The Submarine Division of the Naval Safety Center Presents:

# FLASH

## Factual Lines About Submarine Hazards

Jan 2004 – Mar 2004

Table of Contents



***Statistics: An ounce of prevention can prevent you from becoming one***

***As of 31 March 2004, 85 Sailors and Marines died in mishaps:***
***- Private Motor Vehicle: 44 (52%)***

# *Private Motor Vehicle Accidents*

**By FTCM(SS/SW) Clements**

Cars, trucks, and motorcycles are still the number one non-combat killer of our Sailors and Marines. The CNO has directed Navy's leadership to reduce the Private Motor Vehicle (PMV) mishap rate by 50% in FY 2005. Commands that are proactive in their PMV safety program are making a dent in this deadly statistic. One of the "Best Practices" the Safety Center has seen is a Traffic Safety stand-down that really addresses the issues involved with PMV accidents, rather than providing just another "check in the box" stand-down. Additionally, reinforcing the requirements for motorcycle riders to attend the motorcycle safety course remains an invaluable benefit to new riders. Finally, the Navy's senior leadership has begun taking notice of crewmembers driving or riding in performance cars and discussing safety precautions during the PMV safety stand-downs. The 50% reduction mandated by the CNO is achievable with steady and even-handed command involvement.

Let's review some of the more recent PMV mishaps that drive the need to reduce the PMV mishap rate:

- A 20-year-old Seaman Apprentice was riding an off-road motorcycle on an approved off-road course, on base. The Seaman Apprentice veered to the right to avoid running through some standing water, lost control, and ran directly into the trees. He sustained major internal injuries that were fatal. He had not attended the motorcycle safety course, did not own the motorcycle, and was not familiar with its operating characteristics. He was wearing a helmet, gloves, and steel-toed boots. (CONSTRUCTION BATTALION)

- A 19-year-old E-3 was driving while intoxicated, lost control of his truck, and crashed on the side of the road. He sustained head injuries, a collapsed lung, five broken ribs, and multiple lacerations. Luckily, he survived the accident. (AVIATION SQUADRON)

- A 25-year-old First Class Petty Officer was driving home from a day of skiing at a local resort (50 mile drive) with his spouse. During the drive back home, he fell asleep at the wheel, and ran into a tree. Both he and his wife died in the accident. Seat belts were worn, but the air bags did not deploy. (SSBN)

- A 30-year-old First Class Petty Officer with nine years of motorcycle experience lost control of his motorcycle while downshifting during a turn. He sustained a fractured clavicle, multiple abrasions, and bruises. He was wearing a helmet, boots, a riding jacket, and gloves. Imagine how much worse the injuries could have been had he not been wearing his safety gear? (SSBN)

- A 22-year-old Third Class Petty Officer and 20-year-old Seaman were injured when the intoxicated driver (civilian) of the car they were riding in lost control and flipped over onto its roof. The driver was charged with DUI. The driver wore seat belts and was not injured. The Seaman and Third Class Petty Officer did not wear their seat belts and sustained multiple broken bones (ribs, right femur), a bruised lung and liver. (AVIATION SQUADRON)

- A 24-year-old Third Class Petty Officer and a 25-year-old Seaman were returning from leave in New York a day early. They were traveling south on the Chesapeake Bay Bridge Tunnel. The bridge authorities observed the Sailor's car traveling at 80mph and tried to signal them to slow down. The car continued to the end of the bridge and down an exit ramp, where it continued off the left side of the ramp and smashed through the barrier rail. This woke up the passenger. The vehicle then jumped across the southbound lane and crashed

into the median. This woke up the driver. Both driver and passenger were wearing seat belts and the air bags deployed. They received relatively minor injuries because they used the safety devices installed in the vehicle. (LPD)

# *Equipment Guide Lists are Key to Success*

**ETC (SS) White**

Over the past year, electrical surveyors have observed a disturbing trend during numerous submarine safety surveys, the steady deterioration of our electrical safety programs. Section 300-2.7.3 of NSTM 300 and Chapter B-7 of OPNAVINST 5100.19D require periodic checks of portable and mobile electrical equipment and initial checks of personal and fixed electrical equipment. PMS completed IAW MIP 3000 series, supervisor involvement, and zone inspections help ensure an effective electrical safety program.

Equipment Guide Lists (EGLs) are required by paragraph 3-4.5 of OPNAVINST 4790.4 to assist in the completion of this maintenance. Without thorough and periodically updated EGLs, there is no guarantee that all equipment receives the required checks.

Whether the checks are quarterly or annually, EGLs help the divisions track the equipment under their cognizance. Unfortunately, the lack of EGLs is most commonly the root cause of ineffective electrical safety programs seen during safety surveys.

EGLs eliminate all the guesswork regarding electrical equipment requiring safety checks. A successful electrical safety program starts with a complete and updated database. Submarines that choose not to use EGLs run electrical safety programs that are typically hit and miss in nature. They do well for the gear they know exists, but have no control of upgrades and other alterations that bring new electrical equipment onboard.

# *Improperly Dead-ended Cables, Ready to Strike!*

**LT Vic Romano**

It is often stated that the work is not done until all of the paperwork is done. However, in some cases the paperwork gets done, but all of the work does not. A prime example of this problem is the increase in the number of improperly dead-ended cables noted during our safety surveys.

Much of the time these improperly dead-ended cables are "leftovers" from contractor and outside activity work performed for ship's force during inport availabilities. They are tucked away in the overhead or shoved behind the serving line in the galley. They may be de-energized and have tape over the business end or they may still have power applied and are awaiting that unsuspecting Culinary

Specialist to strike down like a death adder (see photo).

Typically, when an improperly dead-ended cable is found, it's there because that new slushy machine was installed or an upgraded GPS receiver was put in so "they" took out the old one, but didn't remove the excess cabling back to the power supply. The work package for these upgrades includes the removal of the cabling for the replaced equipment. Unfortunately, outside activities have come to realize they can sometimes get by with not completing the job and convince ship's force to sign off on the paperwork.

Whatever the reason for the dead-ended cable, it is imperative that ship's force remembers that these activities work in support of the fleet. Ship's force supervisors need to ensure that these activities are conforming to established requirements and procedures. Before signing off work packages, inspect the work. Without a proper inspection, the ship could easily "buy off" on the work and the "leftovers" that come along with it.

So let's say that the contractors have run up against the clock and can get the upgrade installed, but cannot remove the excess cabling in time for the ship to meet its operational commitments. The solution is to have the cabling dead-ended properly IAW NSTM 300-4.6.9 and DOD-ST-2003-1. To do this, the power supply is either tagged out or removed. Both ends of the cabling is disconnected, insulated, and sealed. A work candidate is generated to have the dead-ended cabling removed at the next FMA availability per the JFMM (4790.3 Rev A VI-28.5.d). Finally, the ends are tagged with a manila-type document tag indicating that the cable power supply has been secured, the cable is de-energized, and the JSN is active for its removal.

If the excess cabling is not dead-ended properly it can lead to more heartache and busy work for the electricians and a potential electrical shock for that Food Service Attendant cleaning behind the serving line. If the terminal ends are not ended properly it is impossible to tell if the cable is live or de-energized without using a multi-meter or learning the hard way. So save yourself some time by spending the time to inspect the work being done on your ship. If you come across one of these death adders, end it properly.

# *Something Old, Something New.*

**MMC(SS) Morrow**

First of all, the something old, "fair winds and following seas" to MMCS(SS) Ron Downham and thank you for all the work you have done for Damage Control while at the Safety Center. For the new, I am MMC(SS) Robert Morrow reporting from the USS Albany (SSN-753). I am qualified on 594, 637, 640, 688 (First Flight) and 688I class submarines, including two tours as Damage Control Petty Officer. I know how important good information in a FLASH and support from the Safety Center can be at the shipboard level.

**School** - In the 10 surveys I have done, it is apparent that the Submarine Damage Control Petty Officer course (CIN A-495-2054) is being underutilized. This course offers a great opportunity to conduct PMS and maintenance in a learning environment on things like OBAs (which continue to lead the way in the world of material deficiencies with bent guide rods) and the galley range guard (a close second with cable travel issues), and coming soon the SCBAs. Don't forget, this is a required course per the STMPS report and is available at all bases. If you cannot find this course in the normal course catalog call your local training facility and attempt to schedule a special convening.

**EAB** – As some of you may have seen, the new ultra light EAB masks are in the supply system and arriving on board. These should arrive to you with a five-strap head harness. If they come with the two-strap harness, order the correct harness and do not place the EAB into service until the correct harness is installed. Also, the current style voice projection unit will not even come close to working on this EAB. Therefore, here is some good ordering information:

**Unit with amplifier installed**
**- Part number 10043949**
**- NSN 4240-01-518-3866**

**Amplifier kit**
**- Part number 10024074**
**- NSN 4240-01-491-0336**

**Steam Suits** - As some of you may already know there is a new style steam suit for use with the FFE and SCBA modification. Unfortunately for those of you without SCBAs, the MSA air fed oven suit is no longer available in the supply system. To help with this problem, NAVSEA issued a letter COMNAVSEASYSCOM 11 APR 02 that reduced the number or air fed suits required on board. This was followed up with COMNAVSYSCOM 291618ZAPR02 (NOTAL) that recommended SUBLANT and SUBPAC collect the extra suits and disperse them to ships in need of air-fed suits in good repair. If you have a MSA air-fed suit on order, you may grow old before it comes in from supply. The best course of action for you is to work with your Squadron and Type Commander representatives to attempt to get one of the air fed suits collected from another ship. The SCBA install is being worked as quickly as possible and should include the new style steam suit with the SCBA modification, therefore, keep those air fed suits you have in good shape!

# *Keep Your Hands To Yourself: Five Tips for Preventing Amputations and Other Injuries*

**HMCS(SS/SW) Flannery**

All of us can relate to the need for protecting our hands. No matter what product you make or service you provide, at some point hand protection will be required. If you don't believe that your hands and fingers are important, try working without them.

1. **Know the hand hazards of your workplace**.

Review your injury mishaps to find trouble spots. Crew complaints can identify problems before they turn into injuries. Are injuries or complaints occurring in one department? Doing one procedure? If there are a number of minor injuries, what is the potential for a serious injury? Have you just been lucky?

2. **Assure safety compliance**.

Supervisors should ensure personnel wear appropriate hand protection when their hands are exposed to hazards. Some examples of hazards are: absorption of harmful substances, chemical burns, severe cuts, lacerations or abrasions, punctures, thermal burns, and harmful temperature extremes. You should also be familiar with the safety regulations that can impact hand protection, such as lockout/tagout, machine guards, and walking-working surfaces. By doing this, it will also protect you from unforeseen events. Safety standards are based on events that have occurred. Often the worst injuries are the ones we never imagined would happen.

3. **Check your Industrial Hygiene Survey and PPE (Personal Protection Equipment) checklist.**

Gloves come in many different types suited for general or specific uses. There are abrasion/cut-resistant gloves, chemical-resistant gloves, clean-room gloves, anti-vibration, general-purpose, electrical grade, leather, and temperature-resistant gloves. Safety supply catalogs come with charts to help pick out the right glove. Some contain a glossary of glove terms. The chart I enjoy most is the one that tells which grade of leather comes from which

area of the animal hide, and what type of leather is suitable for specific uses.

If you work around chemicals, the chart you'll most likely use focuses on chemical resistance. Some charts will indicate whether a specific glove material such as latex, rubber, or nitrile is recommended for certain chemicals. More advanced charts will specify the manufacturer and model name of a recommended glove, along with its breakthrough time.

Breakthrough time refers to how long it takes (under laboratory conditions) for a chemical placed on the outside of the glove to be detected within the glove. This test requires equipment most of us do not have. Also, the key phrase is "laboratory conditions," a state most of our submarines or work sites will never meet.

In situations where protection is extra critical, such as working around benzene or amine, you need to institute very strict guidelines on changing gloves well before the listed breakthrough time occurs. Guidelines would include hand-washing procedures whenever the gloves are taken off or if there is a hint of exposure.

4. **Inspect before reusing**.

Should you reuse gloves? It's not the best practice, but there are times, such as when gloves are very expensive, that you have little choice. When this is the case, you need to pay attention to decontamination and inspection. As a matter of fact, if gloves protect against serious injury or health hazards such as blood borne pathogens, inspect them before initial use. Make sure whatever gloves you receive are what you ordered. Inspect the seams and look for cracks or tears. To find holes, inflate the glove and roll it toward the fingers. Or you can inflate and hold the gloves under water. If you have to reuse a pair of gloves, turn them inside out and look for discoloration, swelling, stiffening, or anything else that would indicate chemical presence on the inside. What you're looking for is permeation. The worry is that while decontamination got rid of the chemical on the outside of the glove, part of the chemical was already absorbed into the material of the glove. This can happen while gloves are being stored between uses.

5. **Set handling procedures**.

Even the best gloves will not prevent amputations or crushing injuries to fingers or hands. In situations like these, you'll need strict enforcement of procedures for material handling and lockout, just to name two safety issues. Team lifts — manual lifting of any heavy object by more than one person — need to be explained to your workers. Before you lift a heavy load, decide where you are going to take it, the route to get there and who will make the calls as it is set down. Does anything have to be moved out of the way before you start to carry it? Most people give little thought to this simple stuff, but thinking ahead will save hands, as well as backs, when it comes to lifting and carrying jobs. In general, check anything that has to be moved or handled by hand for sharp, jagged, or rough edges — any hazard that could hurt hands. Finally, how is the personal hygiene of your shipmates? Not sure? Better have a follow-up inspection after glove use to check for small nicks and cuts. You don't want someone to risk an infection or exposure to a harmful substance.

As a final note, the next time you have your automobile repaired, observe the hands of your mechanic. Many private employers now require mechanics to protect their hands from oils, greases, and other solvents used in maintenance and repairs by using textured latex or nitrile gloves. Using the tips described here can help reduce the chance for injuries at sea and home.

# *How's Your Temperature?*

**MMC(SS) Shull**

During the last 6 months, our surveyors have uncovered a persistent problem regarding the bi-metallic thermometers and improper recording of temperatures of the countermeasures locker.

IAW paragraph 5-4.1.e of NAVSEA OP 4 Rev. 7, magazines shall be fitted with thermometers, temperature record cards, and holders. They must

be capable of recording minimum and maximum temperatures. These thermometers shall be direct reading, bi-metallic thermometers with maximum and minimum index pointers, and a reset knob. They must meet the specifications of MIL-I-17244. The required temperature range is –40 to 180 degrees. Additionally, the thermometer must be a 3-inch, back-connected dial, with a 4-inch stem. To order the correct thermometer, use the following: NSN 6685-00-042-3218

IAW NAVSEA OP 4 Rev. 7 par. 5-6, for pyrotechnic lockers, thermometers may have a range of 20 to 240 degrees. Once again, the thermometer must be a 3-inch, back-connected dial, but with a 2-inch stem.

View of correct thermometer well

Available in the supply system is a bi-metallic thermometer with a 2-inch stem. To order this thermometer use the following: NSN 6685-01-216-7147

Do not perform an unauthorized alteration and cut the thermometer well to make room for the stem!

We should never forget that these bi-metallic thermometers must also be calibrated. The required calibration cycle is no longer 36 months. It has been changed to 48 months. Ref: COMNAVSEASYSCOM R 261504Z MAR 02 (NOTAL). Make the calibration shops do the right thing.

View of incorrect/altered thermometer well

Now that we have cleared up the thermometer issue, lets talk about recording the temperatures. IAW paragraph 4001 of COMNAVSUBFORINST 8500.4, temperatures are required to be taken daily and recorded on magazine temperature record cards. Additionally, the temperature data is required to be recorded in the ship's smooth deck log for permanent record. Of course we use MIP 7000/X04 to perform our daily magazine inspections of the Small Arms Ammunition Locker (D-1), Pyrotechnic Locker (D-2), and Countermeasures Device Locker (D-3). Questions? Comments! Give me a call at (757) 444-3520 ext. 7091 (DSN 564) or e-mail me at ***jeffery.shull@navy.mil***

# *Wescodyne*

**HMCS(SS/SW) Flannery**

For those of us who have not been at a sea command for a few years, networking with old and new shipmates remains, and will continue to be, our most valuable resource for information upon our return to sea. Here is something that I received via e-mail: "Quick question for you. Have you seen a change over the last couple of years or is Wescodyne still the brand of choice when it comes to cleaning EABs and SCBAs? I have been asked about this, and prior to ordering before sea trials, I wanted to confirm."

I knew the answer, but decided to check with a former shipmate who has personnel cleaning the

SCBA's daily at the fire fighting trainers. I got more than I bargained for. Here is his reply:

"For EAB, mix one part disinfectant with 8 parts of fresh water in clean mixing bowl or container. A-1116/028 R-7 step 1.a. Disinfectant is SPMIG # 01548 (aka Wescodyne)

For OBA, prepare disinfectant solution by mixing 1 1/4 tablespoons of Wescodyne per gallon of warm fresh water. 6641/009 R-8 step 2.a.

For SCBA, prepare three pails each containing approximately 1 1/2 gallons warm fresh water. Water temperature shall not exceed 110 degrees Fahrenheit. Mix two tablespoons of Wescodyne or sodium hypochlorite solution in one pail. Use remaining 2 pails for rinse water. (Sodium hypochlorite solution is MILSTD 1208{considered HazMat} or SPMIG #03618)."

If you have any other questions concerning submarine safety items, contact us using the points of contact on the last page of the FLASH or use safe-afloat@navy.mil and send an e-mail.

# *Changes for Calcium Hypochlorite*

**HMCS(SS/SW) Flannery**

There have been some changes to Calcium hypochlorite from 2 years ago that we, at the Safety Center, are just now finding out about. Apparently, it is no longer a Type II hazardous material and is NOW a Type I hazardous material. What does that mean? It means its shelf life can no longer be extended. Type II materials are extendable and Type I is not, due to stability properties in its chemistry composition. Additionally, the shelf life is now 24 months versus 36 months.

During the next monthly inspection of your calcium hypochlorite lockers, check the status of the calcium hypochlorite and be sure to order new material as needed.

Listed below is the data received from the CHRIMP (Consolidated Hazardous Material Reutilization and Inventory Management Program) experts:

6810-00-255-0471, Calcium hypochlorite, Technical Shelf Life M (24 Months (Type I Non-Extendable)

Item used to be shelf-life (SL) Type II material until June 2001 under shelf-life code (SLC) 7 (36 Months). The SLC of this material was changed effective 01067 (8Mar2001) but it took three months to validate all federal automated systems. The SL was changed from type II, SLC 7 to type I, SLC M (24 months) based on quality data gathered from test results and technical information concerning stability of the product for storage.

Additional NSN's involved in SL change from type II, SLC 7 to type I, SLC
M, which are managed by DSCR (S9G):
- 6810 00-238-8115
- 6810 00-255-0471
- 6810 01-065-2410
- 6810 01-358-4336
- 6810 01-368-3566

Additionally, FSC will be changed to 6840 because these items require an EPA registration number and EPA label.

# *Life Saving (Reverse Osmosis Desalinator)*

**FTCM(SS/SW) Clements**

Submarines that have had the modifications for SEIE (Submarine Escape Immersion Ensemble), final PMS requirements have arrived for the four reverse osmosis desalinators that accompany the

modification. PMS FR 1-04 introduced MIP 5315/016 for maintenance of the desalinators.

It comes with two cards. First is the Q-1R. The Q-1R provides a visual inspection of each unit. This card ensures the units are complete and in satisfactory condition.

Next is the 48M-1. The 48M-1 details a test maintenance procedure. I strongly recommend you complete the 48M-1 on all of your desalinators upon receipt of PMS FR 1-04. The reason, all the SEIE suit boats I have surveyed have desalinators that were manufactured at least six years ago. Completing the PMS now, versus 48 months from now, will ensure the equipment functions properly.

Don't wait until you need it to find out the SEIE suits have problems and the desalinators do not function properly. Besides, if there are problems with either one, it's better to identify them now.

Desalinator Kit

# *Editor's Thoughts*

**HMCS (SS/SW) Flannery**

This last quarter has been a busy period for our section as we were out conducting safety surveys and presenting ORM to boats on the east coast. One of the most asked questions we are asked by Commanding Officers is "How do we compare to other boats?"

This is usually a harder question to answer than most commands realize. Each command has its own unique characteristics that in its safety programs or has one or more portions that do not fully meet the intent of the safety requirements. Therefore, LT Romano (Submarine Division Head) has taken all the surveyor's inputs and composed the "Submarine Safety Survey Best Practices and Recurring Discrepancies." The date time group is COMNAVSAFECEN 251456Z MAR 04.

The message outlines the practices that have set the benchmark in safety. Also, the message focuses on common deficiencies among commands surveyed in the last six months. The intent is to provide valuable information that we can all use to ensure current safety practices are communicated without the usual finger pointing that follows audits, surveys, or inspections.

Finally, I'd like to give a BZ to the pacific fleet in their efforts to complete the Afloat Safety Climate Assessment Survey. COMNAVSAFECEN 101800Z NOV 03 provides the guidance for this voluntary survey. The survey is a web-based survey that is used as another tool for Commanding Officers to assess their safety climate and gain some valuable insight to the crew's perspective on safety.

The ASCAS is an online survey with 66 questions regarding safety for afloat commands. The survey is designed for those Sailors filling a deck-plate job to a department head position. The first 60 questions ask you to grade the particular question on a scale of 1 to 5, 1 being "Strongly Disagree" and five "Strongly Agree." The remaining 6 questions allow each crewmember to input their own comments in response to the question regarding the sub's safety program.

Of those submarines surveyed, the following items are the top five issues recognized by the crews:

1) The safety officer is not a sought after position.
2) Command crew rest standards are not enforced.
3) Adequate resources are not readily available to accomplish the jobs assigned.
4) Lack of experienced personnel affects my command's ability to operate safely.
5) The command hesitates to temporarily restrict individuals from watch standing who are under personal high stress.

By the end of March 2004, 16 submarines have completed the survey. If your command is interested in the survey, view the website for more information: http://www.ascas.org/, or you may contact LCDR Alan Tupman, alan.tupman@navy.mil or me, richard.flannery@navy.mil.

# *Mk 1 Float Coat PMS. Which MIP Are You Using?*

**FTCM(SS/SW) Clements**

After looking over the FR 1-04 PMS hull-to-MIP listing, I have noticed several boats using the incorrect MIP for the Sterns MK 1 float coat. AEL 2-330013101 (submarine life preservers) authorizes only the new Sterns MK 1 float coat for submarine use. The Sterns MK 1 float coat uses PMS MIP 5832/014. The discontinued MILSPEC MK 1 float coat (MIP 5832/002) is still in use in the afloat community and will remain in use until existing stock is no longer serviceable. The MILSPEC MK 1 float coat is not authorized for submarine use.

Submarines are only authorized the following life jackets and MIPs:

- Sterns MK 1 MIP 5832/014
- Sterns inherently buoyant MIP 5832/015
- Auto-inflatable utility life preserver MK 5 MIP 5832/012
- Kapok inherently buoyant MIP 5832/007

Ref AEL 2-330013101

# *Hail and Farewell*

**HMCS(SS/SW) Flannery**

We would like to welcome aboard MMC(SS) Robert (Bobby) Morrow to the Damage Control section of the submarine division here at the Naval Safety Center. MMC Morrow's 15 years of submarine Damage Control, Auxiliary Division, and PMT experience and expertise will provide an invaluable asset to the survey teams. His previous commands have included the USS ALBANY (SSN-753), USS NORFOLK (SSN-714), Performance Monitoring Team Norfolk, PCU/USS HARTFORD (SSN-768), USS GEORGE BANCROFT (SSBN-643 BLUE), and USS HADDO (SSN-604). You can reach MMC Morrow at (757) 444-3520 ext. 7073 (DSN prefix 564) and e-mail robert.e.morrow@navy.mil.

Finally, we would like to say farewell to MMCS(SS) Ron Downham. MMCS Downham had been serving as submarine safety analyst and operational risk management facilitator. He also participated in the Damage Control Working Group for the Seawolf and Virginia class submarines, as member of the DC/FF Working Group for NAVSEA, as a member of Navy's Protective Clothing Board, and Vice President of Naval Safety Center's CPOA. MMCS Downham reports to the USS FLORIDA as the Auxiliary Division LCPO and Safety Officer. We extend our best wishes and say, "thanks for a job well done, shipmate".

# *Eye Wash Stations*

**ETCS(SS) Monsam**

Eye wash stations and portable eye wash bottles are an item onboard our submarines that don't seem important until they are needed. The significance of maintaining eye wash stations (fixed and portable) in a perfect working conditions and availability could save one of our sailor's vision in the event of a mishap.

The first and most important item in ensuring your command meets all of the requirements for eye wash stations is to know what the requirements are. Knowing the required locations of your fixed or portable eye wash stations is the first step. Each Safety Officer, with the Medical Department Representative's (MDR) assistance, should review the baseline industrial hygiene survey, NSTM 223-9.2.4.1 and 670-1.8, and paragraph B0508 of OPNAVINST 5100.19D. At a minimum, the industrial hygiene surveys for submarines recommend portable eye wash stations to be located at the secondary sample sink and in the close proximity of nucleonics. The portable eye wash bottles need to be placed in a location that is accessible for use versus locked in a locker/cabinet.

Next, both the fixed and portable eye wash station locations must also be distinctly marked with highly visible signs per ANSI Standard Z358.1.1998 and OPNAVINST 5100.19D. The proper signs can be procured through the supply system using NSN 9905-01-345-4521. The signs are green, with a white-eye wash symbol, and white lettering.

Over the last year, surveyors have discovered only a few submarines are using the correct portable eye wash bottles. There have been a wide variety of bottles used in lieu of the correct eye wash bottles. Some of the bottles that have been seen are condiment bottles, specimen bottles, and a variety of other unsuitable bottles that do not meet ANSI specifications. The correct bottles can be obtained through the supply system using NSN 6450-01-353-9946. These bottles are intended to be readily available in sufficient quantities in compartments that do not have permanent or portable eye wash stations per OPNAVINST 5100.19D.

Permanently mounted eye wash stations in the auxiliary division spaces, should be readily available for use in the event of an emergency. On numerous occasions, these stations have been found to be inaccessible, removed, or used for temporary storage while work was being completed. If a permanent eye wash station requires removal or securing for various reasons, ensure an alternate means of emergency eye wash is available (e.g., the shower stall, placement of a temporary portable eye wash station). And most importantly, ensure the crew is made aware of these changes either through the POD, quarters, or training.

Finally, it's recommend that the MDR and Safety Officer check the eye was station for proper operation. This includes checking the flow, (to ensure the station delivers 0.4 gallons per minute for 15 consecutive minutes), the eyepiece fixture has the proper covers attached and that they pop off upon activation of the water, and ensure the eye wash station has not been removed or disassembled. This can be done when conducting habitability, zone, and safety inspections each week.

If there are any further questions with regard to safety related items or stock numbers please contact me at the Naval Safety Center at (757) 444-3520 ext. 7098 or DSN 564-3520 ext. 7098, or email me at peter.monsam@navy.mil.

## *Effective COMNAVSAFECEN Submarine Safety Advisories*

| | | |
|---|---|---|
| **17-00** | **201959Z DEC 00** | **Contract Liberty Boat (Water Taxi) Safety** |
| **1-04** | **051505Z JAN 04** | **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, "Naval Safety Center Secure Site". Once you are on the Secure site, select the Afloat Messages link and then select the Submarine effective advisories link.**


**Naval Safety Center**
375 A Street
Norfolk, Virginia 23511-4399
Phone: (757) 444-3520 (DSN 564)
Fax: (757) 444-8636 (DSN 564)

safe-afloat@navy.mil
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### *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. The data is 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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