



**DEPARTMENT OF THE NAVY**

NAVAL SEA SYSTEMS COMMAND  
1333 ISAAC HULL AVE SE  
WASHINGTON NAVY YARD DC 20376-0001

IN REPLY TO

**NAVSEAINST 9590.1**

**Ser 395/0639**

**7 JUL 04**

**NAVSEA INSTRUCTION 9590.1**

**From:** Commander, Naval Sea Systems Command

**Subj:** SPECIAL OPERATIONS FORCES (SOF) CARRY-ON HARDWARE  
AUTHORIZATION REQUIREMENTS AND STANDARDS FOR TRANSPORT  
AND STOWAGE ON SUBMARINES AND DEEP SUBMERGENCE SYSTEMS  
(DSS)

**Ref:** (a) Nuclear Powered Submarine Atmosphere Control Manual  
S9510-AB-ATM-010/(U)  
(b) NAVSEA SS800-AG-MAN-010/P-9290 (series), System  
Certification Procedures and Criteria Manual for Deep  
Submergence Systems  
(c) NAVSEAINST 8020.6 (series), Navy Weapon System Safety  
Program  
(d) NAVSEA OP4 Seventh Revision, Ammunition and  
Explosives Safety Afloat  
(e) OPNAVINST 5530.13 (series), Physical Security of  
Conventional Arms, Ammunition, and Explosives (AA&E)  
(f) NAVSEANOTE 5400, Ser 05BX/096 of 14 Mar 03

**Encl:** (1) SOF AA&E Authorization Requirements for U.S. Navy  
Submarine and DSS Stowage/Transport  
(2) SOF Carry-On Hardware Authorization Requirements  
for U.S. Navy Submarine and DSS Stowage/Transport  
(3) SOF AA&E Tracking System  
(4) Carry-On Hardware (Non-Ordnance) Tracking System  
(5) Sample AA&E Submarine Stowage Approval Letter

1. Purpose. To establish policy, procedures, requirements, and standards to ensure that carry-on hardware, to include all Special Operations Forces (SOF) mission equipment and Arms, Ammunition, and Explosives (AA&E), is properly approved and authorized for stowage on board host U.S. Navy submarines and for deployment from and storage within Deep Submergence Systems (DSS). The requirements of references (a) through (c) must be addressed for all AA&E prior to authorization. The requirements of references (a) and (b) must be addressed for all non-ordnance carry-on hardware prior to authorization.

07 JUN 2004

2. Applicability. This instruction is applicable to the authorization of all SOF-related carry-on hardware (ordnance and non-ordnance), which will be deployed and used in the Advanced SEAL Delivery System (ASDS), Dry Deck Shelter (DDS), and submarine Lock-In/Lock-Out (LIO) chambers/trunks, which fall within the scope of reference (b) and for all SOF-related carry-on hardware requests for submarine stowage and transport not otherwise installed via an approved configuration change process. This instruction is applicable to new classes of submarines, modifications to existing classes of submarines, and associated applications to embarked DSS.

### 3 Background

a. NAVSEA PMS395 has cognizance and is responsible for ensuring that all SOF carry-on equipment stored on board or deployed from U.S. Navy submarines or DSS meets the certification standards of references (a), (b), and (c), as applicable. In accordance with references (d) and (e), the responsibility for physical security and hazard class/compatibility group segregation for AA&E rests with the host platform program manager.

b. The Weapons System Explosives Safety Review Board (WSESRB) has responsibility for independent oversight for the safe stowage and handling of all Navy and Marine Corps ordnance items, weapon devices, or systems used, handled, stored, or tested aboard a Navy ship and/or submarine. WSESRB "safety approval" is required prior to the item and/or platform obtaining Initial Operational Capability (IOC). WSESRB Safety Approval for carry-on ordnance-related items must be obtained in writing prior to PMS395 authorizing use on board specified DSS's or submarines. AA&E items having received a safety approval by other agencies or boards and not previously authorized by NAVSEA PMS395 is prohibited aboard submarines or DSS unless concurred with by the WSESRB and authorized via this instruction.

c. As a non-voting technical member of the WSESRB, NAVSEA PMS395 identifies DSS and submarine-unique certification requirements for AA&E to be stowed on-board and deployed from submarines and DSS. These requirements are outlined in enclosures (1) and (2).

### 4. Responsibilities

a. NAVSEA PMS395 - Ensure the timely response to all requests for authorizing carry-on hardware, including AA&E, on

07 JUN 2004

submarines and applicable DSS. Accordingly, PMS395 assigns PMS395A22 as the lead for AA&E authorization and PMS395A21 as the lead for authorizing all other carry-on hardware. The following responsibilities are assigned:

(1) Act as central point of contact for coordination of carry-on hardware interface issues for SOF-related ordnance and non-ordnance equipment.

(2) Maintain an auditable master tracking system of authorized stowage/transport items.

(3) Coordinate the authorization process of all carry-on hardware for submarine and DSS stowage, to include ensuring that the items can be successfully deployed from the submarine and DSS (in accordance with the Operational Requirement Document, or equivalent, for the item), and ensuring that all other program requirements are addressed.

(4) For each request to authorize stowage of carry-on hardware, develop a package using enclosure (1) or (2), as applicable. Prepare a coordinated response to the office requesting authorization for submarine/DSS stowage for carry-on hardware, submit for signature by PMS395, and distribute when signed.

(5) Maintain an auditable file of all appropriate NAVSEA PMS395-dispositioned authorizations for carry-on hardware. For new items, the file shall include the original routing package, all comments, and the response. It is understood that the file will contain many items for which packages do not exist, as these items have been "grandfathered." Where available, a copy of the original authorization letter/memorandum will be maintained in the file.

(6) Obtain and resolve technical comments from the applicable Warranted Technical Authorities (WTA) and other cognizant NAVSEA codes as required.

(7) Participate in host ship and DSS SOF stowage arrangement working groups to ensure applicable requirements are addressed and risks are clearly identified and mitigated.

(8) Attend all WSESRB meetings that concern NSW AA&E items that have the potential to be stowed on board a submarine and utilized from the DSS.

07 JUN 2004

5. Procedure. Upon receipt of a request for authorizing stowage of SOF carry-on hardware (ordnance and non-ordnance) on board a submarine and for transport from the ASDS, DDS, and/or LIO chamber/trunk:

a. PMS395 shall enter the request into the PMS395 NSW/SOF carry on hardware tracking system, enclosure (3) or (4), as applicable.

b. PMS395 shall prepare a carry-on hardware authorization requirements sheet, enclosure (1) or (2), as applicable.

c. Upon completion of the technical review and the resolution of all issues, PMS395 shall prepare a response to the request. The technical review shall be coordinated via the appropriate submarine program offices and WTAs. Final response will be signed by PMS395 and should reflect the format provided in enclosure (5).

d. The response letter will authorize dry, 1-atmosphere stowage of carry-on hardware items on board all submarine classes, in the Torpedo Room and other dry spaces. The letter will authorize carry-on hardware for stowage and deployment from the DDS, ASDS, Lock Out Trunk (LOT) for VIRGINIA Class submarines, and Lock Out Chamber (LOC) for SSGN, down to the maximum operating depth of the DSS, where applicable. If only limited stowage is being authorized, the letter will specifically identify those areas that are authorized for carry-on hardware stowage. The letter will also address any other limitations that are being placed on the carry-on hardware (i.e., restricted stowage locations, special stowage orientations, etc.).

e. PMS395 shall place a copy of the dispositioned request and supporting documentation into the carry-on hardware DSS Stowage status binder.

6. This instruction does not address AA&E segregation and AA&E Physical Security covered by references (d) and (e), which are platform-specific concerns to be coordinated separately through Naval Ordnance Safety and Security Activity (NOSSA) Code N7. In accordance with this Instruction, PMS395 will ensure that all applicable DSS and submarine platforms, from which the item is intended to be transported, have an approved stowage segregation and security plan suitable for the specified item.

NAVSEAINST 9590.1

07 JUN 2004

7. The NAVSEA PMS395 responsibility to ensure proper approval of authorization for carry-on SOF equipment does not limit or supersede the authority of the WTA as defined in reference (f). The WTAs will ensure that all applicable technical reviews have been conducted prior to signing concurrence. The following warrant holders assigned by reference (f) for their cognizant areas of responsibility must review and concur with applicable proposed carry-on items:

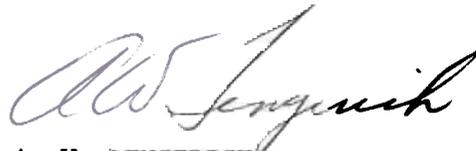
a. NOSSA TD - Weapons Systems and Ordnance - Explosive Safety and Security

b. SEA 00C3 - Diving Systems

c. SEA 05U1 - Ship Design Manager for Deep Submergence Systems

d. SEA 05Z9 - Climate Control Systems (Submarine Atmosphere Control Manual)

8. Review. NAVSEA PMS395 shall review this instruction annually.



A. W. LENGERICH  
Vice Commander

**Distribution:**

SEA 07Q, 07Q4

SEA 05Z93, 00C, 07T

PMS395A1

PMS395A2, A23

PMS395A3

PMS392

PMS450

PMS350

PMS325

PMS398

NOSSA (N75)

NAVSPECWARCOM (N43, N83, N914)

NSWC CRANE (Code 40, 4023, 405A, 408)

NSWC PC (Code A09)

Applied Marine Technology, Inc.

OII-CLT (J. Ritzo)

PNSY (205, 206)

07 JUN 2004

SOF AA&E Authorization Requirements  
for U.S. Navy Submarine and DSS Stowage/Transport

DODIC/NALC: \_\_\_\_\_ Nomenclature: \_\_\_\_\_

Compatibility Group/Hazard Class: \_\_\_\_\_

	Date Received	Status	Date Completed
AA&E Stowage/Transport Request			
System Description/Summary			
Submarine Material List Review (Tox evaluation by SEA 05Z93) <sup>(8)</sup>			
DSS Material Review (Tox/Flam evaluation) <sup>(1) (8)</sup>			
Temperature range for stowage			
Max pressure range and pressure deltas for stowage and transport <sup>(2)</sup>			
HERO impact and restrictions <sup>(8)</sup>			
Magnetic susceptibility <sup>(2) (8)</sup>			
Details on batteries <sup>(2) (8)</sup>			
Implodability/Explodability data <sup>(3) (8)</sup>			
Seawater interaction evaluation <sup>(2)</sup>			
Safety Analysis <sup>(7) (8)</sup>			
Approved Operating/Emergency Procedures <sup>(2)</sup>			
Approved Maintenance Requirements <sup>(2)</sup>			
Fire Fighting <sup>(4) (8)</sup>			
Shock Certification <sup>(5) (8)</sup>			
Stowage Configuration/Special Requirements <sup>(5) (6) (8)</sup>			

NAVSEAINST 9590.1

	Date Received	Status	Date Completed
Packaging information including dimensions of shipping containers			
WSESRB Safety Approval & Initial Operational Capability (IOC) <sup>(8)</sup>			

- Notes:
- (1) Off Gas Testing is required for ASDS, DDS, and LIO operations and is dependent on the manner that the item is intended to be deployed from the submarine (i.e., unprotected or protected in a waterproof container).
  - (2) Must verify technical data and operation of AA&E to determine if applicable.
  - (3) Determination of critical or non-critical implodable/explodable volumes will be made during preliminary and detailed design by PMS395 and/or applicable WTA. The requesting activity shall submit design information and system summary package to PMS395 during preliminary design, requesting NAVSEA to identify critical volumes and design/testing requirements. The requesting activity shall submit detailed design package for final review of system design/testing requirements. PMS395 shall ensure that these requirements and subsequent design and testing have been completed satisfactorily.
  - (4) Identify any unique firefighting concerns and procedures that are not typically available on the submarine.
  - (5) All AA&E and AA&E stowages must meet Grade B shock requirements for applicable host ship, platform, and/or DSS.
  - (6) Develop a stowage plan that provides sufficient restraint for the carry-on item when it is stowed aboard the DSS.
  - (7) Conduct safety analysis to identify potential hazards/risks and develop a mitigation strategy.
  - (8) Warranted Technical Authority concurrence required.

07 JUN 2004

**SOF Carry-On Hardware Authorization Requirements  
for U.S. Navy Submarine and DSS Stowage/Transport**

Nomenclature: \_\_\_\_\_

Managing Program Office and POC: \_\_\_\_\_

	Date Received	Status	Date Completed
Carry-On Hardware Request			
System Description/Summary			
Submarine Material Control List Review (Tox evaluation by SEA 05Z93) <sup>(8)</sup>			
DSS Material Review (Tox/Flam evaluation) <sup>(1) (8)</sup>			
Temperature range for stowage			
HERO impact and restrictions <sup>(8)</sup>			
Magnetic susceptibility <sup>(2) (8)</sup>			
Details on batteries <sup>(2) (8)</sup>			
Implodability/Explodability data <sup>(3) (8)</sup>			
Seawater interaction evaluation <sup>(2)</sup>			
Packaging information including dimensions of shipping containers			
Shock Certification <sup>(7) (8)</sup>			
SEA OOC Review (ANU listed) <sup>(4) (8)</sup>			
Safety Analysis <sup>(5)</sup>			
Approved Operating/Emergency Procedures <sup>(2)</sup>			

	Date Received	Status	Date Completed
Approved Maintenance Requirements (2)			
Stowage Configuration (6) (7) (8)			

- Notes:
- (1) Off Gas Testing is required for ASDS, DDS, and LIO operations and is dependent on the manner that the item is intended to be deployed from the submarine (i.e., unprotected or protected in a waterproof container).
  - (2) Must verify technical data and operation of carry-on to determine if applicable. Battery evaluation might require review by SEA 07T.
  - (3) Determination of critical or non-critical implodable/explodable volumes will be made during preliminary and detailed design by NAVSEA PMS395 and/or applicable WTA. The requesting activity shall submit design information and system summary package to PMS395 during preliminary design requesting NAVSEA to identify critical volumes and design/testing requirements. The requesting activity shall submit detailed design package for final review of system design/testing requirements. PMS395 shall ensure that these requirements and subsequent design and testing have been completed satisfactorily.
  - (4) Only items that fall within the cognizance of NAVSEA 00C and that could pose a diver safety hazard need to be reviewed by NAVSEA 00C.
  - (5) Conduct safety analysis to identify potential hazards/risks and develop a mitigation strategy.
  - (6) Develop a stowage plan that provides sufficient restraint for the carry-on item when it is stowed aboard the DSS.
  - 7) All items shall be reviewed to ascertain whether the item or its stowage is required to meet host ship, platform, and/or DSS shock requirements.
  - (8) Warranted Technical Authority concurrence required.





07 JUN 2004

**SAMPLE**

8024

Ser 395A211/0208

2 Apr 03

**From:** Commander, Naval Sea Systems Command  
**To:** Commander, Crane Division, Naval Surface Warfare Center  
(Code 4083)

**Subj:** APPROVAL TO CARRY ON SUBMARINES, M72A7 LIGHTWEIGHT  
ANTIARMOR WEAPON (LAW)

**Ref:** (a) NSWC Crane ltr 8010 Ser 4083RH/0177 of 27 Nov 00  
(b) NAVSEA 05Z93 memo of 9 Jan 01  
(c) NAVSEA ltr 8020 Ser N7151/58 of 29 Jan 01  
(d) Nuclear Powered Submarine Atmosphere Control Manual  
S9510-AB-ATM-010/(U)  
(e) NAVSEA ltr 8020 Ser 395A28/0255 of 18 Mar 03

1. NAVSEA has reviewed reference (a) request to carry the M72A7 LAW (NALC H557, NSN 1340-01-472-5349) on board submarines, Advanced SEAL Delivery Systems (ASDS), and Dry Deck Shelters (DDS).

2. Bureau of Medicine and Surgery approval and Submarine Material Review Board approval are documented by reference (b). Reference (c) documents Naval Ordnance Safety and Security Activity Safety Approval of the item.

3. NAVSEA concurs with carrying the items on board submarines, to include the Torpedo Room, and on board ASDS and DDS and grants PERMITTED USE category in accordance with reference (d). The following procedures must be adhered to when deploying the M72A7 LAW from the ASDS or DDS:

- The M72A7 LAW **MUST** be placed in a NAVSEA-approved off-gas barrier bag prior to ASDS/DDS loadout.

4. The off-gas barrier bag has been approved for use per reference (e).

Enclosure (5)

Page 1 of 3

NAVSEAINST 9590.1

07 JUN 2004

Subj: APPROVAL TO CARRY ON SUBMARINES, M72A7 LIGHTWEIGHT  
ANTIARMOR WEAPON (LAW)

5. NAVSEA point of contact is Erik Gardner, PMS395A211, at  
(202) 781-7335.

S. T. WALSH  
By direction

Copy to:  
USSOCOM (SOAC M&R)  
COMSUBLANT (N752/N951)  
COMSUBPAC (N754)  
COMNAVSPECWARCOM (N43, N914)  
NAVORDSAFSECACT (N715)  
SDV Team ONE  
SDV Team TWO  
NSWC Division Crane (Code 405A)

Enclosure (5)  
Page 2 of 3

NAVSEAINST 9590.1

07 JUN 2004

Subj: APPROVAL TO CARRY ON SUBMARINES, M72A7 LIGHTWEIGHT  
ANTIARMOR WEAPON (LAW)

Blind copy to:

PMS 395A21  
395A22  
395S (file)  
SEA 05Z93  
07Q41  
PMS NSW

Record note:

1. This letter grants conditional PERMITTED USE of the M72A7  
LAW (NALC H557, NSN 1340-01-472-5349) on board submarines, ASDS,  
and DDS as defined in paragraph 3 of this letter.

Concurrence:

Code \_\_\_\_\_ Date

Code \_\_\_\_\_ Date