



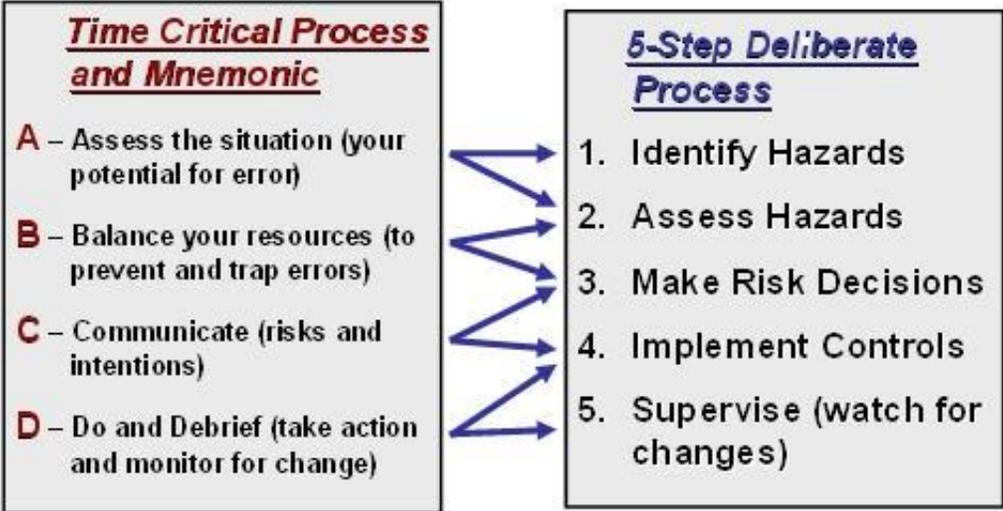
FLASH

actual lines about submarine hazards

October - December 2014 Edition

FLASH is a periodic release by the Afloat Safety Directorate of the Naval Safety Center. The information contained herein is a summary of research from selected reports of submarine hazards to assist you in your mishap prevention program. The FLASH is intended to give advance coverage of safety-related information while reducing individual reading time. This bulletin does **not**, in itself, constitute authority but will cite authoritative references when available. **It is recommended that this newsletter be made available to all hands.**

The Link Between Time Critical and Deliberate



FLASH
 Naval Safety Center
 375 A Street
 Norfolk, VA 23511-4399
 Phone: 757-444-3520 ext. 7838, DSN 564-3520 ext. 7838
 Fax: (757) 444-8636, DSN 564-8636
 Head, Submarine Division – LT John Oravitz
 Class “A” Mishaps – LT Mike Lopez
 LCPOs- MMC(SS) Joshua Alkire, EMC(SS) Louie Belk, MMC(SS) Kamil Chayim, ETC(SS) Adam Kingsley, FTC(SS) David Macon, HMC(SS) Frank Thomas

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From the Submarine Safety Division Head

LT John Oravitz

“Safety Assessments”

First things first: The Naval Safety Center now conducts Safety Assessments, Safety Surveys are history. In short, the fleet (submarine, surface, ground, ashore, and aviation) has improved its safety culture and by stepping up our survey to an assessment, we hope to keep the ball rolling in a positive direction. CY 2015 will bring some changes to our assessments, including the assignment of a Risk Assessment Code (RAC) to each discrepancy and the categorization of discrepancies that aligns with WESS. Finally, assessments will be returning to the 36 month interval, so we will work with units in 2015 to ensure a 24 -36 month interval is maintained for those units coming due in FY 2015.

“Good News Story”

Submarine Forces Afloat was literally the good news story of the Naval Safety Center for FY2014; you can get an idea from the statistics below in Figure 1. Class “A” Mishaps are A, Class “B” are B, and so on. HAZREPS are represented by the H.

Submarine Force Afloat Mishaps						
FY	A	B	C	D	H	Total
2009	2	5	24	32	14	77
2010	0	1	30	41	25	97
2011	4	0	30	69	24	127
2012	0	1	29	55	14	99
2013	5	1	23	68	15	112
5 YR Avg	2.2	1.6	27.2	53	18.4	102.4
2014	0	1	16	43	17	77

Figure 1: Submarine Forces Afloat 5 year mishap data from COMNAVSAFECEN.

So, BRAVO ZULU to all Submarine Safety Officers and their safety teams; we all know that your requirements are endless and safety can be inadvertently moved down in the priority list, causing mishaps. The key will be to maintain that positive safety climate through FY2015 and beyond. Stay engaged and keep complacency at bay with regular (quarterly at a minimum) Safety Council meetings that involve the command leadership and focus on safety related trends on the boat from multiple data points, motorcycle safety, upcoming high risk evolutions, and anything else safety related. Safety Officers and all safety team



members need to remember that during the Safety Council meeting you have the Commanding Officer's undivided attention. The safety team should be prepared, analyze statistics prior to meeting, prepare the quarterly motorcycle safety report, generate a few power point slides that show what trends you are seeing and why, and make reasonable recommendations for safety related training based on your findings.

Last note, PCU John Warner (SSN-785) is planning to execute Sea Trials in March, 2015 followed by INSURV. We have established communication with the Safety Officer on the 785 to set up an "assist visit" prior to Sea Trials to give the boat something to work with prior to INSURV. Safety Officers, if you are interested in an assist visit, all you have to do is request one when we are planning to be in your area. Look at our regional schedule on the last page and contact us – it is that easy. We'll come by, do some great training and give you a report with data points you can work off of.

Safety Management

LT Mike Lopez

Safety Management System

There has been a lot of talk about the new Safety Management System (SMS) that is supposed to help revolutionize the safety environment and how we make risk-based decision-making.

SMS is a concept of promoting an evolving safety culture within the Navy that will be utilized by each command. It is composed of four sub-concepts that interlock with one another to promote the growth of the command's safety culture. It is a system that is supposed to help predict the next mishap and allow commands to proactively prevent them from occurring. This advances the evolution of safety from reacting to mishaps (reactive culture) to proactively identifying hazards before mishaps occur and predicting where your next mishap may happen (proactive culture).

The four key concepts of the SMS are: Safety policy, safety assurance, safety risk management, and safety promotion. When these concepts are combined, it creates the SMS. It is not a tangible system, but rather a change in thought process that promotes the growth of the command's safety culture.

Safety Policy is just that; it is the methods, processes, and structure used to establish and promote the safety culture. It is the rules and regulations that the 5100.19E and other NAVOSH standards mandate. It ensures that the policies set forth are adhered to and are known and are standardize across the fleet.

Safety Assurance is about continual evaluation of risk-control strategies and supports identification of hazards. This includes inspectors and survey teams. This allows for internal and external organizations to assess a command's safety climate and see where and how the command can improve; it is about feedback and recommendations. This is the center of the evolving safety environment that SMS is trying to support.



Safety Assurance allows for mishap and hazard reports to be collected in a database but also allows for mishap and hazard trends to be readily accessible by anyone in the fleet. This will make lessons learned available and allow for individual commands to see where the fleet or community has issues with regards to safety. This is also the hardest to accomplish. As we all know, WESS has its issues. It is slow and only available on low side. With submarines, it is difficult to transmit UNCLASS reports on the high side, and is an ongoing struggle to find a way to allow submarines to submit reports in low-bandwidth areas.

Eventually, those issues will be resolved and information sharing will be improved. That is the ultimate goal for the SMS: predicting and preventing mishaps through information sharing, specifically, lessons learned. This integration of safety processes should allow commands to see trends and train on them to better inform their Sailors of commonplace issues causing mishaps in the fleet while giving them better situational awareness to prevent mishaps from occurring.

Safety Risk Management is essentially ORM/TCRM. It describes the evolution, identifies hazards, assesses risk, analyzes risk, and controls any identified risks. These three concepts work together and allow for each concept to evolve or change with the safety climate.

Safety Promotion is the new over-encompassing concept of SMS. It centers on training and strengthening the positive safety culture within the command. It also adds the lessons learned concept from NNIR or incident reports as a requirement. Again, nothing new within submarine culture, but now the creeping nuke-ism that lingers between the forward and aft end of the boat has emerged and has influenced the rest of the Navy to continue the practice of disseminating lessons learned.

Overall, SMS isn't new; it is a culmination of best practices across the fleet and promoting it as a new management system. Most of it is already imbedded in the submarine fleet due to the nature of how we operate. It is standardizing the way safety is seen and ensures that the fleet is on the same page on safety and how it is being operationalized. The real change is the reporting system; we are trying to figure out how to make reporting for submarines easier in the type of environment in which they operate as well as getting people to report mishaps and hazards. That will be the longest leg in incorporating SMS fleet wide. As the database is being worked on, commands should be reporting mishaps and hazards to the best of their ability. If the command climate is such that people are not forthright in reporting hazards and mishaps, then the system will not work. That is the internal struggle we face as submariners. We like doing internal critiques or hot washes, but we are not providing that data to the rest of the community. SMS is nothing new with the way submarines do business, just a new way to look at promoting safety and ensuring that safety is everyone's responsibility. In short, sharing information and improving communications – especially with regards to safety – is the backbone of SMS.



Damage Control

MMC(SS) Alkire

With the replacement of the 30 minute SCBA bottles with the 45 minute bottles comes a procedural problem. Note 21 of MRC 5519/016 M-1R states **“All SCBAs are to be stowed in approved stowage lockers according to stowage procedures found in the latest revision of the SCBA technical manual S6220-EN-MMO-010, Section 2.5. Ensure each SCBA locker contains a copy of SCBA stowage procedures.”** Section 2.5.b of the SCBA tech manual has you place the face piece assembly under the right side-strap of the backpack. The problem is that the mask does not fit behind the side-strap and still allow room for putting the cover on the locker without damaging the face piece. Instead, we stow the face piece beneath the spare bottle in the bottom of the locker. We, at the Naval Safety Center have been working with COMSUBFOR to get this changed, but we need the Fleet to submit Technical Feedback Reports requesting that either the note in the MRC be changed to allow for submarines to stow the masks differently, or the tech manual be changed to allow for submarines to stow the mask differently. Since surface ships use the same MRC and tech manual, we can't just remove the note, but we can request to make an exception for submarine stowage.

Combat Systems

MMC(SS/SW) Chayim

Recreation and Off-Duty Safety

Getting Sailors safely to and from work and to and from liberty is a primary emphasis of command traffic safety programs, but let's not forget about recreational safety. Here are a few tips for reducing injuries during recreational activities.

First, check with your doctor before starting a training program. This will help you set limits. Don't be afraid to ask an MWR representative for assistance. They are trained professionals who can show you techniques to reduce or avoid injuries.

When lifting free weights, always use collar devices. Use spotters when necessary and lift light if no one is available for support. Do not attempt to lift outside of your capabilities. Know Your Limitations! Keep hydrated (drink lots of water) before, during, and after your workout.

Basketball is a great way to stay in shape if played responsibly. Pay attention to what you and those around you are doing. Wear the proper shoes and include padding (knees, elbow, mouth, etc.) as needed or felt necessary. Baseball, football, soccer and even frisbee should follow the same rules. Make sure you understand the dangers of any sport and use ORM to minimize the possibility of getting yourself or someone else hurt.

Recreational safety encompasses more than sports or exercise; it also includes barbecues, gardening, house maintenance, and lawn care. How many times have you heard “Wear the proper foot protection” or “Wear



the proper eye protection”? It’s beating a dead horse, but we still receive WESS reports about Sailors cutting off their toes while mowing the grass or getting something in their eyes while cutting wood for a new deck. Everyday life can be very dangerous. I want our Sailors to think before they act. Risk is present in every activity. Live life to its fullest, but do it safely so you can read the next edition of FLASH.

Submarine Deck

FTC(SS) Macon

Based on recent safety assessment results, I can see that we are making headway on issues that are facing Deck division. The following are our top 10 discrepancies for 2014:

Crash Bags. 54% of units assessed had crash bags that would not pass PMS due to SCV Collars having corroded batteries or missing items.

Safety Lanyards. 51% of units assessed had incorrect safety lanyards.

Float Lines. 42% of units assessed had float lines that were not rigged correctly. (Floats were not attached to buoyant line with tie down straps running through float eye and line twice).

Ship’s Life Ring. 42% of units didn’t have properly configured life rings.

Helo Transfer Kit. 34% of units didn’t have reflective tape applied to cranial helmets properly.

Life Jackets. 33% of units assessed are not maintaining the MK-1 Life jackets in accordance with the MRC.

Jacobs Ladder. 33% of units assessed had damaged Jacobs ladders, or did not have the Jacobs Ladder attached to the safety track or cleat in the vicinity of the access hatch when moored or anchored.

Helo Transfer Kit. 33% of units assessed didn’t have helo transfer kits maintained in accordance with the MRC.

Weight Test. 28% of units assessed didn’t have a current weight test for the davit.

Life Jackets. 28% of units assessed are not maintaining the inherently buoyant life jackets in accordance with the MRC.



Electrical

EMC(SS) Belk

TOP ELECTRICAL SAFETY DISCREPANCIES (FY 2014)

Portable electrical equipment, both government and personally owned, including ships entertainment components, coffee pots, portable extension lights, etc. had not been electrical safety checked in accordance with PMS.

Look for: Test equipment and gear stowed in lockers for extended time; Verify all work centers SKED against actual electrical equipment under their cognizance.

Berthing rack lighting and wiring electrical shock hazards

Look for: Recessed rack light switches with missing locknuts; Unauthorized alterations to berthing wiring and rack lights.

Safety screens installed on red devil blowers missing or not in good repair

Look for: Screen mesh broken free from the screen frame; Screen missing due to not being stowed in the vicinity of the blower.

Shock hazards associated with navigation lighting panel N-1 breakers were not corrected per the MRC and applicable A&Is.

Look for: Missing nylon screws which are attached to rocker bars on the breaker switches.

FHL-14g type fuse holder line side test points were not sealed with a non-hardening water repellent sealer.

Look for: Missing sealant on dead front fuse holder's test points; Damaged dead front fuse holders.

Glove stowage

Look for: Electrical safety gloves not stowed in their original container or equivalent to prevent folded or flattened gloves; Stowage area which could cause damage from oil and grease.

Multiple power source placards

What to look for: Missing or incomplete placards listing all power sources supplying the ABT or controller.



Medical / HAZMAT

HMC(SS) Thomas

Submarine Respiratory Protection:

This article is on the requirements for submarine respiratory protection program. In order to successfully meet these requirements, you'll need to be familiar with Article B0614 of OPNAVINST 5100.19E. In accordance with article B0614, the following requirements apply and have been added to the Submarine Safety Assessment:

- 1) Has the submarine's Commanding Officer appointed an individual to serve as respiratory protection assistant (RPA) for that unit? This can be via a letter of appointment or listed on the collateral duties list.
- 2) Is documentation available to show that proper respirator training has conducted for all supervisors of those trained to wear respirators? These supervisors should include Petty Officers First Class, Chiefs and Officers.
- 3) Is documentation available to show that the required respirator training has been conducted for all respirator users prior to the respirator use and annually thereafter? This training can be documented in CTQS or via hardcopy in a binder.
- 4) Has the submarine's RPA been trained by the squadron respirator protection manager (RPM) upon initial assignment and annually thereafter? Is there documentation available to show that this training included standard operating procedures, respirator selection, care and maintenance, fit-testing procedures, and respirator user training? The best practice for this is to maintain documentation of the training in the Respiratory Protection binder.
- 5) Does the RPA maintain a copy of the local guidance or standard operating procedures and a roster of personnel in the respiratory protection program? The best practice for this is to maintain documentation of the training in the Respiratory Protection binder.
- 6) Does the RPA maintain supplies to conduct fit testing and training? These supplies should be kept in a locker onboard and should be available for inspection.
- 7) Has the RPA ensured appropriate fit-testing has been performed for all respirator users and does the recordkeeping for fit-testing include the type of respirator, brand name and model, method of test, test results, test date, name of the instructor/tester, and name of the individual tested? The best practice for this is to maintain documentation of the training in the Respiratory Protection binder.



Naval Safety Center Submarine Division Scheduled 2nd QTR FY15 Assessment Plans

Groton: 5 Jan – 16 Jan Guam: 24Jan – 31 Jan Kings Bay: 1 Mar – 6 Mar, 22 Mar – 26 Mar

The following commands are overdue and need to schedule their submarine safety assessments:

USS SAN FRANCISCO (SSN 711) – Expired Sep 2014

Commands that have scheduled their submarine safety assessments:

USS TOLEDO (SSN 769)
USS GEORGIA (SSGN 729)
USS VIRGINIA (SSN 774)
USS RHODE ISLAND (SSBN 740)
USS TOPEKA (SSN 754)
USS MISSOURI (SSN 780)
USS KEY WEST (SSN 722)
USS OKLAHOMA CITY (SSN 723)
PCU JOHN WARNER (SSN 785)

The safety assessments for the following commands will expire during the 3rd QTR FY15:

USS CHICAGO (SSN 721) – Due May 2015
USS CONNECTICUT (SSN 22) – Due Jun 2015
USS MICHIGAN (SSGN 727) – Due Jun 2015

Note: Safety assessment scheduling requires a request message sent to the Naval Safety Center from the ship or ISIC. You can find additional assessment information, request message template, and survey checklists at www.public.navy.mil/comnavsafecen/. For additional questions, please call the submarine division at 757-444-3520 ext. 7838.



Advisories

<u>Effective COMNAVSAFECEN Submarine Safety Advisories</u>		
2010		
6-10	081904Z Dec 10	Asbestos Removal Protection
2011		
2-11	041532Z Mar 11	Heat Stress Meter Clarification
3-11	071634Z Mar 11	Heat Stress Survey Clarification
5-11	021648Z May 11	Reportable Mishap Clarification and Reporting
9-11	181607Z Nov 11	Afloat Fall Protection
2012		
3-12	231505Z Aug 12	Reporting Afloat Mishaps
4-12	291342Z Aug 12	Replacement of HMUG with NSTM 670
2013		
4-13	295572 Aug 13	Heat Stress Meter Certification
2014		
1-14	141511Z Jan 14	Effective COMNAVSAFECEN Afloat Safety Advisories for Surface Ships and Submarines
2-14	101655Z Feb 14	Naval Safety Supervisor Course Requirement Change
4-14	151837Z APR 14	Electrical Safety Advisory



Contact Us

Naval Safety Center

375 A Street

Norfolk, Virginia 23511

Phone: 757-444-3520, ext. 7838

DSN: 564-3520, ext. 7838

Fax: 757-444-7205 (DSN 564)

SAFE-submarines@navy.mil

<http://www.public.navy.mil/comnavsafecen/>

<https://www.csp.navy.smil.mil/NSC-SUB/>

Commander Naval Safety Center

RADM C.J. Murray

Afloat Directorate Head

CDR McWhorter

Afloat Executive Assistant

Mr. Ron Keim

SUBMARINE DIVISION SURVEYORS

Submarine Safety Division Head

LT John Oravitz

Submarine Advisor

for Class "A"

Safety Investigations

LT Mike Lopez

Damage Control

MMC(SS) Joshua Alkire

Combat Systems/Deck

FTC(SS) David Macon
MMC(SS) Kamil Chayim

Submarine Technical

Advisor for Class "A"

Safety Investigations

EMC(SS) Louie Belk

Electrical/Mechanical

ETC (SS) Adam Kingsley

Medical/HAZMAT

HMC (SS) Frank Thomas