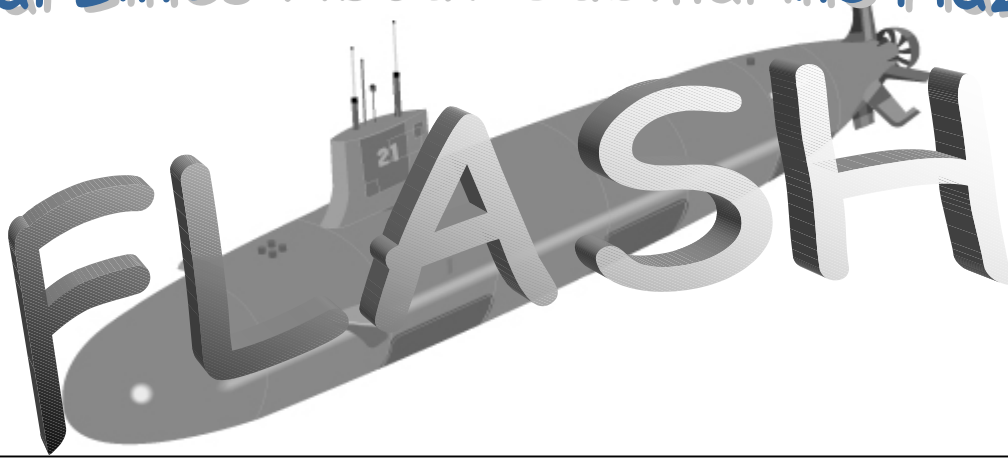


Submarine Division of the Naval Safety Center Factual Lines About Submarine Hazards



OCT-DEC 2004

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Route for Safeties Sake

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CPO's	_____	Ship's DCPO	_____		_____		_____		_____
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'Tis the Season for Traffic Safety Awareness

LT Vic Romano

Statistically speaking, the holiday season is one of the most hazardous times to be on the road. Whether you're heading all the way to Grandma's house for some of her mouth-watering oyster dressing or just down the road to the 7-11 for a pack of smokes, you'll have to be aware of distracted or impaired drivers just waiting to add your name to this list of statistics.

The Safety Center has completed a pre-holiday Traffic Safety Across America training. Safety analysts spent a whirlwind week at four to five locations giving presentations dealing with the number one killer of Sailors and Marines. This number one killer is not work-related falls or maintenance evolutions gone bad. It's not collisions or how we operate our aircraft. The number one killer is getting Sailors and Marines safely to and from work and to and from liberty. We could eliminate every submarine, surface ship, and aircraft related Class A mishap and not meet the fifty-percent mishap reduction goal. We must reduce the number of POV crashes.

The most frustrating part of my job at the Safety Center is having to review the message traffic and continually seeing mishaps described in personal casualty reports, unit SITREPs, and motor vehicle mishap reports. Each of the reports has a brief description of the events and invariably I find one thing the mishap victim could have changed to prevent the mishap from occurring.

If only he would have planned the trip better and not tried to make it 650 miles in a day to Connecticut in December. If she simply would have called a friend or a cab.

After each survey trip, I dutifully update my ORM slideshow to reflect the newly acquired mishap numbers and wonder if anyone truly gets it. Attached to each one of these numbers is a Sailor or Marine whose family won't have them home for the next holiday season. They are the shipmates that don't come back to work after the stand down period.

Fatalities due to traffic mishaps can be greatly reduced if Sailors and Marines use that four-lettered word PLAN. No one plans to have a mishap, but they do occur. The simple act of buckling up is a vital step of mitigating traffic hazards. The PLAN must incorporate the "what if" questions we emphasize during ORM presentations. What if the weather turns bad? What if my car breaks down? What if I have too much eggnog to drink at Grandma's?

Being an intrusive leader means participating in the planning process for your work center by asking the tough questions. Ensure the plan makes sense and provide feedback where necessary. Merely completing a leave chit and stapling a Risk Factor Screening Form to it is not succeeding in getting our shipmates home and back safely. Supervisors must go beyond the routine and participate in the process.

N.K.O. Your Safety

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MMC (SS) Nixon

If any of you have used the Navy Knowledge Online (NKO) website, you know what a valuable tool it can be in planning and managing your career. But, did you also know that NKO is a valuable safety tool as well? NKO has several safety-related courses that Sailors can take and

receive credit. Ranging from the Safety Programs Afloat course to ladder and fire safety, to electrical safety there is something for everyone. Upon completion, every course is automatically entered into the individual's electronic training jacket and eventually into his

Sailor/Marine American Council on Education Registry Transcript (SMART). NKO can be accessed from any computer that has Internet capabilities. Accessing NKO is as simple as going to the website at www.nko.navy.mil. Follow the easy instructions to register and enter your user name and password. Once on the home page, click on the "Education" link. Next launch the "Navy 'E' Learning" link. At the bottom of that page, click the "View All Categories" link. Finally, in the search section type in "safety." There are several

pages of courses available. Select a course and it is added to the enrollment page. Click the "My Enrollment" tab to launch the course.

Due to operational commitments, manning requirements, and a variety of issues, schools are not easy to come by in the submarine community. Completing these courses is a good way to satisfy many of the boat's safety requirements without having to physically attend an instructor-driven course TAD. Remember, you can never learn too much about safety.

Machine Shop Safety

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ETCS (SS) Monsam

The submarine machine shop can prove to be an invaluable asset when the ship is underway and repairs are critical. Unfortunately, until it's a critical priority, we do not spend time ensuring that the drill press, lathe, and grinders are maintained in a safe and operational condition. It should be every ship's goal to maintain this equipment in peak working condition, not only to ensure that it is operating properly but that personnel are not placed at risk while using it.

During recent surveys, we have seen defective machine shop equipment which if used puts the operator and anyone in the vicinity at risk of serious injury. Chapter D8 of OPNAVINST 5100.19D is the reference for proper machine guarding and inspection. The mechanical systems checklist lists the following machine guarding requirements and is available on the Safety Center web site. The deck around the equipment is required to be marked with yellow and black striped or checkered tape to ensure that everyone understands that they are entering a potentially hazardous area. The NSN for the yellow and black striped tape is 9905-01-342-5933 and checkered is 9905-01-342-5934. Non-skid strips are required to be on the deck in front of each piece of equipment to prevent operators from slipping on oil that could come from the operation of the lathe. The NSN for the non-skid strips is 7220-00-205-0389. Each piece of

equipment is required to have operating and safety precaution signs posted. The NSNs for each are 0177-LF-224-3801 (lathe), 0177-LF-225-3601 (grinder), and 0118-LF-114-3000 (drill press). Additionally, noise and eye hazard signs are required. Hazardous Noise Warning Label Form NAVMED 6260/2 (8"x10") NSN 0105-LF-004-7200 U/I PG (25s), or NAVMED 6260/2A (2"x2") NSN 0105-LF-004-7800 U/I PG (1400s), and Eye Hazard Caution Sign NSN 9Q/9905-01-100-8203 are required. The proper eye and hearing protection is required to be stored in the vicinity of each piece of equipment. Proper eye protection is defined as face shield and goggles as a face shield only protects the face not the eyes.

The bench grinders are the most deficient machine guarding issues noted during safety surveys. Common problems include:

- Lack of non-shatter eye shields.
 - Eye shields that cannot be adjusted or reduced visibility due to excessive scratches.
 - The tool rest is not properly adjusted to within 1/8th inch from the grinding wheel.
 - The grinding wheel has been used for non-ferrous metal, which can cause imbalance and possible disintegration of the grinding wheel.
 - The bench grinder is not electrically safe.
- Most grinders are missing the light bulbs under the eye shields and have open electrical sockets.

The open light sockets can collect metal shavings creating a hazard. Additionally, many power cords are cut/cracked or have exposed wires showing by the plug or light socket that creates a shock hazard.

These items should be found during a thorough zone inspection. A work candidate

should be submitted for those items that can't be corrected on the spot and be included in the NAVOSH Deficiency Abatement Plan.

Consideration should be given to placing the machine shop equipment OOC until repairs are made depending on the nature of the deficiencies.

How Does a Fire Start in a TDU Can?

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HMCS (SS) Juneau

Here is the scenario. Light smoke was emanating from a TDU can that had just been compacted. A CO₂ fire extinguisher was expended and the smoke dissipated, only to return thirty seconds later. More CO₂ was expended with two fire hoses standing by. Inspecting the can revealed a noticeable hotspot midway up the can. To overhaul the can, it was cut down the side with tin snips that allowed the material inside the can to expand and produce a brief flame. What was the source of the fire? A rechargeable battery pack was the source, most likely a nickel-cadmium (Ni-Cad) or lithium battery.

As far as the fire goes, article 31.6.2 of NSTM 555 Vol 2 (Submarine Firefighting) stipulates that if a fire is deep-seated, AFFF, when available, is more effective than seawater and can be used as a wetting agent to rapidly penetrate and extinguish the fire. The cooling and penetrating characteristics of AFFF most probably would have prevented the flare up in the TDU can during the overhaul process.

Lithium batteries pose an additional concern, since mixing lithium and water creates sulfuric acid.

As for batteries, there are several guidelines governing the shipboard allowance, storage, handling, and disposal of batteries as hazardous material. Paragraph D1507 and Appendix D15-G of OPNAVINST 5100.19D, NAVOSH Program Manual for Forces Afloat, discuss the storage standards and handling. Page 3-4 of OPNAV P-45-110-96, Hazardous Material User's Guide (HMUG), states batteries must be containerized for shore disposal. Note: Do not mix battery types together, a possible explosive reaction could occur.

This incident is a good item to discuss during annual all hands job-specific hazardous waste/material training per paragraph B0302 of OPNAVINST 5100.19D. Hazardous materials brought onboard the ship, the types, and allowance for shipboard use is the responsibility of **each and every crewmember** not just the SUPPO.

Hail and Farewell

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Code 38

Welcome aboard to Commander Richard McClellan. CDR McClellan is taking over for CDR Richard Martel as Code 30 Afloat Safety Programs Directorate. CDR Martel has transferred to Afloat Training Group (ATG). CDR McClellan reports to us from a successful tour as Mid-Atlantic Regional Anti-Terrorism Officer

where his duties and responsibilities covered five states. Previous commands include USS Theodore Roosevelt (SSBN 600) (Gold), USS Trumpet Fish (SS 425), Service School Command, Orlando, USS City Of Corpus Christi (SSN 705), Mobile Technical Unit 14, Kings Bay, upon Commissioning in September 1988, CDR McClellan served on USS

Klakring (FFG 42), SIMA Charleston, SC, Oakridge (ARDM 1), Naval Submarine School, Groton, CT, and Trident Refit Facility, Kings Bay, GA.

We say farewell to MMC (SS) Edwin Nixson after a successful two-year tour onboard Naval Safety Center as Submarine Division Combat System and Deck Safety Analyst.

Chief Nixson also served as the Safety Center's 3M Coordinator submitting countless PMS feedbacks and maintaining the ATIS database.



MMC (SS) Nixson

His contributions to the fleet were invaluable and he will be greatly missed. He reports to the USS Georgia SSBN 729 as the *safety officer*.

Editorial

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ETC (SS) White

Welcome to FY 2005! The opportunity to improve our safety posture to meet the goal of "50% Reduction in Mishaps" will only be achievable through supervisory diligence and involvement by the chiefs quarters, perseverance in training our junior personnel to understand the consequences of becoming a statistic, and mentoring so as not to be part of the problem. When we are young, we feel invincible and have our whole lives ahead of us. The reality of the consequence of a mishap is rarely considered. Experience is a two-edged sword. If you've been shocked working on an electrostatic precipitator or wrecked your car driving reckless on the commute home, experience often changes how you work around electricity or drive your car. It's a valuable lessons learned. However, if you've always done it this way and it's never been an issue, experience could actually lead to a mishap if the way you've always done it is not in accordance with the procedure.

The Navy's core values of Honor, Courage, and Commitment speak volumes of how we must

approach safety. Honor is personal integrity maintained without legal or other obligations. Courage is a quality enabling one to face danger or hardship with confidence and resolution. Commitment is being bound emotionally or intellectually to an ideal or a course of action. Honor, Courage, and Commitment as they relate to safety is having the integrity to do things by the book when no one is looking. It's noticing that your shipmate isn't using his required PPE and correcting the issue. It's being the example of how to get the job done, not the lessons learned.

So I challenge all to make a difference in 2005. Train your reliefs. Be the example, not the lessons learned. If your ship has not completed the operational risk management immersion training or the recommended safety survey within two years periodicity, please work with us to schedule it. The training and assist we provide is a benefit to the submarine force not a hinderance. Our mission is to enhance your ship's capabilities not merely document discrepancies.

Effective COMNAVSAFECEN Submarine Safety Advisories

17-00 201959Z DEC 00 Contract Liberty Boat (Water Taxi) Safety

1-05 251930Z JAN 05 Effective COMNAVSAFECEN Afloat Safety Advisories for Surface Ships and Submarines

To download you must be on a .mil domain terminal. Go to our secure web site by selecting the [DoD Menu](#) link. Once you are on the secure site select the [Afloat Messages](#) link and then select the [Submarine Effective Advisories](#) link.

Warnings, Cautions and Notes

The Flash is a newsletter that provides safety-related information to the fleet. This information is a summary of research from selected mishaps and surveys done throughout the force. This data are provided to assist you in YOUR mishap prevention program and gives advance notice of other safety-related information.

This newsletter is NOT authoritative but will cite references when available.

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