

The Submarine Division of the Naval Safety Center Presents:

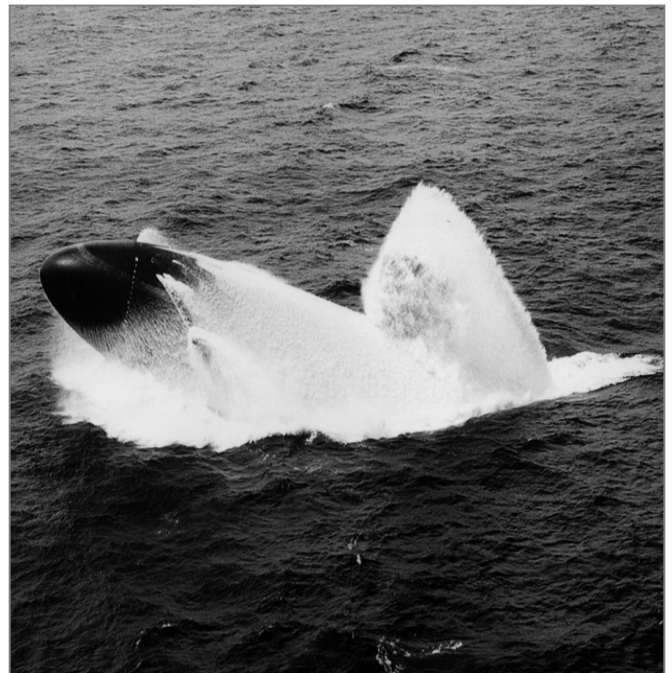
FLASH

Factual Lines About Submarine Hazards

January 2003 - February 2003

Table of Contents

| Page | Article Name |
|------|---|
| 1 | Table of Contents Editor's Thought |
| 2 | Combat Systems Deficiencies Damage Control Deficiencies |
| 3 | Damage Control Deficiencies Deck Deficiencies |
| 4 | Diving Deficiencies Electrical Deficiencies |
| 5 | General Departmental Deficiencies Mechanical Deficiencies Safety Officer Deficiencies |
| 6 | Safety Officer Deficiencies Medical Department Deficiencies |
| 7 | Medical Department Deficiencies Welcome Aboard |
| 8 | Effective COMNAVSAFECEN Submarine Safety Advisories Points of Contact |



Editor's Thought

After this issue of FLASH, we no longer will mail FLASH to shore-based commands that have Internet access. We will post the new issues of FLASH on the Naval Safety Center web site at www.safetycenter.navy.mil. If you want us to notify you of the release of the new FLASH, e-mail your .mil domain address to me at jeffery.shull@navy.mil. Once we place the new issue of FLASH on our web site, we will notify you via e-mail that it is available to download.

This issue of Flash is dedicated to the most frequently found deficiencies in each subject area during surveys of the submarine force for calendar year 2002. Overall, statistically, we show an unacceptable trend. 2001 PMS completion rate was **70%**. 2002 PMS completion rate was **62%**. Does this bother you? We, at the Naval Safety Center, find it disturbing!

CORRECTION TO FLASH (Oct 02-Dec 02): In the article, "Nothing is Ever What it Seems!" page 4, the five-buckle EAB harness had an incorrect part number listed for AEL 2-330023047. The correct part number is 805017.

Combat Systems Deficiencies

Combat Systems PMS completion statistics from '01 to '02 increased from 83% to 92%. Those of you in the fleet who contributed to this we give a **BZ**. The three areas of concern are listed below.

- Is the dummy/drill ammunition segregated from service ammunition, properly color coded and labeled?

Solution: Dummy/drill ammunition must be segregated and properly labeled. The ammunition can be segregated by using a spare ammo can, color-coded gold (for inert), and labeled "**For practice only.**" Reminder: Blanks and grenade rounds are NOT dummy-drill ammunition. Do not store them together! (This item has made the most common discrepancy list for the last four years!)

- Does the ship maintain all required physical security gear?

Solution: Refer to AEL 2-30024503 for specific requirements. The biggest offenders are the helmets missing all required parts (e.g., adjustable headbands and clips). Without them,

the helmet is useless. Reminder: Body armor is designed for use under your utility or camouflage shirts, not above. Kevlar vests are for use over your outer-most garments.

- Are complete Otto fuel spill kits available?

Solution: Refer to OD 44979 Vol. 4 for the specific requirements of both spill kits. Yes, you are required to have two spill kits. The gag-assembly should not use a nylock nut or wing nut. The torque wrench and 9/16" deep-well socket should be readily accessible, and the torque wrench should be calibrated. And finally, the Otto fuel detector should be within calibration and the detector tubes should not be beyond periodicity. (This item has made the most common discrepancy list for three out of the last four years!).

The combat systems safety survey checklist is an excellent tool you can use to check on the status of required items. Correct any deficiencies you may find and check your program often. Be proactive not reactive. If you have any questions, please contact us.

Damage Control Deficiencies

- Are the OBA latches positive locking and guide rods straight? Submarines surveyed have had more than 40-50% of OBAs placed out of commission (OOC). These problems were unknown to the crew because the guide rods are misaligned, bent, and even the wrong guide rods installed (two rights or two lefts).

Solution: Properly performing the 6641/ Q-8R will alleviate these common but deadly problems. Train the crew on proper use, handling and

stowage of the OBA. Will your OBA function properly when used for a fire?

- On the range guard APC system, have the fusible links been replaced within the last six months? Is there at least 3" of free travel between the cable tube and the ends of the link assembly? This system is installed onboard submarines to help combat deep-fat-fryer fires and galley-ventilation fires. This is what the system is designed to do; but on many boats, it won't work because of insufficient cable travel

to actuate the APC bottle. Another problem is that most systems are so dirty and greasy they are a fire hazard instead of a fire extinguisher.

Solution: Properly performing the required PMS per MIP 5556/004 would greatly enhance the ability of the system to work as designed. Don't forget to put the tag in place to identify when the PMS was last accomplished. We also recommend incorporating range guard PMS into the command-monitoring program and/or PMS spot-check program.

- Is the submersible pump electrically safety checked (required semi-annually and after use)? Is it properly grounded? Are cables and connections in good repair?

Solution: Do the PMS! Sub pump PMS should be completed semi-annually and after each use utilizing MIP EL-002/029 MRC S-1R. Operators should wear rubber electrical gloves when operating the portable sub pump. Seventy-five percent of all sub pumps surveyed have had electrical safety violations and been placed OOC.

Deck Deficiencies

- Is MRC 5832/012 Q-1 being performed on all MK-5 AIULPs? The answer to this question is a resounding, "NO!" During FY 2001 the non-completion rate for this MRC was 41%. In FY 2002 the non-completion rate rose to 68%! Someone is going to fall overboard and drown because this PMS is not being accomplished.

Solution: First lieutenant and deck LPO aggressively spot check all life jacket PMS. Ensure all jackets are on the MRC equipment guide list (EGL). Number all life jackets so when the maintenance person is doing the MRC, he can find all of the jackets listed on the EGL. Add MRC R- 1 (inspect prior to use) to deck division pre-underway check-off list.

- Are all MK -5 AIULPs equipped with distress marker light and water-activated CO2 inflator, and is the battery expiration date within three years of the manufacture date? We are getting a little better at this one. The non-accomplishment rate dropped from 76% in FY 2001 to 67% in FY 2002. This is still our second highest non-accomplished safety MRC.

Solution: The first lieutenant and deck LPO aggressively supervise the PMS program in deck division. MIP 5832/012 MRC R-1 (inspect prior to use) would catch this problem every time. Add this MRC to the pre-underway check-off list. I have surveyed several SSNs and SSBNs and found every MK-5 AIULP with an expired battery. Even if your MK-5s have not been used recently, MRC Q-1 will also catch this problem.

- Is the helicopter transfer kit complete? Over half of the boats surveyed last year had incomplete kits. The un-sat rate for this has grown from 41% in FY 2001 to 55% in FY 2002. A helicopter transfer at sea is usually on very short notice and finding out when the helicopter is inbound that you are missing items can endanger the bridge crew or the crew of the helicopter.

Solution: Inventory the kit IAW the SSM/AEL 2-33023065. Have MIP H-406/002 MRC A-1R added to deck division pre-underway check-off list.

Diving Deficiencies

Over the past year, we have been providing diving assistance with submarine safety surveys. Listed below are the top discrepancies we have seen.

- Do service record entries (Page 4s) properly document diver re-qualification?

Solution: MILPERSMAN 1220-260 provides policy and definitions of diving re-qualifications. MILPERSMAN 1220-100 exhibit 4 provides the sample format for documenting qualifications and re-qualifications and instructions for data entry.

MILPERSMAN 1220-100 exhibit 5 provides dive re-qualification standards.

- Is the command using the Dive Reporting System (DRS) and are they submitting the information promptly?

Solution: The most current version of the Dive Reporting System (DRS) is the windows based version 5.1.5. If your command needs this version please visit our website at www.safetycenter.navy.mil/afloat/diving/drs/default.htm.

Instructions are provided for downloading the current version or patch files, and an on-line CD-ROM request form for those commands needing a copy.

- Is PMS being performed on all regulators?

Solution: "R" checks, completion of and documentation of the same. Need I say more?

A submarine scuba diver is unique in the diving navy. It's a collateral duty, your gear is stowed/crammed from bow to stern and you may only dive enough to maintain your qualifications. However, the administration, training and equipment maintenance still needs to be accomplished and properly documented. We strongly recommend you take a good hard look at your diving lockers. What you find might surprise you. The diving safety survey checklist is an excellent tool you can use to check on the status of your lockers. Correct any deficiencies you may find and check your program often. It will make things safer for your divers. If you have any questions, please contact us.

Electrical Deficiencies

- Shipboard portable electrical equipment not being safety checked IAW PMS.

Solution: Ensure that all shipboard portable electrical equipment is safety checked and all EGLs are current and up-to-date. (This item has made the most common discrepancy list for seven out of the last nine years!)

- Navigation lighting panels (N-1) have not had the A&I completed on them, or parts are missing or damaged.

Solution: Ensure that the A&I has been completed and N-1 is in good repair. (688 class COMSUBLANT/COMSUBPAC A&I N-3171; 726 class A&I TZ-0856) (This is the sixth year in a row for this recurring item!)

- Unauthorized multi-outlet power strips (surge suppressors) are being used onboard.
Solution: Ensure that all power strips meet the requirements set forth in MIP EL-002/029 MRC A-11R, Note 4 on the MIP page lists the only authorized strips allowed on board! (This item has made the most common discrepancy list for six out of the last nine years!)

General Departmental Deficiencies

- Are there any electrical or electronic shock hazards in personal bunks?

Solution: Do not make alterations to bunk lighting. If you need to add an electrical receptacle in your bunk, submit a LAR and, if approved, install it in accordance with the NSTM.

- Are the gaskets on flood-control doors in good condition, free of dirt, debris, and paint?

Solution: Check the gasket material during zone inspections. Remove paint using the same techniques as for sound mounts. Replace them if necessary. The technical name for flood-control

doors is bilge baffle doors. The drawing for the doors gives complete references for size and type of material for the gasket material. The drawing numbers are:

SSBN: NAVSEA Dwg 4645488

SSN: NAVSEA Dwg 4456844

- Do the flood-control doors lock when their latches are released?

Solution: During the normal zone inspection, test the doors. Typically the doors have gasket material that is too thick and doesn't allow the door to close far enough to latch.

Mechanical Deficiencies

- Bench grinders are in general disrepair (e.g., tool rests and grinding wheel hoods not adjusted properly, nonskid area not adequate, safety precautions not posted, non-shatter eye shields loose/broken/missing, light bulbs missing, electrical connections chafed or have exposed wires).

Solution: Perform proper maintenance and pre-use checks on bench grinders (IAW technical manual and OPNAVINST 5100.19D). (This is the seventh year in a row for this recurring item!!!)

- Pneumatic grease guns are not configured IAW the *Submarine Greasing Handbook*.

Solution: Supervisors need to take the time and spot-check their pneumatic grease guns. Verify that pneumatic grease guns have all pieces required IAW *Submarine Greasing Handbook*. (This has been a recurring item for five out of the last nine years.)

- The hydrostatic test of the steam kettle relief valve and steam jacket discharge line is not being accomplished annually.

Solution: Supervisors, spot-check your PMS. (This is the second year in a row for this recurring item.)

Safety Officer Deficiencies

- Does the safety officer have a copy of the NAVOSH deficiency abatement plan (NAVOSHDAP)?

Solution: The safety officer can place in a binder the CSMP Option D printout (safety-related jobs only), the zone inspection program sheets that have safety-related items, copies of

the latest inspections, and any other safety-related item that needs correction. The safety officer should track and ensure that the safety items are corrected.

- Are all required reviews of the atmosphere contaminant log conducted?

Solution: The XO must approve the stowage of all prohibited and limited items onboard. He also is required to review it prior to each underway to ensure that HAZMAT is minimized onboard. Is the HM coordinator initialing the line items? Are department heads reviewing it monthly? How about the DCA?

- Is the submarine material control program audited annually by an officer other than the HM coordinator?

Solution: Have the XO place the audit in his audit program so that it does not get dropped. This is a good review of the program. The

auditor should receive a printout of SNAP report 42, which will list all the hazardous materials and compare that to the listing in SHIMS. If SHIMS is not being used, check FLASH (Dec 01-Jan 02) for the POC information. The HAZMAT data can be entered into SHIMS by saving the report 42 in electronic format and e-mailing it to the program manager. This list will be converted to a format that SHIMS can import readily. Check that lockers and material are properly labeled. Use the safety officer portion of the safety survey checklist for other items to review.

Medical Department Deficiencies

A review of the data collected during the safety surveys of CY 2002 has shown a continuing trend in a couple areas of the medical departments review. These areas, heat stress, WBGT PQS, and personal eye wash bottles, were commented on in FLASH (Feb-Mar 02), and continue to be an ongoing deficiency. Unfortunately, there seems to be some difficulty in correcting these two issues. The paragraphs below provide a few ideas to help resolve this ongoing trend. Additionally, the poison control phone numbers were posted incorrectly. Finally, I'll preview those areas that are progressing well and some insight with helpful ideas to improve your safety posture.

- Are heat stress surveyors assigned to perform WBGT surveys trained and qualified using heat stress surveyor watch station 303 of the Safety Programs Afloat PQS, NAVEDTRA 43460-4B?

Solution: OPNAVINST 5100.19D (w/chg 1) states that the MDR is responsible for conducting WBGT surveys in engineering and non-engineering spaces on submarines. Although the responsibility is placed directly on the MDR,

the instruction does allow other personnel to be trained as a surveyor. The requirements for heat stress surveyors are outlined in paragraph B0206. However, one of the biggest questions received is where to get the PQS. One way is by downloading it from the CNET web site: <https://wwwcfs.cnet.navy.mil/pqs/Home.htm>. You must log in and go to the NAVEDTRA 43400 section to find NAVEDTRA 43460-4B, Safety Programs Afloat PQS. In this PQS book, there is a section on heat stress training. And, yes, I can hear everyone saying, "That's great if you have access to the Internet on the boats." Here is one other way to get the PQS booklet; ask your safety officer for the CD-ROM provided to them from the Naval Safety Center during the last safety survey. Along with the PQS, there is a wealth of other information there that you may find useful. Once you have the PQS, you can begin training surveyors. I found that using the MSs or EMAT to be the best personnel to train as back-up surveyors to the MDR. Use the time during ship's drills to provide the training. During a recent survey, I found one MDR who solicited the local NEPMU (Naval Environmental Preventive Medicine Unit) to come down for a couple of hours and provide the training.

Conducting a little training at frequent intervals helps to ensure retention of the information.

- Are approved eye wash bottles readily available, in sufficient quantities in lieu of permanent or portable eye wash stations in nucleonics/water chemistry and secondary analysis stations? Are all eye wash stations and personal eye wash bottle locations distinctly marked with highly visible signs?

Solution: Since there is no permanent eye wash station in the engine room, the personal eye wash bottles (NSN 6515-01-393-0728 or 6540-01-353-9946) should be installed. The eye wash placard (NSN 9905-01-345-4521) has a green background with white lettering and a picture of the eyewash station. In many instances, MDRs state the placards are difficult to obtain. Try this; make a placard/sign on your laptop, laminate it, and post it until you get the correct one. Finally, during some recent surveys, there has been a trend of inoperative eye wash stations that has begun to spiral upward. Encourage everyone onboard to periodically check, visually, that the permanent eye wash station is free of obstacles and in good working order.

- Is the phone number of the nearest poison control center and the national poison control center conspicuously posted on the locker?

Solution: There is a new nationwide poison control hotline phone number, which is 1-800-222-1222. This phone number will work from anywhere in the U.S., including Hawaii. You should also keep an up-to-date local poison control hotline number posted. During 2002, nearly 70% of the medical departments were deficient in posting the correct local and national numbers.

With that aside, what are we doing well? Plenty! The use of SAMS has helped MDRs to be nearly 100% in injury reporting, effectively manage hearing conservation, documenting NAVOSH training and potable water testing. Also, during sanitation inspections, MDRs are improving their skills in reporting hazards as well as those requirements outlined in NAVMED P-5010, Chapter 1. Finally, an additional area that we have historically done well in has seen a slow decline in efficiency: quarterly pressure testing of oxygen bottles. This is one area that should always be in complete compliance. An empty oxygen bottle in an emergency is a great mishap to the crewmember that needs it most.

Have any helpful ideas, improvements, or concerns regarding safety onboard? E-mail or call, and I will do my best to help you and get the information out to everyone. Keep up the continued improvements and great work out there.

Welcome Aboard

Welcome aboard to ETC(SS) Bryan C. White. Chief White reports to the Naval Safety Center as electrical and mechanical systems safety surveyor in Code 38. Chief White's previous duty stations include: DSRV Mystic; Pearl Harbor Naval Shipyard/IMF; USS

Greeneville (SSN 772); USS Tunny (SSN 682); NAVCRUITDIST Raleigh, NC; USS Stonewall Jackson (SSBN 634); USS Daniel Boone (SSBN 629). You can reach ETC(SS) White at (757) 444-3520 Ext. 7202 (DSN prefix 564), or e-mail at bryan.white@navy.mil.

Effective COMNAVSAFECEN Submarine Safety Advisories

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

1-03 071425Z JAN 03 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.

Naval Safety Center

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

submarines@safetycenter.navy.mil
www.safetycenter.navy.mil

FLASH Editor: MMC(SS) Jeff Shull Ext. 7091
E-Mail: jeffery.shull@navy.mil

Afloat Directorate Head: CDR Don Ciesielski Ext. 7127
E-Mail: donald.ciesielski@navy.mil

Commander Naval Safety Center
RADM Stephen Turcotte Ext. 7000

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.

THE SURVEYORS

Safety Officer/General Departmental

LCDR David Bragg Ext. 7100
david.bragg@navy.mil

DC/Mechanical/Electrical/Electronic

MMCS(SS) Ron Downham Ext. 7073
ronald.downham@navy.mil
ETC(SS) Craig Houck Ext. 7098
craig.houck@navy.mil
EMC(SS/SW) Greg Seplak Ext. 7092
gregory.seplak@navy.mil
ETC(SS) Bryan White Ext. 7202
bryan.white@navy.mil

Medical

HMCS(SS) Rich Flannery Ext. 7097
richard.flannery@navy.mil

Combat Systems/Deck/Divers

FTCM(SS) Chris Clements Ext. 7099
chris.clements@navy.mil
MMC(SS) Edwin Nixon Ext. 7104
edwin.nixon@navy.mil
MMC(SS) Jeff Shull Ext. 7091
jeffery.shull@navy.mil