

SEA COMPASS

The Naval Safety Center Magazine for Surface, Submarine and Diving Operations

Spring-Summer 2013



SPOTLIGHT ON

SITUATIONAL AWARENESS

What's your SA at home, work or play?

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MISSION STATEMENT: Our goal is to provide information and resources to help our Sailors, Marines and civilians focus their efforts on the mission. We 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 twice yearly 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: ICC Curtis N. Fox, assigned to USS *Blue Ridge* (LCC 19), enjoys an open water recreational scuba dive at Manta Ray Bay Reef on the Great Barrier Reef during a four-day port visit to Cairns, Australia. (U.S. Navy photo by MCC John S. Stadelman) OPPOSITE: GMSN Erika Macon and BMSN Russell Bellinger conduct maintenance on the .50-caliber machine gun before manning their sea and anchor station aboard the guided-missile destroyer USS *Decatur* (DDG 73). (U.S. Navy photo by MC1 Jennifer A. Villalobos)

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SITUATIONAL AWARENESS

Sailors and Navy leaders work together in identifying common factors that cause mishaps. Awareness, a behavioral skill valuable in crew resource management, helps identify factors that increase the potential for error. The articles featured in this issue show how they use time critical and deliberate processes to mitigate mishaps.

FEATURES

Experience, TCRM Instrumental in Scuba Rescue 8

Author uses his training during a medical intervention that saves the life of a critically-ill diver. By Lt. Cmdr. John Cooke

The Bold, the Daring and the Stressed 10

USS *Decatur* (DDG 73) leaders and Sailors keep a watchful eye on each other while meeting high optempo demands.

Special from the Naval Center for Combat and Operational Stress Control

Is OPTEMPO Driving Us to Fall Asleep at the Wheel? 12

Sleep deprivation can have the same effect as alcohol consumption. Adequate rest and sleep reduce fatigue.

By EMCN (SW/AW) Frank Valdepeña

IN THIS ISSUE

COMMANDER'S MESSAGE

Focus on Readiness 5

Rear Adm. Kenneth "K.J." Norton talks about improving situational awareness and being ready to prevent mishaps with critical thinking and careful planning.

SAFETY IN HISTORY

THRESHER: Cold War Casualty 16

Remembering the tragic loss of USS *Thresher* (SSN 593) and the 129 lives, whose sacrifice led to the establishment of a world-renowned quality assurance program. By David Sears

AWARENESS CAMPAIGN

Navy Launches New Campaign Promoting Responsible Drinking 29

Sailors take part in developing awareness and prevention products that focus on their accomplishments in their Navy careers. Special from the Navy Personnel Command

DISASTER PLANNING CHECKLIST

Emergency Preparedness 32

Know what to do when disaster strikes. Featuring recommendations from the American Red Cross and other safety agencies, the checklist offers survival tips.

WEB EXTRAS

- **Naval Education and Training Command – 2012 Excellence in Safety Award Winners**
- **Naval Safety and Environmental Training Center – Global Online Classes Shifting the Paradigm**

SEA COMPASS CONTENTS

DEPARTMENTS

EDITOR'S NOTE

AN ISSUE OF AWARENESS 3

Use ORM resources to catch errors before they occur.

PERSPECTIVES

What Sailing Taught Me About Life, and Vice Versa 6

A seasoned seafarer, former Military Sealift Command leader shares his perspectives on maximizing efficiency, effectiveness and safety. By Rear Adm. Mark H. "Buz" Buzby

BEST PRACTICE

The Real Value of \$3 Safety Glasses 14

Was it luck or PPE? Following protocol and requirements averts potential eye injury. By GSE3 (SW) Kayode Adewole

OCCUPATIONAL SAFETY

How Much Does It Weigh? 18

Forklift operations, on the ship or shipyard dock, require strict adherence to procedures. By Gunnery Sgt. Amber Allison

ORM PLAYBOOK

Personal Firearms, Personal Responsibility 21

How not to become a victim of accidental shooting. Get proper training and follow basic guidelines for weapon handling, storage and cleaning. By GMC (SW) Barry Cramer

ASK THE EXPERTS

Mobile, Portable or Personal: Do You Know the Difference? 24

Get smart about managing electrical/electronic equipment you bring and operate onboard. By EMCM (SW) Matthew Kerridge



Check Exhaust Ducts for Hazardous Gas Leaks 22

Prevent potential burn to personnel and fire in work space.

By GSCS (SW) Noah Lopez

Storing Disinfectants 23

How to avoid accidental exposure to hypochlorite.

By HMC (SW/AW/FMF) Randahl Benson

OFF DUTY

WATER SAFETY

Seconds Count in Preventing Poolside Tragedies 25

Prevent a drowning by knowing the dangers, using pool safety barriers and making rescue equipment available.

By Wanda M. Walters

OFF-ROAD RIDING

Mojave Solitude 26

The author takes us to the desert during a training course on big and heavy off-road bikes like the R1200GS. By Mario di Prete

DISTRACTED DRIVING

In the Blink of an Eye 30

Getting overly confident behind the wheel leads to a disastrous ride on the highway. By Evelyn Odango



Our online page offers articles and resources that can help you chart the course to a mishap-free Navy. Visit *Sea Compass* online at <http://www.public.navy.mil/navsafecen/pages/media/sea-compass/index.aspx>.

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An Issue of Awareness

While serving as a grand juror early this year, I heard cases that made me think about this issue's focus on situational awareness (SA). There were a number of precautions that the victims of the alleged crimes could have taken. Similarly, there are things we can all do to minimize the odds of becoming a victim: shredding documents with private information to protect identity, not displaying valuables in a parked vehicle, or installing an alarm system to deter burglars. These safeguards give us peace of mind.

If we're already managing risks to increase personal safety, it wouldn't be hard to do the same while at work. By increasing our situational awareness, we can avoid damaging Navy equipment or becoming a mishap casualty. We have the resources to manage risks at work or during off-duty hours; these are embedded in ORM. When we have good situational awareness, we can catch errors before they occur.

Our contributing writers and safety experts address key factors that can increase the potential for error. They help us recognize that task loading, additive conditions and crew fatigue/stress can decrease situational awareness.

In the scuba rescue article (page 8), the author calls on his knowledge of diving and experience as an aerospace physiologist to save a life. The leaders and Sailors of USS *Decatur* (DDG 73) depend on each other to handle the stresses of work demands and home issues (page 10). Our safety analyst's article on sleep deprivation gives us insights on fatigue and how it affects mental awareness (page 12). From planning to preventing, these articles address the value of using resources. You'll see a promotional piece for the Naval Safety and Environmental Training Center's online classes. Take the time to visit their site. Browse courses such as safety programs afloat and other refreshers; these can help improve your safety knowledge and expertise.

Enjoy this issue of *Sea Compass* and let us know if there are articles that help your situational awareness. I look forward to receiving your submissions for the fall/winter 2013 issue.

Evelyn Odango
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Time-Critical Risk Management

Because conditions can change with little or no warning, being ready allows you to manage that change and minimize risks associated with it.

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U.S. Navy photo by MC2 Jeff Troutman



COMMANDER'S MESSAGE: FOCUS ON READINESS



It's no secret that times are tough. Sequestration happened and we are all doing the best that we can as we remain the world's greatest fighting force. And due to the realities of the fiscal restraints, we have had to cancel maintenance and reduce training opportunities. We have to operate with less, and consequently that means every Sailor, Marine and civilian must take care of the resources we do have – both human and material. We simply cannot afford to lose anyone or anything due to preventable mishaps.

This issue of *Sea Compass* is centered on readiness. We all know that injury and even death are possible during combat actions. That is the tragic side of warfighting, and we do everything we can to prevent it. However, mishaps during routine operations cost millions of dollars and too many lives. We owe it to our shipmates and to the taxpayers to prevent those by making good decisions on the job and during off-duty hours as well.

Mishaps (non-combat) cost us \$3.2 billion and 675 lives during FY08-12. This money and those lives would build and man four new Arleigh Burke-class destroyers. Breaking it down to conceptual grasp, reported mishaps cost us \$20 every second of every day. But even this staggering number doesn't tell the full story.

When a live-fire exercise kills seven Marines, when an FA-18 crashes into an apartment complex, or when one of our ships runs aground on a reef, headlines about these mishaps damage our reputation and create

a lack of trust and confidence in our organization. We, therefore, must be better stewards of our resources and our people. Not doing so takes a toll on our combat readiness and the ramifications distract us from successfully executing our mission.

Everyone – from the most senior officer to the most junior Sailor and Marine – plays an important role in Fleet combat readiness. No matter what your pay grade, you are authorized and obligated to speak up if something unsafe is taking place on or off the job. You know the principles of ORM, but it's up to you to make those principles apply to real life. Make a plan, think ahead, take care of yourself and your shipmates, be engaged, and never be afraid to seek guidance. We are all in this together.

Of course, there are no guarantees, but we stand a better chance of preventing painful mishaps with critical thinking and careful planning. I hope to read about your lessons learned and best practices in *Sea Compass* magazine. Your stories reflect well on our willingness to tackle the challenges we face and remain a ready Navy and Marine Corps team.

A handwritten signature in black ink, appearing to read 'Kenneth J. Norton'.

RDML Kenneth "K.J." Norton
Commander, Naval Safety Center

What Sailing Taught Me About Life, and Vice Versa

By Rear Adm. Mark H. “Buz” Buzby

As I put together my remarks for the Naval Academy Safety at Sea seminar, I called upon much of what I had learned from my own 50 plus years of experience on the water, including my time at Military Sealift Command leading our professionals at sea and the afterguard ashore. I quickly realized that much of my lecture was truly reflective of the way we do business at MSC. This is what I shared with those young seafarers; see if any of this rings true for you, too.

RESPECT THE SEA

“Thy sea is so vast, and my ship so small.” MSC ships do business on the great waters 24/7, 365. One of the first lessons I learned about respecting the sea was to understand the elements — wind and wave — and the powerful and sometimes unexpected effects they can have on your life. As a boy, I took my 16-foot runabout for the first time out to the Great Egg Harbor inlet on the Jersey Shore. There was a steep swell break over my bow. I learned very quickly that there were times when a small boat did not belong there. I hadn’t bothered to note the strong onshore winds and the strongly ebbing tide combining to make some very sloppy seas. The more you understand your environment and the uncertainty of what you might face, the better able you are to function day to day and handle the bad stuff when it comes. It always will. Sound like something that might apply to work ashore? Or even to life at home?

KNOW YOUR SHIP AND YOURSELF

Whatever your duties, afloat or ashore, knowing your “ship” is key to maximizing efficiency and effectiveness, as well as your safety and that of your shipmates and co-workers. Our full value to the Navy and other customers is realized only when we know our ship and how to put it to best use. That includes knowing the rules and policies that govern our duties, or how a given piece of equipment operates in our ship. The more we know, the more effectively we can operate and the more passion we can pour into what we do.

KNOW YOUR SHIPMATES

I was told years ago by an old sailing master that “you never really know someone until you have been to sea with them.” On the water, it quickly becomes obvious that your life depends on the people around you, especially during UNREPs and the many other

inherently dangerous operations we execute every day. In the office, it may not be life and death, but it sure can affect your career when the team doesn't function the way it's supposed to. Getting to know your shipmates — their strengths and weaknesses, whom you can trust in a stressful situation and whom you can't — is an important part of forging a strong team. Our line of work is not for everyone, but your strengths can help build up someone else's weaknesses, and the other way around.

BE CAUTIOUS OF SHORTCUTS

During my presentation, I showed a picture of a "vessel." It had been assembled from a rusted out barge with a cabin fabricated from salvaged house parts. It was propelled by a paddlewheel made from a car rear end and a used diesel generator. The family band who built it ("The Flying Neutrinos") intended to drive it up and down the coast visiting various gigs. It didn't get very far. We all know, deep down inside, that cutting corners is risky business — whether we're at sea, in the office or at home. It comes home to roost sooner or later. Two band aids and a bottle of aspirin don't make a first aid kit, nor does several wraps of duct tape make a proper pipe patch. While "winging it" temporarily is sometimes required on short notice, doing it right, using the right materials and the right procedure is the professional way to do business.

GET YOUR HEAD OUT OF THE BOX

In this age of information and automation, it is too easy to be drawn into a very narrow view of the facts based solely on what the marvelous electronic display is telling you. These systems are not infallible, though many of us seem to have total belief in the information they are presenting ("If it's on the Internet, it must be true"). Who hasn't been led astray by a car GPS that steers you off to the boondocks? The point is that a seasoned mariner uses all aids and sources available to him or her to ascertain the vessel's position and maintain situational awareness. Pulling your head "out of the box" will most often keep you from shoal water that may be plainly visible if you just had looked. The same holds true ashore; more informational "lines of position" will usually result in a better "fix." If you haven't heard that, look it up — this is a nautical outfit!


IT'S NOT CORNY TO PLAN AND DRILL

In fact, it's professional! At sea, drills are a routine part of being ready to swiftly and effectively handle emergencies. Ashore, over the past several years, we've been working on our Mission Continuity Plan. How would we conduct MSC business in the event of a disaster? What would we do in a situation that forces us to abandon our headquarters buildings? We've exercised mobile working. We've planned for relocating to alternate facilities. When Hurricane Sandy hit the East Coast in October 2012, MSC business was virtually unaffected, even though the federal government in D.C. closed down for two days. We could do that because we planned for it, rehearsed it, refined our processes, and figured out how to get the mission done.

DON'T SETTLE FOR MINIMUMS

Whether it's safety, quality or commitment, don't aim for "just enough." Aim to exceed your goals, provide a better service, write a better contract. That's what builds MSC's reputation as the place to go for maritime solutions, knowledge and expertise. That's why the Navy and DoD place trust and confidence in MSC and continue to give us new classes of ships and new missions. It's not because we look good, it's because we are good.

WHEN IN COMMAND, COMMAND!

That is to say, if you are charged with responsibility for something — whether it is to write a report or command an MSC vessel — I expect you to exercise the full extent of your authority to produce the best possible outcome. Whether it's your ship, your department, your task or your life, take charge and forge ahead. You can truly have an impact on much of what happens to you through your own actions. Take charge of yourself and make a difference for MSC, your office, your ship, and yourself. 

Editor's Note: Former Commander of Military Sealift Command, Rear Adm. Buzby, shared his perspectives on sailing in the January 2013 edition of Sealift. He talked about the core values and standards that, when combined with the skills workers bring to the command, define them as individuals and enable them to do their jobs well. Photo of Rear Adm. Buzby and Zulu courtesy of Gina Buzby. Reprinted with permission.

Experience, TCRM Instrumental in Scuba Rescue

By Lt. Cmdr. John Cooke, CTW-5

Early this year, I was involved in a medical intervention that called for time critical risk management. My experience as a physiologist came into play during a dive gone wrong.

In January, I took my 10-year old daughter to Gulf Islands National Seashore for her junior scuba qualification. It was the first of four dives she would have to complete. I was confident that she was in good hands with a qualified dive master, who was also an Army Special Forces combat dive medic. Two other students were present. The group was going 30 feet below in this popular aquatic preserve known for its sandy beaches and aquamarine waters.

As the four submerged into the water, my older son and I waited for a friend to arrive in his boat (we were going fishing nearby while my daughter was diving). Only a couple of minutes into the dive, the instructor and a male student surfaced. As the male diver thrashed (he apparently panicked while underwater and tried to ascend from 30 feet), the instructor yelled out to the beachgoers, "Get him out of the water!"

I retrieved the student as the instructor dove back to look for the others. After watching him search four separate times to no avail, I decided it was time for me to take action. I took the snorkel, mask and a pair of fins from the student who was recovering ashore. I followed a rhythmic flow of bubbles coming from below and free dove to their location. I was immediately engulfed by poor visibility and cold temperature (the surface temperature was a balmy 60 degrees).

After three unaided short and unsuccessful searches, I swam to shore and donned the student's scuba gear and resumed my search. By this time, the dive master had searched five more times. I was about midway to the student divers when the instructor's ninth trip down proved successful. It turned out that my daughter and the other student had been doing some dive drills to pass the time. They were oblivious to the drama that had unfolded.

Ashore, the attention of the bystanders focused on the man who had lost control. But I was more worried about the instructor, who was starting to get light-headed; he attributed it to the extreme workout he had just endured. As we were cleaning up, his efforts became uncharacteristically disorganized. Within minutes, the instructor developed a strong headache and was losing his balance. I suggested that he get checked out by a diving medical officer. He wanted to drive to the hospital while others wanted to dial 9-1-1. The nearest fire department was well over 30 minutes away and the hospital was farther.

By this time my fishing buddy, who was a Coast Guard commander, had arrived and pointed out that his boat would reduce transport time by at least an hour. As we left shore, he alerted the local USCG unit that we were inbound and in need of immediate medical attention. Meanwhile, I called the Aviation Survival Training Center in Pensacola hoping to use the hyperbaric chamber (an enclosed unit used in the recovery of decompression sickness). I wasn't sure if we could get in because it was a weekend. The officer in charge of the Naval Survival Training Institute (NSTI) was available and coordinated an emergency access to the chamber.

We reached the USCG station where ambulance and police arrived shortly. The emergency technicians (EMTs) began assessing the dive master, who was experiencing a right-side headache, spinning vision and confusion. The EMTs stated that protocol required them to transport the patient to the local hospital, which had no chamber facility.

The dive master's condition was critical and any more delays would have caused him permanent damage or killed him. I intervened and introduced myself as an aerospace physiologist. I informed them that I had talked with the NSTI staff about using the hyperbaric chamber where an emergency team was waiting. I insisted that if we didn't get the instructor

An arterial gas embolism (AGE) is a serious health emergency that is a major cause of death following a dive. Common causes include voluntary breath holding during ascent from a dive or a closure of an airway due to diseases, such as a chest cold. The inhaled air leaks directly into an artery too suddenly to be dissolved in the blood. When the diver surfaces the inhaled air forms bubbles in the bloodstream. The bubbles block the blood supply to the heart, brain or other parts of the body, cutting that part of the body off from oxygen and energy. Symptoms may include bloody foam from the mouth or nose, disorientation, chest pain, weakness, dizziness, or convulsions. Treatment involves submersion in a hyperbaric dive chamber, a pressure vessel designed for treating dive-related health conditions.

Sources: Naval Safety Center, National Association of Rescue Divers
Photo courtesy of National Park Service



into the chamber immediately, he could die. The EMTs conceded and in three minutes, we were in the ambulance.

The dive medical officer's initial neurological assessments showed the victim had suffered from an arterial gas embolism (AGE) and conditions were getting worse. They proceeded with the treatment where the staff pressurized the chamber. The instructor would breathe pressurized oxygen and other atmospheric gases, such as nitrogen, at greater than atmospheric pressure.

During the treatment, the inside tender (a diver who closely monitored his condition) reported that at 30 feet, the instructor's room had stopped spinning and his headache had decreased from a 4 to a 1 on a scale of 1 to 10. The chamber nurse and his staff proceeded to a depth of 55 feet, which resolved all the AGE symptoms. He stayed on 100 percent oxygen for four hours and was released to his wife later.

Back at home that night, my family and I talked about the day's remarkable event. I was so relieved that

everything worked out for the dive instructor. The day's incident was a prime example of how risk management can benefit everyone in a stressful situation. My years of experience and Navy ORM training make me able to take correct and decisive actions. I also saw this in my daughter's ability to remain calm. She told me later that the diver who panicked had kicked off her mask and regulator. She had focused on her training and knew what to do and how to react.

I now live a bit more prepared. I keep a diving medical officer's number on my cell phone. I dive with enriched air and use the buddy system, both in the water and out. I also have increased my life insurance. As for my daughter, she didn't mind me being in the water during her remaining dives. The incident also gave her a new level of confidence.

There are no shortcuts to becoming a certified scuba diver, but once learned, the skill can go a long way. **SC**

Lt. Cmdr. Cooke is an aeromedical safety officer with Training Air Wing Five at NAS Whiting Field, Fla.

U.S. Navy photo by MCSN Andrew Breese



ND1 Mike Barnett, left, and ND1 Chad Christensen test built-in breathing masks inside a recompression chamber located in the dive locker at Naval Undersea Warfare Center Keyport, Wash. The recompression chamber is used to treat diving-related disorders and other medical conditions with hyperbaric oxygen therapy.



The Bold, the Daring and the Stressed

Special from the Naval Center for Combat and Operational Stress Control

Combat and the operations that support it often capture the headlines when talking about psychological stress in Sailors. But even apart from combat, the surface, sub and air communities have experienced an arduous, high-operational tempo for many years. Longer periods at sea are coupled with maintaining warfare, training and inspections requirements, as well as equally demanding periods in home port. One much-deployed ship knows it all too well.



“Bold and Daring” reads the banner on USS *Decatur* (DDG 73), a ballistic missile defense (BMD) destroyer homeported in San Diego. The phrase describes the ship’s namesake — the great 19th century naval warfighter Stephen Decatur — and it’s an equally apt description of the ship’s 21st century mission and the attitude of her Sailors.

But the bold and the daring are not impervious to stress. USS *Decatur* has deployed four times in four years

as part of an effort to deter aggression from potential enemies in the Persian Gulf.

“With limited BMD ships in the fleet, we end up away more than we’re home,” said HMC (SW) Shawn Brooks, the ship’s senior medical department representative. “This doesn’t hit home with the young Sailors until after we leave port, and then it kind of snowballs for them.”

Being away from home and family is difficult, and the stressors attached to the job are often immediate and relentless. Sailors on ships like *Decatur* have taken the brunt of budget cuts over the last few years.

“We’re doing the same job with 10 Sailors today that 30 Sailors were doing just six or seven years ago,” said Brooks. “The work hasn’t changed. The gear hasn’t changed. We’re just working our Sailors harder.”

Brooks added that positive leadership, a clear sense of mission and awareness of stress management are key to helping the Sailors find balance. Still, there are challenges.

“Once we’re at sea, little issues from home creep up. Like hearing how a dishwasher is breaking or a child getting in trouble or the spouse getting a parking ticket — it all starts to add up and eventually, some people crack.”

While there has not been time to do structured training in Operational Stress Control aboard the ship, Brooks said officers and chiefs know the importance of reminding Sailors to take care of themselves and one another. Much emphasis is placed on suicide awareness.

“We reinforce looking out for each other and we keep an eye on everyone,” Brooks said. “If we think someone is at risk, we’ll shadow them to make sure they’re OK.”

Cmdr. Shanti Sethi, [former] commanding officer of *Decatur*, emphasized the importance of supporting those who ask for help — whether it’s pressure from work or home.

“We encourage divisional leadership to communicate our plans and schedules so that the entire crew understands what’s coming next,” said Sethi. **SC**

Editor’s Note: This article was previously published in Mindlines, Spring 2012. Reprinted with permission by the Naval Center for Combat and Operational Stress Control Strategic Communications.

Is OPTEMPO Driving Us to Fall Asleep at the Wheel?

By EMCM (SW/AW) Frank Valdepeña

How many times have you stood watch or conducted an evolution and have been completely drained halfway through it? Did you count the minutes until you were relieved? How aware of your surroundings were you at that time?

As leaders we manage our Sailors, both personally and professionally. We tell our Sailors about the dangers of drinking and driving. We counsel them on getting plenty of rest prior to taking a long trip. But

are we taking the time to ensure our Sailors are getting adequate rest prior to taking the watch, operating multi-million dollar pieces of equipment or navigating ships?

We all know that undisturbed sleep is hard to come by while at sea. If a watchstander averages four to five hours of undisturbed sleep a day for three consecutive days, that person's effectiveness is down to 70 percent by the end of the third day. This also takes into account that the Sailor has the same sleep start time each night. If the Sailor does not sleep at the same time each night, and the sleep is of a lower quality, the watchstander's effectiveness continues to decline.

Sleep deprivation can have a similar effect on attentiveness as consuming alcohol. By the end of the third day the same watchstander would have a similar mental awareness of someone that had a blood alcohol concentration of more than 0.08. This is legally drunk!

Lt. Elizabeth DeVault, right, and GM3 John P. Bransom stand watch on the bridge aboard the aircraft carrier USS *George H.W. Bush* (CVN 77).



U.S. Navy photo by MC2 Kasey Krall

Fatigue is a subjective feeling of tiredness which is distinct from weakness and has a gradual onset. Unlike weakness, fatigue can be alleviated by periods of rest. The onset of mental fatigue during any cognitive activity is gradual and depends upon an individual's cognitive ability, and also upon other factors, such as sleep deprivation and overall health.

Source: Wikipedia

We would not let them get behind the wheel of a car. If we thought a watchstander was drunk, we would not let them take the watch. If we knew their mental awareness was diminished, I am sure they would not be allowed to take the watch.

With the demanding operational tempo (OPTEMPO) of the military, adequate sleep is a valuable — and sometimes rare — commodity. We face a culture today to tough it out, work long hours and then take the watch, as to not put a burden on anyone else. This behavior can put others at risk.

Supervisors have to take on some of the responsibilities to minimize risk. Are you taking the time to verify Sailors are getting adequate rest, and balancing workloads and watchstanding? Verifying adequate time to rest should be part of every supervisor's operational risk management plan. This will ensure that a safe watchbill is written and that risks are managed for scheduled work.

We charge our personnel with significant responsibilities, and part of that is getting enough rest. Don't just assume that your personnel will tell you when they are tired or have worked too long. Be proactive. Make sure fatigue does not lead to mistakes. **SC**

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EMCM Valdepeña is a submarine analyst in the Naval Safety Center's Afloat Safety Programs Directorate.

ONLINE RESOURCES

"Sleep Impacts Reaction Time as Much as Alcohol," by Mitch Leslie, Stanford Report, September 29, 1999

<http://news.stanford.edu/news/1999/september29/sleep-929.html>

Sleep Deprivation: Impact on Cognitive Performance, National Institutes of Health

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2656292/>



An operations watchstander, of Amphibious Squadron 11, analyzes ship movements of a "synthetic" battle group during a Fleet Synthetic Training exercise held aboard amphibious assault ship USS Essex (LHD 2).

The Real Value of \$3 Safety Glasses

By GSE3 (SW) Kayode Adewole

Closely following precautions is key to getting through an availability period mishap-free. I learned this firsthand while aboard USS *Chancellorsville* (CG 62) during her extended development selective repair availability in 2012.

The CO had mandated the wearing of hard hats and safety glasses at all times. This new requirement wasn't something easy to transition to, especially when I had just broken in my command ball cap.

One day, while on duty as the inactive equipment maintenance (IEM) watchstander, I was conducting a routine tour through the engineering spaces. I was wearing the prescribed hard hat, safety glasses, and hearing protection. It had gotten to the point that my ship had been in the yards for more days than I cared to count. These safety measures became as common to me as lacing up my steel-toed boots every morning.

As I was patrolling through the bowels of the ship that night, a piece of equipment broke. Relying on years of training from my LDO, CPO and DIVO, I rushed to the side of the area from where I heard the commotion. A piece of equipment was gushing water. I immediately reported it to the Central Control Station, telling them that I was on scene.

I realized that it was no minor piece of machinery — it was a critical fire pump. The fire pumps onboard are primed at 150 psi. If leaks aren't quickly contained, spaces can readily flood. In this case, the water spewing out the top of the pump was not at full pressure; I knew how to contain and fix it.

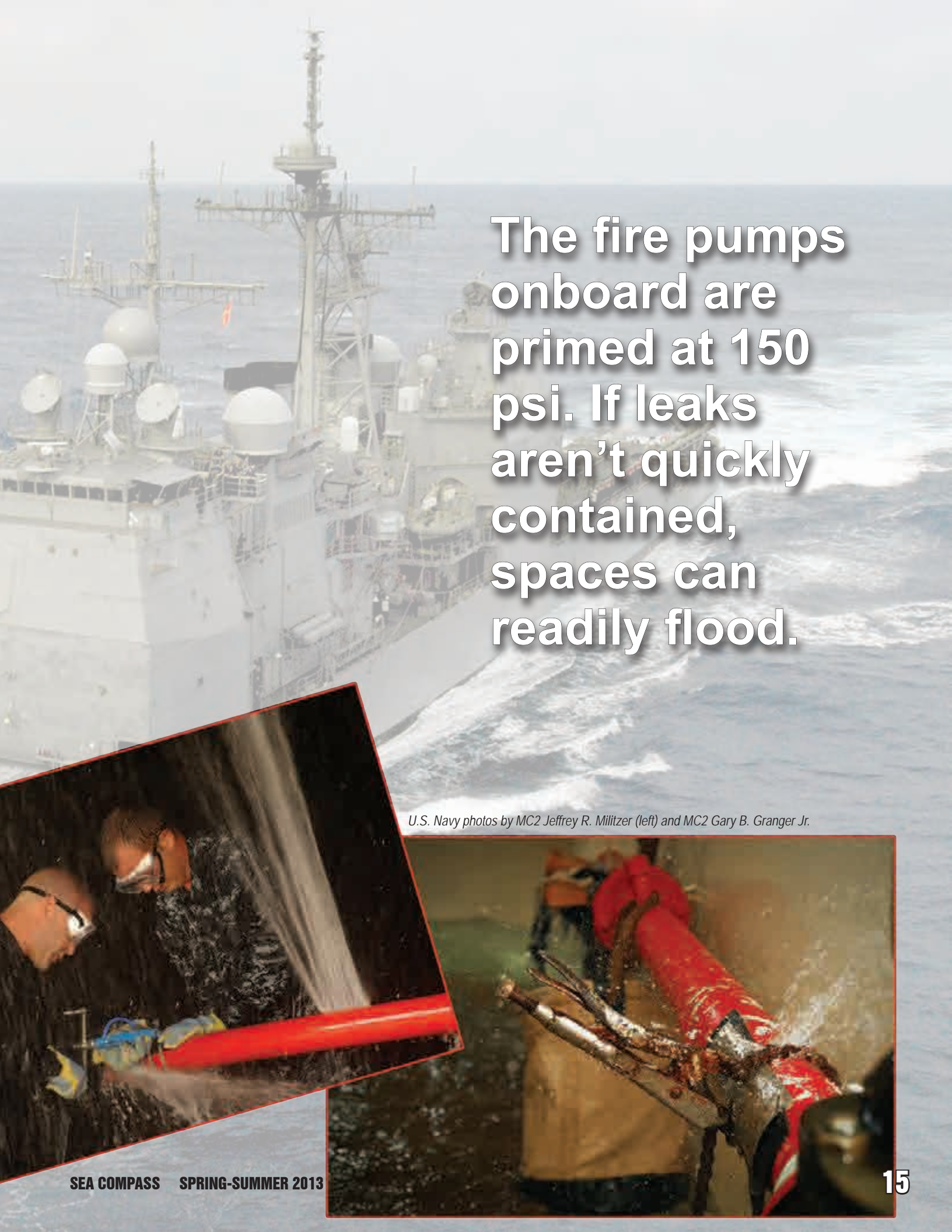
As I focused on the job at hand, with water soaking my coveralls and covering my safety glasses, the stem

of the pump burst. The pipe flew right at my face. I did not have enough time to react when the pipe struck my safety glasses dead-on before clanging into the cramped space. I could not stop thinking about how lucky I was that the pipe didn't knock the glasses off. Water was still coming out of the pump. It took several more minutes before I fixed the pump and was able to take stock of what had just happened.

I searched the space and found the metal pipe. I took off my glasses to survey what the thick piece of metal did to them. I noticed a small crack on the nose bridge. The impact-resistant safety glasses had saved me from a potential broken nose and averted the likelihood of blindness. I was in shock. That \$3-pair of glasses I had been wearing for months had just saved me from a potential life-altering injury. All this time they were nothing more to me than a check in the box everyday: boots, socks, coveralls, belt, hard hat, hearing protection, and safety glasses.

It wasn't luck that prevented this possible injury; it was properly worn protective personnel equipment. **SC**

GSE3 Adewole was attached to USS *Chancellorsville*.

A large U.S. Navy ship, likely a fleet ocean tug, is shown from a high angle, sailing on a choppy blue sea under an overcast sky. The ship's complex superstructure features numerous radar masts, satellite domes, and antennas. The ship's hull is white, and it has a dark upper section. The wake of the ship is visible in the water.

The fire pumps onboard are primed at 150 psi. If leaks aren't quickly contained, spaces can readily flood.

U.S. Navy photos by MC2 Jeffrey R. Miltzer (left) and MC2 Gary B. Granger Jr.



THRESHER: Cold War Casualty

By David Sears

The month of April marks the 50th anniversary of the loss of 129 men aboard the submarine *Thresher* on April 10, 1963, far off Cape Cod, Mass. The complete cause of the sinking may never be known, but the memory of those who died must never be forgotten.

On the evening of April 10, 1963, veterans gathered in Philadelphia aboard the decommissioned submarine USS *Hake* (SS 256). They came to honor 3,500 comrades lost during World War II — many without a trace. But even as a next-of-kin tossed a memorial wreath into the Delaware River, in the deep Atlantic waters 220 miles east of Cape Cod, some 100 more men had joined the ranks of the dead.

That same morning, USS *Thresher* (SSN 593), the first of a class of swift, deep-diving nuclear-powered submarines designed to attack both surface ships and other submarines, was lost at a depth of 8,400 feet. The final human toll would be 129 — 108 crewmen and 21 military and civilian specialists. It was the Navy's first nuclear submarine disaster — and its worst submarine tragedy ever.

First in the Class

Thresher had been commissioned in August 1961 at the government-operated Portsmouth Naval Shipyard in New Hampshire. In July 1962, after passing initial sea trials which included tests of her ability to withstand underwater explosions, *Thresher* returned to Portsmouth for a “post-shakedown” and “reliability” overhaul.

Her nine-month stay was unusually long but not surprising: *Thresher* was the first of a new submarine class with many new systems. Finally, though, on the morning of April 9, commanded by Lt. Cmdr. John W. Harvey, a new but experienced skipper, the boat departed Portsmouth for two days of post-overhaul trials. Two hours later, east of Boston, *Thresher* rendezvoused with USS *Skylark* (ASR 20), a submarine rescue ship equipped with diving and sonar gear. On the first day, *Thresher* conducted a shallow dive test, communicating with *Skylark* via UQC, an underwater acoustic radio communications device.

As planned the two ships met up again early the next morning, this time in deep waters. At 7:47 a.m., *Thresher* informed *Skylark* that she was beginning to submerge to her “test depth,” the 1,300-foot limit at which she was designed to operate. Five minutes later, *Thresher* reported herself 400 feet deep, checking for leaks. UQC

transmissions resumed as *Thresher* continued down. For secrecy purposes, reports were stated as relative to test-depth rather than actual feet.

After 9 a.m., *Thresher's* UQC transmissions became garbled. According to *Skylark's* official log, sometime after 9:12 a.m. *Thresher* reported difficulty. “Have position up angle ... Attempting to blow up,” the *Skylark* log recorded, indicating *Thresher's* crew was trying to surface, using compressed air to empty ballast tanks.

Her last words were cluttered with static, indecipherable except for what sounded, to *Skylark* navigator Lt.j.g. James D. Watson, like “... test depth.” These words became *Thresher's* epitaph.

Attempts at Rescue

Having lost communication, *Skylark's* skipper Lt. Cmdr. Stanley W. Hecker carefully marked his ship's position and began patrolling the area, all the while transmitting to *Thresher* and listening for any response. At 10:58 a.m., *Skylark* began dropping grenades into the water, a pre-arranged signal for a submarine to surface if communication had been lost. At the same time, *Skylark* alerted sub headquarters in New London, Conn.

More extensive search efforts soon got under way. The Navy dispatched a search aircraft and three vessels — nuclear submarine *Sea Owl* (SS 405) and rescue ship *Sunbird* (ASR 15). As concern mounted, more resources joined, including additional aircraft — a third rescue ship, a destroyer and two frigates. Hope that the incident was a simple communications glitch faded with the passing hours. Searchers found inconclusive yet distressing remnants on the surface: oil slicks and pieces of cork and plastic.

Notifications of next-of-kin began at 7 p.m. in advance of a planned 8 p.m. press announcement. *Thresher* was deemed “overdue and presumed missing” — the same wording used for wartime submarine losses. The following morning, even as the on-scene flotilla expanded, Chief of Naval Operations George W. Anderson announced to the Washington press “with great regret and sadness” his conclusion “that this ship with 129 fine souls aboard is lost.”

Court of Inquiry Convenes

Anderson simultaneously announced the convening of a court of inquiry, headed by Vice Adm. Bernard L. Austin, president of the Naval War College. Organized in New London, the five-member court soon moved to Portsmouth. It eventually heard from 120 witnesses and compiled 1,700 pages of evidence during eight weeks of testimony, much of it behind closed doors. The parade of witnesses included Navy brass, veteran submariners, shipyard managers, forensic experts and even crew family members.

Perhaps most telling were the statements of two of the four crewmembers, who, for different reasons, had missed the ill-starred voyage. Both Lt. Raymond McCoolle, the boat's reactor control officer, and Chief Machinist's Mate Frank DeStefano reported problems with *Thresher's* main seawater valve. McCoolle also described persistent malfunctions in the compressed air systems vital to the operation of the ballast tanks.

In all, witnesses pointed to many possible factors: faulty hull and interior pipe construction; inadequate deballasting technology; frequent, disruptive changes in shipboard personnel; insufficient shipboard emergency training; and lagging appreciation for the dangers posed by the nuclear submarine's faster and deeper operational environment.

The court issued its still-inconclusive public findings in a June 10 announcement by Secretary of the Navy Fred Korth. The April 10 sinking, Korth said, was "most likely" caused by a failure in a piping system which in turn caused sea water to flood *Thresher's* engine room. In "all probability" the "violent spray of water" damaged electrical circuits and cut off power. *Thresher* slowed and began to sink. Within moments she exceeded her collapse depth, totally flooded, and then imploded before eventually settling on the ocean floor.

It was not until Aug. 28 that substantial remains of *Thresher* were finally found. The Navy bathyscaphe *Trieste*, piloted by Lt. Cmdr. Donald Keach, identified remains at a spot the Navy labeled Point Delta, at 41 degrees, 45 minutes N.Lat., 65 degrees W. Long. Using *Trieste's* remote control pickup arm, Keach snagged a section of copper pipe. Job and serial numbers were etched in the pipe as was the designation "593 boat." The 10-pound, 57-inch long piece of pipe was found in an area of ocean floor Keach described as "like an automobile junkyard."

Reappraising the Tragedy

As months and years passed, reappraisal of the tragedy persisted. Much of it centered on the inability of the Navy inquiry court to attribute the disaster

to the "intent, fault, negligence, or inefficiency" of anyone involved.

In April 1964, testimony before a House congressional subcommittee, for example, Vice Adm. Hyman G. Rickover, head of the Navy's nuclear propulsion program, implied that *Thresher's* loss demonstrated a "lack of individual responsibility within the Navy in the management of technical projects."

Much later, in a 1993 newspaper interview, Raymond McCoolle also called the Navy to task for its personnel rotation practices: "They had almost a complete change of crew [before *Thresher* sailed], and the captain, although, an experienced nuclear submariner, [had] been aboard [only] for months."

Despite the indeterminate soul searching, the Navy did make fundamental changes. Within months, a Submarine Safety Center was established in Groton, Conn. Meanwhile designers and engineers devised technical fixes: a centralized control room system to quickly shut off all piping valves and emergency ballast blow system for use in deep waters. Even ironclad nuclear program procedures were modified to speed recovery from a "scram" — the total loss of main power due to a reactor shutdown.

A Fortunate Crewman

Garron S. Weitzel, another of the four lucky crewmen who sidestepped the disaster, reflected on the loss of *Thresher*. "I heard about the sinking while I was in the Dam Neck mess hall," he said. "Everyone knew I was assigned to *Thresher*, so at first I thought it was a joke. Then I was just shocked. She was a good ship with good men."

Although Weitzel was never called to testify before the inquiry, he was interviewed by personnel at Dam Neck, Va. He said of the underwater explosion tests: "I still think those blasts somehow damaged a pipe and the damage was never detected and fixed."

The truth of what actually happened to *Thresher* rests with the souls of those who perished. Their sacrifice sobered everyone in the sub community and inspired major improvements in nuclear-powered boat construction and operation. Their 129 lost lives doubtless saved untold others. **SC**

Editor's Note: The Submarine Safety Program (SUBSAFE) was created as a direct result of Thresher's loss. Mr. Sears' article appeared in the April 2013 issue of VFW magazine. Reprinted with permission. (Naval Historical Center photo)

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Mr. Sears is an author, historian and former naval officer. His most recent book is *Pacific Air*. His Web site is <http://www.dlsearsbooks.com>.

How Much Does It Weigh?

Operating a forklift is tricky; lifting heavy objects with a forklift is even more challenging – shipboard or dock side. This proved to be even more so for a Marine sergeant who learned a gravity-defying lesson on weights and balances.

By Gunnery Sgt. Amber Allison

I adjusted the fork tilt, pulled up under the pallet with ease and lifted it off the ground a few inches. As I drove the short distance to the ammunition-laden vehicle ahead, I slowly started lifting the pallet a little higher. I stopped short of the truck by about the distance of a pallet-and-a-half and placed the forklift in park. I began lifting the pallet when it suddenly felt as if the forklift were tilting forward. When I realized that the back wheels were actually coming off the ground my mind started racing.

How much does the pallet weigh? I didn't do the math and obviously neither did the package crew. As I realized I was about to lose this pallet, it fell off the forks and landed on its side. I stared at the pallet bottom, all I could think of was "This is going to hurt"!

I immediately thought of my fork-lift operation training to stay upright. I then held both hands tight on the steering wheel, pulled my knees together and braced for impact. I surely did not think that tilting

back flat at about 3.5 to 4 feet would knock the wind out of me. But as the back end of the forklift hit the ground and bounced a little, I couldn't breathe. My hard hat fell off. It reminded me of the time my brother jumped off the seesaw, bouncing me in the air before hitting the ground breathless. After regaining my composure, I released the seat belt, got off the forks and lay on the ground with my arms spread above my head.

When I caught my breath, I unleashed a whirlwind of fury and butt-chewing upon the package crew (all the while feeling like a hypocrite because I knew I was just as much to blame). Thankfully the axle on the forklift didn't bust. The hydraulics for the forks still worked fine, and the ammo was only small arms and not something that could have exploded. I got off light with this minor mishap. The moral of the story is you can never get complacent in any job, whether it is ashore or shipboard.



U.S. Navy photo by JO3 Kat Smith

In a study by the Centers for Disease Control and Prevention (CDC) from 1980 to 1994, forklift accidents involved the death of 1,021 workers:

Type of Incident	% Total Victims
Forklift overturns	22
Worker on foot struck by forklift	20
Victim crushed by forklift	16
Fall from forklift	9

CDC data source: <http://www.cdc.gov/niosh/docs/2001-109/>

According to Naval Safety Center data from 2005 to 2013, 224 mishaps have occurred; 18 percent of which happened aboard ship.

Service	Class A*	Class B**	Class C***
Navy	2	8	164
Marine	1	0	49

Forklift Refresher Rules

Below are some rules to live by for those who operate forklifts. See if you can identify the ones I violated and which ones you have violated in your past:

- Do not operate a forklift unless you have been trained and licensed.
- Use seat belts if they are available.
- Report to your supervisor or maintenance department any damage to or problems with a forklift during your shift.
- Do not jump from an overturning, sit-down type forklift. Stay with the truck, holding on firmly and leaning in the opposite direction of the overturn.
- Exit from a stand-up type forklift with rear-entry access by stepping backward if a lateral tip over occurs.
- Use extreme caution on grades or ramps.
- On grades, tilt the load back and raise it only as far as needed to clear the road surface.

- Do not raise or lower the forks while the forklift is moving.
- Do not handle loads that are heavier than the weight capacity of the forklift.
- Operate the forklift at a speed that will permit it to be stopped safely.
- Slow down and sound the horn at cross aisles and other locations where vision is obstructed.
- Look toward the travel path and keep a clear view of it.
- Do not allow passengers to ride on forklift trucks unless a seat is provided.
- When dismounting from a forklift: set the parking brake, lower the forks or lifting carriage, and neutralize the controls.
- Do not drive up to anyone standing in front of a bench or other fixed object.
- Do not use a forklift to elevate workers who are standing on the forks.
- Elevate a worker on a platform only when the vehicle is directly below the work area.
- Whenever a truck is used to elevate personnel, secure the elevating platform to the lifting carriage or forks of the forklift.
- Use a restraining means such as rails, chains, or a body belt with a lanyard or deceleration device for the worker(s) on the platform.

- Do not drive to another location with the work platform elevated.
- Use a ground guide at all times.

Mishap Definitions

**Class A mishap.* The resulting total cost of damages to government and other property is \$2 million or more, a DoD aircraft is destroyed (excluding unmanned aircraft system groups 1, 2, or 3), or an injury or occupational illness results in a fatality or permanent total disability.

***Class B mishap.* The resulting total cost of damages to government and other property is \$500,000 or more, but less than \$2 million. An injury or occupational illness results in permanent partial disability, or when three or more personnel are hospitalized for inpatient care (which, for mishap reporting purposes only, does not include just observation or diagnostic care) as a result of a single mishap.

****Class C mishap.* The resulting total cost of property damages to government and other property is \$50,000 or more, but less than \$500,000; or a nonfatal injury or illness that results in 1 or more days away from work, not including the day of the injury. **SC**

Gunnery Sgt. Allison is a weapons analyst in the Shore/Ground Safety Programs Directorate, Naval Safety Center.

CDC and Naval Operations Forklift Mishaps

A 43-year-old man was killed when the forklift he was operating overturned and pinned his head and neck to the concrete driveway. He was driving a sit-down type forklift to unload steel tubing from a flatbed trailer. The man drove the forklift about 5 miles per hour beside the trailer on a concrete driveway with a 3-percent grade. The man turned the forklift behind the trailer, and the forklift began to tip over on its side. He jumped from the operator's seat to the driveway under the falling-object protective structure (overhead guard).

A young Marine died from severe head trauma after being thrown from his seat and pinned under the 2-ton forklift he was operating. The Marine was driving at high speed and was not wearing a seat belt. He missed the turn to his entrance point, slammed the brakes, and overcorrected the turn causing the rear end to fishtail.

A 61-year-old died after falling 7 feet from a safety platform that had been elevated by a forklift. He had been raised in a steel-framed, cage-type safety platform that had not been secured to the forklift. The victim removed a fluorescent light bulb from its fixture and stepped to one side of the platform. When the victim shifted his weight from the center to the outer edge, the platform toppled off the forks. The victim fell about 7 feet, struck his head on a concrete floor, and was subsequently struck by the steel safety platform.

While underway a Sailor was crushed to death when trying to board the side of a forklift while the operator was driving in reverse. The driver did not know he had a passenger and pinned the Sailor between the bulkhead and the forklift.

Personal Firearms, Responsibility

By GMC (SW) Barry Cramer, Weapons Analyst, Naval Safety Center

Thousands of people die or get injured each year from accidental shootings while cleaning or handling personal firearms. The National Center for Injury Prevention and Control reports that 14,675 people were wounded in 2011 in an unintentional shooting but survived. In 2010, 606 people in the U.S. died from an unintentional shooting. If you own or are planning to buy a weapon and not very familiar with guns, here are a few basic safety rules.

- Treat every firearm as if it were loaded.
- Always keep the firearm pointed in a safe direction.
- Keep weapon on safe and finger off the trigger until ready to shoot.
- Always know the target and what's behind the target.

Note that plenty of victims are shooters who were very familiar with guns — so familiar that they got sloppy or complacent.

HANDLING

Before handling a gun, learn how it operates. Know its basic parts. Learn how to safely open and close the action. A gun's mechanical safety device is never foolproof. Remove any ammunition from the gun or magazine. Most shooting ranges hold safe weapons-handling classes with live-fire instruction. Never use alcohol, over-the-counter prescriptions or other drugs before or while handling or shooting.

STORAGE

Many factors must be considered when deciding where and how to store guns. Store firearms where they are not accessible to children or unauthorized persons. Also consider individuals with mental problems or who are on prescription drugs. These conditions can affect their ability to make good decisions. A variety of gun storage devices are available such as gun safes or cable locks that go through the barrel and trigger locks. Note that mechanical locking devices, like the mechanical safeties built into guns, can fail and should not be used as a substitute for safe gun handling and the observance of all safety rules.

CLEANING

Clean the gun regularly to ensure it operates correctly and safely. Taking proper care of it will also maintain its value and extend its life. Before cleaning your gun, make absolutely sure that it is unloaded and in operable condition. The gun's action should be open during the cleaning process. Make sure that no ammunition is present in the cleaning area. Inspect for cracks, burrs and defective parts. If concerned about a gun's ability to function properly, a knowledgeable gunsmith should look at it.

TRAINING

The Navy E-Learning now offers the Personal Firearm Safety training course (Catalog number/ Course ID: CSF-PFS-010). Training is optional at this time but recommended for firearm owners. Mandated training will be directed when the next revision to the Navy Recreation and Off-Duty Safety Program (OPNAVINST 5100.25B) instruction is finalized. Log in to Navy Knowledge Online at <https://www.nko.navy.mil/portal/home/> or go to the Naval Safety Center Web site for more information at <http://www.public.navy.mil/navsafecen/Pages/ashore/explosives/PersonalFirearms.aspx>.

Sources:

Centers for Disease Control and Prevention, National Rifle Association

ONLINE RESOURCES

State Laws on Handguns

<http://www.handgunlaw.us/>

CDC Morbidity and Mortality Weekly Report, September 14, 2012

<http://www.cdc.gov/mmwr/pdf/ss/ss6106.pdf>

ORM
on the web

browse
preview
download
sign up



<http://www.public.navy.mil/navsafecen/pages/orm/orm.aspx>

Check Exhaust Ducts for Hazardous Gas Leaks

By GSCS (SW) Noah Lopez

Our shipboard surveys are showing a frequent occurrence of exhaust leaks from exhaust ducts on gas turbine modules and gas turbine generators. Ship's force personnel often are aware of the discrepancy but aren't fixing the problem.

The *Joint Fleet Maintenance Manual* (Rev. C/Vol. IV of COMUSFLTFORCOMINST 4790.3) specifies that marine gas turbine inspectors must consider this discrepancy as a "Repair Before Operating" (RBO) situation. Any existing condition categorized as RBO, if left unattended, would be hazardous to personnel and shipboard safety.

Stack gases from exhaust leaks significantly reduce the stay time in a heat-stress environment. Many shipboard spaces contain environments of high heat and humidity, including engineering spaces, galleys, sculleries, and laundry rooms. Personnel can remain

only 66 percent of the time working in these areas. Leaks can severely burn personnel and could lead to a main space fire if left unattended. To help ensure an exhaust stack's integrity, inspect the lagging. Burnt lagging and severe carbon build-up are the most common indications of exhaust leaks. While conducting routine PMS according to the Maintenance Index Page 2591 instructions, pay special attention to the exhaust ducting to identify this discrepancy. If there's a leak, ship's force personnel shall submit repair jobs in time to meet planning milestones. This is critical in allowing personnel to perform work during continuous maintenance availabilities, prevent scheduling conflict and increase engine readiness.

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GSCS Lopez is a main propulsion analyst in the Naval Safety Center's Afloat Safety Programs Directorate.



EVIDENCE OF EXHAUST LEAKS

❶ Upper level of NR 3 GTG exhaust stack

❷ Upper level MER 2 GTM 2B exhaust stack

❸ Lower level MER 1 NR 1 GTG inspection cover

❹ Upper level MER 2 NR GTG exhaust stack



Storing Disinfectants

By HMC (SW/AW/FMF) Randahl Benson

Recent safety surveys have revealed major problems with the storage of calcium hypochlorite. Calcium hypochlorite is a disinfectant agent used on ships for the emergency purification of potable water and the decontamination of biological and chemical agents. One of the major problems we find on safety surveys is that PMS is either not being done or is being done wrong.

It is an extremely strong oxidizer and will react with rags, fabrics, antifreeze, ammonia, paints, oils, greases, detergents, acids and alkalis. When heated, calcium hypochlorite decomposes to chlorine gas, phosgene, and other toxic and corrosive gases. Accidental contact with moisture causes formation of toxic chlorine gas.

Refer to the *Naval Ships' Technical Manual* (NSTM) 470, "Shipboard Biological Warfare/Chemical Warfare Defense and Countermeasures" and NSTM 533, "Potable Water Systems," for additional handling and use practices. Ensure you conduct PMS as outlined in the Maintenance Index Page (MIP) 6521/601.

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



An example of an improperly maintained hypochlorite locker.

BASIC REQUIREMENTS

- Ready-use calcium hypochlorite issued to the medical and engineering departments must be stored in a locked box mounted on a bulkhead.
- Don't store more than 48, six-ounce bottles in a locker.
- Use a metal box, such as a first-aid locker (Navy Stock Number 1H 2090-00-368-4792). Make sure that you have enough lockers to store the amount of calcium hypochlorite you are required to have. Drill at least three 1/4-inch vent holes in the bottom of the box to allow release of any chlorine products. Paint the boxes gray.
- Label all calcium-hypochlorite storage spaces, lockers and cabinets with red letters on a white background.
- Don't use commercial lockers intended for flammable liquids or corrosives to store calcium hypochlorite.
- Keep calcium hypochlorite lockers away from oil lines and other potential sources of combustible material. Keep the lockers at least 5 feet from any source or surface which may exceed 51.7°C (125°F).

Here are a few more important points about storage:

- Store calcium hypochlorite in well-ventilated areas.
- Don't store in machinery spaces, storerooms, flammable-liquid or compressed-bottle stowage areas, hazardous-waste minimization centers, berthing spaces, or oil- and water-test laboratory areas
- Don't store in areas used for stowing greases, oils, paints or other combustible materials.
- Storage areas must not be subject to condensation or water accumulation. To help reduce off-gassing of chlorine gas, individual six-ounce bottles may be put in a plastic bag and sealed (zipped) shut.

Ask the Experts

QUESTIONS, MYSTERIES AND UNCLEAR ISSUES ANSWERED BY NAVAL SAFETY CENTER ANALYSTS

Send your questions to safe-seacompass@navy.mil.



Mobile, Portable or Personal: Do You Know the Difference?

By EMCM (SW) Matthew Kerridge

Since joining the survey team at the Naval Safety Center, I have seen some amazing and creative things when it comes to shipboard Sailors and their electronics. Some Sailors make their own rules when describing the equipment (mobile, portable and personal) that they operate onboard and figuring out how to check it.

The *Naval Ships' Technical Manual* (NSTM) 300 and Maintenance Index Page (MIP) 3000 are the governing documents for standardizing the use of electrical/electronic equipment. Most Sailors are improperly using the MIP 3000 when doing electrical safety checks. It is important that you know the true difference between various kinds of devices.

Mobile and Portable

Electrician's mates and electronics technicians must take the time to read each line item for mobile and portable equipment. The major contributor to the dilemma is the MIP 3000, which contains these definitions:

► **Portable Equipment:** These can be used in multiple locations. Think hand-held devices. MIP 3000/001 Q-1R (2-prong), Q-2R (3-prong). This also applies to all battery chargers for hand-held devices, referencing Scheduling Aid 10.

► **Mobile Equipment:** Normally stationary but can be moved. Check during initial installation and again when moving. MIP 3000/001 R-5 (3-prong), R-6 (2-prong)

► **Surge Suppressors:** Must be metal-cased. MIP 3000/001 A-4R NOTE 2 describes the proper suppressor that is required onboard. NSTM 300-2.7.3.5.d is

even more descriptive and gives a great explanation as to why we use them.

Big-Ticket Items

► **Electric Submersible Pumps (ESPs):** The actual reference is MIP 6641/006 A-11, which has a note to conduct the MIP 3000 R-8 if idle longer than 30 days. Check your ESPs, remove MIP 3000 A-3, as the A-3 is for hardwired units. Read the check and be familiar with your systems.

► **Jackstaff or Flagstaff:** Do not use the MIP 3000 R-2, which is solely for dress ship or waterline security. Check using R-5 or R-6, which is specific to mobile equipment.

Personal Equipment

Let's talk about personal electrical equipment that the electrical officer has allowed onboard. If you are using MIP 3000 to safety check these items, you are wrong. Read Scheduling Aid 5 closely and you will discover that NSTM 300 is the governing document for personal gear. Also, using the self-adhering sticker is authorized but commands may use a color-coded label.

Electrical safety is not just the job of those in the electrical and electronic ratings. Everyone needs to be smarter about managing their electrical safety programs. Reading — and truly understanding — our governing documents and instructions is the first step toward success stories. Remember, you can always add to the standard but you can never take away from it. **SC**

EMCM Kerridge is the fleet electrical analyst in the Naval Safety Center's Afloat Safety Programs Directorate.



Seconds Count in Preventing Poolside Tragedies

By Wanda M. Walters

I remember stretching out on a poolside chaise lounge and thinking, “This is the only way to study.” My son, a 3-year-old at the time, was playing happily in an adjoining kiddie pool. A friend stopped to ask how graduate school was going. While chatting with her, I glanced toward the pool. My son had disappeared!

I quickly scanned the area just in time to see him jumping in the deep end (8-feet) of the Olympic-sized adult pool. He only had limited dog-paddling abilities; I quickly ran and dove in after him. When I reached my son, he was having a great time and oblivious to the danger he was just in. He thought it was cool his mommy was also in the pool.



In less than 10 seconds, with his mother less than 20 feet away, my son had become a potential drowning victim. Now, years later and after his many swimming lessons, I worry less.

This personal experience highlights the fact that, according to the National Safety Council, drowning ranks as the seventh leading cause of injury deaths for all ages and the second leading cause of death in children ages 1-14. More than 3,300 people drowned in the U.S. in 2001, according to the Centers for Disease Control and Prevention. That figure doesn't include drownings related to boating accidents. Statistics show that most drowning accidents occur in residential pools — at the victim's own home. About 75 percent of the youngsters under age 5 who drown were not expected to be at or even near a pool; more than half of them were thought to be safely inside the house. Many times, they drown quickly and silently, without any splashing or screaming.

The U.S. Consumer Product Safety Commission reminds pool owners that there are steps they can take to avoid these tragedies. Physical barriers designed to limit access to pools provide an important layer of security. Effective barriers include fences or walls and motor-powered safety covers over pools. Fences and walls should be at least 4-feet high, and they should be installed completely around the pool. Fence gates should be self-closing and self-latching. Put the latch out of small children's reach, and then periodically test their skills to ensure they haven't figured out how to open the latch.

If your house forms one side of a pool's barrier, protect the doors leading from the house to the pool with alarms that produce an audible sound when the doors open. A motor-powered safety cover is an alternative to door alarms. For an above-ground pool, secure steps and ladders or remove them when no one is using the pool.

Never substitute flotation devices as substitutes for supervision. Realize that just because children know how to swim doesn't make them drown-proof. Watch them closely while they're in the pool; if one is missing, check the water first. Seconds count.

Keep rescue equipment and a phone by the pool, along with emergency numbers. Parents and other caregivers — such as grandparents, babysitters, and older siblings — who know CPR can greatly improve a drowning victim's chances for survival. **SC**

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Ms. Walters was assigned to NAS Sigonella, Sicily.

ONLINE RESOURCES

Safety Barrier Guidelines for Home Pools

<http://www.cpsc.gov/PageFiles/16575/pool.pdf>

Swimming and Water Safety

<http://www.redcross.org/take-a-class/program-highlights/swimming#learn-to-swim>

Water Safety Guide

<http://www.safekids.org/safety-basics/safety-guide/water-safety-guide/>

MUSINGS OF A VETERAN RIDER

We all have those special places that have unique meaning, evoke our best memories, and take us back to another time in our lives every time we visit them. For me, one of those special places is a part of the Mojave Desert, north of Castaic, Calif. It is a small town right out of the pages of the Old West: Trona.

Mojave Solitude

By Mario di Prete

The majority of my years were spent riding various styles of street bikes, from high-revving 2-strokes of the '70s, to the modern superbikes like my Ducati 1098. Intermingled were an eclectic collection of dirt and dual sport motorcycles, an obsessive hobby that delivered some of my most memorable experiences from my adolescence to present.

My latest off-road trip to the desert had the classic underpinnings of a mid-life crisis: an older motorcyclist yearning to recapture some of his youth. I was searching for dusty isolated back roads that our forefathers may have taken when southwestern and central California was considered part of the Republic of Mexico. I found them last November through the BMW Off-Road Riding Academy located just off of I-5 in Castaic. I took a two-day, off-road training course on a R1200GS, followed by a two-day ride into the Mojave.

Training at the academy began after a hearty breakfast with cups of steaming hot coffee, punctuated with good conversation from riders who eagerly anticipated the day's itinerary. After obligatory introductions, range orientation and safety brief,

we were ushered to our awaiting bikes for the day's exercises. The course covers everything from clutch/throttle control, to negotiating deep sand washes, all on a 200-acre ranch discretely tucked away from civilization. These big off-road bikes command a lot of respect. It has been 33 years since BMW Motorrad founded the segment of large touring Enduro motorcycles. The "G" in GS stands for "Gelande" (terrain), the "S" stands for "Strasse" (road). The GS models earned victories in the Paris-Dakar races of the 1980s and quickly became the mount of choice for world adventure riders. These are heavy bikes with shorter travel suspension and expensive parts, compared to the spirited pace that's possible on lighter bikes. Riding the "heavies" is a different kind of riding, like training with a medicine ball. The idea is not to smash into things so much as to roll steadily over or through them. This is no easy feat for a 500-plus pounds of motorcycle, capable of velocities well above posted speed limits.

In keeping with the spirit of adventure, we pushed our bikes and ourselves under the watchful

eyes of our coaches. During one downhill exercise, I punctured a tire while running a little wide in a turn and through some thorny vegetation. The coaches took advantage of my misfortune and turned it into a teachable moment by gathering riders around my crippled bike. They taught Tubeless Tire Repair 101 while I did the steps in sequence. This would turn out to be time well spent since I was not the only one who would experience this minor setback during the next few days. With the tire plugged and filled with air, I was back in the game learning how to negotiate my GS over loose, uneven terrain, all with increasing confidence.

The following morning began with stuffing the pockets in my off-road riding jacket with trail snacks, journal, camera, sunscreen and other items that I might need for the two-day ride into the desert. With 3-liter CamelBak straps snugly fastened to my shoulders, I headed out to the staging area with 20 other likeminded adventure riders on similar bikes: mostly BMWs, a few Triumph Tigers and a Kawasaki KLR. While running through my pre-ride checklist searching for mechanical gremlins, I was also preparing mentally, keeping in mind that I have a wife, kids, and a job. Planning to end the day successfully and getting up the next morning ready to ride again was at the forefront of my mind. This is an actual visualization that I do while putting on the gloves



Photo courtesy of the author

These are heavy bikes with shorter travel suspension and expensive parts, compared to the spirited pace that's possible on lighter bikes.

and helmet and the other ritualistic things that go along with getting my head wired on straight to go riding. As I mounted up, I was thinking about other ways to mitigate the risk so I could fully enjoy the ride deep into the desert.

The pace was steady, with regular rest breaks to drink much-needed water and take scenic photos. Surrounding the arid desert is a wide range of geological attractions, dramatic vistas, and historic curiosities. The Mojave is a welcoming base for exploring the region on adventure bikes. Small towns like Jawbone dot desolate stretches of two-lane, black-top back roads; we use these roads to connect some of the dirt trails together. These isolated towns seem to draw subsistence income from visiting off-road motorcyclists and motorists alike. It reminds one of what it must have been like during the early days of travel on Route 66.

Off-road, you won't be skipping any whoops or flying high over jumps with these heavies. That's where the training and experience come in. Patiently conquering an obstacle is the best course of action; consistency and predictability are more important than speed.

Given the harsh desert conditions and long distances between destinations, the ideal adventure motorcycle for exploring the area is capable of 65 mph or more on the empty two-lane highways. It must be willing to tackle sand and rock-strewn single-track trails.

The ride was great. No traffic, no thoughts of the daily grind of life, just the mechanical symphony of moving engine parts coming together in harmonic conversion on the black top. The taste of Mother Earth as you ride through dust plumes left by the rider in front of you, searching for the best line on the trails. The satisfaction that you were able to do all this with acquired skills and confidence is pure enjoyment!

Out in the Mojave, the sky provides half of the scenery. It's a dazzling cobalt blue with a few cumulus puffs here and there. You see their shadows on the valley below. I can feel the warm breeze and I am greatly satisfied by the earthy smell. Right here, right now is when I succumb fully to relaxation and sit next to my motorcycle gazing upward into the brilliant blue sky. I have found my special place with unique meaning once more and will soon file it with my other moto-memories.

Ride well.

Mr. di Prete is a safety specialist in the Base Safety Directorate, Marine Corps Base Hawaii. His previous article, "For the Love of Riding," appeared in the fall-winter 2012 issue of Decisions magazine.

Off-road, you won't be skipping any whoops or flying high over jumps with these heavies. That's where the training and experience come in. Patiently conquering an obstacle is the best course of action; consistency and predictability are more important than speed.



Photo courtesy of BMW.com

Navy Launches New Campaign Promoting Responsible Drinking

The Navy's new campaign called "Keep What You've Earned," is designed to encourage responsible drinking among Sailors by focusing on the accomplishments in their Navy careers.

"Being an advocate for responsible drinking is not only a leadership responsibility, it is a responsibility of every Sailor in the fleet," said Chief of Naval Personnel and Total Force Fleet Master Chief Petty Officer April Beldo. "Together we have reduced the number of alcohol-related incidents and DUIs by almost half over the last five years. By drinking responsibly, you can continue to help bring these numbers down and make a difference in fleet readiness."

According to Dorice Favorite, director of the Navy Alcohol and Drug Abuse Prevention (NADAP) program, Sailors drink primarily because of stress related to the workplace, their families and life changes — from boot camp to advancement exams, job training and deployments. "The 'Keep What You've Earned' campaign recognizes these challenges and encourages Sailors to drink responsibly to maintain their successful careers," said Favorite.

To address alcohol use from all angles, the new campaign actively engages alcohol-abuse prevention personnel, Navy leaders, local communities and Sailors as advocates for responsible drinking.

"Our Sailors are excited about this campaign's launch because they were a part of its development," said Cmdr. Jay Clark, commanding officer of the guided-missile destroyer USS *Roosevelt* (DDG 80).

Sailors from *Roosevelt* participated in a photo shoot to be used in posters and other print materials, then in an informal review of the products to see if they resonated with the core audience of young Sailors.

"We talk about responsible alcohol use constantly aboard *Roosevelt*, but it was nice to have the Navy include our Sailors in the development of something that affects them and their careers," said Clark.

"The safety and well-being of our Sailors is our top priority," said Beldo. "Sailors endure many challenges during their first few years of enlistment and this should be recognized. It should not be treated as an excuse to drink. We all work together to create and maintain a responsible drinking environment, remind Sailors of their accomplishments and encourage positive decisions regarding alcohol."

NADAP facilitators encourage all units to discuss the importance of drinking responsibly. To facilitate these discussions, the campaign offers leadership talking points, posters, fact sheets and social media messages. These are available on the NADAP website, <http://www.nadap.navy.mil>, under "What's New."

TIPS FOR SAILORS: EARN RANK — NOT A REPUTATION

You've worked hard for your career as a Sailor. Only one-third of 17 to 24 year olds in the United States are even eligible for Navy service, and even fewer are capable of enduring the physical and emotional challenges of being a Sailor. From boot camp to advancement exams, job training and deployments, you have conquered them all through hard work, sacrifice and dedication.

Making responsible drinking choices is an extension of that dedication. Just one bad decision while drinking alcohol can jeopardize everything you've earned. Sailors involved in alcohol-related incidents face serious consequences, including:

- Loss of rank, rate or pay
- Separation from the Navy
- Civilian consequences, such as fines and jail time

Irresponsible drinking not only threatens your health and career, it threatens the Navy's ability to be mission-ready.

In the Blink of an Eye

By Evelyn Odango

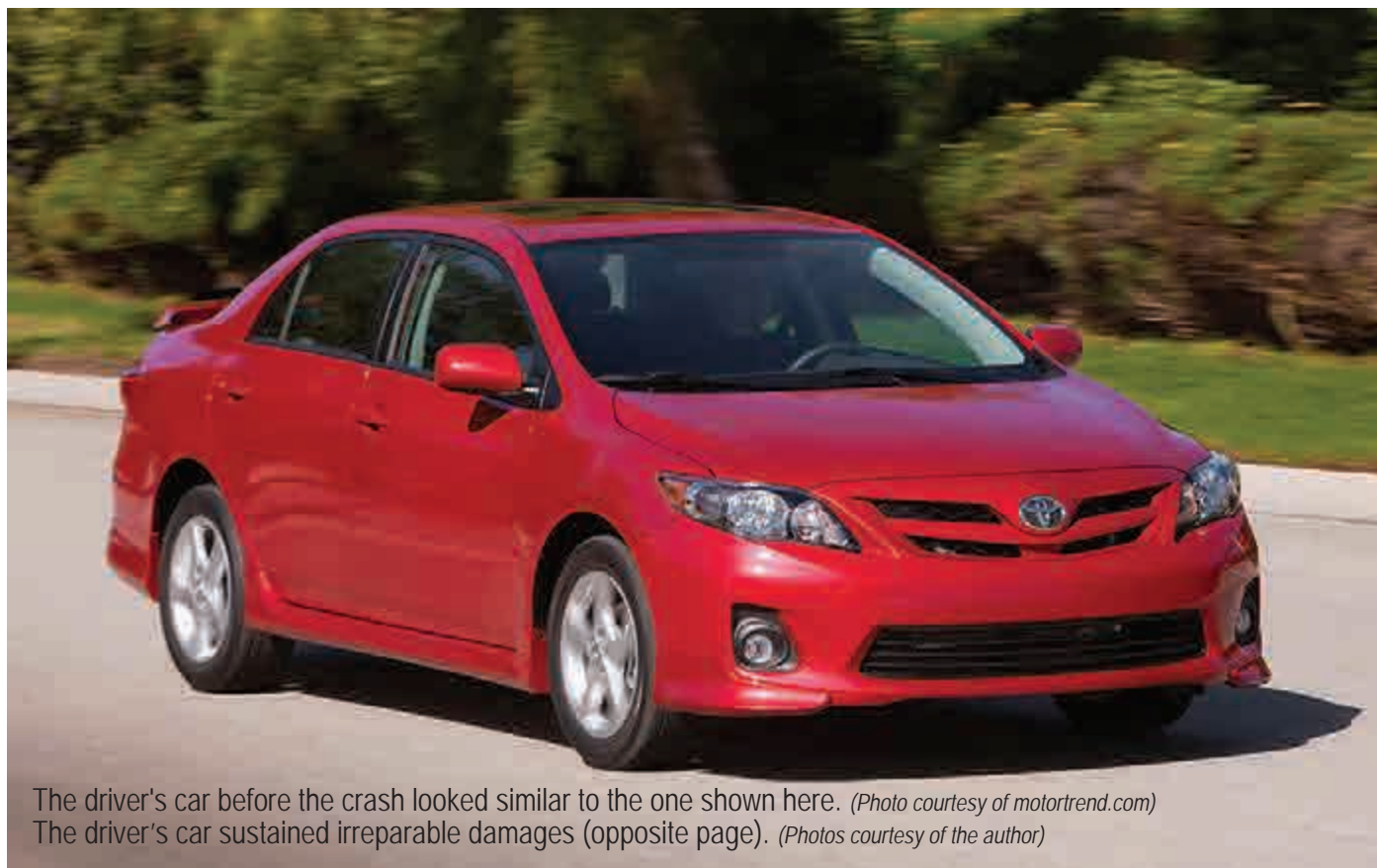
A 50-year-old woman drives her brand-new car along a busy highway in Northern Virginia. She drives with confidence; after all, she's been driving for 30 years. In the blink of an eye, her life and five others hang in balance between reality and the unknown.

She struggles with her seat belt as she tries to comprehend what had just happened. The last thing she remembers was that she was driving 60 mph when she got a text message on her cell phone. Thinking she had plenty of room between her and the vehicle ahead, she quickly glanced at the text message. The result: a six-car pile-up on the interstate that afternoon.

Reality dawns on her. *Oh, my God. Did I kill anyone?* Her thoughts are racing, heart pounding and fear settling in. She manages to get out of her car and looks around. For what seems like miles of mangled metal and broken glass, she sees cars at a standstill and people

running toward the scene. Her car's front-end is now smashed and unrecognizable. Despite the commotion before her and sirens blaring from a distance, she tries to answer questions from bystanders offering assistance. Miraculously she has no visible injuries. She now worries about the others.

The emergency doctors at the hospital treat her for spinal sprain and minor contusions. She's afraid to ask if anyone died in the accident, but the nurse tells her that all of the other drivers survived the crash. The driver of the car she hit has sustained non-critical soft-tissue injuries and will stay in the hospital. She and the others will be released that night. Although relieved, what she



The driver's car before the crash looked similar to the one shown here. (Photo courtesy of motortrend.com)
The driver's car sustained irreparable damages (opposite page). (Photos courtesy of the author)



View of the front from the driver's side.



Head-on view of the car.



View of the front from the passenger's side.

has to face next does not bode well. The authorities will make her account for her actions.

A ticket for multiple counts of reckless driving looms over her like a dark cloud. In all her years of driving, she has not received any tickets, much less injured anyone. Reckless driving is a Class 1 misdemeanor in Virginia, punishable by up to 12 months in jail and a fine of up to \$2,500. The thought of prison is agonizing.

She soon afterward becomes embattled with insurance claims and legal proceedings. Although instrumental in keeping her out of jail, her lawyer costs her thousands of dollars. The inconvenience of totaling her new car has nothing on the nearly half-million dollars of compensation that her insurance company pays to the other drivers.

One year has passed since that unforgettable crash. The effects, though, are still as real as the second she took her eyes off the road. Feelings of shame, fear, paranoia, and anger constantly reside within her. She frequently asks herself: *How could I have been so stupid and irresponsible?* Having to take the bus to go to work and not being able to attend out-of-town family gatherings are insignificant outcomes. The thought that she or someone else could have been killed still makes her cringe. The thought that her daughter might have been orphaned that day makes her cry.

At her age, she didn't think it could happen to her. She always has been the careful one, with years of experience. But she's learned the hard way that the dangers of distracted driving don't discriminate against age or gender. She may not have been the one texting, but the temptation to check who was sending the text has caused her a lot of angst and inconveniences for others. The quick second she thought she had that day has changed her life and five others in many ways.

As she talks about her experience, this mom — my sister — hopes for young and adult drivers to learn from her mistake. She emphasizes the value of not abusing and taking for granted our privilege to drive. She is more cautious now. She turns off the phone before driving and pulls over if texting is absolutely necessary. As she regains some normalcy in her life, I am grateful that she's here today to share the lesson she has learned. I am grateful no one was badly injured or died that day. **SC**

ONLINE RESOURCES

Official U.S. Government Website for Distracted Driving – <http://www.distractation.gov/>

Cell Phone and Texting Laws – http://www.ghsa.org/html/stateinfo/laws/cellphone_laws.html


Emergency Preparedness



Photo courtesy of Naval Research Lab

Disasters and emergencies strike quickly and without warning. They can happen anywhere, anytime. Whether you're at home, at work, or at sea, preparedness is vital to rescue and survival.

This checklist features many recommendations from the American Red Cross, the Federal Emergency Management Agency, U.S. Coast Guard, and U.S. Fleet Forces Command. Use it to build a comprehensive emergency kit that will help get you through most situations.

Should an event take place while you're at a military installation, follow guidance from your security and safety managers. Make sure to update and verify your personal information in the Navy Family Accountability and Assessment System (NFAAS). All Navy military and civilian personnel (including dependents and contractors) are required to update their information twice a year. NFAAS is the system used by the Navy to account for personnel and their families during widespread natural or man-made disasters. 



EF5 Tornado, 2011 (U.S. Navy photo by Lt. j.g. Ryan Sullivan)



Hurricane Katrina, 2005 (U.S. Navy photo by MC3 Jon Hyde)



Checklist

Food and Water

- ☐ One gallon of water per person, per day and canned or nonperishable food (3-day supply for evacuation, 2-week supply for home)
- ☐ Special food items for elderly members and infants
- ☐ Iodine tablets for water (available at sporting goods stores)
- ☐ Manual can opener
- ☐ Camp stove with fuel
- ☐ Plastic utensils, plates and bowls
- ☐ Cooking pots and pans

Medicine and First Aid

- ☐ Prescription medications for each family member. Make a list with information for dosage, frequency and administration.
- ☐ Pain relievers for both adults and children
- ☐ Anti-diarrheal and cough medicines; aspirin
- ☐ Insect repellent
- ☐ Compression stockings to prevent blood clots (especially in situations where people sit or stand for extended periods)
- ☐ First-aid kit with bandages in various sizes, sterile gauze pads, tweezers, antibacterial ointment, instant cold compress, oral thermometer (non-mercury/non-glass), non-latex gloves, scissors, antiseptic wipe packets, and first-aid instruction booklet

Personal Hygiene and Sanitation

- ☐ Toothbrush, toothpaste and soap
- ☐ Contact lenses and lens cleaner
- ☐ Antibacterial hand sanitizer
- ☐ Toilet paper
- ☐ Baby supplies (diapers, bottles, wet wipes)
- ☐ Breathing masks (for areas where air quality is poor)

Communication Needs

- ☐ Flashlight (helpful for sending signals)
- ☐ Battery-powered or hand-crank radio (NOAA Weather Radio, if possible)
- ☐ Extra batteries (radio, flashlight and cell phone)
- ☐ Cell phone and charger (ideally one that works in the car)

- ☐ Two-way radios
- ☐ List of family members and contact information (include out-of-area relatives, work and personnel accountability roster – if you are a supervisor, include work and home numbers)
- ☐ Whistle

Boating and Water Survival

- ☐ U.S. Coast Guard-approved life jacket for each person
- ☐ Communication devices (flares, flag or smoke signals, flashlight, bell, whistle and horn/siren, cell phone, emergency contacts)
- ☐ Fire extinguisher
- ☐ Life raft or dinghy
- ☐ Ring buoys or reaching pole
- ☐ Personal locator beacon
- ☐ Food and water supplies
- ☐ Foul-weather gear
- ☐ First aid kit (onboard a vessel or near a pool)

Clothing and Protective Gear

- ☐ Emergency blankets or sleeping bags
- ☐ Towels
- ☐ Rain gear
- ☐ Extra clothing, hat and sturdy shoes
- ☐ Plastic sheeting or tarp
- ☐ Work gloves

Other Basics

- ☐ Pet supplies (collar, leash, ID, food, carrier, bowl)
- ☐ Copies of personal documents (proof of address, deed/lease to home, passports, birth certificates, insurance policies)
- ☐ Extra cash
- ☐ Map(s) of the area
- ☐ Extra set of car keys and house keys
- ☐ Duct tape, rope, string or bungee cord (to secure tarp or loose items)
- ☐ Plastic garbage bags
- ☐ Chlorine bleach (to use as a disinfectant)
- ☐ Matches in waterproof containers
- ☐ Utility knife

ONLINE RESOURCES

U.S. Coast Guard Boating Emergency Guide – http://www.uscgboating.org/safety/float_planning.aspx

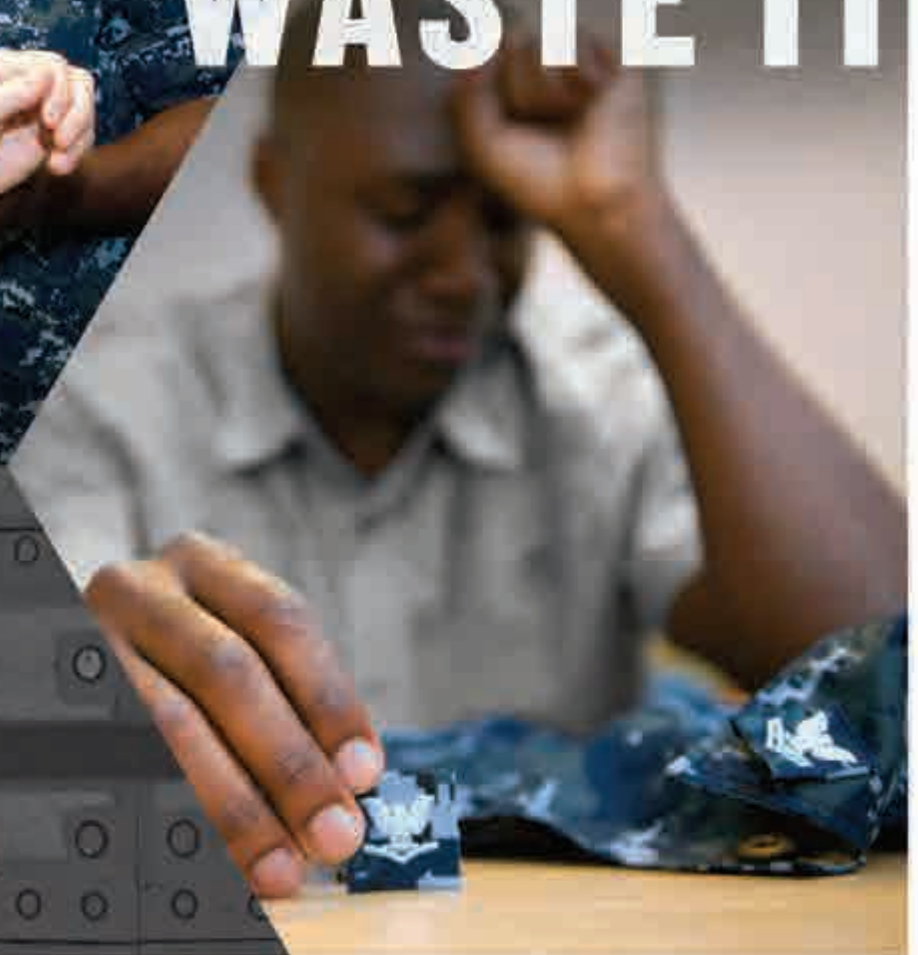
American Red Cross Disaster Preparedness Library – <http://www.redcross.org/prepare/disaster-safety-library>

Disaster Preparedness Plans from U.S. Fleet Forces Command – http://www.public.navy.mil/usff/pages/disaster_preparedness.aspx
Plan, Prepare and Mitigate – <http://www.fema.gov/plan-prepare-mitigate>

Navy Family Accountability and Assessment System – <https://navyfamily.navy.mil>

YOU'VE EARNED IT

DON'T WASTE IT



DRINK RESPONSIBLY.

**KEEP WHAT
YOU'VE EARNED**

IT WASN'T EASY GETTING HERE.
DRINK RESPONSIBLY.
www.nadap.navy.mil

The Navy's "Keep What You've Earned" campaign encourages responsible drinking among Sailors by celebrating the achievements in their Navy careers.