



DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
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WASHINGTON NAVY YARD DC 20376

IN REPLY TO:
NAVSEAINST 10560.2E
Ser 00C/0040
07 Oct 13

NAVSEA 00C Instruction 10560.2E

Subj: THE DIVING EQUIPMENT AUTHORIZED FOR MILITARY USE (AMU)
PROGRAM

- Ref: (a) DODINST 3224.04 of 23 May 2008, Single Manager
Responsibility for Joint Military Diving Technology
and Training (MDT&T)
(b) OPNAVINST 3150.27 (Series), Navy Diving Program
(c) NAVSEA00C AMU List (dynamic),
http://www.supsalv.org/00c3_AMU.asp?destPage=00c3&pageId=3.2
(d) SEA SS521-AG-PRO-010/0910-LP-107-2826, U.S. Navy
Diving Manual
(e) SEA SS521-AA-MAN-010/0910-LP-103-3916, U.S. Navy
Diving and Manned Hyperbaric Systems Certification
Safety Manual
(f) U.S. Navy Salvage Manual, S0300-A6-MAN-010 (Series)
(g) Emergency Ship Salvage Material (ESSM) Catalog Salvage
Equipment Volume I, S0300-BV-CAT-010
(h) Emergency Ship Salvage Material (ESSM) Catalog Salvage
Equipment Volume II, S0300-BV-CAT-020
(i) Underwater Cutting and Welding Manual,
S0300-BB-MAN-010
(j) Underwater Ship Husbandry Manual,
S0600-AA-PRO-010 (Series)

- Encl: (1) Diving Equipment Authorized for Military Use -
Submission Form
(2) Diving Equipment Authorized for Military Use - Board
Review
(3) Diving Equipment Authorized for Military Use -
Configuration Control Form
(4) Diving Equipment Authorized for Military Use - Quality
Management Program Audit Guide

1. Purpose. To provide and define procedures for evaluating
diving equipment for inclusion on the Authorized for Military
Use (AMU) list.

2. Cancellation. This instruction supersedes SEA 00C
Instruction 10560.2D of June 2011.

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3. Scope. This instruction applies to equipment for all U.S. Navy and other Department of Defense diving commands falling within the scope of reference (b).

4. Background. Reference (a) designates the Secretary of the Navy as the Department of Defense (DoD) executive manager for Joint Military Diving Technology and Training (MDT&T). Reference (b) requires the Office of the Director of Ocean Engineering, Supervisor of Salvage and Diving, NAVSEA 00C, to prepare and publish a list of diving equipment Authorized for Military Use (AMU).

AMU equipment should not be confused with NAVSEA Certified Diving Life Support or Manned Hyperbaric Systems. Diving System Certification is described in reference (e), and is a formal process consisting of an independent technical review by the System Certification Authority (SCA), NAVSEA 00C4. Certified diving systems are defined as diver life support systems that consist of a breathing gas source and a means of delivery of the gas to the diver and all manned hyperbaric systems. In accordance with reference (b), diving systems, manned hyperbaric systems, diving equipment, and tools used in diving may only be used if certified, approved via AMU process, or issued a waiver by the CNO.

5. Policy. The AMU List addresses two basic categories of diving equipment:

a. Category I: Life Support Diving Equipment - Category I equipment provides a safe, controlled environment for a diver by satisfying the life support requirements of the intended diving operation (e.g. SCUBA regulators, life preservers, SCUBA manifolds and tanks, SCUBA/special service full face masks, compressors, CO₂ scrubbers, decompression computers, gas and atmosphere monitors used to ensure that breathing media is safe, etc).

b. Category II: Non-Life Support Diving Equipment - Category II equipment enhances the mission capability and is not essential for diver life support (e.g. fins, masks, snorkels, weight belts, wet/dry/hot water suits, SCUBA depth gauges, diver's knives, tools, etc.). Category II equipment may exhibit inherent attributes that are hazardous to a diver (e.g. explosive-actuated tools, electrical equipment operating above 7.5 VAC or 30 VDC, low mu EOD items, special purpose dry suits, diver heating equipment, etc.).

Reference (c) provides a list of approved diving equipment which has undergone technical design reviews to ensure that it meets

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Navy diver safety standards and Fleet operating requirements. Reference (c) is considered a living document that is routinely edited and updated as required.

The Diving Programs Director (00C3), in his capacity as the Diving Technical Warrant Holder, is responsible for setting technical standards and ensuring safe and reliable operations. As such, SEA 00C3 approves or disapproves equipment for inclusion on the AMU list based on the recommendation of the Supervisor of Diving (00C3B), the AMU Board, and his/her own engineering knowledge and experience.

The Supervisor of Diving (00C3B) is designated as a permanent member of all AMU Boards. They hold a unique place in the AMU process due to their extensive operational experience and knowledge of policy. The AMU Program Manager shall provide the recommendation of the AMU board to the Supervisor of Diving (00C3B). The Supervisor of Diving (00C3B) shall then submit the AMU package, AMU Board recommendation and their recommendation to the Diving Programs Director (00C3). The Supervisor of Diving's (00C3B) recommendation does not need to match the AMU Board's recommendation. If it does not match the AMU board's recommendation, a written document shall be provided explaining the discrepancy. This document shall be kept as part of the permanent AMU package.

Medical equipment used in hyperbaric chambers shall be included on the AMU list. Where authorizations for such items are restricted to a specific command or medical personnel, this will be stated in the notes section of the AMU list. These items are reviewed via the AMU process and approved by the Diving Programs Director (00C3) following all processes described herein. A NAVSEA Diving Medical Officer (00CM) or civilian equivalent (00CN) shall be a member of any AMU Board involving medical equipment or devices.

In order to ensure the safety and adequacy of Category II equipment cited in references (f) through (j) and other similar SEA 00C technical publications, SEA 00C Division Directors must notify the AMU Program Manager whenever the revision of any SEA 00C publication would result in the introduction of new or modified equipment that will be diver operated. It is the responsibility of all NAVSEA 00C Program Managers and Division Directors to ensure that equipment listed in these publications is subjected to the AMU approval process as outlined in this instruction and approved by SEA 00C3 prior to issuance of any new publication.

The secure SUPSALV website (<https://secure.supsalv.org>) is Common Access Card (CAC) enabled and lists the latest AMU updates, as well as the link for providing feedback to the AMU

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Program Manager. A consolidated list in PDF format is updated periodically on the SUPSALV website (www.supsalv.org), whenever updates are made on the secure website. AMU equipment designated for specific commands or operational scenarios shall be so annotated on the AMU List (e.g. environmental, depth, temperature, pressure limitations, EOD use only, SPECWAR use only, saturation diving use only, etc.).

6. AMU Process. Prior to authorization for use, all Category I items are required to undergo a formal technical review process, consisting of a tabletop design review by the AMU Board and any required testing and evaluation. At the discretion of the AMU Board, some Category II items may require a formal technical review due to attributes that may pose hazards to the diver. Not all Category II items require formal technical design reviews or testing if they, by nature, are considered non-hazardous to the diver. This determination shall be made by the AMU Program Manager in consultation with AMU Board members when appropriate. If any AMU Board Member requests a formal review of a piece of equipment, this request shall be granted and a full technical evaluation shall be conducted.

An AMU board will be designated by the AMU Program Manager for each piece of equipment submitted for approval. All boards will consist of at least one representative from the Diving Programs Division (00C3) and one representative from the Diving Certification Division (00C4). The Supervisor of Diving is considered a board member for all equipment submitted. The 00C3 representative must be in addition to the Supervisor of Diving. Other representatives shall be chosen based on their experience with the type of equipment being evaluated (e.g. 00CM for medical devices or 00C5 for UWSH tools).

The AMU Board draws upon the professional knowledge and specialized skills of a diverse group of personnel to evaluate the environmental, safety, and health risks associated with a piece of equipment. In addition they will evaluate the mission and cost effectiveness of the equipment if this is determined to be appropriate. The AMU Board shall meet quarterly to review new equipment that is sponsored for inclusion on the AMU List and to maintain configuration management of equipment currently on the AMU List. The AMU Program Manager shall promulgate an agenda for the quarterly AMU Board Meeting to the AMU Board members, SEA 00C2, SEA 00C3, SEA 00C4, SEA 00C5, SEA 00CM and any other applicable participants. The agenda may be prioritized to meet operational needs or modified as otherwise appropriate.

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The AMU Board recommends action to 00C3B based on reviews of the documentation within, appended to, or referenced in the AMU Submission Form and AMU Board Review, Enclosures (1) and (2) respectively. Following the review of all information by the AMU Board, each board member shall record their recommendation on enclosure (2). The Supervisor of Diving (00C3B) shall sign after the other board members. The Diving Programs Director (00C3) will receive the completed package and will make the final decision. This decision shall be documented on enclosure (2). Enclosure (2) is the record of AMU Board discussions and serves as the documentation for all AMU Board recommendations and actions. The AMU Board reviews are scheduled by the AMU Program Manager throughout the year and also occur via the quarterly AMU Board Meeting. The AMU Board may be comprised of the equipment's sponsor, representatives from the NAVSEA 00C technical codes, Fleet or program office representatives and other members as designated by AMU Program Manager. A schematic of the approval process is shown in figure 1 below.

The AMU Program Manager is required to provide formal minutes of each AMU Board Meeting to the AMU Board Members no more than 5 days after the meeting. These minutes will document submissions to the Board, completion of previously directed requirements, corrective actions taken on equipment discrepancies, and a plan of action for sponsored items. AMU Board Members have 5 calendar days from the date of the publication of the meeting minutes to request modification to the meeting minutes.

The AMU Program is designed to be open and visible to the U.S. military diving community, including any applicable operational (e.g. Fleet activities, command dive lockers, shipyard and repair facilities, etc.) and technical organizations that support the military (e.g. NAVSEA, Navy Experimental Diving Unit, etc.). When possible, representatives from these activities may attend the AMU Board Meetings for items they have sponsored or for items under their cognizance.

Equipment can be proposed for AMU evaluation by a variety of methods. Action items from various conferences, program office tasking(s), NEDU/NAVSEA internal memoranda, and command originated requests are all valid methods of requesting AMU equipment evaluation. Commands shall contact the AMU Program Manager to arrange for the AMU evaluation of diving equipment. Typically it is the sponsoring activities' responsibility to fund any formal testing that would be required based on initial review by the AMU Board.

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Items on the AMU list are approved for use in the configuration for which they have been evaluated and/or tested. Enclosure (3) is provided as a method for the AMU Program Manager to ensure configuration control for those items that are not included in a NAVSEA approved Configuration Management Plan (CMP).

As a matter of policy, NAVSEA does not accept requests by commercial vendors to test and evaluate equipment without appropriate endorsement by Fleet sponsors. NAVSEA 00C may self-sponsor items.

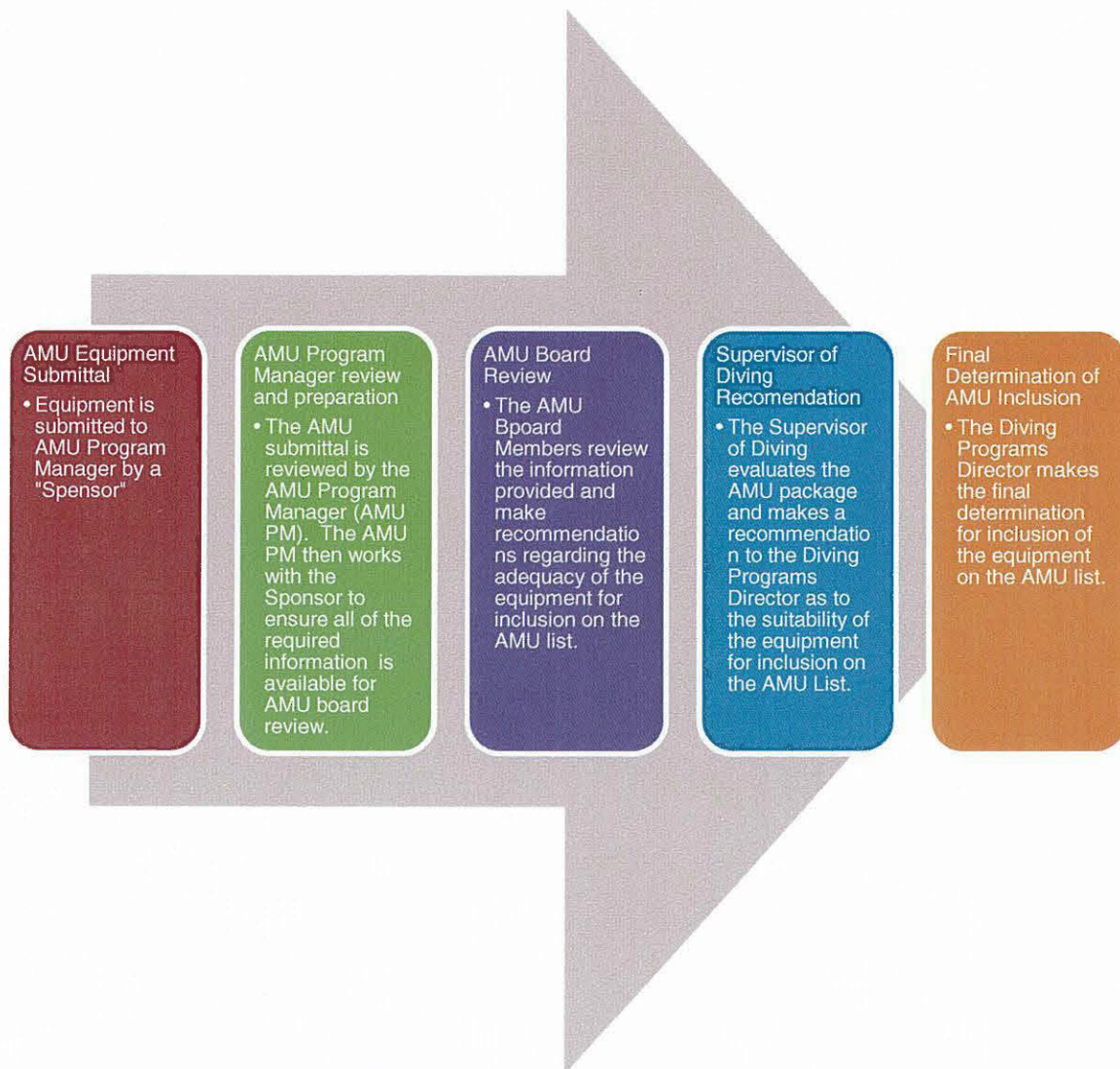


Figure 1: Basic AMU Process

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7. AMU Documentation. Enclosures (1) through (4) provide the description of the required documentation procedures for the AMU evaluation process.

a. Enclosure (1): *The Diving Equipment AMU Submission Form* provides the step-by-step procedures to sponsor and submit diving equipment for AMU evaluation. Enclosure (1) provides descriptive information about the candidate equipment, the operational requirements to justify inclusion on the AMU List, and documentation to support evaluation by the AMU Board. Enclosure (1) is completed by the Sponsor and submitted to the AMU Program Manager via email (00C39@supsalv.org) or fax (202.781.4588).

b. Enclosure (2): *The Diving Equipment AMU Board Review* provides the step-by-step procedures for the review process of equipment sponsored for AMU inclusion. Enclosure (2) shall be used by the AMU Board to determine whether the operational needs and the technical documentation are sufficient to support the AMU approval of the sponsored equipment. The requirements for formal testing may also be established and final comments, recommendations and signatures shall be recorded. Enclosure (2) is completed by the AMU Board, AMU Program manager, Supervisor of Diving (NAVSEA 00C3B) and the Diving Programs Director (NAVSEA 00C3).

c. Enclosure (3): *The Configuration Control Form* provides a format to record the verification of existing AMU equipment configuration, operability, maintainability, and availability. The verification process may be completed for each Category I and II AMU item periodically as required by the AMU Program Manager or at the request of the user. The AMU Program Manager shall be responsible for educating equipment manufacturers on the need to notify NAVSEA 00C of any significant technical changes in AMU equipment as a means of configuration control. Enclosure (3) is completed by the AMU Program Manager.

If verification is incomplete due to the fault of manufacturer, 00C3 may order a suspension of AMU evaluations of future items from that manufacturer. Removing equipment from the AMU due to incomplete verification may not be feasible, if the removal would negatively impact command operations. However, removal of equipment shall occur if so warranted by unsatisfactory performance or incidents of unsafe operation.

Any unusual findings that require immediate Fleet notification shall be promulgated by release of a Diving Advisory. Follow-on action may be required, including Quality Assurance audits or site visits to manufacturers. The AMU process may need to be

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repeated if equipment has undergone significant design changes without notification to the AMU Board.

d. Enclosure (4): Diving Equipment Quality Management Program Audit Guide shall be utilized to perform Quality Assurance Audits on manufacturers of AMU equipment in order to ensure that standards of quality are being met by the manufacturer. Quality Assurance should include the processes to regulate the quality of raw materials, assemblies, products & components, services and processes in relation to management, production and inspection. Quality Assurance Audits shall be performed on manufacturers of Category I equipment. Enclosure (4) is completed by the AMU Program Manager.

8. Responsibilities:

a. Diving Programs Director (NAVSEA 00C3), shall:

(1) Retain responsibility for the safety and adequacy of all AMU equipment.

(2) Exercise final approval of the AMU Program for Category I and Category II diving equipment.

(3) Review and provide feedback to NAVSEA 00C Program Managers and Division Directors to ensure the diving equipment specified in technical publications under their cognizance meet the requirements of the AMU Program.

(4) Review and recommend changes to AMU policy as required.

b. Supervisor of Diving (NAVSEA 00C3B), shall:

(1) Liaise between the military diving community and NAVSEA 00C to ensure that AMU equipment continues to meet fleet requirements.

(2) Review AMU Board evaluations of submitted items and provide recommendation to NAVSEA 00C3.

(3) Review and recommend changes to AMU policy as required.

c. AMU Program Manager shall:

(1) Work with 00C Division Directors to ensure that the AMU Boards are manned appropriately: Category I equipment (2-3

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Board members), Category II equipment (1-2 Board members). In addition to Board members, the AMU Program Manager will review every package submitted and consult with applicable subject matter experts.

(2) Liaise with the Sponsor to ensure AMU documentation is complete.

(3) Ensure AMU documentation is stored in accordance with local NAVSEA 00C directives with electronic files maintained on either a network drive or in LiveLink. It is understood that historical AMU items (pre 2008) may not have complete files or packages. Provide NAVSEA 00C personnel access to electronic records of AMU documentation.

(4) Distribute AMU package information to be reviewed by the AMU Board Members. Ensure AMU packages are reviewed in accordance with the required schedule. Email distribution is acceptable.

(5) Publish and forward the AMU Board Meeting minutes, and incorporate or resolve meeting comments. Email distribution is acceptable.

(6) Serve as a NAVSEA point of contact for testing and evaluation of all proposed AMU equipment items, maintenance of AMU documentation, and coordination of equipment verification activities.

(7) Coordinate AMU Verification activities. Verify configuration of Category I and II equipment periodically via manufacturer data calls, site visits or quality assurance audits as required. Notable findings shall be reported to 00C3.

(8) Record approved AMU changes in the web-based AMU application. Liaise with web team to ensure AMU application is operating as intended. Provide an AMU update for the public SUPSALV website (www.supsalv.org) when required.

(9) Serve as the Lead Auditor during QA Audits of AMU manufacturers.

(10) Review and provide feedback to NAVSEA 00C Program Managers and Division Directors to ensure the diving equipment specified in technical publications under their cognizance meet the requirements of the AMU Program.

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(11) Review and recommend changes to AMU policy as required.

d. AMU Board Members shall:

(1) Attend AMU Board Meetings and conduct technical reviews to determine whether candidate diving equipment should be recommended for inclusion on the AMU List.

(2) Make equipment addition and deletion recommendations to the AMU Program Manager.

(3) Provide comments and recommendations to AMU packages within 15 working days of being assigned as a reviewer.

(4) Complete action items that have been assigned during AMU Board Meetings within 15 working days.

(5) As requested by the AMU Program Manager or 00C3, review and provide feedback on technical publications under the cognizance of NAVSEA00C Divisions.

(6) Review and recommend changes to AMU policy as required.

e. Diving Medical Officer (NAVSEA 00CM), shall:

(1) Ensure the AMU Program Manager (00C39) is included on all correspondence regarding requests for the use of medical equipment in hyperbaric chambers.

(2) Act as AMU board member when a request for approval of a medical device is received.

f. Test and Evaluation Facilities shall:

(1) Test and evaluate equipment in accordance with the approved NAVSEA 00C testing criteria provided by the AMU Program Manager and make AMU recommendations to the AMU Program Manager.

(2) Ensure test and evaluation deliverables are completed, as directed.

(3) Ensure the AMU Program Manager is informed of any changes in the testing, schedule or funding estimates from what was determined by AMU Board review.

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g. Sponsors shall:

(1) Provide supporting documentation to the AMU Program Manager to support the AMU evaluation.

(2) Inform the AMU Program Manager of any configuration changes to developmental or prototype equipment that could affect testing.

(3) Provide funding for testing required for AMU inclusion.

9. Appeal Procedures. After a reasonable attempt of adjudication within the AMU Board, any members of the AMU Board may appeal to NAVSEA 00C if they believe a decision made jeopardizes the safety of divers. Appeals to NAVSEA 00C shall be documented in a formal memorandum to NAVSEA 00C, with copies to SEA 00CB, SEA 00C3, 00C3B and 00C4.



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