specialty (MOS). You will also undergo physical conditioning via Physical Training (PT), conditioning hikes, and sustainment training in the Marine Corps Martial Arts. Most importantly, you will become a complete Marine, by applying the Leadership Traits, and our Core Values in every aspect of your life.[21]

The non-infantry MOS marines attend Marine Combat Training (MCT) for 29 days, which teaches them basic combat skills. Though not as robust as ITB the non-infantry MOS marines get a substantial amount of training them to be a warfighter. The general mission statement form the USMC website states MCT as:

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[20] Kimberly Johnson, (September 30, 2007). "SOI adds 7 days, weapons skill to training" Marine Corps Times. http://www.marinecorpstimes.com/news/2007/09/marine_soi_070929/.

21 USMC website, "ITB Training Information," March 2012, http://www.marines.mil/unit/tecom/soiwest/Pages/ITBn/ITBTrainingInformation.aspx.

> Marine Combat Training Battalion consists of a 29-day course in which entry-level Marines are taught the common skills needed in combat. While at Marine Combat Training Battalion every Marine will learn the basics of combat marksmanship, grenades, M203 Grenade Launcher, AT-4 Rocket Launcher, M240B Medium Machine Gun, Improvised Explosive Devices, defensive fundamentals, convoy operations, offensive fundamentals, patrolling, Military Operations on Urban Terrain (MOUT), tactical communications, Combat Hunter, M249 Squad Automatic Weapon, and land navigation. They will also undergo combat conditioning through the use of obstacle courses, conditioning hikes, combat fitness runs, and the Marine Corps Martial Arts Program (MCMAP). Upon completion of Marine Combat Training every Marine will have the knowledge and ability to successfully operate in a combat environment as a basic rifleman.[22]

This training pipeline is extensive for both infantry and non-infantry MOS marines and reaffirms the slogan "'Every Marine is, first and foremost, a Rifleman." This training that the Marines undergo is a huge asset that is available for the current VBSS and MIO mission.

b. Experience

The USMC is finishing up a decade of combat operations with the average marine deploying at least two five month deployments to Iraq or Afghanistan in a four year enlistment. The amount of experience gained from these combat action veterans could be utilized in other areas if the USMC is provided the opportunity. The USMC could create smaller teams that would specialize and focus their war-fighting skills towards a maritime environment. The leaner more versatile detachments could embark on the Carrier Strike Groups (CSG) and Expeditionary Strike Groups (ESG) and conduct level IV boardings in a 24-hour notice anywhere around the world.

The previous summary section discussed the takedown of the high jacked M/V Magellan Star by the Force Recon Marines of the 15th MEU. Captain Martin stated, "These Marines went through a very diverse training pipeline prior to embarking with the 15th MEU. During their four phase work-up prior to being certified by SOC they

22 USMC website, "MCT General Information," March 2012 http://www.marines.mil/unit/tecom/soiwest/Pages/MCTBn/MCT%20General%20Information.aspx.

conducted multiple VBSS missions as the assault element of the MEU's Maritime Raid Force."[23] Captain Martin outlines the Training Pipeline for this VBSS Training as listed.

- Rigorous eight week weapons and tactics training
- Classes on MIO and Counter-Piracy Ops
- Familiarization of Nautical and ship terms
- Ship design and classification
- Helo insertion tactics
- RHIB insertion tactics

These classes include the same information that is covered in the Navy's VBSS curriculum with the exception of Helo insertion tactics. The MEU Maritime Raid Force is certified to conduct Level IV Opposed Boardings, so why is the Navy still sending amphibious fleet sailor to VBSS School and allowing them to conduct boardings when a better trained and more experienced team is onboard.

c. Already "On-board" Amphib Fleet

Marines have deployed underway on Navy ships from the age of sail and this is true in today's military. The Navy currently deploys 29 amphibious warfare ships to carry Marines and equipment into combat and to perform peacetime missions.[24] All 29 of these ships transport Marines to the fight, and all of the MEUSOC members are certified to the level IV VBSS boarding. The Commanders have seen the value in the Amphibious Fleet and have requested them more than any other ship to project power since 2007. The 2010 Navy Operating Concept stated, "The combatant commanders' demand for forward postured naval forces, particularly carrier strike groups (CSGs), amphibious ready groups with embarked Marine expeditionary units (ARG/MEUs), and surface action groups, exceeds the current and forecast capacity of the Naval Service. Since 2007 the combatant commanders' cumulative requests for naval forces have grown

[23] Alexander Martin, CAPT, "Evolution of a Ship Takedown" Proceedings Magazine, November 2010, Vol. 136/11/1,293, http://www.usni.org/magazines/proceedings/2010-11.

[24] Charles S. Clark, "Navy's amphibious fleet could fall short of goals, CBO says," Government Executive, November 2011, http://www.govexec.com/defense/2011/11/navys-amphibious-fleet-could-fall-short-of-goals-cbo-says/35497/.

29 percent for CSGs, 76 percent for surface combatants, 86 percent for ARG/MEUs, and 53 percent for individually deployed amphibious ships."[25]Combatant Commanders have certainly seen the value in the Marines when it comes to efficient use of precise force in all domains.

The infrastructure and the skill sets are in place and the Navy would not have to build new berthing or add this asset because it has already been conducting this mission for years. This joint service effort would give the Marines a mission while on cruise and would allow Sailors to stand their watches, conduct maintenance on their equipment, and improve rating skills—all beneficial for the ship.

3. Weaknesses of USMC Boarding Teams

a. Different Mission

The Maritime Raid mission is a relatively newer mission for the MEUSOC and was only recently introduced into their qualification process. To get all of the Marines attached to the amphibious assault ships would likely require a substantial amount of resources in time and money. However the MEUSOC would be capable to conduct the VBSS mission for the ships that they are attached and increase that capability by conducting level IV opposed boardings. The ship's crew could assist the Marines in the administration details that accompany the VBSS mission in the after action reports and Intel collection areas.

4. Opportunities for USMC Boarding Teams

a. Expanding AOR

As previous discussed in the Expanding AOR section of the current boarding teams, the AOR is still vast and shows no signs of decreasing. In an October 2011 statement by the International Chamber of Commerce (ICC) controlled International Maritime Bureau (IBM), "Piracy on the world's seas has risen to record

[25] Data provided by U.S. Fleet Forces Command as of 23 September 2009 and is based on a comparison of force requests for fiscal years 2007 through 2010.http://www.navy.mil/maritime/noc/NOC2010.pdf.

levels, with Somali pirates behind 56% of the 352 attacks reported this year."[26] Later on, Pottengal Mukundan, Director of IMB, whose Piracy Reporting Centre (PRC) has monitored piracy worldwide since 1991 stated, "Somali pirates are intensifying operations not just off their own coastline, but further afield in the Red Sea—particularly during the monsoon season in the wider Indian Ocean."[24] The Somali pirates seem to be expanded the area of operation and there is intelligence that suggests that the Somalis are looking into broadening their capabilities and these capabilities will be discussed in the threats section. In 2010, piracy off the Horn of Africa cost the international economy an estimated seven to twelve billion, and between 2007 and 2010 Somali attacked more than 450 ships and had taken more than 2,400 hostages. [27] Though these attacks off the Horn of Africa make up the majority of piracy, there has been a new area off the coast of Africa. Pottengal Mukundan outlined the areas of Benin, of the western coast of Africa. "Benin is seeing a surge in violent piracy, with 19 attacks leading to eight tanker hijackings this year, up from zero incidents in 2010. A pattern has emerged where armed pirates board and hijack the ship sometimes injuring crew then force the Masters to sail to an unknown location where they steal the ship's properties and cargo, and let the vessel free."[24] This new area could spur more poverty stricken areas to take up this new way of extorting money. Pottengal Mukundan stated:

> The response from Nigeria and Benin Navies is a step in the positive direction but the problem will occur in the prosecution of these pirates under international law. Attacks have also been reported off the coasts of Bangladesh, Nigeria, Haiti, Colombia, Peru, and Brazil among other places around the world.[28]

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[26] Pottengal Mukundan, "As world piracy hits a new high, more ships are escaping Somali pirates, says IMB report" October 2011, http://www.icc-ccs.org/news/969-as-world-piracy-hits-a-new-high-more-ships-are-escaping-somali-pirates-says-imb-r.

[27] US House of Representatives, Committee on Transportation and Infrastructure, "Assuring the Freedom of Americans on the High Seas: The United States' Response to Piracy," March 2011, http://republicans.transportation.house.gov/Media/file/112th/CGMT/Coast%20Guard%20Briefing%20Memo%20%20%203-15-11.pdf.

[28] James Jay Carafano, Richard Weitz, and Martin Edwin Andersen, "Maritime Security: Fighting Piracy in the Gulf of Aden and Beyond," Heritage Foundation Special Report No. 59, June 2009.http://www.heritage.org/research/reports/2009/06/maritime-security-fighting-piracy-in-the-gulf-of-aden-and-beyond.

5. Threats for USMC Boarding Teams

a. New Piracy Tactics

Piracy has existed since the age of sail and really has not been an important issue until the past couple of years; as pirates appear more daring and resourced. Long gone are the days of untrained pirates on four to five meter skiffs approaching a ship and boarding with no plan or support structure in place. The following paragraphs outline the newly developed tactics of the Somali pirates; and discuss why these tactics are working.

> Somali pirates often go to sea in a "mother ship, "which is usually a fishing vessel captured in a previous pirate attack. The mother ship enables the pirates to stay at sea longer and operate further away from Somalia than if they just used their skiffs. Earlier in this decade, they often used skiffs to launch attacks from land. The pirates also use the mother ship to scout for targets of opportunity. Once a passing cargo ship has been spotted, the mother ship deploys two to four smaller high-speed vessels (skiffs), which flank the target and approach at high speed. To slow or stop the ship, pirates use various means of intimidation, including firing automatic weapons and rocket-propelled grenades.
>
> Once the target has slowed, a team of seven to 10 pirates boards the ship using ladders and grappling hooks and takes the ship and its crew hostage. The team of pirates is usually armed, and the small number of crewmen required to operate modern merchant ships (usually no more than a dozen) makes hijacking a ship relatively easy. Once hijacked, larger cargo ships and their crews are often sailed to a pirate port in Somalia to await negotiation and payment of their ransom. Pirates also maintain networks of depots along coasts, where they can sell captured goods, rearm, and resupply their ships. The network of depots also affords them the opportunity to communicate with spies in the region to obtain information about ships that may be passing through the area. Profits from hijacked cargo are disbursed to the pirate suppliers, organizers, and investors who support the pirates during their time at sea. The illegal income may also benefit their clan members, including family and friends. The profits from piracy support the local economy, filtering through the community as pirates resupply and upgrade their vessels and weapons and as those in the network spend their wages.[29]

29 James J. Carafano, "Taking the Fight to the Pirates: Applying Counterterrorist Methods to the Threat of Piracy" Backgrounder, March 2011, No.2524, http://thf_media.s3.amazonaws.com/2011/pdf/bg2524.pdf.

These new tactics illustrate the ability of the Somali pirates to adapt to the newly implemented tactics by their enemies. Somalis now understand the importance of intelligence gathering and sea basing to further expand their reach for targeted vessels. The new tactics signals that piracy is not going away, and as they change to combat our efforts, the coalition forces will also have to change to counter their efforts.

b. Defense Downsizing

In today's shrinking fiscal environment, the Department of Defense (DoD) is cutting costs, and the Marine Corps and Army are downsizing personnel. Even though the infrastructure and assets are in place for embarked Marines to conduct VBSS missions, increased training costs would probably need to come from SOCCOM funding.

6. USCG Boarding Teams

a. Summary of USCG Boarding Teams

The United States Coast Guard (USCG) created the Law Enforcement Detachments (LEDETs) in 1982 to assist Navy ships in the counter narcotic mission. Following 1982 the USCG saw the value in these LEDETs, in conjunction with an expanding mission area choose to increase the number of teams. "In the 1990s, the individual LEDETs were consolidated under three Tactical Law Enforcement Teams (TACELTs): Tactical Law Enforcement Team North (TACLET North) based in Chesapeake, Virginia, Tactical Law Enforcement Team South (TACLET South), based in Opa-locka, Florida, and the Pacific Area Tactical Law Enforcement Team (PACTACLET) based in San Diego, California."[30] The following is the synopsis of the 2010 disposition of the USCG's Tactical Law Enforcement Teams detailed in a report on The U.S. Coast Guard's Deployable Specialized Forces to Governmental Accounting Office (GAO):

- Tactical Law Enforcement Teams (two teams)
    1. Pacific Tactical Law Enforcement (Eight Law Enforcement)
        - San Diego, California

30 Michael Shelton, "The Forward Edge of Drug Interdiction," The Navy League of the United States, http://www.navyleague.org/seapower_mag/sept2001/forward_edge_of_drug.htm.

2. Tactical Law Enforcement Team South (Nine Law Enforcement)
    - Miami, Florida

- Tactical Law Enforcement Number of Personnel
    - 204

b. Unit Description

Tactical Law Enforcement Teams provide specialized law enforcement and maritime security capabilities to enforce U.S. laws across a spectrum of maritime missions, including drug interdiction and vessel interception operations. The Coast Guard's two Tactical Law Enforcement Teams collectively are composed of 17 smaller units (Law Enforcement Detachments) whose average complement consists of 9 personnel with a range of capabilities—e.g., precision marksmen and law enforcement boarding officers perform around 40 deployments per year, with each detachment averaging over 185 days away from its home base. Teams typically conduct their primary mission (law enforcement) in the Caribbean Sea and Eastern Pacific Ocean. Teams have also provided training to foreign naval, coast guard and police forces in the Caribbean, Pacific Ocean, Asia, Africa, Central and South America, and the Middle East. More recently, Law Enforcement Detachments have been deployed to the Gulf of Aden and the eastern coast of Somalia as part of a multinational task force to suppress piracy.[31] The Coast Guard's mission has begun exponentially growing following September 11th. Maritime Interdiction Operations (MIO) has been expanded from brown to blue water operations for the Coast Guard and do not seem to be going away anytime soon. The Coast Guard LEDETs have been working jointly with all services since the first Gulf War in various maritime operations. Their training in Law enforcement assists them in a manner that would allow the Navy to prosecute piracy and trafficking inside the Exclusion Economic Zone (EEZ) of the United States.

[31] United States Coast Guard, "Coast Guard: Deployable Operations Group Achieving Organizational Benefits, but Challenges Remain" Enclosure II, April 2010, http://www.gao.gov/assets/100/96651.pdf.

7. Strengths of USCG Boarding Teams

a. Training

The Coast Guard LEDETs go through an extensive training pipeline that allows them to conduct boardings in both inland and international waters. The primary school for a Coast Guard member to get into (TACLET), Law Enforcement Detachments (LEDET), and Maritime Safety and Security Teams (MSST), is the Basic Tactical Operations Course (BTOC). The stated purpose of the BTOC is, "This seven week course delivers maritime interdiction common tactical skills and advanced tactical marksmanship to prepare personnel for high risk response mission operations."[32] Another description provided by MARSEC4, "The Basic Tactical Operations Course primarily teaches students the fundamentals of marksmanship. In seven weeks, students fire thousands of rounds at flat ranges, houses, around barricades and at close range."[33] The BTOC is similar to the pipeline that Navy VBSS teams attend, SRF-B, SRF-A, and NEC course.

In 2004, the USCG established the Maritime Law Enforcement (MLE) Academy at the Federal Law Enforcement Training Center in Charleston, South Carolina. The primary mission of MLE was to increase the efficiency and effectiveness of the USCG personnel conducting maritime law enforcement. The MLE Academy offers nine training programs to create a better more educated and proficient Maritime Law Enforcement personnel. The list that is outlined on their website includes, Boarding Officer Course, Boarding Officer Practical, BO eLearning, Ports waterways coastal security, Boarding Team Member, Radiation Detection Level II Operators, Marine Patrol Officer Instructor, Marine Patrol Officer Tactical, International Boarding Officer Course, Maritime Law Enforcement Boarding Officer Counter Drug Operation Course."[34] These

[32] USCG website, "Special Missions Training Center Basic Tactical Operations Course," http://www.uscg.mil/smtc/Training_USCG_BTOC.asp.

[33] Thomas, J. Griffith, SGT USMC, "USCG Basic Tactical Operator Course" MARSEC4 Team, July 2011, http://www.marsec4.com/2011/07/uscg-basic-tactical-operator-course/.

[34] USCG website, "Maritime Law Enforcement Academy" USCG website, http://www.uscg.mil/mlea/courses/boc.asp.

courses range from 24 hours of training for Radiation to five weeks for the Boarding Officer course. In contrast the Navy's Boarding Officer course is only one week long.

In summary, the U.S. Coast Guard has developed an effective training program, that is exhaustive and highly specialized, that would allow them to conduct MIO and/or VBSS in any maritime area around the globe. These courses are more detailed and teach more information than the Navy VBSS Team Trainer course that all boarding team members are required to complete. Furthermore, the U.S. Navy Boarding Officer course is only one week, compared to the five-week Coast Guard Boarding Officer course.

b. Knowledge Regarding Maritime Law

Maritime Law is emphasized for all levels of U.S. Coast Guard LEDET members. This understanding of International, Federal, and State laws would greatly improve the capabilities of the U.S. Navy and expand their areas of operation. In a statement from the U.S. Coast Guard regarding Office of Law Enforcement CG-531,

> The United States Coast Guard is the nation's leading maritime law enforcement agency and has broad, multi-faceted jurisdictional authority. The specific statutory authority for the Coast Guard Law Enforcement mission is given in 14 USC 2, "The Coast Guard shall enforce or assist in the enforcement of all applicable laws on, under and over the high seas and waters subject to the jurisdiction of the United States." In addition, 14 USC 89 provides the authority for U.S. Coast Guard active duty commissioned, warrant and petty officers to enforce applicable U.S. law. It authorizes Coast Guard personnel to enforce federal law on waters subject to U.S. jurisdiction and in international waters, as well as on all vessels subject to U.S. jurisdiction (including U.S., foreign and stateless vessels). [35]

The U.S. Coast Guard has greater jurisdiction in the capacity of conducting boardings and this would expand the overall ability and improve the skill set for the U.S. Navy's MIO/VBBS mission.

[35] USCG website, "Office of Law Enforcement CG-531" USCG website, http://www.uscg.mil/hq/cg5/cg531/.

8. Weaknesses of USCG Boarding Teams

a. Costs

The current disposition of the U.S. Coast Guard is significantly smaller than the U.S. Navy. To grow the forces required to put 12 man teams on every ship in the Navy would be an enormous cost and in a fiscal constrained environment, the probabilities of growth are unlikely. The U.S. Coast Guard does fall under both the DoD and Department for Homeland Security so there might be funds available through one of these routes.

9. Opportunities for USCG Boarding Teams

a. Expanding AOR

The expanding AOR has been discussed at length in the previous opportunities sections, but for the U.S. Coast Guard being under the control of both DoD and Department of Homeland Security is already having difficulties meeting all missions. The U.S. Coast Guard has partnered with the U.S. Navy more frequently in recent years in the fight against Narcotics smuggling and in the War on Terror in the Gulf. The LEDET were the main contributors in the training of Iraqi Naval Forces during the stability operations of the recent Gulf War.

In the article outlining the U.S. Coast Guard's mission during Operation Iraqi Freedom, Dr. Thiesen stated, "The navy saw the Coast Guard's cutters and skilled personnel as ideally suited to naval operations supporting Operation Iraqi Freedom. In addition, the law enforcement background of Coast Guard personnel would expand the navy's ability to intercept and board Iraqi vessels and Coast Guard cutters could serve in force protection and escort duty, thereby freeing naval assets to conduct offensive combat operations."[36] The U.S. Navy recognizes the capabilities possessed by the U.S. Coast Guard and requests their assistance in many areas they might be lacking in. This overlap of critical capabilities is the overall idea for two separate services; the Navy controls the

[36] William H. Thiesen, PhD, "Guardians of the Gulf: A History of Coast Guard Combat Operations in Support of Operation Iraqi Freedom, 2002-2004" June 2009, http://www.uscg.mil/history/articles/USCGinOIF.pdf.

"Blue" water while the Coast Guard controls the "Brown" water. With the continuous push for more standardization of capabilities and joint operations the DoD will look for savings in this area.

10. Threats for USCG Boarding Teams

a. Defense Downsizing

The U.S. Coast Guard (USCG), part of DoD and part of the Department of Homeland Security, is also feeling the cuts. Defense expert Robin Laird stated, "While the Administration is reducing the numbers of USCG cutters in the Pacific and arguing against the full number of replacement cutters and the building of a new Offshore Patrol Cutter, the need for an expanded USCG capability is going up," [37]. James Carafano added, "This is yet another disconnect between words and deeds."[35] Many experts thought the USCG would be less affected when it came to downsizing, but it is clear that they will be affected the same as the other services. The story is the same with the USCG as it is with the other services; the administration continues to increase our responsibilities without the funding. This leads to an overworked and exhausted military force that is not prepared for high risk missions.

D. DEDICATED USN BOARDING TEAMS (SIMILAR NECC PROGRAM)

1. Summary of NECC Boarding Teams

The Navy discovered the gap in the level III VBSS/ MIO capability and decided to created seven 23-man Navy Expeditionary Combat Command (NECC) Maritime Security Squadron (MSRON) VBSS detachments. These detachments would fall under the Navy Expeditionary Combat Command and would station four teams in Little Creek, Virginia and the other three out of North Island, California. These newly created teams were are not created to replace or augment surface ship VBSS capability. The first two detachments completed training with the first deployment scheduled for October 2007. In a 2009 Navy Times article by Andrew Scruto, Lt. Cmdr. Susan Henson, spokeswoman

37 James Carafano, "Pentagon Not Only Place Hollowing Out," The Foundry, May 2011, http://blog.heritage.org/2011/05/09/u-s-coast-guard-faces-troubling-cuts/.

for the Navy Expeditionary Combat Command, said, "Two teams have deployed, with the Abraham Lincoln and Ronald Reagan carrier strike groups, but were not sure if they completed any boardings."[38] Although many of these teams did not deploy, these teams met a Level III capability outlined by the Chief of Naval Operations Guidance in 2006. In 2007 Maritime Expeditionary Security Force (MESF) accepted the VBSS level III personnel as part of its concept of operations.

2. Strengths

a. Dedicated Force

One of the main issues that current boarding teams face is double-tasking, i.e., train thoroughly in your rating and train thoroughly in VBSS. If/when sailors must choose one over the other, a gap is created forcing their shipmates to take up the slack. . With a dedicated detachment of VBSS personnel attached to ship's company, sailors could perform their duties outlined in the billet code and the ROC/POE. Dedicated detachments would free-up ship's company to perform their primary missions. These are the main issues facing boarding team members, ship CO's, and indeed every sailor on board.

b. Better Trained

The members of this NECC controlled VBSS teams attending many of the same schools as the ship's boarding teams attend, but added a few more to get them qualified to conduct the Level III boarding mission. Members of this NECC VBSS boarding teams received training for helicopter insertion also known as HVBSS. This HVBSS capability significantly increases the mission set and capability being able to conduct boardings with a higher freeboard and get onboard quicker than climbing. Members get the opportunity to continually train and develop that muscle memory that many combat forces also discuss when they have to react to hostilities in theatre. This repetition of knowledge, skills and abilities (KSA) allow the members of the VBSS teams

[38] Andrew Scutro, "Future of boarding teams in doubt," Navy Times, January 11, 2009, http://www.navytimes.com/news/2009/01/navy_boardingteams_011009/.

to retain more of these KSA's thus better preparing them if the mission goes towards non-compliant or even opposed.

3. Weaknesses

a. Costs

The reason NECC removed the VBSS dedicated teams from their commands were costs. However they did not remove the teams completely, they integrated them and their capabilities into the Maritime Expeditionary Security Force. As the DoD attempts to reduce the budget by 1.5 trillion over the next five years, they are not going to be too interested in establishing any type of new detachment that is going to cost money. The work around might be to maintain that capability, but put it under the control of another unit so the support structure is already in place, therefore minimizing overhead costs.

4. Opportunities

a. Expanding AORs

These are the same as the previous sections involving the VBSS/MIO mission areas. There should be no deviation from the other sections outlining this opportunities area.

5. Threats

a. Defense Downsizing

These are the same as the previous sections involving the DoD downsizing and the pursuit to save the Federal government to meet the fiscal policies adopted by the current administration. There should be no difference from the other sections outlining threats in this area.

E. SUMMARY OF SWOT ANALYSIS

U.S. Navy VBSS teams have performed well on numerous maritime security missions without any known serious injury or loss of life. VBSS teams on onboard all

U.S. Navy surface ships can conduct boardings up to level II anywhere at sea. This flexibility allows the U.S. Navy to project this capability around the globe. One distinct disadvantage that the current VBSS teams have is the amount of time they are authorized onboard the ship to practice and rehearse this skill set. Sailors do not attend the same types of schools that a Marine might attend, therefore they are at a disadvantage when it comes to a fight or flight situation. This is not a fault of the Sailor; it is the culture of the Navy not to create warfighters similar to the USMC or the Army. The Marines possess a competitive advantage in the area of offensive operations and are likely a preferred option to shipboard VBSS teams. This could be accomplished with a minor expense due to the infrastructure already in place and they already have the required training for this mission. All the Services are feeling the effects of ongoing and anticipated reductions in military spending. Maritime security is a vital piece of national and inter-national security, and the Navy has been tasked to keep this environment safe for all mariners. Either protect and augment the funding for continued VBSS development and deployment training tin this important area or select an alternative structure to deliver this mission.

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IV. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

A. SUMMARY

1. Change VBSS Structure or Prioritize Deployment Training

As the Navy's experiment with Optimal Manning comes to a close, this study examined an increasingly important U.S. Navy mission of training, certifying and deploying on-board Officer and Enlisted Visit, Board, Search and Seizure (VBSS) teams. Although VBSS teams have been accomplishing the mission since the late 1990s, adding these duties onto shipboard sailors without increasing personnel numbers has resulted in unattractive tradeoffs for sailors and their supervisors, and is not reflective of the important manpower-driving document, the required operational capabilities and projected operational environment (ROC/POE).

The unattractive tradeoff occurs when a sailor must be proficient and qualified in two, major competing areas—especially during deployment, i.e., prioritize training around one's Navy Enlisted Code (NEC) and rating; and/or prioritize training around VBSS team development? Answering yes to both sounds heroic and can-do, but can easily degenerate into nonproductive conflict, i.e., being in two places at once. There may be a lack of understanding in that VBSS certification identifies only a basic skill level, which must then be systematically developed and practiced during deployment.

In short, effective teams have to be built and maintained, similar yet different from developing individual technical skills, e.g., fire-fighting teams, Special Forces teams. Team cohesiveness cannot really be learned in a schoolhouse, rather effective team members must learn and want to work together. Commanding Officers also have a direct bearing on enhancing and/or impeding training by the various teams underway.

If this maritime support area remains important for international sea lane security and protection of life, limb and property, then the following recommendations are offered: (1) Change the current VBSS shipboard team structure and replace it with dedicated Fifth Fleet VBSS detachments, or (2) Elevate the training priority of shipboard

VBSS teams during deployment. Finally, correct the ROC/POE so that it reflects VBSS manpower requirements and man accordingly.

2. Post Qualification Required Training

A disparity exists among ship's boarding teams attending the same training pipeline and certification process. The disparity in the quality of the teams can be partly attributed to the amount of training time obtained by shipboard teams to practice the VBSS/MIO mission during deployment. In my experience, if the Commanding Officer believes in the VBSS/MIO mission, s/he will authorize and support team training. Unfortunately, a lack of interest can translate into a training impediment, i.e., CO's projects and sailors' primary (traditional) duties crowd-out VBSS training. The point is that certified teams are at a base level, which unless enhanced by systematic and realistic training is simply insufficient. Developing and maintaining VBSS team cohesion can only occur after formal training. Kevin Ray stated in his 2010 thesis, "The current VBSS team trainer course also was discussed in depth. All of the participants agreed that the course does an outstanding job in preparing the sailors for noncompliant boardings, but it fails in many other areas."[39] Other areas include level I/II and approach and assist (AAV) operations. Schoolhouse skills although crucial are perishable without dedicated refresher training.

3. Lockheed Martin Study

a. Summary

A Lockheed Martin study determined that there was an inaccuracy between the OPNAV ROC/POE capability portrayed in Table 3 and the other directives. The ROC specifies a temporarily manned team (E), limited capability (L), while the other directives all direct and support a very robust capability. Later to the issuance of the revised DDG 51 Class ROC/POE in 2003, the Navy Manpower Analysis Center (NAVMAC) removed all MIO workload, 2,057 weekly hours of Own Unit Support (OUS) from each DDG 51 Class SMD. This was equivalent to removing 30 billets worth

39 Kevin Ray, "Identifying Capabilities Gaps in Shipboard Visit, Board, Search, Seizure (VBSS) Teams" Naval Post Graduate School, December 2010, http://www.hsdl.org/?view&did=11019.

of workload from each DDG. A VBSS event could have as many as ten boardings per event as the RHIB and team cycle among a group of dhows.

The VBSS capability for surface ships may not be aligned to actual operational necessity, other than for contingency Level II operations, or the anticipation of more rigorous and potentially non-compliant events in support of new international sanctions.

Within the current Navy command environment, DDG 51 Class ships are tasked to perform vigorous VBSS operations without the aid of special detachments. Commanding Officers and their crews feel the burden of conducting VBSS operations. These operations are additional workload the ship is not credited with and draw individuals from all divisions from the ship. While the crewmembers are participating in extensive VBSS operations, they are not performing the work that generated their respective SMD billets in the first place. Operating areas in the Persian Gulf and Horn of Africa, the teams perform VBSS frequently enough to mitigate the need for proficiency training.

The Lockheed Martin study was conducted in 2007 exemplifying many of the problems experienced by many VBSS Boarding Officers. It was a constant battle to get the approval for VBSS team members to be excused from divisional training, maintenance, and watches. On many occasions I had to change my VBSS/MIO watch bill to accommodate a critical repair that took priority over the VBSS mission. Many of my VBSS team members had NECs that required them to be available onboard, so their divisions were often reluctant to allow them to leave the ship for VBSS/MIO operations, training, and schools. The 30 billets that were removed from the SMD by NAVMAC were just in one warfare area. This number would likely be higher if the study included other warfare areas. The bottom line is that the ROC/POE is the document that outlines all of the U.S. Navy's current capabilities, yet insufficient shipboard manning does not accurately reflect the ROC/POE.

B. CONCLUSIONS AND RECOMMENDATIONS

1. What is the Current Visit Board Search and Seizure (VBSS) Structure, Work Requirements and Guidance in the Ship's Manpower Document (SMD), and Could VBSS Non Shipboard Detachments be a Viable Alternative?

a. Conclusions

Current VBSS teams are organized to meet the requirements to conduct Level I and II boardings. The training that all teams receive applies to a non-compliant level, meaning that VBSS teams will avoid and/or evade contact with aggressors. Additionally, Navy ship COs would not intentionally send their shipboard boarding team into a non-compliant or opposed boarding. These anticipated high risk situations are reserved for SOCOM subject matter experts. Even so, boarding a foreign ship is still potentially dangerous on a number of fronts, requiring special precautions. The issue raised in this study concerns both a lack of dedicated VBSS training dedicated for shipboard deployed VBSS teams, and a real and/or perceived disparity among VBSS teams in terms of uniformly maintained capabilities after certification.

There is a generally accepted mindset that the VBSS/MIO mission is a collateral duty, and therefore does not need the equivalent attention as other traditional areas, e.g., 3-M, Air Defense, etc. Although no known VBSS boarding team members have been injured accomplishing this mission, many VBSS experienced team members would likely disagree with the collateral duty mindset.

The amount of man-hours a typical ship uses for the VBSS mission was determined to be 2,057 man hours per week. These 2,057 man hours determined as own unit support was discarded from the Ship's Manning Document by NAVMAC, removing 30 billets from each destroyer. The Navy canceled the optimal manning experiment in 2011 though the effects of the policy change are not clear. If the U.S. Navy wants to continue to stress the importance of the VBSS/MIO warfare area, then why not fund it like a primary mission? For virtually no-cost, ship COs could be encouraged to prioritize and better support the VBSS training mission by ensuring their VBSS team has a chance to develop cohesion, trust and professionalism.

The U.S. Navy has historically and currently utilizes embarked units or detachments for many different warfare areas that require specialized training or skill sets. One example of embarked units in current operation is Navy Explosive Ordnance Disposal (EOD) teams. These units embark and deploy with Carrier Strike Groups (CSG), but are not really ship's company because they depart the ship post-deployment. These EOD detachments provide a specialized skill set that is mobile enough to be transferred to any other assets in the CSG. The NECC stood up VBSS level III boarding teams in 2006 and disbanded them in 2009 due to budgetary cuts. The Navy could have used these teams like EOD detachments deployed with CSGs. Then, if a particular ship was tasked with a dedicated VBSS/MIO mission, the detachment could translocate to the affected area and conduct the VBSS mission without distracting shipboard personnel. Additionally, dedicated detachments would likely respond with greater confidence, safety and skill because this is their primary focus on which they are expertly trained and experienced, not a part-time fill-in.

b. Recommendation

N86 should direct MIO ROC/POE to change ROC element MOS 4.4 from Team (E) to Limit (L) in condition I and II The Navy also needs to stress to the leadership it is committed to the highest degree of readiness for all boarding teams in the fleet and this mission is not going to be going away and they need to give the members of the VBSS the time to train to retain their KSAs.

2. What are the Strengths, Weaknesses, Opportunities, and Threats when Comparing the Existing Versus the Alternative Programs?

a. Conclusions

(1) VBSS teams operating since the early 1990s appear to have a high success rate with no known serious injuries. Teams are well-trained to conduct level I and II boardings which make up the majority of today's boardings. VBSS teams are multi-skilled and widely-dispersed around the globe, i.e., 12-person teams composed of multiple ratings on all Navy warships. The Navy can assign any ship to conduct

boardings knowing it possesses that capability. Pirates may also be learning that where there is a U.S. Navy ship—a VBSS team is close.

(2) There is unwanted variability in terms of the quality of shipboard VBSS teams (likely due to a lack of priority for VBSS deployment training); and a lack of consistency of training conducted on Navy ships after VBSS certification. Measures have been put into place for VBSS to maintain these skill-sets to conduct Level I and II boardings. However, as with every other inspection that the Navy adds to the ships, these inspections are trained to as the come down the schedule. Once the inspection is completed, the teams return back to their divisions and the Chain of Commands focus is on the next inspection. This creates an interrupted training plan for the VBSS team members.

(3) The Navy considers VBSS/MIO operations as a critical mission area and advertises that it is committed to protecting commerce around the globe however, VBSS is under-funded. The U.S. Navy's newest commercial slogan promulgates a "Global Force for Good" and leading the fight to maintain open sea lanes for commerce. However, per the 2007 Lockheed Martin study removing 2,057 man hours, approximately 30 sailors per DDG were removed from conducting this high-risk mission.

(4) Discussion. The high-level IV, opposed or non-compliant missions are almost always conducted by Navy SEALS or other SOF teams. These are the boardings that involve weapons being fired and the possibility of injury or death. The USCG Law Enforcement Detachment (LEDET) teams are very skilled in this area however, they are stretched thin and it might be difficult to use these teams based on sheer numbers. The LEDET community apparently is also seeing their mission area of responsibility (AOR) expanding without the funding to perform new AORs. A separate alternative could be in using the USMC MEU SOC as boarding parties when embarked on amphibious ships. Expeditionary Strike Groups are constantly transporting Marines around the globe. These highly dispersed, specialized Marines already have the training and skills to accommodate this somewhat atypical mission of boarding, searching and securing a foreign ship. Marines are already required to get VBSS level IV qualified

prior to being deployed as a MEU SOC, and Marines conducting maritime raids is nothing new to the Navy. Finally, the Marine option could alleviate some of the manpower issues facing Navy ships and possibly decrease the number of cuts facing the USMC.

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