



SHIP'S SAFETY BULLETIN

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THE OFFICIAL SAFETY NEWSLETTER OF THE SURFACE COMMUNITY

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The Naval Safety Command's Surface Fleet Assessment Team has subject matter experts in Auxiliaries, Combat Systems, Damage Control, Deck, Electrical, Main Propulsion, SOH, Safety Administration and Weapons.

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The SSB is intended to advise DON personnel of current and emerging safety concerns to enhance their professional development and improve operational readiness. All photos are U.S. Navy unless otherwise noted. Current and past issues are available at <https://intelshare.intelink.gov/sites/nsc/>.

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Naval Health Clinic Oak Harbor's Pictured here: Lt. Courtney Rafferty (seated), clinic optometrist, and Hospital Corpsman 2nd Class Christopher Cruz conduct training on ocular trauma—foreign body removal. (Courtesy photo)

Protect Those Eyes With Proper PPE

By Senior Chief Gas Turbine Systems Technician Casey Barnes

Within the last two years, there have been 557 reported eye injuries throughout the Navy. The vast majority of these injuries occurred when the Sailor was conducting work that didn't require a maintenance card, i.e, chipping, grinding or cleaning.

Other potentially hazardous eye operations examples are: warfighting and operational training, cutting and welding, drilling, grinding, milling, chipping, sand-blasting, other dust-and-particle producing operations and pouring or handling molten metals or corrosive liquids and solids. Personnel in the immediate vicinity of such operations, or entering a posted eye-hazard area, must wear eye protective equipment.

However, OPNAVINST 5100.19F states that Navy policy requires that personnel working in eye-hazard areas or operations are provided adequate eye protection at government expense. The term is personal protection equipment or PPE.

The best method of protecting personnel from exposure to eye hazards is to eliminate the hazard. As we know all too well, the eye hazards associated with Navy life cannot simply be eliminated.

When elimination or engineering controls are not feasible or unable to reduce the hazard to

acceptable levels, personal protective equipment (PPE) must be used.

PPE establishes a last line of defense against exposure to hazards, and in some cases, may be the only means of protection. Any PPE breakdown, failure or misuse immediately exposes the wearer to the hazard and therefore increases likelihood of potential mishaps.

Commands must ensure there is sufficient PPE to meet the needs of the command. Supervisors must monitor and enforce the proper use and wear of PPE. All hands must remain vigilant against complacency and wear the proper PPE when required. If PPE is not available to complete the assigned task, Sailors must immediately notify supervisors.

Recommendation:

Any time you are conducting tasks that have the potential to produce debris, whether inside or outside, take the time to get the proper PPE, ensure it is in good working order and use it. Be mindful of the environmental conditions as well. The risk of debris becoming airborne increases when working in windy conditions outside, near ventilation or while the vessel is moving.

Reference:

- OPNAVINST 5100.19F



An aviation boatswain's mate (handling) aboard an aircraft carrier wears the new HGU-99/P Hearing Protection Helmet (HPH) on the flight line during a recent fleet assessment. The helmet is designed for use on the flight deck, where crewmembers are exposed to extreme noise environments. (U.S. Navy photo)

Say It Again Louder...

By Chief Fire Control Technician Enriqueluis Sosa

We have all experienced the person on the other end of the sound-powered phone talking too low for us to hear, or the background noise is so loud that it starts to overpower the speaker's voice. But what if the speaker on the other end isn't the issue? What if it is you?

Although we all experience some level of hearing loss over time due to aging, there are decisions we can make as Sailors when we are exposed to loud noises that can hasten or slow our natural hearing loss.

Whether you are in the auxiliary machinery room, the fan room, a dry dock basin or a sports arena, hearing loss is preventable. But how do you identify a hazardous noise area? Onboard a ship, it starts by going to your ship's specific industrial hygiene (IH) survey to figure out where your noise hazard areas are located.

The Ship Industrial Hygiene Survey Repository on navy.mil allows you to identify the program office that is your support team, as well as a history of baseline and previous surveys reference (b).

What makes it a hazardous noise area? If the area or equipment has noise levels at or above 85 dBA, are an

expression of the relative loudness of sounds in air as perceived by our or 140 dBp, it is considered a considered hazardous.

The difference between the two is that dBA is the perceived noise to the ear, where the dBp is the pressure level that the equipment puts out. A good rule of thumb if the area is not posted to determine if you are in a noisy environment is the "2-3 foot rule": if you have to raise your voice to talk to someone one arm's length away from you then your environmental noise is likely over 85 dBA (ref c).

References:

- OPNAVINST 5100.19F
- Ship Industrial Hygiene Survey Repository: www.med.navy.mil
- Occupational Noise Exposure: www.osha.gov/noise

EDITOR'S NOTE: dB sound pressure levels are un-weighted. dBA levels are "A" weighted according to the weighting curves to approximate the way the human ear hears. *Source: IAC Acoustics*



Aviation Ordnanceman 3rd Class Dominique Campbell drives a forklift on the flight deck of the Nimitz-class aircraft carrier USS Harry S. Truman (CVN 75) during a vertical replenishment. She is wearing proper hearing and vision protection. (Photo by Seaman Victoria Sutton)

Ensuring Safety at Sea: The Importance of Temporary Label Plates and Tags

By Lt. Cmdr. Michael Overton

Shipboard maintenance and repairs are constant necessities, but safety is paramount. The Navy has established clear procedures to safeguard personnel during these activities, outlined in OPNAVINST 5100.19F, Section B, Chapter 11. This directive mandates the implementation and annual evaluation of a comprehensive tag-out program, as detailed in the Tag-Out User's Manual (TUM), NAVSEA S0400-AD-URM-010 that details tag-out procedures.

Both deckplate Sailors and supervisors responsible for authorizing tag-outs will find detailed explanations of their duties, planning and writing procedures and tag clearance protocols. The TUM also features appendices covering additional topics and scenarios of equal importance.

Recent local area assessments have revealed a recurring issue: improper or inadequate use of temporary label-plates and tags. Navy Safety Command (NSC) has observed numerous instances of inaccurate temporary tags throughout the Fleet, indicating a lack of program adherence. The correct procedure is outlined in the TUM, Appendix F, paragraph 5.b.

Temporary labels or tags are required when a permanent label is absent or existing identification is insufficient. In such cases, the tag and plate must undergo a two-pronged verification process: checking and matching against ship plans and a physical ship system and component check by two qualified individuals. This team can be composed of a crewmember, contractor or a combination of both.



Engineman 3rd Class Adam Salcedo hangs a danger tag for maintenance in the laundry room aboard the Wasp-class amphibious assault ship USS Iwo Jima (LHD 7) . (U.S. Navy photo by Mass Communication Specialist 3rd Class Dominick A. Cremeans/Released)

The temporary label-plate must contain sufficient and verified information to clearly identify the component. Once affixed, the tag must be signed and dated by both parties, similar to caution or danger tags. Unfortunately, each incorrect tag discovered during inspections was missing one of these crucial elements, leading to inconsistencies in the crew's understanding of the requirements. Common discrepancies identified are easily preventable through routine self-audits, as mandated for caution and danger tags. Examples include oil-soaked tags, paint-obstructed are reinstalled. In one extreme case, NSC found a submarine system with three redundant tags hanging together.

Recommendations:

Formalize Tracking: As the TUM lacks guidance on a formal tracking mechanism for temporary label-plates, NSC suggests incorporating them into a local command instruction (if used) and conducting audits alongside danger and caution tag audits.

Streamline Verification: To address the verification gap, consider incorporating the two-pronged verification process directly into the temporary label-plate design, ensuring all necessary information is readily visible.

By implementing these recommendations and adhering to established procedures, we can ensure the continued safety and efficiency of maintenance and repairs throughout the Fleet.

References:

- a. OPNAVINST 5100.19F, Section B, Chapter 11
- b. NAVSEA S0400-AD-URM-010, Tag-Out User's Manual (TUM)



Hospital Corpsman 2nd Class Ian Villones, from Las Vegas, left, Hospital Corpsman 3rd Class Javier Gonzalez, from Fallbrook, California, and Hospital Corpsman 3rd Class Jordan Stier, from Benton, Louisiana, simulate providing trauma care on a patient during a medical training team drill aboard the amphibious assault ship USS Boxer (LHD 4), Sept. 22, 2023. (U.S. Navy photo by Mass Communication Specialist 2nd Class Mikal Chapman)

CPR-Qualified: The Difference Between Life and Death At Sea

By Senior Chief Hospital Corpsman Vanessa Poland

Cardiopulmonary resuscitation (CPR) is an emergency lifesaving intervention consisting of chest compressions and rescue breaths. If initiated immediately and effectively, it doubles the survival chances. Proper recognition of a cardiopulmonary emergency and swift action can be the difference between life and death.

There are several causes for a cardiovascular event, ranging from disease to trauma. But due to heavy medical screening, the most likely cause in the submarine force is electric shock. Every submariner, at some point, will work with or around electricity. This work is inherently dangerous and potentially deadly, with reference (a) citing fatalities as low as 30 volts. Electrical shocks are a systemic issue across surface and submarine fleets. Since 2022, 71 electrical shock mishaps on submarines were reported in the risk management information (RMI) system.

The Navy and submarine force requires personnel to be certified in CPR and basic life support (BLS), in addition to policy, procedures and controls for safe electrical work.

Reference (a) requires at least 50% of all electrical and electronic associated ratings to be CPR-certified.

The submarine force in reference (b) adds requirements for all ship's force divers, command fitness Leaders, and wire-rated crewmembers to have current BLS provider certificates. The medical department representative

(MDR) must be BLS instructor and Advanced Cardiovascular Life Support-certified. This required certification ensures quick response during a cardiopulmonary event, and it supports the time it takes for emergency personnel to reach the patient.

Recommendations:

Maintaining CPR and BLS certifications is required and saves lives. Electrical work is frequent and dangerous, increasing the probability of a cardiovascular event due to electric shock that requires a rapid response.

Maintaining certifications is challenging due to rotating expiration dates, operational tempo and deployment schedules, changes in standards, lack of resources and communication with the affiliated medical treatment facility. It is imperative for the MDR to review current certifications, stay proactive maintenance, maintain onboard chain-of-command involvement and inform their superior in command of challenges meeting this requirement.

References:

- a. OPNAVINST 5100.19F, Navy Safety and Occupational Health Program Manual for Forces Afloat
- b. COMSUBLANT/COMSUBPACINST 6000.2E, Standard Submarine Medical Procedures Manual

Supervisors, Procedural Compliance and Hubris



Gunner's Mate 2nd Class Gage Duncan, right, from Cardington, Ohio, is supervised by Chief De Los Santos as he stands watch at the remote operator console for a Mark 38 25 mm machine gun during a live-fire exercise aboard the Arleigh Burke-class guided-missile destroyer USS Sterett (DDG 104). (U.S. Navy photo by Mass Communication Specialist 1st Class Charles J. Scudella III)

By Chief Electrician's Mate (Nuclear) Jericho Hasselbush

Supervisors are essential to safety and the proper execution of an evolution. As a supervisor, sometimes it is difficult to stand back and just observe instead of getting personally involved in the tiny details of what is happening. Yet, you must stay strong and not give in to the desire to put your hands into whatever is happening, unless it is to stop something else bad from happening.

Procedural compliance is how workers execute a task repeatedly and can expect to have the same result. If deviations occur in the execution of a procedure, then the outcomes of that evolution can be unexpected. Proper preparation, training and level of knowledge also play roles in the designed execution of a procedure. The Submarine Engineering Department Watchstanding Guide (reference (a)) states that, "established procedures are defined as approved written instructions from higher authority... evolved over many years from the lessons learned following mistakes made by others."

Hubris, defined by the dictionary as exaggerated pride or self-confidence, poses a significant threat when supervisors succumb to an inflated sense of infallibility. This mindset may lead to hasty decisions without due consideration, jeopardizing safety.

If a supervisor isn't paying attention to his or her own weaknesses and hubris, he or she could step out of the supervisor role, become too involved in a task and subsequently violate procedural compliance. The best-case scenario is nothing bad happens and the evolution is complete, but with no supervision. The worst-case result would be catastrophic damage, injury or death—a class A mishap.

In 2010, an electrician supervisor on an aircraft carrier

disregarded safety protocols and personally moved a circuit breaker while it was still energized. Without a backup person to assist him, he came into contact with live components and was electrocuted.

If the supervisor didn't become physically involved in the work, he would have noticed the safety violation. It seems these lessons are always learned the hard way.

More recently (reference d) in August 2023, during a shore power removal evolution, a supervisor stepped out of a supervisory role and became physically involved with the task at hand. Upon loosening some fasteners, a hydraulic crane was engaged and the supervisor was caught in a chain, lifted nearly 30 feet into the air before falling and fracturing his back. Had the supervisor maintained his observational duties, he would have recognized the improper actions taken and stopped it.

Each of these instances have other issues at hand, but isolating them down to these factors could have contributed greatly to reducing the probability that the incidents would have occurred.

References:

- a. Submarine Engineering Department Watchstanding Guide
- b. RMI report 10148415: Mishap victim received electric shock while installing a 450V circuit breaker
- c. RMI report 4577830: Removing shore power cables on submarine; SVM fell 30 ft onto sub and fell overboard
- d. RMI report 4577830— Removing shore power cables on submarine; Sailor fell 30 feet onto the sub before falling overboard.

LIFE PRESERVERS SAVE LIVES

By Lt. Cmdr. J. Ray Norris

While conducting local area assessments, Naval Safety Command personnel continue to find ship's force Sailors improperly wearing life preservers while conducting daily operations. Personal protective equipment (PPE) establishes a last line of defense against exposure to workplace hazards. In some cases, PPE may be the only means of protection. Any PPE breakdown, failure or misuse immediately exposes the wearer to the hazard.

How do you know when you should don a life preserver? This is actually very easy, but we are finding that Sailors are failing to wear required life preservers often citing excuses such as:

- "I can't locate a life preserver."
- "It's a quick job. I don't need one."
- "No one is looking, so I won't wear one."

However, the most common reason is that supervisors are not enforcing safe standards regarding life preservers.

As per OPNAVINST 5100.19 series, Sailors are required to wear an inherently buoyant life preserver or auto-inflatable utility life preserver topside where the potential exists of falling overboard. The figures below are of the inherently buoyant and inflatable (MK-1) life preservers. NSTM 077 Table 077-2-1 provides guidance regarding the authorized use of each specific life preserver. For example, an inherently buoyant life preserver is authorized for all shipboard evolutions except flight deck operations. An MK-1 life preserver is not to be worn while performing hot work.

Note: In accordance with the Safety Advisory 20-2 Personal Flotation Devices, DTG- 042042Z MAR 20, inherently buoyant life preservers shall be worn when being lowered or raised in a small boat by a davit. Additionally whenever personnel, other than aircrew members and flight deck personnel are required to wear life preservers in open sea operations, the life preserver must be inherently buoyant or the MK-1.

Those jacket-type life preservers are used by personnel in exposed battle stations, when working over the side, topside in heavy weather, during replenishment at sea, in small boats, and other evolutions where personnel can fall overboard.

MK-1 life preservers should not be worn by personnel performing hot work or other actions that may cause damage to the bladder. Thoroughly dry life preservers before stowage. Following drying, stow them in designated clean and dry locations.

Recommendations:

Shipboard personnel should familiarize themselves with all references and requirements regarding life preservers.

Shipboard leadership should continuously assess and verify that life preservers are being worn in accordance with applicable references.

Contact the Naval Safety Command Afloat Safety Directorate at NAVSAFECOM_CODE30_AFLOAT@navy.mil for any life preserver-related questions or assistance obtaining applicable references.

References:

- NSTM Chapter 077
- OPNAVINST 5100.19
- Safety Advisory 20-2 Personal Flotation Devices, DTG- 042042Z MAR 2



Boatswain's Mate 3rd Class Clifford Turner, from Harrisonburg, Virginia, directs Sailors while recovering the rigid-hull inflatable boat (RHIB) after small boat operations aboard the Arleigh Burke-class guided-missile destroyer USS Roosevelt (DDG 80) in the Baltic Sea, Aug. 5, 2023. (U.S. Navy photo by Mass Communication Specialist 2nd Class Elexia Morelos)

Fall Protection Baseline Surveys

By Lt. Cmdr. Gary Ullrich

Baseline hazard surveys aimed at fall protection offer a valuable resource to your designated competent person (CP). They provide pre-evaluated risks and recommendations for fall hazard mitigation on ships. Nonetheless, individuals unacquainted with the survey format may find it challenging to navigate and interpret. In this article, we will furnish an overview of the data encapsulated within these baseline surveys, shedding light on how a CP can harness them to create a comprehensive fall hazard report.

The Occupational Safety and Health Administration defines CP as one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Every ship that undergoes a class baseline survey should incorporate a copy of the survey into its fall protection program. These baseline surveys are conducted by third-party assessors and focus on identifying common fall hazard areas and associated work types, evaluating their risks in terms of severity and probability, and suggesting mitigations. These recommendations also include estimated costs and the percentage of risk reduction achieved.

As an illustration, we present an example in figure 1 for the midship kingpost on a flight two guided missile destroyer. The survey data sheet consists of two main sections, followed by a visual reference photo of the fall hazard area.

The top section details the hazard information, including location, category, risk factors, severity and probability. It's essential to note that the fall hazard addressed in the survey pertains to a specific type of work. If your Competent Person is assessing a different type of work, the

baseline survey should not be used as a reference for your report.

The second section offers recommended corrective actions to mitigate the identified fall hazard. These actions are categorized based on the established hierarchy of controls, including elimination, substitution, engineering solutions, administrative measures or personal protective equipment. Each corrective action may present up to three options, complete with installation or design costs, risk reduction percentages and specific notes explaining the details of the proposed action. Additionally, each sheet includes a visual reference photo of the area for clarity.

If your work type and area match those provided in the specific Fleet Hazardous Material Information System, you may use the listed options as acceptable mitigations in your fall hazard report. However, many of the corrective actions are controls that would require installation of additional safety equipment such as permanent ladders, restraint points or certified anchorages for harness attachment. Implementation of these corrective actions will require engagement with your type commander (TYCOM) and a designated qualified person and would likely have to be contracted and included in an availability package. However, this should not discourage the CP or fall protection program manager from pursuing these options. Feedback from ships up the chain of command is imperative to provide an overall safer work environment for Sailors in the future.

Recommendations:

Fall protection program managers and competent persons download and become familiar with the class baseline surveys for your platform if it exists. To implement structural controls, develop a plan early and engage with the ship's maintenance management officer and TYCOM to get a work item added to a future availability. Use these survey's to drive your fall hazard reports and assist in determining proper and feasible mitigations when conducting fall hazard work aboard your ship.

If your class of ship does not have a class survey, elevate your request up the chain of command to the TYCOM.

Reference:

- OPNAVINST 5100.19F
- Fall Hazard Identification Sheets

FALL HAZARD IDENTIFICATION DATA SHEET			
Hazard Number: 121001		FALL HAZARD RISK	
Hazard: Access to and maintenance of equipment		Risk Index: 0.01904807	
Vessel: USS Preble		Overall Hazard Rank: 52	
Frame Number: 225-2		Hazard Rank: 52	
Deck: 01		RAC: 0	
Hazard Category: Maintenance/Inspection		SEVERITY FACTORS	
Equipment Name: Station 6 PMS		Fall Distance (feet): 15	
Date Identified: 10/20/15		Observation: 10-m	
Onsite Contact: Robert Dills		Severity Category: 1	
Risk Assessment Contact: Derek Lynch		PROBABILITY FACTORS	
URL: OCS 90		Number of Workers: 1	
Base: JBPHF1		Frequency of Exposure: Monthly	
		Task Duration: 20 Minutes	
		External Influence: Slightly Reduced Risk of Falling	
		Probability Category: D	
CORRECTIVE ACTIONS			
Option 1	HOC*	Option 2	HOC*
Permanent ladder with cage	Eng		
Installation/Design Cost			
Total Cost Estimate	\$4,335/1905		
Reduced Risk/Risk Reduction %	90.99%		
Corrective Action Notes			
The costs associated with PPE do not include the costs of training, inspections, etc.			
NOTES: Ladder climbing system is in place. Hull Outfitting Equipment Chapter 600: rung length is less than the 14" minimum rung length. It is 12". There is no landing at top of ladder.			



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The Naval Safety Command, located on Naval Station Norfolk, Virginia, provides resources and guidance to develop a Navy safety culture in which everyone is trained and motivated to manage risk, and to ensure the combat readiness of our forces and the Navy's global warfighting abilities.

We provide policy, doctrine and guidance, safety surveys and assessment visits, training and education, multimedia products, marketing and outreach campaigns and recognition and awards programs.

Our magazines, current and archived, can be found at <https://issuu.com/navalsafetycommand/stacks>

NAVAL SAFETY COMMAND

PREVENTING MISHAPS, SAVING LIVES AND PRESERVING READINESS

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