

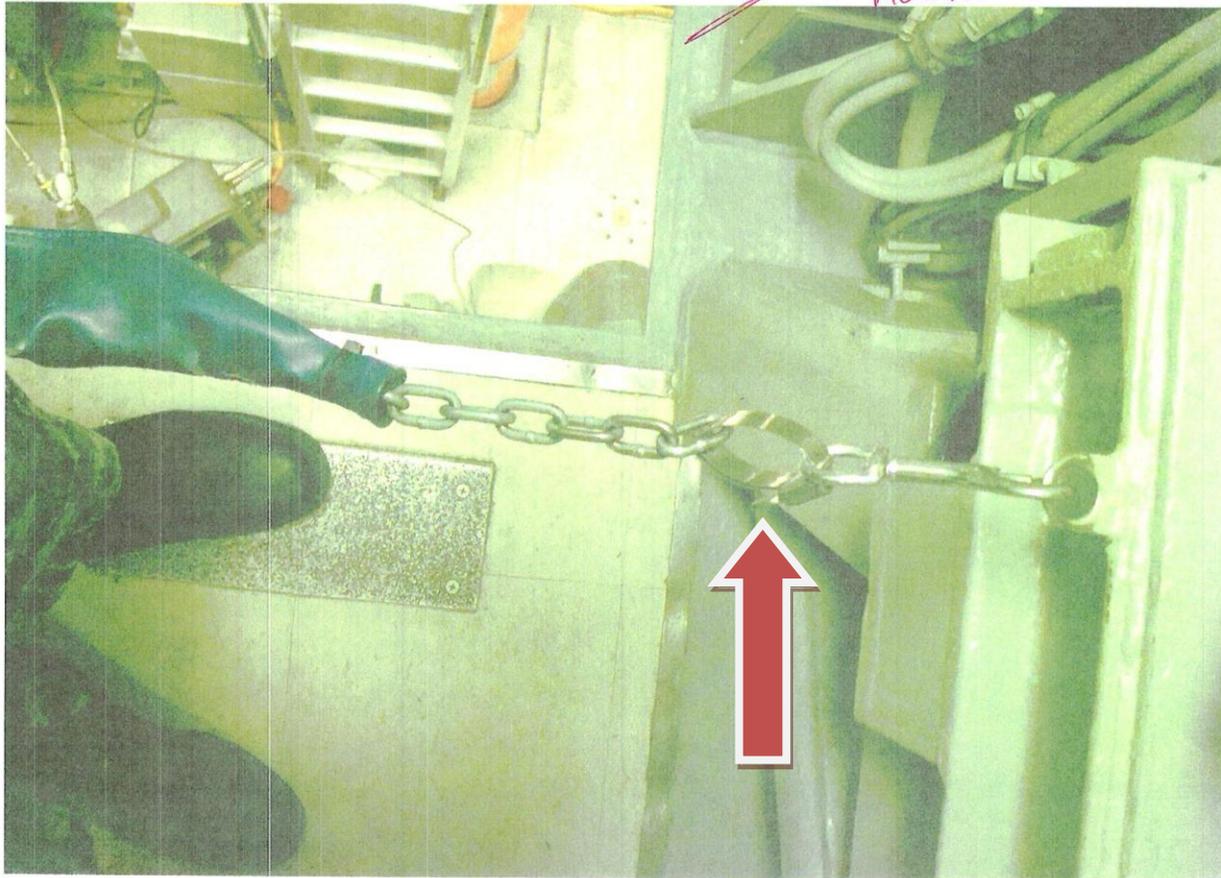
FLASH

Factual Lines About Submarine Hazards

Submarine Division of the Naval Safety Center

July – September 2012

RELEASED TO GENSER UNCLASS *MURPHY 8/2/12*



Route for Safety's Sake

CO ___ XO ___ NAV ___ ENG ___ CSO ___ SUPPO ___ COB ___ DCA ___ Safety Officer ___
EDMC ___ MDR ___ 3MC ___ CPO Quarters ___ Ship's DCPO ___ 1st LT ___

What would MacGyver do?

We at the Naval Safety Center look forward to your questions and feedback.

In the spirit of "**ASK THE FLASH**," we have opened the FLASH up for write-in articles, pictures, and cartoons. You can find the Naval Safety Center classified web page at <https://www.csp.navy.smil.mil/NSC-SUB> and the Naval Safety Center videos on You Tube at <http://www.youtube.com/user/dsteber1849>

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 give advance notice of other safety-related information.

This newsletter is NOT authoritative.

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ORM Anyone?

LT Rich Ray

Take a good look at the above picture. The story goes that the archer drew back the arrow and then touched off the trigger release. Things went seriously wrong when the arrow fell from the rest before the operator could correct the problem. The cause: The arrow was too short. The result: This poor guy required assistance from an ER doctor to let go of the bow. If the arrow is too short for the archer's length of pull on the bow, this is a potential result. Ouch!

Basic operational risk management (ORM) principles are to ask some simple "What if?" questions. Have a questioning attitude. What could go wrong? I'm going shooting, so, maybe somebody could get shot. Who could get shot? How do I keep everyone safe, including myself? What PPE do I need for this evolution?

In this scenario, a technical specification was not met. What is the required length of the arrow for the given make/model of the bow and the size of the operator? The first step of time critical risk management (TCRM) is to assess the situation. If the shooter would have assessed this situation and determined that things were falling apart quickly, he probably could have prevented putting the arrow through his hand.

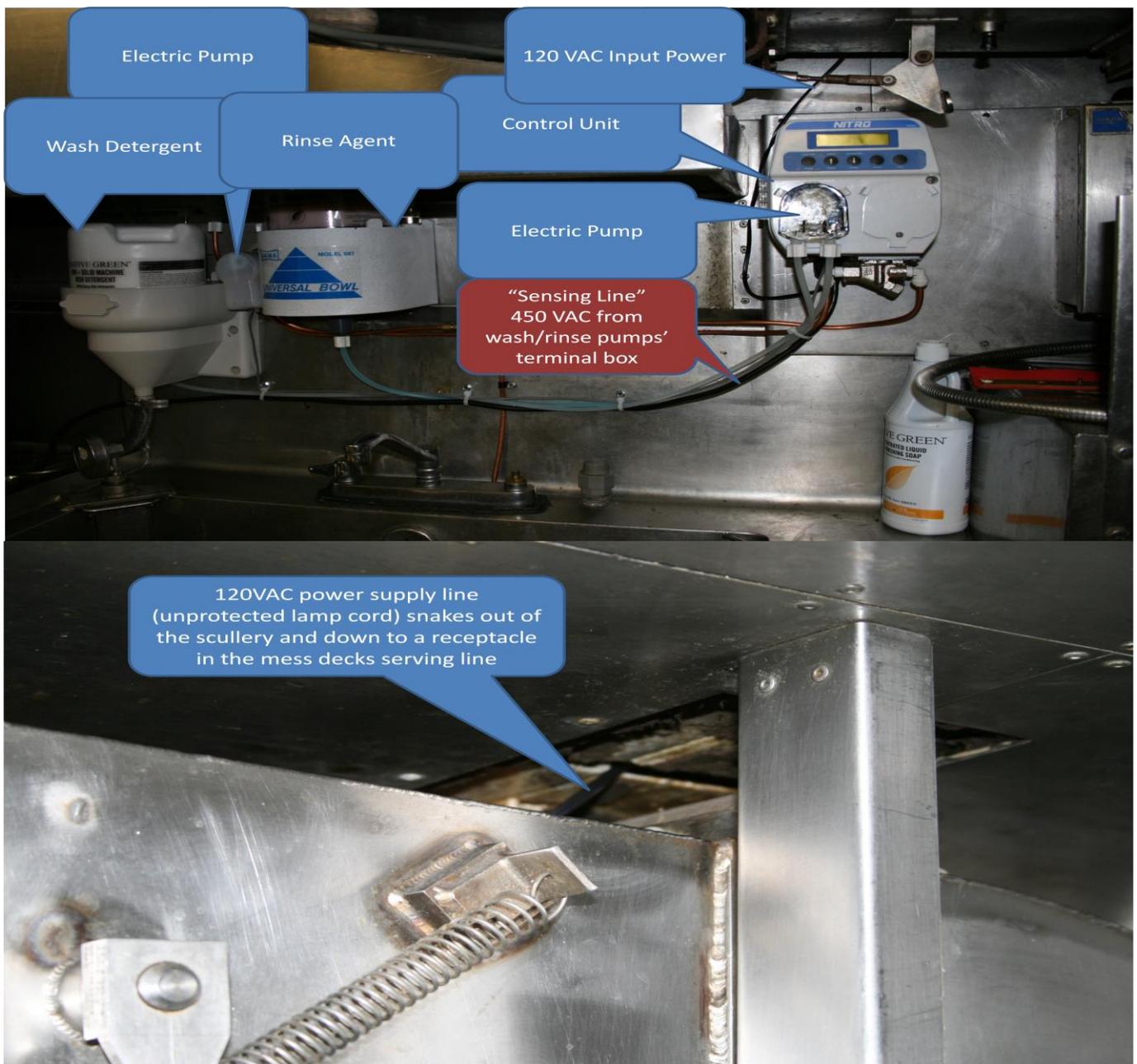
OPNAVINST 3500.19C Operational Risk Management, is a very easy read. It can be found on our website at <http://SAFETYCENTER.NAVY.MIL>. ORM works 24/7 and is an effective tool to be used not just at work, but at home as well. Use ORM for off duty and recreational activities. What would this picture look like if the arrow had been equipped with a broad head?

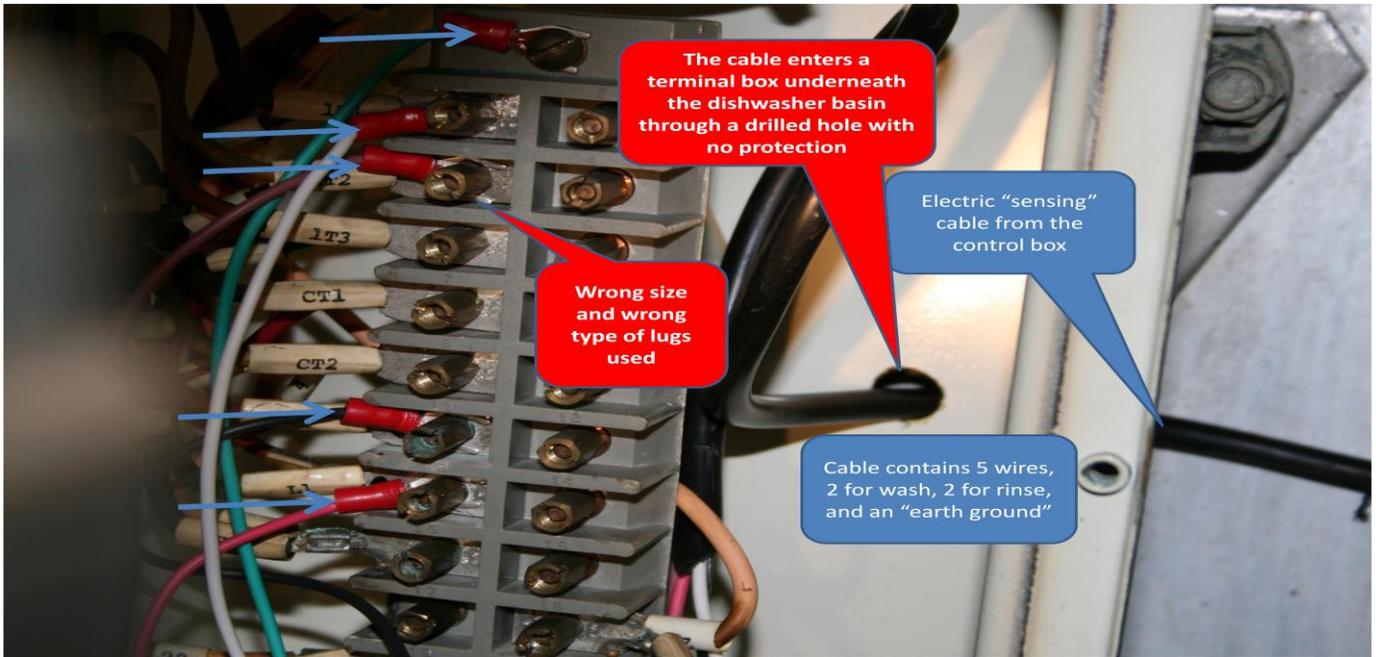
Closer to home, I would like to "Welcome Aboard" LT Semrau at Squadron Twenty. Good to have you as part of the safety team, LT. Also, I would like to wish "Fair winds and following seas" to LT Alan Wade from the same squadron. LT Wade compiled many noteworthy accomplishments during his tour. Two of his squadron boats earned the CNO Afloat Safety Award.

He scheduled three local convenings of the Submarine Safety Officer Course, training 30 students. Best of luck to you LT.

Dishwasher/Sanitizer Soap Dispenser Installation EMCM(SW/AW) Valdepeña

During recent surveys we have noticed an unauthorized shipalt for the electric soap dispenser. Native green electric soap dispenser was replacing the vacuum drag dispensing system from *ECOLAB*. Installation on one submarine caused a $0K\Omega$ ground on the 450VAC distribution system. Not only was this a problem due to the ground on the electrical system but there was no MOA with the vendor, no work control, no WAF, and no tag-out or lockout, thus violating maintenance procedures and OSHA requirements.





The story goes that one vendor used his retired military ID to access the ship. The ship did not provide adequate escorts for the non-cleared vendor. The vendor was able to install and electrically connect the system undetected, without the duty officer or duty chief being informed. While command personnel were aware of the work and met the salesman, the vendor did not explain the scope of the work. Personnel believed they were being sold some new non-powered hand soap dispensers. The lesson learned here is to ask probing questions, be aware of your surroundings, don't install anything onboard without an approved shipalt, and ensure the duty officer and duty chief are well informed.

N-1 Lighting Panel EMCM(SW/AW) Valdepeña

The most recent alteration and improvement (A&I) for the N-1 Lighting Panel is Ser. N43331/00594, dated 18 Oct 11.

COMSUBLANT/COMSUBPAC A&I item:

SSN: N3542 WC/JSN: EXTY3542 EIC: 4503 SWAB: 3031 CAT: B
TRID:T0181 WC/JSN: EXTY0181 EIC: 4503 SWBS: 3031 CAT: B
SSN: V0051 WC/JSN: EXTY0051 EIC: 4503 ESWBS: 3311 CAT: B

This A&I is applicable to all SSN 688, SSBN/SSGN 726 and SSN 21 class submarines and SSN 774 class (SSN 774 through SSN 781).

Note: Applicable submarines which are within five years of inactivation will require an approved memorandum for the record (MFR) before the installation can begin. Contact your TYCOM N43 staff for assistance in filing a MFR.

The purpose of this A&I is to alleviate an electric shock hazard by replacing the existing N-1 lighting panel breakers with modified breakers. Ship's force accomplishment of the category "B" A&I is required within two years of the TYCOM authorization date. The material is to be provided by COMSUBLANT / COMSUBPAC TYKIT program. After completing this A&I item, submit a ship's configuration change form (OPNAV 4790/CK) for the class-specific A&I accomplished.

Are You Ready for the Big One? MMCS(SS) Sisk

By now, everyone should have heard about the fire aboard the USS MIAMI (SSN-755) while in dry dock. This disaster has brought much needed attention to shipboard fire response using temporary fire fighting systems during an upkeep period when the normal means of fire fighting is not available. COMNAVSEASYSYSCOM (NAVSEA) has released three messages (DTGs 261400Z JUL 12, 221532Z AUG 12, and 241233Z AUG 12) addressing added requirements for naval supervising activities (NSA) and region/installation fire and emergency services (F&ES). These requirements will beef up shore side fire response but in **"NO WAY RELINQUISHES OWNERSHIP"** from the submarine.

As the ship's damage control petty officer (DCPO), your job doesn't stop just because your gear is no longer on the ship. When damage control gear is removed from its standard location or a system is secured for maintenance, you and the damage control assistant (DCA) should develop an alternate location or damage control plan. All damage control gear is required to be maintained ready for use and staged in an accessible location known by the crew. DCPOs and the DCAs are also responsible for the development and training of a casualty response plan. If the normal fire fighting means is secured and temporary fire fighting equipment is staged topside, the DCPO needs to verify the adequacy of the temporary system. All hoses need to be routed throughout the submarine to determine if all spaces can be reached. Secondly, all hoses need to be checked for rapid deployment and pressurization capability. Simply reaching the scene isn't enough, attacking the fire with a pressurized fire hose is the goal. Ship's force must be able to attack any casualty rapidly and continuously in an effort to preserve the lives of the crew and civilians alike and minimize equipment damage.

If you have any questions about these items or ideas of items to submit, feel free to call or email me using the contact information listed in the FLASH, page 11.

Equipment Guide Lists are Key to Success

ETC(SS) Dawson

Over the past year, electrical surveyors have observed a disturbing trend during numerous submarine safety surveys, causing a steady deterioration of our electrical safety programs. Naval Ships' Technical Manual (NSTM) 300, paragraph 300-1.2.6, and Navy Safety and Occupational Health Program Manual, OPNAVINST 5100.19E, Chapter B7, requires periodic checks of portable/mobile electrical equipment and initial checks of personal/fixed electrical equipment.

Supervisor involvement, zone inspections, and proper completion of applicable maintenance index page 3000 series will help ensure an effective electrical safety program. NAVSEAINST 4790.8B, Ships' Maintenance and Material Management (3-M) Manual, paragraph 1-5.5, require equipment guide lists (EGLs) on ships using SKED 3.1 to assist in the completion of maintenance. The EGL provides the sailor a road map for completing maintenance on all applicable equipment. If the Sailor does not have the EGL's when required, then any guarantee for full accomplishment is null and void.

The most common observation from Naval Safety Center surveyors is that Sailors are completing maintenance without an EGL. Why not use an EGL? It eliminates all the guesswork regarding electrical safety equipment safety checks for the Sailor. The purpose of an EGL is for multiple equipment of the same type. If the MRC location block says "see EGL", an EGL is mandatory.

A successful electrical safety program starts with a complete/updated equipment database. During our surveys, submarine crews who choose to disregard the requirement have a failed or below average program. Submarines that are doing poorly overall will have listed equipment in proper working order but unlisted equipment in a very poor condition, thus again re-enforcing the use of accurate and complete EGLs.

Naval Safety Center Submarine Division Travel Schedule 1st QTR FY13

14-20 Nov - Pearl Harbor, Hawaii

26-30 Nov - Groton, Connecticut

Commands needing submarine safety surveys scheduled during 2nd QTR FY13:

USS Annapolis (SSN 760)

USS California (SSN 781)

USS Connecticut (SSN 22)

USS Hartford (SSN 768)

USS Jefferson City (SSN 711)

USS Jimmy Carter (SSN 23)

USS Louisiana (SSBN 743)

USS Missouri (SSN 780)

USS New Hampshire (SSN 778)

USS New Mexico (SSN 779)

USS Norfolk (SSN 714)

USS Oklahoma City (SSN 723)

USS San Juan (SSN 751)

USS Springfield (SSN 761)

USS Topeka (SSN 764)

USS Virginia (SSN 774)

Notes and Advisories

1. "Fessing Up." When people hide, ignore or downplay mishaps, they're helping make other people learn the hard way. More information regarding reporting mishaps requirements is available at http://www.public.navy.mil/navsafecen/Documents/media/deckplate_dialogue/DD_Jan12_fessing_up.pdf



August 2012

To view the newest E Blast posting, visit:

http://www.public.navy.mil/navsafecen/Documents/media/e-blast/E-Blast_Aug2012.pdf

2. The official Navy blog site called "Navy Live" can be viewed at <http://navylive.dodlive.mil/>.



3. The semi-annual publication for the surface, submarine, and dive communities is available on line at <http://www.public.navy.mil/navsafecen/Pages/media/sea-compass/Index.aspx>

Effective COMNAVSAFECEN Submarine Safety Advisories		
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
4-11	191844Z Apr 11	Electrical Safety during PMS
5-11	021648Z May 11	Reportable Mishap Clarification and Reporting
7-11	201437Z Oct 11	Safety Survey Requirement Change
9-11	181607Z Nov 11	Afloat Fall Protection
2012		
1-12	231658Z Jan 12	Effective COMNAVSAFECEN Afloat Safety Advisories for Surface Ships and Submarines
3-12	231505Z Aug 12	Reporting Afloat Mishaps
4-12	291342Z Aug 12	Replacement of HMUG with NSTM 670



NAVAL SAFETY CENTER

Work, Play, Live...Safely!

SUBMARINE HAZARDOUS MATERIAL INFORMATION SHEET

HAZARDOUS MATERIAL

Any material that, because of its quantity, concentration, physical or chemical characteristics, may pose a hazard to human health or the environment during use, handling, storage, transportation, or spill.

Hazardous material use, storage, proper disposal, and casualty response is an all hands' responsibility.

FLAMMABLES and COMBUSTIBLES

Flammable Material (Flash Points <100°F)
Combustible Material (Flash Point at or above 100°F but less than 150°F)
Flammables and Combustible Materials with a flashpoint of <200°F must be stowed in a designated locker (688 Class) or in a Flammable Storage Locker without:

- Other types of HAZMAT.
- Class A materials inside lockers.

Chemwipes shall not be placed on the shelves to collect spills – causes a fire hazard due to wicking (lowers flash point). Instead, use a Pad, Adsorbent, hazardous material with NSN: 4235-01-379-8381



PRIMARY AND SECONDARY LABELING



Manufacturer's labels for shipboard identification of HM containers must clearly identify the **material name, the manufacturer's name and address, and the nature of the hazard presented by the HM including the target organ** potentially affected by the material. HM dispensed from a shipping container to another container, annotate the secondary container to indicate the **material name, manufacturer name and address, and the nature of the hazard (including target organ)** as specified by the manufacturer. Material transferred into a small container that has insufficient room on the container to affix a label, an abbreviated label shall be affixed containing the **material name, manufacturer's name, and stock number**. The remaining information shall be provided on a card in a location known to the users, which is in close proximity to the container, so that it can be readily referred to.

Two available DoD Warning Labels:

DD 2522 (4"x7") NSN: 0108-LF-981-3800
DD 2521 (8.5" X 11") NSN: 0108-LF-981-2600

HAZMAT STOWAGE

Hazardous material shall be stored only in appropriate stowage spaces (lockers and cabinets) and only with compatible material. A diagram regarding HM Compatibility are provided by OPNAVINST 5100.19E Appendix D15-A. Each of these is indexed using the Hazardous Characteristic Code (HCC) system. HCC codes for stock system items are included on the HMIRS datasheet.

Submarines shall post HM stowage locations with a CAUTION sign that states:

HAZARDOUS MATERIAL STORAGE AREA

Designated HM stowage spaces (lockers and cabinets) shall be posted with warning placards affixed to the access doors or lids providing the class of HM stowed within and any appropriate safety guidance.



Spill Response

The DCA shall:

- Implement a written Spill Contingency Plan which is updated annually.
- Train each watch section and supervise ship's damage control efforts to combat HM spills IAW the toxic gas bill and the Ship's Spill Contingency Plan.
- Conduct HM spill response drills as necessary.
- Provide training to divisions regarding reporting, initial handling, and cleanup of HM spills, as requested.



Training

- The HM Coordinator (if the Supply Officer) receives en route training at the Navy Supply Corps School Basic Course .
- The leading LS shall be a graduate of the HMC&M Technician (SNEC 9595) Course (A-322-2600).
- Personnel expected to combat an emergency involving HM shall receive training on HM emergency procedures (On submarines, this would be each duty section).
- All hands receive initial HM training upon check-in and annually thereafter.
- Supervisors must ensure that prior to using or handling any HM, work-center personnel have been trained on the hazards associated with that material and are familiar with what an MSDS is, what it contains, and where a copy is available for review.

REFERENCES

OPNAV INST 5100.19E, VOLUME I, CHAPTER B3 AND VOLUME III, CHAPTER D15

OPNAVINST 5090.1C CHAPTER 22

SSORM ART 4303, 4304, 4313, 4338, 4404 and 4405

NSTM 670, STOWAGE, HANDLING, AND DISPOSAL OF HAZARDOUS GENERAL USE CONSUMABLES

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