SPRING-SUMMER 2012

www.public.navy.mil/navsafecen

CHARTING THE COURSE TO A MISHAP-FREE NAVY

Training Day

Damage Controlman 1st Class Hector Floresdiaz talks about firefighting strategies that keep students alive Page Left Intentionally Blank



Spring-Summer 2012 / Vol. 1, No. 3 www.public.navy.mil/navsafecen/

RADM Brian C. Prindle

LCDR Timothy Debelak

John Mahonev

COL Mark W. Erb. USMC

CDR Rosario D. McWhorter

Commander, Naval Safety Center Deputy Commander Director, Afloat Safety Programs Assistant Director, Afloat Safety Programs Director, Communications and Marketing

EDITORIAL STAFF

Media Division Head **Derek Nelson**

Editor

Evelyn Odango

Graphics

Allan Amen

John W. Williams

Darlene Savage

Webmaster

EDITORIAL OFFICE Commander, Naval Safety Center Attn: Sea Compass 375 A Street Norfolk, VA 23511-4399

Telephone: 757-444-3520, ext. 7220 (DSN 564-3520) Fax: 757-444-6791

General email: safe-seacompass@navy.mil Editor's email: evelyn.odango@navy.mil

AFLOAT SAFETY PROGRAMS DIRECTORATE

Commander, Naval Safety Center Attn: Code 30 375 A Street Norfolk, VA 23511-4399

Afloat mishap line: DSN 564-1562 / 7130; Fax: DSN 564-8636 Afloat safety email: safe-afloat@navy.mil

SUBMISSIONS

Submit your story ideas and manuscript to safe-seacompass@navy.mil. Send letters to the editor to evelyn.odango@navy.mil or write directly to: Commander, Naval Safety Center, ATTN: Sea Compass, 375 A Street, Norfolk, VA 23511-4399. Please refer to our "Writer Guidelines and Photo Requirements" available at www.public.navy.mil/ navsafecen/documents/media/magazines/writer-photo_guidelines.pdf.

NOTICE TO READERS

Contents are not necessarily the official views of, or endorsed by, the U.S. Navy, the Department of Defense, or the U.S. government. Photos and artwork are for illustrative purposes only, unless otherwise noted. Reference to commercial products or links to non-DoD resources do not imply Department of the Navy endorsement. Unless otherwise stated, material in this publication may be reprinted without permission; please credit the magazine and author. We reserve the right to edit all submissions for clarity and applicability. COAST GUARD: Send address changes or changes to subscription to Commandant, USCG, CG-113, U.S. Coast Guard Headquarters, 2100 2nd St., S.W., Washington, DC 20593.

MISSION STATEMENT: Our goal is to provide information and resources to help our Sailors, Marines and civilians focus their efforts on the mission. We will provide relevant data and analysis to help you manage risk, on or off duty. Sea Compass will do its part to keep you informed and be combat ready.

Sea Compass is published quarterly and distributed to ships, submarines, diving commands, shore-based commands, and DoD agencies. Sea Compass (ISSN 1550-1434) is published by Commander, Naval Safety Center, at 375 A Street, Norfolk, VA 23511-4399. Periodical postage paid at Norfolk, Va. Postmaster: Send address changes to Commander, Naval Safety Center, Attn: Sea Compass, 375 A Street, Norfolk, VA 23511-4399.



COVER PHOTO AND OPPOSITE PAGE:

Damage Controlman 1st Class Hector Floresdiaz demonstrates firefighting techniques to students attending the Center for Naval Engineering Learning Site, Pearl Harbor. DC1 Floresdiaz is an instructor of naval engineering, basic and advanced damage control, and aviation and machinery room firefighting tactics. (U.S. Navy photo by MC2 Mark Logico)

NAVAL SAFETY CENTER ADVISORS AND CONTRIBUTING WRITERS

CDR Kevin L. Smith Surface Ship Division Head

LT Eli Ford Diving and Salvage Division Head

LT Richard Ray Submarine Division Head

Steve Scudder Afloat Safety Analyst/Publications Review

SURFACE

LT Edward Alexander Deck Analyst

HMC (SW/AWFMF) Randahl S. Benson randahl.benson@navy.mil Medical/Independent Duty Corpsman Analyst

EMCM (SW/AW) Jim Burke **Electrical Analyst**

GSCS (SW) Esworth Carty Main Propulsion/Gas Turbine Analyst

LT Christine Davy Damage Control Lead/Mishap Investigator

ETC (SW) Jason Mobbs Fleet Combat Systems Analyst DCC (SW/AW) John Ralston

Damage Control Analyst

CWO4 Danny L. Royse Main Propulsion/Diesel Lead

GMC (SW) Ramiro Salas Weapons Analyst

SUBMARINE AND DIVING

FTC (SS) William Cahill Submarine Deck Supervisor

CWO4 Robert Cassels Diving/Salvage Assistant

ETC (SS) Kevin Dawson Submarine Electrical and Mechanical Analyst

HMC (SS) Christopher Harris Submarine Medical Analyst

MMC (SS) Isaac Ingram Weapons Analyst

NDC (DSW/EXW) Rebecca Jones **Diving Analyst**

MMCS (SS) Arthur Sisk Submarine Damage Control Analyst

EMCM (SW/AW) Frank Valdepeña Submarine Division LCPO

edward.alexander1@navy.mil

jim.burke@navy.mil

esworth.carty@navy.mil

christine.davy@navy.mil

jason.mobbs1@navy.mil

john.t.ralston@navy.mil

danny.royse@navy.mil

ramiro.salas@navy.mil

william.j.cahill@navy.mil

robert.m.cassels@navv.mil

kevin.d.dawson@navy.mil

christopher.l.harris@navy.mil

isaac.ingram@navy.mil

rebecca.a.jones@navy.mil

arthur.sisk@navy.mil

frank.valdepena@navy.mil

CONNECT WITH US ON THE WEB



www.facebook.com/navalsafetycenter

You Tube

www.voutube.com/user/navalsafetvcenter

http://twitter.com/NSC_updates

steve.scudder1@navy.mil

richard.d.ray1@navy.mil

kevin.l.smith@navy.mil

elijah.ford@navy.mil

SEACH MPASS CONTENTS SPRING-SUMMER 2012 www.public.navy.mil/navsafecen/pages/media/sea-compass/index.aspx

COVER STORY

TRAINING DAY 12

By DC1 (SW) Hector Floresdiaz Damage controlman and instructor DC1 (SW) Hector Floresdiaz talks about what it takes to train and stay



FEATURE STORY

PAINFUL FIRST DEPLOYMENT 16

By ENS Joshua Stewart

Nutritional supplements get a Sailor in painful situation when he didn't follow dosage instructions.



IN THIS ISSUE

LETTERS, FEEDBACK & COMMENTS 5 SC NEWS WIRE 5 MULTIMEDIA RESOURCES INDEX 5

VIEWPOINT

Written in Blood 6 By John Mapp

ASK THE EXPERTS

How Many Sailors Does It Take to Change a Light Starter? 8 By EMCM (SW/AW) Jim Burke

What's the Secret to a Successful Safety Survey? 9 By ETC (SW) Jason Mobbs

SC MAGAZINE QUIZ

Test Your High-Risk Evolution Knowledge 15

SEACOMPASS CONTENTS SPRING-SUMMER 2012

DEPARTMENTS

EDITOR'S CORNER On Managing Risks and Resources 4

IN THE SPOTLIGHT

A Promise to Ride Well and Stay Alive 10

By LT Noah Rich and ENS Caitlin Castello USS *Benfold* (DDG 65) motorcycle riders sign a "Pledge to Safety" contract before hitting the road.

YOU BE THE JUDGE

Mishap Waiting to Happen 15

By HMC (SW/AW/FMF) Randahl S. Benson

Would you be the one who should have done something about a mishap but chose not to? Judge the picture and tell us how many things you find wrong with it.

ORM PLAYBOOK

Damage Control Gear 17

By Derek Nelson

Can you trust your gear? Make sure your gear works when you need it. Don't wait until it's too late. Get going with the right checklist.

SAFETY AND HEALTH

What's In Your Water? 18

By CWO4 Danny L. Royse

Prevent water contamination by following simple steps for checking and maintaining hoses, connectors and storage.

Knowing When to Say 'Damn It's Hot!" 19

By HMC (SS) Christopher Harris

Don't overheat this summer. Know the early recognition and rapid treatment of heat injury symptoms. It's key to saving lives.

CASE STUDY

OPNAVINST 5100.19E? Never Heard Of It 20

By FTC (SS) William Cahill

A valuable reference for supervisors and leaders in keeping a ship's daily operations and evolutions in check.

.....

ABOUT THE PHOTO ON THIS PAGE: Deep sea divers assigned to Mobile Diving Salvage Unit (MDSU) 1, deployed with Joint POW/MIA Accounting Command (JPAC), search the Palau, Federation of Micronesia crash site of a WWII military aircraft for the remains of fallen service members. (U.S. Navy photo by MC2 Christopher Perez)

DIVE LOCKER

Diving Operation Essentials 21 By CW04 Robert Cassels Checklists can help you avoid discrepancies and prepare for diving safety survey and diving operational

BEST PRACTICE

Two Checks (Together) Don't Make Right 22 By ETC (SS) Kevin Dawson Required independent second checks protect people and prevent costly equipment damage.

SEA STORY

Pain in the Rear 24 By MMCS (SS) Arthur Sisk A submariner looks back 20 years when haste caused a shipboard incident, which led to a tailbone injury.

OFF DUTY

Control the Urge 32

By LCDR Dave Williams

If you have a need for speed and fast cars, there's a way to do it legally. Some tips to keep you out of trouble.

The Helmet that Saved My Life Back Cover By PR1 Thresa Crotz

By using everything this rider learned in motorcycle safety riders course, she now has a chance to tell you that wearing PPE works.



GEAR, TOOLS AND EQUIPMENT

Make Your Gear Seaworthy 26 By EMCM (SW/AW) Frank Valdepeña

CLEATS AND HATCHES

Cleats vs. Hands 28 By MMC (SS) Isaac Ingram

Keep Your Sub's Hatch Cover On 29 By Tom Deatherage

DECK

Don't Wash That Non-Skid! 30 By LT Edward Alexander

ARMORY

Does Your Armory Have an SOP? 30 By GMC Ramiro Salas



Articles and resources that can help you chart the course to a mishap-free Navy.

Preview Magazine

Read each full issue online before it arrives in the mail.

Download Articles Share articles as PDF downloads.

Manage Subscription

Make sure your command's distribution is up-to-date.

www.public.navy.mil/navsafecen/pages/media/sea-compass/index.aspx

2. Media Division Tab

Find links to See Compass, as well as other magazines published by the Naval Safety Center. They are produced by the Communications and Marketing Department. You will also find other multimedia resources such as posters, videos, seasonal campaign presentations, newsletters, ALSAFE messages, and the "Friday Funnies."

1. Naval Safety Center Home

This button will take you to the home page of the command. The Web site address is: www.public.navy.mil/navsafecen/

6. Landing Page

This is the Sea Compass Web landing page. Visit us to get updates and download current or back issues of the magazine. You will also see our calendar-year publication schedule.

7. Archives Download past issues and view table of contents of Sea Compass. You can download PDF articles.

ng 2012 Invan Coming Score

Live Solely!

An and the product of the second second

Carata and a the second of the



Naval Safety Center

8. Award Submissions Don't pass up the chance to be recognized for outstanding contributions to afloat safety awareness. You and your command can participate in two media-based awards.

-3. Current Issue

Download a full version of the current issue as a PDF. The table of contents is linked to the individual articles for your convenience.

4. Submit a Story

Have a story to tell? You can send us your first-hand experience or observations about near misses or risk management. This button will take you to the Sea Compass email: safe-seacompass@navy.mil.

5. Stay Up-to-Date

Modify your distribution copies, change your address, or get on our mailing list. This button takes you to a Word document form that you can fill in and email or fax to us.

EDITOR'S CORNER I ON MANAGING RISKS AND RESOURCES

eturning to Norfolk from an event in northwestern Virginia, I stopped in Washington, D.C., to drop off a passenger. Then the remaining passengers and I headed southbound on I-395 and I-95. Although it was just after midnight, the highway was still packed with cars going more than 70 miles per hour.

En route to Richmond, the three passengers were fully awake and talking loudly. I focused on the highway. My sister said the driver of the car on her right was

waving at her. A minute later, her son said that a car honked at us (I hadn't heard it). When another car passed on my left, I checked my speed. The driver of the car behind me began flashing his high beams. Apparently, something was wrong, but I didn't know what.

I got off the next exit and parked in a well-lit area. Keeping the engine running, I asked my nephew to walk around the vehicle to do a visual check. My headlights were off!



Fatigue was slowly taking over. I had become inattentive and complacent. Examining the dashboard, I saw that I hadn't set the lights from "automatic" to "on." I just assumed they were on because the dashboard was lit.

Driving on that dark, crowded highway, my situational awareness (SA) was in the "red." In terms of time-critical risk management (TCRM), my resources (represented by the blocks in the graphics inset) weren't adequate. I hadn't had a checklist for that type

of car, and made a procedural error. At least members of my "crew" spoke up, and other drivers tried to alert me.

I'd been bore-sighted on getting home, and I kept going (this time with headlights on). By the time we got to Richmond, it was clear that I needed to get back to the "green," with improved SA and resources. I turned the keys over to my niece.

Which brings me to this issue of Sea Compass — which is

How could I have missed such an important standard operating procedure? I've been driving for nearly 30 years. My insurance company gives me a discount for being a good driver.

Several things led up to my dangerous error. For one thing, I wasn't driving my own vehicle because it wasn't big enough. Another factor was that by the time I pulled over, I'd driven nearly 10 hours, stopping at three major Virginia cities and logging more than 500 miles. I didn't feel tired, but I was running on adrenaline.

about managing risks and using resources effectively. In the articles, our Naval Safety Center experts and contributing writers share personal accounts, observations and lessons learned. We hope you find this issue both useful and enjoyable, and stay tuned for our summer digital edition on the web.

Trelyn. evelyn.odango@navy.mil

letters, feedback & comments

Please accept my congratulations on your Fall 2011 edition of *Sea Compass*. This is one of the finest publications of its kind I have seen in over 30 years in the Navy safety world. The articles are outstanding, and made me wish that a quality product like this was available to me as a deckplate leader years ago. I am looking forward to the next issue.

— Mark A. Lovelace, CSP U.S. Customs & Border Protection

From the Editor: Thank you very much for your generous comments. We have a pool of talented contributing writers, subject-matter experts and advisors who helped us create the first issue. We hope you enjoy this edition, as well.



We welcome letters, comments and suggestions from our readers. Send them to evelyn. odango@navy.mil. We appreciate your feedback. You can also visit the Sea Compass magazine page at www.public.

navy.mil/pages/media/sea-compass/index.aspx. Scan the code with your smartphone to download the fulll issue (data rates may apply).

If you would like to receive email notification of the digital edition online availability, subscribe by sending an email to safe-seacompass@navy.mil.

multimedia resources index

Throughout this issue, you will come across references to mulitmedia resources available from the Naval Safety Center. The page number reference listed below will take you to the article associated with the resource. For more information, contact the Communications and Marketing Department at 757-444-3520, Ext. 7870.

- Page 11 MSR DASHBOARD PLAYBOOK The motorcycle safety representative's handy booklet for using ESAMS and other resources.
- Page 17 DECKPLATE DIALOGUE Resources for guiding important discussions between Sailors and LPOs.

SC News Wire safety news briefs

Naval Submarine School Claims Two NETC Safety Excellence Awards

GROTON, Conn. – The Naval Submarine School (NAV-SUBSCOL) Safety Department received, this spring, the North District Command Safety Award and program manager Individual Safety Award from the Naval Education and Training Command. The awards recognize outstanding performance in the areas of safety and risk management in a training and education environment. With an annual throughput of 30,000 Sailors in nearly 200 different courses, NAVSUBSCOL provides undersea war fighting training for the submarine force. For more news from NAVSUBSCOL, visit https://www.netc.navy. mil/centers/slc/nss/default.aspx.

ORM Magazine Now in Production

NORFOLK, Va. – The Naval Safety Center is soliciting articles for the production of the 2012 ORM magazine. We're looking for articles where ORM or TCRM (timecritical risk management) principles were used during any on- or off-duty situation. Did risk management play a key role in your success, or was the lack of risk management a problem? Send articles to safe-seacompass@navy.mil. If you have any questions, contact Ted Wirginis at theodore.wirginis@navy.mil or 757-444-3520, ext. 7271 (DSN 564-7271). Inputs are due by July 20.

Do you have news briefs and short takes?

If you have an important announcement, news brief or safety information that can't wait until the next issue, you can be proactive and use *Sea Compass* to chart the way ahead. We can also post your news online.

Here's what you need to do:

- 1. Get approval from your chain of command, safety department or PAO.
- 2. Provide submission POC's name, email and phone number.
- 3. If referring to websites, please provide the full website address (URL).
- 4. Provide as much information as you can including the who, what, where, when, and how to access the information.
- 5. News briefs should be one page, double spaced.
- 7. Submit news briefs to safe-seacompass@navy.mil.

For more information, contact the editor at evelyn.odango@ navy.mil or call 757-444-3520, ext. 7220 (DSN 564).

viewpoint

commentary, opinion and point of view from Sea Compass readers

Written in Blood By John Mapp

There is a Navywide tendency to scoff at safety rules. The old traditions of "toughing it out" or "can do" are widely regarded as the sources for this attitude. What everyone keeps forgetting is that those rules were written in someone's blood.

E very safety regulation, the instructions, the Naval Safety Center, safety petty officers—all of these exist because someone died or came close to dying. The Navy got tired of losing trained personnel to senseless, preventable mishaps. Since it isn't possible to wrap them in bubble-wrap or lock them up when they aren't on duty, the Navy went with training and education.

This brings us to the purpose of safety organizations that exist throughout the Navy. Contrary to popular opinion, the task of any safety organization is not to send specialists wandering around enforcing safety rules. Enforcement simply is not enough. Their primary goal is to make sure Sailors, Marines and civilians go home with the same amount of blood, and number of fingers, toes, and eyes they left home with. Part of their task is giving our workers enough information about the hazards they face every day to make the right decisions about managing risks. So the idea was that personnel would get educated about the risks they faced. These educated Sailors, Marines and civilians would make informed decisions about the hazards they were exposed to, thus reducing the number of mishaps.

Alas, this proved to be wildly optimistic. A solid percentage of these "apprentices" apparently slept

through their training—judging by the unending stream of mishaps where young men and women continually rediscover the old tried-and-true ways to get hurt, maimed and killed. Even if a Sailor or Marine managed to pay attention to safety training, he or she often thought the rules applied to everyone else. *"That'll never happen to me. I know what I'm doing."*

Another favorite line is, "*T've been doing this job for umpty-squintillion years and never had an accident*!" Guess what? The person making that statement was either following basic safety rules all along or has been lucky for a long time. Congratulations on dodging the bullet all those years. But you need to remember that luck comes in three flavors—blind, dumb and bad—and you can't control which version shows up. If you're relying on luck to keep you safe, you're gambling with your life and health.

There are always a few folks out there at this point who say, "So what? My life; my business!" It isn't just your life and health you put in jeopardy. What happens if your lack of regard for others injures, maims, or kills one of your shipmates? Don't say you didn't know it would happen.

Every man and woman wearing the uniform has been through training and refresher training and safety

C It is up to each and every one of us to take the initiative to control risks that threaten our mission, our shipmates, or our families. 55

- RADM Brian Prindle, Commander, Naval Safety Center

stand-downs their entire career. They've been told it can and will happen. They've been shown it can and will happen. And yet they still insist on behaving like drunken frat boys on a beer run. "No pro-o-o-oblem, man. If there's one thing I know, it's how to drive when I'm hammered. Rules? They're for other people."

When you get right down to it, it isn't your life to throw away; even if yours is the only life at risk. Like it or not, the Navy gets a say in what you can do with your life, whether you're on the ship, on duty or in uniform. Before you start complaining, remember that every service member wearing the Navy or Marine Corps uniform swore an oath to obey the orders of the officers appointed over them. For those of you who weren't paying attention, those safety regulations you fail to obey are lawful orders. Every time you refuse to follow a safety instruction, you are proving to everyone around you that your sworn word is no good. *"Oh, yeah! I'm too cool to bother with safety rules!"*

Your safety is in your hands. It's your responsibility. So, the next time someone tells you to put on your safety glasses don't get mad at them. All they did was catch you being stupid. When someone reminds you to keep your hands clear of the machine guards, don't gripe about it. You were just demonstrating the fact that you lied about obeying orders.

Don't complain when you get told to wear gloves and an apron with that solvent you're using. You were just proving that you don't care about yourself or your shipmates. If you insist on being inconsiderate, you have no one to blame but yourself when the lack of common sense blows up in your face. The only real tragedy is from the innocent bystanders who might get caught in the ensuing disaster.

Here is a truism about safety rules: *Read and heed, or ignore and bleed.*



Mr. Mapp, a retired Sailor, is a safety specialist at the Norfolk Naval Shipyard. He writes for his command safety newsletter and is a regular contributor to Sea Compass. His articles have also appeared in Decisions magazine, and previously in Sea&Shore and other Naval Safety Center publications.

Read more Viewpoint online at www.public.navy.mil/navsafecen/pages/sea-compass/viewpoint.aspx

What's Your Point of View?

Do you have an idea for a safety viewpoint or maybe an observation about a process or a daily routine? Send your commentaries, opinions and views to safe-seacompass@navy.mil.



How Many Sailors Does It Take to Change a Light Starter?

By EMCM (SW/AW) Jim Burke

often joke with Sailors around the fleet that this is what you do when you reach the pinnacle of your career as a U.S. Navy master chief electrician: you tell people how to replace light bulbs!

As funny as it seems, the fleet is lacking in guidance on how to change out light starters and isn't familiar with current advisories. Sixty-five light-starter shocks were reported in 2010 alone. In fact, plastic starters and metal starters that have been specifically recalled have caused light-starter change-out to become the most commonly reported shock hazard on ships and submarines in 2011.

This is not an electrician issue that can be controlled by targeted advisories. It is a Sailor issue, because all hands routinely change out their own light starters in divisional spaces and berthings. Even a simple light-bulb or starter replacement can be dangerous, given the fact that we are effectively floating on a live capacitor: an ungrounded electrical system surrounded by salt water.

Plastic starters have been illegal on naval ships and submarines since 2007. They become heated, discolored and brittle over time. When Sailors attempt to replace



them, they tend to crumble in their hands exposing them to internal elements rated at 120 volts AC. In September 2010, one popular type of metal starter was recalled

by Naval Surface Warfare Center: Surelite FS-2 light starters with blue writing and a black base.

There are many Surelite starters in the fleet, but this particular model is cheaply made and has oversized tabs



that rotate to come in contact with 120volt terminals (left). If these particular starters are found in your supply bins, turn them back into supply and fill out a quality deficiency report (QDR) so your supply chain can be purged up to the depot level (DLA has already purged down to the depot level from their end). The message governing this recall and guidance is NSWCCD-SSES 938 In-Service Engineering Advisory No. 043-07, "Discontinued Use of Plastic Starters for Fluorescent Lights Installed on Ships" and Advisory No. 025-10, "Discontinued Use of Surelite Brand Fluorescent Lamp Starters." Both advisories released on plastic and metal Surelite starters offer guidance on replacing starters. If you find any of these recalled starters, maintenance should only be attempted by a qualified electrician.

Naval Safety Center experts recommend that the basic tenets of this guidance be applied to all light/ starter replacement procedures. Pass this information on to your crew through POD notes and at INDOC or annual crew electrical-safety training:

De-energize/turn off the light fixture before maintenance.

Remove the light bulb, as this effectively breaks the circuit between the 120-volt source and the light starter. (See diagram below.)



- Remove light starter and replace with new.
- Re-install light bulb and turn back on.

Now you know the answer to the age-old question. And please remember, even though it's "just a light bulb," that doesn't mean it can't kill you. It happened to a Coast Guardsman in 2010. Keep your eyes open and stay safe. SC

EMCM Burke is the leading chief petty officer for the survey team in the Afloat Safety Directorate, Naval Safety Center.

Send your questions you want Naval Safety Center subjectmatter experts to address in the next issue, to safeseacompass@navy.mil. Please provide your email and contact information for verification purposes.

What's the Secret to a Successful Safety Survey?

By ETC (SW) Jason Mobbs

where the same is the same is

How can we say that without seeing the ship? Because we are there to help. Although there is no way to fail a safety survey, some are more successful than others. Here are some quick tips to ensure success:

PREPARE EARLY

Begin preparing six months out. Start with a senior person from each area running the applicable checklist. Answer honestly and use a zero-defect mentality. One of our goals while onboard is to give the commanding officer a detailed report on every item as we walked by it. Discrepancies that are corrected prior to the end of the survey will still be listed; however we will note the crew's corrective actions.

Use your last safety survey as a guide. Avoid recurring hits from your last survey if possible. If past surveys noted programmatic deficiencies—and these programs are still a problem—then you may need outside assistance. Contact your subject-matter expert at the Naval Safety Center (NSC) as early as possible with any questions or concerns.

TAKE ACTION

Are the issues that you are finding programmatic? Are they PMS-related? Or are they general design or supply-related? Once a program is up and running there should be no reason for it to fail. There may be times that certain checklist items may not be ideal due to manning, unexpected transfers or higher priorities. Ask for help from the appropriate higher authority, such as your TYCOM, ISIC, or NAVSEA.

We quantify a PMS-related deficiency based on the PMS card information we find. For example, if the PMS had been done verbatim as the card was written, then there would be no deficiency. Many times we find these discrepancies when the PMS card called for a form or specific information to be recorded in a log, and the log or information called for in the maintenance requirement card cannot be produced.

Have you seen things around your ship that you just know are not right or are improperly designed? Contact NAVSEA or the appropriate technical warrant holder. NSC analysts can also help you contact the appropriate authority.

TRAIN TO THE REFERENCE AND THE APPLICABLE STANDARD

During the time safety surveyors are onboard, you will never hear, *"I think this is how it should be"* or *"On my old ship this was how we did it."* We train and speak directly to the paragraph or sentence that we are citing as a deficiency. As our manning decreases in the fleet, we are constantly creating new subject-matter experts and training them to existing references and standards. This process ensures continuity of service and standardization.

These steps will ensure success and help create a well-managed culture of safety. We are your advocate for successful surveys. Don't wait too long. Avoid that frantic phone call at the last minute.

ETC Mobbs is the fleet combat systems analyst in the Afloat Safety Directorate, Naval Safety Center.

ONLINE RESOURCES

References and Checklists

Helpful guides, instructions and checklists to keep you up-to-date. Also includes the 2011 Afloat Shipboard Equipment Shopping Guide: www.public.navy.mil/navsafecen/pages/afloat/surface/references.aspx

Top 10 Discrepancies

A collection of 10 most common deficiencies found during safety surveys from FY06-FY11. Do your part to not contribute to the list: www.public.navy.mil/navsafecen/pages/afloat/surface/surfacewarfare_articles.aspx

Afloat Mishaps and Statistics

Class A mishap summaries and data tables that go back eight years: www.public.navy.mil/navsafecen/pages/statistics/afloat/afloat_stats.aspx

Ships' Safety Bulletin (SSB)

Summaries, research and data to assist in your mishap-prevention program. SSB back issues from 2010-2011 now available: www.public.navy.mil/navsafecen/pages/afloat/surface/ship_safety_bulletin.aspx

IN THE SPOTLIGHT

A Promise to Ride Well and Stay Alive

USS Benfold (DDG 65) riders round the bend on motorcycle safety

By LT Noah Rich and ENS Caitlin Castello

he crew of a ship faces dangerous tasks every day, from climbing towering masts to landing helicopters on a tossing and turning platform to dangling over the side to paint. However, the most dangerous task Sailors face every day in port is the commute to and from work.

According to the National Highway Traffic Safety Administration, about 35,000 people die as a result of motor vehicle crashes each year. In California alone, where the weather is ideal for motorcycle riding, around 70 out of every 100,000 registered motorcycle drivers are killed in crashes each year. The safety team on USS *Benfold* (DDG 65) wants to do its part in making the highways safer for motorcycle riders and others on the road.

The command's goal, as it is with any other on- or off-duty task, is not to avoid risk but to manage it. The Navy isn't going to ban motorcycle riding because it is dangerous. Its leaders and safety team want to teach riders how to manage the risks of riding to make sure every Sailor stays alive.

With this in mind, the crew of USS *Benfold* held their first "Motorcycle Safety Ride" in spring 2011, with nine Sailors participating. It was organized by ENS Chris Richardson, the ship's motorcycle safety coordinator. He prepared the event at the recommendation of Chief Warrant Officer Chester Gorman, the ship's main propulsion assistant, to educate the riders of safe-riding practices and raise awareness of all drivers on the importance of looking out for motorcyclists on the road. It has since become a monthly event.

After riding into work in the mornings a few times, CWO3 Gorman noticed that some of *Benfold's* novice motorcycle riders were clearly nervous on their bikes.

"The motorcycle safety course that is required for all DoD personnel is a great tool, but it's only two days long," he explained. "No one is an expert after that."

The ride taught me a lot about my bike that I didn't know.
I feel so much more confident riding now.
– ENS Allison Hamel

USS Benfold (DDG 65) Motorcycle Rider's Safety Contract



The number of people who own and operate motorcycles continues to grow. Consequently, the number of motorcycle related fatalities are also increasing. While some motorcycle accidents are impossible to prevent due to the actions of other drivers, too many of the fatalities we are experiencing are the direct result of poor decision making by the person riding the motorcycle Frankly, accident investigations often reveal that motorcycle mishaps are caused by the rider's disregard for laws, lowered standards of conduct, and lack of self-discipline, and are absolutely preventable. The adrenaline rush and the feeling of freedom motorcycle rides often seek can make the rider lose focus on the reality of how much power a motorcycle has, and how powerless a rider can be when something goes wrong. Unexpected dipe in the read, debris on the street, and inattentive drivers are among the things that can be very dangerous for a motorcycle rider. And it is not always the young and inexperienced rider who gets killed in an accident. Complacency is your enemy when you ride on two wheels. There is simply no margin for error when all that stands between you and another vehicle, the street or an immovable object is nothing more than your helmet and the clothes on your back. One fatality is too many, but the rate at which people are dying on motorcycles is completely unacceptable. You are our most valuable asset. To the Navy, you are the irreplaceable defender of the freedoms we enjoy in this country. To your friends and family you are absolutely onique and picel. We cannot afford to be We cannot afford to lose you to a careless, preventable accident. This contract is not a legal documentation of the probability or run to the probability of the prob and you don't need a lawyer to review it. We are not trying to catch you in a technicality or run the enjoyment you donter form of the enjoyment you derive from riding your bike. Instead, we are offering you an opportually to abude to pledge your commitment to safely operate your motorcycle in every situation, walch out for your fellow riders, and come back alive.

SC Magazine Illustration

ENS Allison Hamel, one of the less experienced riders aboard USS *Benfold*, explains how much she has benefited from the ship's safety rides. "The ride taught me a lot about my bike that I didn't know. I feel so much more confident riding now." She also appreciates the other riders who have helped her better understand the elements of her motorcycle and how to check them for performance and safety.

USS *Benfold's* recent time in the yards has helped her crew focus on their personal and professional development. ENS Richardson had aimed to make monthly motorcycle safety rides a part of this development. CWO3 Gorman illustrated why these rides will continue to be effective contributions to USS *Benfold's* mission right now. "We are setting it up like any mentor program in the Navy," Gorman explained.

"Those who have been riding for a long time will pair up with newer riders and work with them on important skills like passing and riding in tandem – things you don't really get a lot of practice with in the two-day course but that are important for any motorcycle rider to be proficient with so that they build confidence in their riding abilities."

Each of the participants in the command's motorcycle safety ride showed their commitment to the mission of personal development by signing a "Pledge to Safety," in which they promise to follow all regulations and practice safe riding habits both on- and off-duty.

"It's a reminder to all of us that the most important thing is that we make it home alive every time," said ENS Richardson.

The program has maintained 100 percent accountability in the ESAMS database for all riders. Currently all riders have taken the required Navymandated courses and have had zero injuries related to motorcycles this year. And with winter approaching, now is a good time to get extra training through military-endorsed/state-approved courses. Riders can take extra classes including the military sportbike rider course (MSRC) and the experienced rider course (ERC) to get more familiar with their motorcycles.

During their last ride, the group went over winter tips. Although they rarely see ice in San Diego, the team discussed the need for warmer clothes, proper riding gear and motorcycle maintenance, including changing out anti-freeze in preparation for the cold months. **SE**

At the time of this writing, LT Rich served as the ship's operations officer, and ENS Castello was the ship's first lieutenant. USS Benfold is homeported in San Diego.





Top: (From left) GSM1 Michael Oswald; CS3 Erick Reanos; and FC2 Kevin Moreland look back to make sure the group is ready to ride. Above: Every rider must read the rider's safety contract and sign the "Pledge to Safety," which addresses motorcycle operational checklist, PPE, ORM, local and state laws, and general safety.



Calling all Motorcycle Safety Reps (MSRs). We have two new resources for you: MSR Dashboard Playbook (ESAMS gouge) and MSR "Quick Tips" trifold. Visit the Naval Safety Center website to download your PDF.

ONLINE RESOURCES

Enterprise Safety Applications Management System (ESAMS) www.cnic.navy.mil/CNRMA/RegionOperationsandServices/OperationsandManagement/Safety/ESAMS/index.htm

Navy Motorcycle Management Tool

www.public.navy.mil/navsafecen/documents/ashore/motorvehicle/Nav_ESAMS_mcy_msg.doc

Navy Motorcycle Training Registration www.navymotorcyclerider.com/

National Highway Traffic Safety Administration

Fatality Analysis Reporting System Encyclopedia: www-fars.nhtsa.dot.gov/main/index.aspx Traffic Safety Facts/California: www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/STSI/6_CA/2009/6_CA_2009.htm

Motorcycle Safety Foundation

www.msf-usa.org/index_new.cfm?spl=2&action=display&pagename=Library

COVER STORY

Going into a fire, there are three things a damage controlman must trust: his partner, gear and training. All three control the outcome of every scenario, real or not. In the three years that I've been an instructor at the Surface Warfare Officer School (SWOS) Engineering Learning Site at Pearl Harbor, I've seen how teamwork affects the outcome of a fire.

By DC1 (SW) Hector Floresdiaz

hen a firefighter arrives at the scene of a fire, everything he learned in the classroom and in the field comes back in full force. Everything must be done by the book. He has to trust the people around him. However, the challenge is not always with structure fires or machinery-room explosions.

For a trainer, perhaps the most demanding part of each day is having the Sailors work together under all kinds of conditions, including conflicting attitudes. I tell students that their survival depends on their ability to work together. If they ignored this, they could lose their ship or their shipmates. Attitudes play a big part in guaranteeing we all come out alive.

SAFETY FIRST

The students' safety is always the top priority at the schoolhouse. When we receive students at SWOS, we expect them to be prepared. We expect the commands that are sending students to us to prepare their Sailors with basic knowledge of safety and high-risk evolutions. Some students tell us their commands remind them to make sure they get a good breakfast before coming to class, drink plenty of water, and get enough sleep the day before. These are the students we know will be prepared for training. Unfortunately this is not always the case. So, if anything is going to go wrong it would be with the others. That is why we have to be ready for anything.

We always call a training time out (TTO) whenever an instructor sees something that is not right. Our protocol for safety is intense. There are days that we might call six TTOs during one evolution because students are not paying attention or they lack energy. If it becomes necessary to prolong training to get through a high-risk evolution without any violations or mishaps, we would do so for the students' safety.

A MATTER OF TRUST

As trained damage control (DC) instructors, we can control everything, from how big the fire gets to the behavior of the fire. Equipment can sometimes break down and when it does, our skilled communication personnel can usually fix it. But human error is one aspect of this job that is beyond our control. Human stress — the student who might not be paying attention or doesn't care to be in the field — affects the entire mood of the class. It adds anxiety to the setting because now there are two things that the instructor will have to be aware of: the students who are happy to get the training and the student who wishes he were somewhere else and doesn't want to be there. As soon as a student comes to our learning site, he learns to trust the person next to him. Just as important, the students must have assurances that the instructor is giving them his full attention so they can safely maneuver through their training scenarios.

An unprepared student can panic and become disoriented. In most cases this happens to someone who doesn't have adequate training. During a training evolution, it is important for students to discuss the value of teamwork. Panicking is one of the most dangerous things DC personnel can do in a real fire. This condition could lead to a more serious situation like becoming trapped. There must always be someone on your team who can be trusted to remain calm and composed at all times. Repetitive training can build selfconfidence and strong teamwork.

ALL THE RIGHT GEAR

One of the reasons why it is important to have everyone go through a high-risk class is to let them know that their personal protective equipment (PPE) works. It is also a valuable time to learn that if they take care of it, the equipment will take care of them. So, make sure you know your equipment even if you're never going to use it. It is better to know your equipment and never have to use it than need it but don't know anything about it. Your PPE will protect you. But you need to train. Your training will get you through any casualty.

The self-contained breathing apparatus (SCBA) has two alarms: a bell alarm and a vibration alarm (in case they cannot hear the bell). These alarms will save them

> Information Systems Technician 2nd Class Shana Gibbs adjusts a Sailor's firefighting gear during a general quarters drill aboard the amphibious assault ship USS Essex (LHD 2).

if they run out of air. We show them how to test the alarms before going into a fire. This check is done by the damage controlmen on the ship, but is something good for everyone to know.

The SCBAs that we use to fight fires have 40 to 45 minutes of air. Everyone breathes differently, so this alarm system is very critical. For one person, a 45-minute bottle might last for 40 minutes, which is normal. But then you have people that get very excited and breathe very fast, or may not be in good shape; their bottles can last 25 minutes. That is why it is important to know that your alarms work before going into a fire.

This check takes about 10 seconds and it will save your life. In a fire, if you don't get the indication that you are running out of air the fire may not get you, but the smoke will. The alarm goes off when you have 25 percent of air left in the bottle. That gives you about 10 minutes — plenty of time to evacuate.

We show slides of this process in the classroom and demonstrate it in the field. The students have to demonstrate proficiency that they know how to do this check. Alternatively, the other indication that they are running out of air is their SCBA gauge, which is visible in the dark. But when fighting a fire, paying attention to the bottle is often hard to do. Knowing how the two alarms work is more practical.

TRAINING DAY

Every training scenario is different. But one element of training that must remain uninterrupted is communication. In this scenario, instructors and students communicate verbally and by body language. The air capable ship-helo firefighting team evaluation (J-495-0414) starts in the classroom and moves into the fire field. We address three topics: flight deck and aluminized fire protective clothing/equipment, organization and procedures, and the actual scenario.



Only personnel who are trained and prepared to be evaluated by the instructors participate. If they pass this class, it will be the first step to being air-capablecertified for their ship. Once the class is over, the field safety chief—who is in charge of the safety of the whole evolution—addresses the safety evolution of the fire. He talks to them about the TTO and mishap policies, and what is expected of them during the evolution. An instructor then leads them into a space where they receive their PPE.

Once inside, their scene leader takes over and dresses them in their turn-out gear. Our instructors then walk around the room to make sure everyone is satisfactorily dressed and ready. At the same time that we are inspecting their PPE, we are also studying them by looking into their eyes and making sure they comprehend what is being explained by their scene leader. When they are ready an instructor walks them over to the helo fire structure. After another look, they head inside the fire trainer. All the instructors must be satisfied before the instructor team leader allows the structure chief to let the students enter the structure. Once the structure chief gives him the okay, the instructors walk the hose teams to their designated area and the instructors start talking to them to make sure they know what is supposed to happen. If they have no questions, we will do a "wet walk-through" (going through the whole scenario with no fire, just water). If we see that they understand the whole scenario, we will bring them out and go over any safety violation that we see and ask if they have any questions before we actually do the evaluation. If they are ready, we give them a break to drink plenty of water and get ready for the evolution.

Once they are all back we bring them inside and our scene leader instructor yells out that an incoming helo is on its way with problems and describes what is on board. Everyone goes down to the deck. He signals the structure chief to light up the helo. He then signals back to the on-scene leader instructor to engage the fire. The ship's on-scene leader takes over and we evaluate the evolution. They have two chances to pass the evolution.

Our students receive the best type of training they can possibly get. At this command we have safety precautions in place so that no Sailor gets injured and, at the same time, they see how safety plays a big part in the Navy. One thing that could hurt the Sailors is that their command might not be able to send them because they are too busy with inspections or drills.

Every high-risk evolution presents a different set of dangers. All Sailors should have the opportunity to learn how to make time-critical risk management decisions. Training is what they need to better prepare themselves.

DC1 Floresdiaz is an instructor of naval engineering, basic and advanced damage control, and aviation and machinery room firefighting tactics at SWOS Engineering Learning Site, Pearl Harbor. DC1 Floresdiaz talks with *Sea Compass* about his training experience, what he values most as a damage controlman, and the people he works with.

How I got here ...

After completing the journeyman instructor training (JIT) school, I went through scenarios for fires and wet trainers. I practiced each topic in the syllabus with other students until each one of us was able to teach the entire class as part of the exercise. For the field, I started out as an under instruction (U/I) safety observer where I kept an eye on students to make sure they went through a safe evolution while looking at the evolution itself. This ensured that one day I would be able to do what the instructors were doing inside the fires. When I arrived here, I was quickly qualifying for the fires as a new instructor. I was already a team leader and my next gualification was structure chief, a position for which mostly chiefs qualify. But before I was able to finish my qualifications I was sent to Iraq for a year of individual augment (IA) tour. After that tour, I had to start all over again with my qualifications to include sitting in all the classes as a student. I didn't mind that because I love what I do and it has helped me become a better instructor.

U.S. Navy photo by MC2

Physically and mentally fit ...

In this job it's important to be physically and mentally ready. The first thing I do when I get up at 0230 is eat a big breakfast then go to the gym when it opens at 0430. I do an intense one-and-a-half hour workout to prepare myself and to clear my mind of any problems I have outside of work. By 0600, I am ready to train and fight fires. All that is in my mind as an instructor are the students.

Good leaders, great shipmates ...

At every command where I've been, usually a chief has a lot to do with my success. My chiefs have always pushed me to be better than the next guy. If you are committed to always doing the right things, then your chiefs will always help you even when you slip up. And this command is no exception; they have helped me in my ups and downs and have kept me out of trouble. This command also has great shipmates that have helped in my success when it came to being a good instructor.

The greatest reward ...

Knowing that I play a big role when it comes to training our Sailors and knowing they look to me for guidance when a real casualty occurs. **SC**



Experience is the greatest teacher of all. In shipboard damage control, doing everything by the book is a matter of life and death. (Online)

YOU BE THE JUDGE

Mishap Waiting to Happen



HOW MANY THINGS CAN YOU FIND WRONG WITH THIS PICTURE? Submit your answers to safe-seacompass@ navy.mil. We will post the answers next issue.

By HMC (SW/AW/FMF) Randahl S. Benson

Despite several high-profile and costly hazmat fires in the last few years, most people still feel that it will never happen to them, and that hazmat is someone else's job. Neither attitude is right. Dealing with hazardous materials on a ship is everyone's responsibility and can become everyone's problem. How many times have you walked past the 55-gallon drum of lube oil in the fan room? How many times have you walked by items with expired hazardous-material warning label on them and just figured that someone else would take care of them? What about the Sailor with the unlabeled food-service can of paint? Or the guy who needed a small amount of hazmat and just put it in a handy water bottle.

These are just a few of the things we find during our surveys. Why do we find things that crewmembers didn't find in their own spaces? I understand that sometimes a new set of eyes is helpful. But if we all maintained a questioning attitude, things like those above would not get overlooked. If something looks wrong, it probably is. At the very least, let the space owner know so they can take care of the problem. Don't be the one looking back thinking, "If only I had said something." We all have to maintain our spaces and protect our ship and shipmates. Do your part as you move about. Correct discrepancies when you see them. **SC**

HMC Benson is the medical/independent duty corpsman analyst in the Afloat Safety Directorate, Naval Safety Center.

Taking nutritional supplements has its benefits, but failing to read the label puts this young ensign in a hospital while on his first deployment

Painful First Deployment

By ENS Joshua Stewart

roperly used, it is okay to take nutritional supplements; however, they must be used in moderation and in accordance with the guidance listed on the container. Supplements can be a powerful tool in supporting your work in the weight room.

I, however, learned firsthand that they can be dangerous if you don't adhere to the precautions on the label. It is important that people learn from my mistake so that no one will have to repeat what my ship and I went through. I started using supplements three months before the start of rugby season my senior year of college. I decided to take nutritional supplements to get a competitive edge. After the first couple of weeks I noticed a huge difference in my performance. I was getting much stronger while also losing weight.

A few weeks later, I secured a starting spot on the team and loved the attention that I was getting, so I kept using supplements without regard for the label on the product. I was in the best shape of my life and didn't think anything of the risk.

Three weeks after getting commissioned, I reported to my first ship and immediately set sail across the Atlantic on deployment. After the third day of our transit, I started being unable to urinate freely. I immediately went to medical where the corpsman recommended that I relax and drink plenty of fluids. Later that night, I felt severe pain in my lower stomach and headed back to medical for help. As a result of the failure to urinate on my own, the fluid was building up inside me and causing significant pain. The corpsman inserted a catheter which relieved the pain — not the most pleasant experience.

I thought everything was good until the same problem recurred; this time catheterization didn't work. My ship rerouted at high speed to the nearest hospital. I was under intense pain. The corpsman inserted a needle into my bladder to remove the urine through a syringe.

Upon arriving at a hospital ashore, I was hospitalized for a week with internal bleeding. It was the most painful experience I have endured in my life. I played rugby for a few years in college and have had my share of painful injuries, but none of them were even close to the pain I encountered.

Before you take a nutritional supplement, you need to know the dangers and hazards involved and potential side effects. All I really cared about at the time was the fact that the supplements were enhancing my performance on the field. The supplement's label said to take it for no longer than three months, not to drink any other sources of caffeine, and to drink plenty of water. I failed to follow all three of these warnings.

You need to understand the risks involved and the precautions you need to take when consuming supplements. Do your research before starting a supplement; if in doubt, talk to your physician.

ENS Stewart serves aboard USS Carr (FFG 52).

ONLINE RESOURCES

Navy and Marine Corps Public Health Center www.nmcphc.med.navy.mil/Healthy_Living/Nutrition/dietary_supplements.aspx

Deployment Health

www.nmcphc.med.navy.mil/Deployment_Health/deploymenthealth_overview.aspx

DAMAGE CONTROL

Can You Trust Your Gear?

Adapted from "Deckplate Dialogue," June 2010

By Derek Nelson

What's the issue?

Sailors understand the importance of damage control (DC), but may not appreciate the need for maintaining the gear.

What's going on?

Few personnel have dealt with a major casualty, such as a serious fire or collision. Such catastrophic events are rare, but they do happen. Fighting the conflagration aboard USS George Washington in May 2008, the crew found that at least 20 percent of the firefighting apparatus and gear either didn't work at all or didn't work up to standards. After USS San Francisco's allision with a sea mount in January 2005, the crew's damagecontrol efforts spelled the difference between recovery and the threat of a complete loss.

Discussion items and open questions

- 1. When was the last time you actually used some damage control equipment (as opposed to going through the motions)? Did you have any problems?
- 2. Are you confident that all of your damage-control gear works as advertised?
- 3. If so, do you actually check it?
- 4. Have you ever gun-decked PMS? If so, why?

In any case, a serious casualty is not the time to find out that your Vari-nozzle doesn't work or that you have a problem with your self-contained breathing apparatus (SCBA) face piece. Small Class C fires can quickly spiral out of control if damage control efforts aren't quick and effective.

In the summer of 2008, Naval Safety Center survey teams documented downward trends in the condition of damage-control material readiness and the level of knowledge of damage control petty officers. Although surveyed units are required to follow-up on how they are fixing problems, there were too many repeat problems and ineffective actions. Commands averaged 42 discrepancies on the 146 damage-control items checked by the submarine survey teams. Surface ships averaged 21 discrepancies for the 107 items checked. Recurrent shipboard problem areas include CO₂ actuators, compressed-gas cylinders, and explosion-proof lighting.

During the first quarter of FY11, every command had problems with submersible pumps and aqueous potassium carbonate (APC) systems (nozzles, fusible links, and scissor assemblies). Two-thirds of the surveyed commands had discrepancies with electricalsafety gloves, self-contained breathing apparatus face pieces, red-devil blowers, and fire-extinguisher PMS.

What's the solution?

During the past three years, a number of initiatives have been launched to improve the material readiness of damage-control equipment, and improve the level of knowledge of damage control petty officers (DCPOs) and ship's company.

DC courses (both the training and the exams) have been expanded and made much more practical and hands-on. An intensive effort is underway to clarify and correct PMS maintenance requirement cards. Naval Safety Center teams spent the past year providing focused DC training aboard ships. They don't just teach Sailors how to do the PMS — they teach the chain of command how to oversee and verify the work. **SE**

Mr. Nelson is head of the Media Division at the Naval Safety Center.

Visit the Media tab of the Naval Safety Center home page for archives of "Deckplate Dialogue."





www.public.navy.mil/navsafecen/pages/orm/orm.aspx

SAFETY & HEALTH

What's in Your Wat

By CWO4 Danny L. Royse

our ship has just returned from another arduous underway period. You breathe a sigh of relief. You and your crew can finally get some well-deserved liberty. You go through your in-port checklist, and the last thing to do is connect the pier-side potable water to your ships system. You grab the hoses and get the job done.

Down below, the crew starts drinking that ice-cold water or mixing their energy drinks after completing a sea-detail-workout. The galley crew is busy whipping up the evening meal using the water you provided.

All of a sudden, this enormous responsibility looms over you. Questions run through your head. You mentally review the steps and procedures you took one more time. Did I follow all the proper precautions? Did I clean and sanitize those hoses thoroughly before use?

Are you one of those auxiliaries members (better known as "A-Gangers") who drink bottled water because you saw what the connection fittings and hoses looked like?

The ship's health and welfare is in your hands at this specific moment. Are your potable-water-connection accessories in accordance with the *Naval Ships' Technical Manual* (NSTM 533, Potable Water Systems)? What happens if your ship's potable-water system gets contaminated and a large number of the crew is hit with a waterborne disease? The ship's mission could be degraded because of something as simple as improperly maintained hoses and connectors.

Follow these simple steps to prevent potable water contamination.

1. Potable-water fill connections shall be closed and capped when not in use. The cap must be chained or wired to the station.

2. Potable-water receiving-station risers and hose connections must be color coded and clearly marked in one-inch letters: "Potable Water Only."

3. Potable-water hoses shall be labeled "Potable Water Use Only" every 10 feet.

4. Potable-water deck lockers shall be labeled "Potable Water Hose Stowage" and mounted 18 inches off the deck. They must be vermin-proof



and locked at all times. The only authorized items stored inside the lockers are potable-water hoses and connection fittings that are coupled or closed with caps. Instructions for disinfecting hoses and risers must be posted in a conspicuous place inside the locker, as well. This locker is not an authorized storage place for hypochlorite.

Do the right thing — pay close attention during potable-water-handling evolutions. Remember, a safe environment doesn't happen by accident. Sc

CWO4 Royse is the main propulsion/auxiliaries analyst in the Afloat Safety Directorate, Naval Safety Center.



Knowing When to Say

By HMC (SS) Christopher Harris

ow can you tell when your body is overheating? Lightheadedness? Nausea? How about passing out on a treadmill and getting thrown from the machine's moving track?

That's what happened to one of my fellow crewmembers. After watch during a Mediterranean tour, he decided to go for a run on the treadmill located in the engine room. After some time, he started feeling a little dizzy and nauseated, but being a trooper he fought through it. A little later, I heard the words I always dread over the 1MC, "Corpsman lay aft."

He lay unconscious aft of the treadmill. He had two lumps the size of half a grapefruit on his head. He'd hit his forehead on a handrail as he fell and the back of his head hit a locker.

Could this have been avoided? Definitely! He just needed to realize that he was suffering from heat exhaustion and stop once he started feeling the symptoms. I had provided all-hands training prior to our deployment on heat stress, which included the signs and symptoms of heat exhaustion and heat stroke.

This training obviously wasn't effective. However, this incident was highly effective in training the rest of my crew members. We didn't have another heatrelated casualty the remainder of my time aboard that submarine.

So with the hot months of summer upon us, now is a good time to shift from thinking about seasonal cold injuries such as hypothermia and frost bite to heat injuries. The early recognition and rapid treatment of heat injury symptoms is the key to saving lives.

Condition	Signs/Symptoms	Treatment	
Heat Rash	Raised bumps on your skin in the affected area.	Get plenty of air circulation. Wear light, loose clothing that will let your skin "breathe."	
Heat Cramps	Involuntary spasm of muscles usually affecting the major muscles that are being stressed in the hot environment: thigh, calf, abdominal wall, and arms.	Stop the activity. Get to a cooler place, drink plenty of fluids, and gently stretch the muscles that are cramping.	
Heat Exhaustion	Profuse sweating, weakness, muscle cramps, headache, nausea and vomiting, lightheadedness and fainting, low grade fever.	Move to a cooler environment and remove clothing to encourage heat loss. If conscious and able, drink fluids to rehydrate.	
Heat Stroke	High body temperature, the absence of sweating, with hot red or flushed dry skin, rapid pulse, difficulty breathing, hallucinations, confusion, agitation, disorientation, seizure, and/ or coma.	This is a medical emergency. Notify emergency services immediately.Move to a cooler environment, remove clothing, apply cool or tepid water to the skin, fan the victim to promote sweating and evaporation, and place ice packs under armpits and groin.	

All submarines are required to have a heat stress program. Per OPNAVINST 5100.19 series, the medical department representative is required to perform heat surveys in engineering spaces when such monitoring is required.

When are heat surveys required? I always thought that I had to break out my meter and do a survey once the ambient temperature reached 100°F. I was wrong by 10 degrees. The requirement is 90°F in spaces manned by watch standers with greater than four-hour watches (on an 18-hour day schedule, we stand a sixhour watch). Ambient air temperature is required to be monitored every four hours if the temperature is 85°F or less, hourly if the temperature exceeds 85°F.

Many heat injuries are preventable. Allowing for acclimation, the body gradually becomes accustomed to the heat over a period of time (typically three weeks). Drink plenty of fluids and avoid caffeine and alcohol these steps will keep you hydrated and help your body regulate internal temperature. Get plenty of rest prior to, during and after the heat exposure. This provides for recovery time and allows the regulation of internal body temperature.

HMC Harris is the submarine medical analyst in the Afloat Safety Directorate, Naval Safety Center.

CASE STUDY

OPNAVINST 5100.19E? NEVER HEARD OF IT

By FTC (SS) William Cahill

hat is this **OPNAVINST** 5100.19 series I see on some maintenance requirement cards (MRCs)? Where can I find it? Naval Safety Center surveyors frequently hear these questions from Sailors on the deck plates. In other words, the average Sailor in today's submarine Navy doesn't know that OPNAVINST 5100.19E is the basic reference for afloat safety. Sound scary? It should, especially if you're a supervisor, because it means you're not doing your job.

CASE STUDY

Consider the case of a

supervisor who wasn't in position to make a machinist mate second class (MM2) follow safe procedures. The MM2 was tightening the belt for the forward sanitary pump on a submerged Trident submarine. The belt had been slipping, which was both very noisy and threatened to damage the pump.

To do the job, the MM2 first had to loosen retaining bolts for the assembly. He then had to adjust the pulley assembly. In the MM2's mind, he'd have to adjust the belt with the pump running. Because he was off watch and pumping near the rotating gear, he took very few precautions. He did remove his loose clothing, ring and watch.

SEND US YOUR OPINION ABOUT THIS ARTICLE. WHAT OTHER ELEMENTS OF GOOD LEADERSHIP DO YOU THINK ARE NECESSARY TO ACCOMPLISH A MISSION? WHAT FACTORS CONTRIBUTE TO A BREAKDOWN IN COMMUNICATION?

Send your response to safe-seacompass@navy. mil and we will feature your viewpoint online. We will not publish your name, but please include your rate, rank, age, job function, and years in the service.

DO YOU HAVE A SITUATION AT WORK, AT HOME OR OFF-DUTY ACTIVITY THAT WOULD MAKE A GOOD CASE STUDY FOR SEA COMPASS?



The pre-brief had included a warning not to put any part of his body near the moving belt. The MM2 followed procedures, and was careful until he had made the final adjustment. He had worked on several vehicles at his house and would frequently use his fingers to test belt tension for older model trucks. He placed his index and middle finger inside on the belt to test its slack. The belt caught his fingers and quickly chopped them off.

He called away the medical emergency via his sound powered phones to control, all the while squirting blood all over auxiliary machinery room #1. His

blood loss caused him to be flown by helo to a shoreside hospital.

SUPERVISOR'S RESPONSIBILITY

As the superviosr, you are responsible for managing the ship's daily plan of the day. You can't enforce standards and help provide a safe environment unless you know all the rules and ask the right questions. Get familiar with OPNAVINST 5100.19E, and make sure you have someone monitoring the evolution to prevent lapses of judgment.

FTC Cahill is the submarine deck supervisor in the Afloat Safety Directorate, Naval Safety Center.

Send your article to safe-seacompass@navy.mil. Please include your observations about the following points of interest:

- 1. What is the situation?
- 2. Who are the people involved?
- 3. What is the missing catalyst that could make it better (for example: tools, leadership, time)?
- 4. What is the worst-case scenario?
- 5. What can you do to fix the problem?

You may include a photograph to make your point or to help readers get involved.





DIVING OPERATION ESSENTIALS

By CWO4 Robert Cassels

eed help preparing for your upcoming diving safety survey (DSS) and diving operational readiness assessment (DORA)? It may not be too late to get ready. Submarines that conduct diving operations are required a DORA every two years and a DSS 14 to 20 months from the date of their last DORA.

Diving may not be your primary function aboard a submarine, and it can be hard to maintain your dive locker as required. But safe diving operations are still mandatory. If you are having difficulties or have questions concerning processes, procedures, and requirements, reach out to your squadron diving representative, the Naval Safety Center or the locally assigned divers.

The list below highlights the top-10 diving discrepancies we found in 2011. Most of these discrepancies were also on the top-10 list from 2010. Both the DORA and DSS use the same check sheets. These are available at www.public.navy.mil/navsafecen/pages/afloat/diving/chklist.aspx. Use these checklists to prepare for your survey. SC

CWO4 Cassels is the diving/salvage assistant in the Afloat Safety Directorate, Naval Safety Center.

Check Area	Question ID	% of Units Receiving Discrepancy	Discrepancy
Admin	A2JO	60.87	Is there an effective means of ensuring all divers are kept up-to-date on all the current AIG-239 diving advisory messages?
Training	A1X0	52.94	Does the diver's training plan include emergency response drills?
Admin	A1D1	52.17	Are divers conducting the minimum number of dives every six months to maintain their qualifications? Commands are required to provide NSC survey team with a list of all command divers.
Scuba	A1N0	52.17	Are up-to-date manufacturers' technical manuals available for all scuba equipment?
Training	A2B0	47.83	Is the dive locker following its training plan, and are records of attendance and critiques kept for completed training?
Admin	A2J1	43.48	Is there an effective means of ensuring all divers are kept up-to-date on all the diving safety lines?
Admin	A4B3	43.48	Is the command submitting dives into the dive jump reporting system (DJRS)?
Training	A2F0	43.48	Is a diver's training program in place, and does it include a long-range and short-range training plan?
Scuba	A2M0	40.00	Is the first stage of the single-hose regulator set at the manufacturer's designated PSI?



Two Checks (Together)

To avoid damaging expensive submarine equipment, make sure you do required independent second checks.

By ETC (SS) Kevin Dawson

t's dark, cold and raining as a submarine approaches the dive point. The officer of the deck shifts the watch to control while the off-going officer of the deck and lookout scramble to rig the bridge and bridge-access trunk for dive. With only five miles to the dive point, tension is building because many things must be done before the ship submerges.

The off-going officer of the deck (OOD) and lookout are having problems rigging the bridge, so now they're really feeling the pressure. Finally, the bridge is rigged, and all that's left to do is rig the access trunk.

The off-going OOD and lookout drop into the trunk and a few minutes later, complete the rig for dive. Right on time, the submarine slides beneath the surface, and everyone breathes a sigh of relief.

Later the captain orders: "All ahead flank cavitate." As the ship increases speed, the watch team hears something

bumping in the sail area. The chief of the watch announces the radar mast no longer indicates down.

This may sound familiar if you have been involved in an incident like this. In many cases, part of the problem was someone's omission of the required independent, two-party checks. The tag-out (used Navywide) and the rig-for-dive procedures (used by submarines) specifically require these checks. When they are overlooked, expensive equipment gets damaged and even worse things can happen.

Don't Make Right

Doing the first and second check together is not the only way to bypass the independent check. During rig-for-dive operations aboard one submarine, a petty officer aligned the bow planes for submerged operations. Because he wasn't familiar with all the valves involved, he had a watch stander (who also didn't understand the system) try to help him.

Later, the officer who was second-checking the rig-for-dive had the same problem as the petty officer and had the same watch stander try to help him. Both the petty officer and the officer got the same incorrect information. When the watch team tried to extend and test the bow planes, they wouldn't move.

In another case, a Sailor was assigned to hang a tag out. When he found a valve he wasn't familiar with, he too got help from someone in the area. As you might have guessed, the second checker had the same problem and got help from the same person. In this case, though, a third person doing a weekly tag out audit recognized the valve was out of position, before maintenance started.

For tag outs, independent checks are required both during the process of preparing the tag out and while hanging the tags. Similarly, the rig-for-dive procedure requires the designated officers to check the rig-for-dive in each compartment level. They must follow the checklists as a separate action, not in conjunction with, but after the designated petty officer completes the check.

Clearly, other factors were involved in these examples, but in each case, all-important independent checks could have prevented a mishap. Procedures that protect people and ships must be at the top of everyone's priority list. The only acceptable standard is verbatim compliance. SE

ETC Dawson is the submarine electrical/mechanical analyst in the Afloat Safety Directorate, Naval Safety Center.



Pain in the Rear

By MMCS (SS) Arthur Sisk

SO THERE I WAS, EN ROUTE TO MEDICAL TO GET AN X-RAY FOR MY THROBBING TAILBONE, TOPPLING OFF MY BIKE AFTER Hitting a railroad track that was covered with snow.

How did I find myself in this unenviable position? Read on.

s with any typical duty day for an "A-Ganger" (submarine auxiliaryman), a lot of work had to get done. One task on our list for the night —mine specifically, since I was junior — was to bilge blast the diesel bilge. It wasn't uncommon for the bilge to get greasy and grimy, especially after running the "Screaming Demon" (Fairbanks Morse 5.25 diesel engine). This name for our diesel came about due to its high-RPM operation. Our workload on that given day was substantial and with all the watch standing, the only time I could get to clean the bilge was after my 1800-2200 below-decks watch.

The ship's duty officer and duty chief petty officer knew about the job because they had been briefed earlier. There were a couple of problems: I was starting the job late at night, and I'd been working and standing watch all day.

Nevertheless, it seemed like an easy task. All I had to do was break out the bilge blaster, high-pressure hose, nozzle, and the water hose, and then connect them. The electrical connection was close enough so I didn't need an extension cord, but the nearest water connection was in the chief's quarters. I tried to run the hose through the diesel access hatch in the bow compartment, but it was too short. I was tired and getting irritated.

I decided to use the emergency egress hatch as the route for the hose. I opened the hatch and installed the latch. I pulled all the slack out of the hose and laid it down on the deck in the bow compartment. Then I went up the forward hatch and walked to the hose. I took it to the chief's quarters and connected it to the hot water.

Stepping Onto Air

As some of you might have noticed, I hadn't installed safety chains on both sides of the emergency egress hatch. The hatch wasn't visible from the passage because it was around a corner. I rushed down the passageway to get the job started and my right foot met an empty hole. My left leg stayed on the deck, and my body followed my right leg down the hole.

My tailbone slammed into the edge of the hatch ring, and it was no match for solid steel. The pain was indescribable. I went into shock.

I pulled myself up out of the hatch and climbed down the forward ladder to the diesel. I leaned on my hip and collected myself while I silently cursed my chief for making me do this job. Tears filled my eyes as the pain took over my thoughts. After about 20 minutes of venting, I continued with the task at hand. I put up the safety chains, finished cleaning the bilge and then put everything away. After I cleaned up, I crawled into my rack for a nap before my next watch.

The next morning the pain was still overwhelming so I went to see the doc. Instead of giving me some "Vitamin M" (Motrin), he sent me to medical to get my tailbone X-rayed. The duty van wasn't available to take me to medical. My only option was to ride my bike to the clinic.

Road Rash

I worked it out with my inner self and decided that I would stand the whole way so as not to further injure myself. I had ridden my bike many times to and from work, but on this day it would prove to be tricky due to snow covering the ground. I managed to stay upright, but along my route to the clinic from dry dock



#3, my back tire entered a hidden railroad track. This slip of the back tire caused me to quickly slam to the ground, ripping my dungarees and cutting my right leg and arm. I got back on my bike and continued riding to the clinic. They looked at me and assumed they

SC Magazine Illustration

already knew my reason for being there due to the blood on my uniform. I told them that this was not the only reason for my visit. After the wounds were cleaned up, I proceeded to X-ray only to find out that I had fractured my coccyx during my first mishap.

Twenty years later, I still have pain in my tailbone if I sit on a hard surface for any period of time. Now that I am at the Naval Safety Center, I see young guys leaving chains unlatched, creating a potential hazard just like mine. As my previous commander would say, "Think about the space as if the lights were out and it's flight or fight. That safety chain could be the only thing keeping you alive."

As part of my enlisted submarine qualifications aboard USS *L. Mendel Rivers* (SSN 686), while in Portsmouth, N.H., I remember standing blindfolded at various locations where I had to point out or describe every piece of damage control equipment in different areas. Realizing that my life someday might depend on knowing the location of all this equipment, as well as obstructions and turns in the passageway, I was intent on doing well.

With the passage of time, I forgot some of what I had learned, but much of the knowledge has stayed with me through my career. Every day I spent aboard the submarine increased my familiarity with certain surroundings, even though I wasn't always aware of it. Without thinking, I would bend down to avoid low-hanging obstructions or take a slight side step to prevent hitting my shins on something. This familiarity is invaluable to a submariner. However, it also can cause problems once haste and inattentiveness come into play.

Slow down and keep yourself and everyone around you safe. There are hazards to every part of shipboard life. Be familiar with your surroundings, but not to the point where you start taking them for granted. If you do, you aren't earning your sea pay. St

MMCS Sisk is the submarine damage control analyst in the Afloat Safety Directorate, Naval Safety Center.





B2BPMS is your basic guide on how to not fall a victim of complacency. It is a common-sense approach to keeping your ship on the right course. Have you ever taken a short-cut to save time, but instead, cost you and your ship time, resources or people? Share your short story with our readers so they might learn from your experience. Submit your article to safe-seacompass@navy.mil.

GEAR, TOOLS AND EQUIPMENT

Make Your Gear Seaworthy

By EMCM (SW/AW) Frank Valdepeña

Photos by ETCS (SS) Robert May

aintaining our tools and equipment is crucial to mission accomplishment. During our surveys, we often find improperly completed maintenance issues. During a shipboard incident while deployed is not the time to find out that a tool does not work. Here are a couple of scenarios:

- Have you ever not been able to flash the field of a generator because the field excitation leads were swapped incorrectly?
- Have you ever blown out a compartment sample cover because C (calibration) was not selected on the CAMS (Central Atmosphere Monitoring System) compartment selector switch before you introduced the CAMS calibration gas?

To avoid problems like these, there are standard operating procedures that everyone who works for the Navy knows about: PMS (Planned Maintenance System). PMS provides the tools to plan, schedule, and control maintenance. Maintenance procedures developed by Submarine Maintenance Engineering, Planning and Procurement (SUBMEPP) Activity, in accordance with reliability-centered maintenance (RCM), are the minimum required to maintain equipment within specifications.

A maintenance requirement card (MRC) contains the minimum maintenance required to keep a piece of equipment in proper operating condition. If we accept 80-90 percent accomplishment, is our gear seaworthy and ready for war? If not, what standards are we shooting for?

EMCM Valdepeña is a submarine analyst and the submarine advisor

HOW TO RUN A SUCCESSFUL 3M PROGRAM:

• Assign the right maintenance person for the task.

• Have the right tools, parts, materials, and test equipment. Substitutions must satisfy both the basic maintenance and safety requirements of the MRC. If there is any doubt, submit a PMS Technical Feedback Report (TFBR) specifying the desired substitution and reason. All items listed in the "miscellaneous" section are required.

• Ensure all protective personal equipment (PPE) required by the MRC, Navy Safety and Occupational Health (SOH) Program Manual for Forces Afloat (OPNAVINST 5100.19E) and Hazardous Material Users Guide (HMUG) (OPNAVINST 5100.28) are used. If there are any differences between the PPE required by the MRC, HMUG or the SOH, submit a TFBR requesting clarification.

• Ensure procedural verbatim compliance, including notes and cautions. In the "Procedure" block, work center supervisors may cross out alternate procedures that do not pertain to current equipment or configuration. This step is followed by "if applicable" or a note identifying steps to be omitted. These items must be reviewed and initialed by the division leading chief petty officer or leading petty officer. As these changes are work center-specific, submission of a TFBR is not required. If a particular step can't be followed, a TFBR must be submitted to resolve the issue.

• Ensure deck plate (LCPO, DIVO, etc.) monitoring, supervision and follow-up of maintenance. Ensure forms are of the current revision (i.e., Accomplishment Confidence Factor and Wire Removal/Replacement Forms). The "Effective Planned Maintenance System Completion & Monitoring Practices" training can be found in the Submarine Safety Officer Training, Topic 6, on the AKO/DKO Secure Site at https://www.us.army.mil/.

for class "A" safety investigations at the Naval Safety Center.



Inspect, Replace, Protect

Here are some events that have occurred due to improperly completed maintenance:

- 1. Manual Bus Transfer (MBT) Vent Failure: \$800,000.
- 2. Bow-Dome Failure: \$1.2 million without a replacement dome; \$8 million including the replacement dome.
- 3. Two Reduction Gear Failures: \$1.8 million each.
- 4. Anchoring Failure: \$2.5 million required docking.
- 5. Life Jacket/Harness Failures: Four souls lost.

You are responsible for incorporating a review and monitoring program, along with periodic PMS spot checks by the LCPO or division officer, as required by paragraphs 1–4 and 1–5.22 of NAVSEAINST 4790.8B, *Ships' Maintenance and Material Management Manual.*

Sailors comment that they had been sent to conduct PMS the first time on their own. But neither the divisional LPO nor LCPO had ever witnessed, been involved in the training, or personally verified that the young Sailor performing the maintenance was achieving quality results. Proper monitoring leads to quality and efficient work and a reduction in lost man-hours.



I challenge safety officers, department heads, division officers, leading chief petty officers and 3M coordinators to reinvigorate your PMS monitoring program.

- Require 100 percent verbatim PMS accomplishment and inspect what you expect by conducting deck plate monitoring.
- ► Don't purposely pick the 10-minute weekly PM.
- Monitor that tough out-of-the way maintenance; you may just learn something about your boat and your people.
- Your proficiency reduces the time required to perform a good look and will prepare you for future assignments. I guarantee it's worth your time, and if the crew sees that it is important to you, it will be important to them.

IMPROPERLY COMPLETED MAINTENANCE ITEMS

PNEUMATIC GREASE GUN ASSEMBLY





(A) Unauthorized brass piping is used in a high-pressure system and unauthorized fitting adapter is attached to the high pressure hose. (B) The gauge is broken and not calibrated.

The pneumatic grease gun assembly is required to be assembled IAW MIP 5462/001, MRC Q-1R.

MULTI-OUTLET POWER STRIPS





(A) Unauthorized power strip with personal electrical equipment (iPOD charger) that has not been checked for proper use and cleared for electrical safety. (B) Unauthorized power strip that has an attached electrical safety tag for improperly conducted PMS.

Where a multi-outlet power-line is required, only one is permitted on one isolated receptacle circuit, it must be the marine type. They must have a metal case, a double-pole switch/circuit breaker, and dual thermal fuses to prevent dangerous overheating. A six-receptacle unit with a six-foot cord is available under NSN 6150-01-362-7192.

LIGHTING NAVIGATION PANEL N-1



Broken breaker with exposed metal. Improperly completed maintenance on the N-1 panel can also result in an electrical shock.

The panel must be configured IAW COMSUBLANT/COM-SUBPAC A&I N-3171 for 688 Class, A&I TZ-0856 for 726 Class, MIP 4221/011, MRC S-1 for 688/21/774 class, MIP 4221/012, MRC S-1 for 726 class.



In the battle between submarine retractable cleats and Sailors handling them, no need to guess on the outcome if PMS was not part of the plan. Below are just a few stories involving personnel who didn't follow procedures (either operational or PMS):

A Sailor was rigging retractable cleats in preparation for entering port. A wet cleat slipped in his grasp, caught his middle finger and cut it.

A Sailor was handling a line during a maneuvering watch when a cleat stuck (due to lack of PMS). As he was pulling on the cleat, it came free. He lost his balance. He hung onto the cleat but ended up with two crushed fingers on his left hand.

A retractable deck cleat fractured a seaman's right index finger when the cleat swung to the stowed position during a maneuvering watch.

A petty officer was trying to roll a cleat that was bound. It gave way and slammed down on his hand. It amputated one finger at the second knuckle and partially amputated another at the same spot.

Sailors were handling lines as tugs moved a submarine into dry dock. While casting off a line to the forward tug, a seaman (SN) put both hands in the eye of the line to pull it over and onto the cleat. At that moment, the tug started rubbing against the submarines sail staging. The tug master immediately backed down, catching the SN's left hand and amputating two fingers. Two Sailors were checking a retractable cleat that had locked in the "up" position. As one man held the cleat open, a machinist's mate first class (MM1) put his hand between the sections to check the locking bar. The after-section slipped from the first Sailor's grasp and caught the MM1's hand, ripping the skin on one finger and cutting two other fingers.

A missile technician (MT) was holding a retractable cleat while another Sailor lubricated it. The cleat rolled and amputated the MT's little finger.

LESSONS LEARNED

- Ensure PMS is completed correctly. A good PMS monitoring and spot-check program can solve most of the PMS problems that plague us today. There have been too many issues surrounding PMS accomplishment throughout the fleet as well as the Navy as a whole.
- Train personnel to accomplish procedures correctly using the principles of operational risk management (ORM) and time-critical risk management (TCRM).

MMC Ingram is the submarine weapons analyst in the Afloat Safety Directorate, Naval Safety Center.

Keep Your Sub's Hatch Cover On

When sub is in port, hatch cover protectors must be in place



By Tom Deatherage

The protective covers on personnel access hatches are often in disrepair. These covers are important, because they include improved hatch-seat protectors made of lightweight material [ultra high molecular weight poly (UHMWP)] with a replaceable hinge kit in case of damage or fatigue failure of the original hinge. The use of the protective covers is required by Planned Maintenance System (PMS). They preserve and protect the surfaces that touch when the hatch closes; if these areas are damaged, the hatch won't seat properly when it is closed.

These hatch covers should be installed anytime the ship is in port and the hatch is opened for personnel or equipment access. Install the watertight (WT) seat protector to protect the WT hatch seats anytime the ship is in port and engine-room conditions don't preclude the WT hatch from staying open.

These protective covers are initially provided by the TYCOM as a type commander kit (TYKIT) as a replacement to the existing seat protectors. They should be stored when not in use in the same manner as the existing protectors.

Visually inspect to verify the conditions of the hinges and the seat protector prior to installation of the hatch protectors. If either hinges or the seat protector are damaged or severely rusted, don't use these protectors and order the replacement parts (using the APL for the hatch in question) through your supply system. (See table for replacement parts list.)

Don't use damaged hatch protectors. Personnel, such as the member of a unit that was in port for a maintenance period, can be injured. A shipyard



Inspect, Replace, Protect

The following are the Allowance Parts List (APL) for replacement parts for the hatch protectors:

- Hatch seat protector for 25-inch hatch / 31A070075
- Hatch seat protector for 30-inch hatch / 31A070076
 - Upper & lower, forward & aft escape trunk
 Upper weapons shipping
- Bayonet style hatch protector for 30-inch hatch / 31A070077
 - Lower weapons shipping
- Hatch protector for 20x38 WT door / 31A070078
 - CL 20 38 watertight door

contractor (working aboard a submarine while it was in maintenance) was getting ready to exit the boat through the aft lower escape trunk (LET) hatch when somebody yelled "Look Out!"

An improperly installed hatch protective cover on the LET hatch opening did not have a complete assembly in place. It resulted in half of one hatch seat freefalling 8-10 feet to the deck below hitting the shipyard contractor on the head. The shipyard contractor received a contusion with a concussion. This mishap was completely preventable if the hatch seat cover had been installed properly.

Protect your personnel by inspecting your hatch protectors before entering port as well as after installation on the hatch opening. **SE**

Mr. Deatherage is the program manager for environmental, safety and facilities at Submarine Forces Atlantic (SUBLANT). Photo courtesy of the author.

RELATED MESSAGE: Unclassified Subject: Afloat Safety/Environmental Best Practices Originator: COMSUBLANT NORFOLK VA (MC) DTG 291544Z Jun 11 Precedence: Routine DAC: General To: AL SUBFOR (SC), AL ALSUBLANT (SC), AL SUBLANT (SC), AL ALSUBPAC (SC), AL SUBPAC (SC) Cc: COMSUBPAC PEARL HARBOR HI, COMSUBLANT NORFOLK VA (MC)



DECK Don't Wash That Non-Skid!

By LT Edward Alexander

Non-skid reduces the risk of personnel and equipment slipping on the weather decks. When you apply deck wash to the non-skid, it fills the areas in the non-skid, reducing its profile and making it less effective. This is a growing issue. Personnel have slipped on degraded non-skid and fallen over the side. Deckwashed non-skid may look pretty, but it increases the risk of mishaps.

Line-handling stations and boat decks are primary areas of concern. I have also found deck-washed underway replenishment stations. Adding fuel and water to the equation makes for an even higher risk of a mishap. Note that color topping of non-skid is for visual landing aid (VLA) and safety markings.



For more information on deck washing, refer to NSTM Chapter 634, Deck Coverings, Paragraphs 634-3.24.2, 634-3.24.3, 634-3.31.1. Contact the Naval Safety Center Afloat Safety Directorate at 757-444-3520, ext. 7102/7108 (DSN 564) or email safe-code31@navy.mil.

LT Alexander is a deck analyst in the Afloat Safety Directorate, Naval Safety Center.

ARMORY

DOES YOUR ARMORY HAVE AN SOP? By GMC Ramiro Salas

It baffles me that in a Navy where I have seen standard operating procedures (SOPs) for changing out a roll of toilet paper, I rarely see SOPs for what I consider the most dangerous place on a ship. A place where we stockpile a plethora of guns, ammunition and sometimes explosives: the armory. Nothing directs us to have one, but is that what really stops us from setting our Sailors up for success?

Picture this. It is 0315 and the ship is quiet. The aroma of fresh-baked bread is in the air. The off-going watch is anxiously waiting to be relieved so they can get a few hours of shut-eye before the oncoming day. Then, out of nowhere, Sailors hear a loud "Pop!"

Mass confusion ensues. The watch team desperately searches for the origin of the sound and ensures everyone's safety. Safety personnel rush to the armory to find people looking around as if they had just lost their minds. Reality sets in. It has happened. Someone on your ship has negligently discharged a weapon. After making sure that everyone is okay, what do you do? Wouldn't it be great if you had thought ahead and made a plan for this very plausible occasion? The fact of the matter is that when things like these happen it is usually at the most inopportune time and in the company of the ill-trained.

This is the time when an SOP would be very useful. It can be as simple as a set of standing orders for the armorer to follow in the event of any incident. It can give directions for the upper chain of command until the appropriate personnel arrives to take control of the situation. It can also be as detailed to define how inventory is completed and how watch turnover is done.

Don't let the fact that you were not directed to do this deter you from being prepared for any given situation. Remember, just because nobody got hurt, that doesn't guarantee the same result next time. Have a plan in place and train to the plan.

GMC Salas is the weapons analyst in the Afloat Safety Directorate, Naval Safety Center.

What Does Your Inner Compass Tell You?

Do PM5.

You better check that tool. We haven't used it in a while; it might not work right.

We haven't used that tool in a while so it should be in good shape

> You owe it to your conscience to keep yourself and your shipmates safe. PMS is there for a reason.



www.public.navy.mil/navsafecen/ 01 PMS/ORM Sept 2011 JW.

OFF DUTY

Control the By LCDR Dave Williams

here are essentially two types of cars on the road today. One has enough power to outperform a late-60's muscle car. The other provides an economical means of transportation.

Sure, you might find some odds-and-ends that don't fit these criteria, but they are becoming increasingly rare. Even some economical cars are beginning to blur the lines between inexpensive and really fast. As a safety officer, my concerns lie with fast cars.

I might be preaching to the choir here because I drive a 2001 BMW M3. This car has 333 horsepower, 262-foot pounds of torque, weighs 3,400 pounds, and will do zero to 60 miles per hour in a shade below 5 seconds. It's fast. Really fast. And I'm not alone.

Cars these days present a wide array of options. Big, lifted American trucks are getting blowers and aftermarket engine software upgrades. Hondas have been lowered, engine-swapped, and intaked for years. Diesels are getting turbos, regular gas engines are getting more turbos, and car companies have figured out ways to make high-power engines that produce upwards of 30 miles per gallon. These cars are sitting in our lots right now!

The days when Seaman Timmy pined over speed are over. We all drive cars that are capable of great speed and can kill at the drop of a hat. If safety was the number one concern on the roads today, we'd all drive cars with a top speed of 75 miles per hour. This would allow us to drive at the speed limit in many areas. But Americans love their cars, and they love them fast. There are ways to harness that desire for speed and do it in a safe manner. Unharnessed, it is what the National Highway Traffic Safety Administration calls "aggressive driving." They suggest the following steps:

► CONCENTRATE. Don't allow yourself to become distracted by talking on your cellular phone, eating, drinking or putting on makeup.

► RELAX. Tune the radio to your favorite relaxing music. Music can calm your nerves and help you to enjoy your time in the car. But don't be too relaxed that you fall asleep to the music!

► DRIVE THE POSTED SPEED LIMIT. Fewer crashes occur when vehicles are travelling at or about the same speed.

► IDENTIFY ALTERNATE ROUTES. Try mapping out an alternate route. Even if it looks longer on paper, you may find it is less congested.

► USE PUBLIC TRANSPORTATION. Public transportation can give you some much-needed relief from life behind the wheel.

► JUST BE LATE. If all else fails, just be late. This may be a hard pill to swallow for your immediate superior, but arriving safely will quickly outweigh the cost of a speed-related accident. Every time you speed or become an aggressive driver, you are gambling with your health and safety. Why not put the odds in your favor and decrease your speed? Speeding tickets are expensive and can hurt your insurance rates as well your driving record.

There is a time and a place for speed and it's not on public roads. Take a deep breath, relax, and control the urge to push your car to its max.

Want to drive fast and do it legally? Take a look at track days. Search for it online. There are many clubs out there that provide a fantastic way to get your car up to speed. It's usually cheap, and all you'll need is a safe car and a helmet. In most cases, you don't even need to be a member of the club.

Check out www.carclubs.com/clubname.html for a complete listing of every club imaginable You can also try any of these organizations.

Sports Car Club of America: This organization has great programs and tracks set up on everything from parking lots to Indy car race tracks. You can race anything from a Pinto to a Pantera.

National Auto Sport Association: It has chapters all over the country and also offers great tracks.

RaceLegal.com: San Diego-based organization that provides a drag racing venue at Qualcomm Stadium every Friday night.

Various type/make-specific clubs: Mustang, Corvette, Audi, Cadillac, Datsun/Nissan, BMW, Porsche, Ferrari, Mopar, GM, Ford, and everything in between. **SC**

LCDR Williams is the safety officer on USS Makin Island (LHD 8) and is a regular contributor to Naval Safety Center publications.



... and last but not least

THE HELMET THAT SAVED MY LIFE

Story and photo by PR1 Thresa Crotz

May 20th started out as a beautiful, warm, sunny Sunday. My children had spent the night with friends. My boyfriend and I decided to go on a motorcycle ride. I wanted to try my new bike, a 2005 custom Chopper, and he rode his 1992 Harley Davidson Softail.

I suited up with all my bike PPE, including my ³/₄-face helmet. Since it was our first time with me on the new bike, we stayed on back roads until we felt comfortable on state roads.



The wind had been gusting but not enough to scare me, just enough for me to "think" a little more than normal. It was a picture-perfect Florida afternoon. We had lunch at a restaurant we hadn't tried before and made new friends there. Finally, it was time to head home.

Having tested the new bike, I wanted to ride some more. We decided to go to a nearby creek. We took the back roads, which were much more picturesque and made for a shorter trip. While coming around a long corner, I found myself too close to the center line. I didn't think that I had time to correct my position — an oncoming car was not too far away.

I was taught to always "have an out" when riding. I learned this long ago when I rode dirt bikes, taught by my boyfriend who has been riding for more than 20 years and from the Motorcycle Safety Riders course I had taken last year. I was also taught that "you and the bike are one; what hurts the bike will hurt you," and vice-versa. I saw my two choices: land under or on the car, or go into a yard bordered by a ditch. I had to choose immediately. I opted for the yard with the ditch (and some railroad ties).

I remember driving into the ditch and the initial impact of the front tire hitting the railroad tie. Then I awoke to a strange voice saying I was going to be okay. A woman – a Good Samaritan – was holding my head in her lap. I was praying.

At the hospital I underwent several X-rays and MRIs. I was fortunate enough to come out with only a fractured nose, a mild concussion and a big knot on my right eyebrow, which required at least 25 stitches (it will eventually need cosmetic surgery). The only damage to the bike was a busted headlight.

I'm alive because I wore my helmet in a non-helmet law state! Learn from my experience. Put it on. My helmet saved my life. Let your helmet save yours.

PR1 Crotz is attached to Fleet Readiness Center Southeast in Jacksonville, Fla.

Log on to our **YouTube Channel** at www.youtube.com/user/navalsafetycenter to watch motorcycle safety videos and other public safety awareness campaigns. You can also read more motorcyle safety articles and personal stories in the 2012 edition of *Smart Ride* magazine. Visit www.public.navy.mil/navsafecen/pages/media/smart_ride.aspx for details.