DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362-5101

IN REPLY REFER TO
NAVSEAINST 5450.48A
OPR 05D/36
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NAVSEA INSTRUCTION 5450.48A

From: Commander, Naval Sea Systems Command

Subj: MISSION AND FUNCTIONS OF THE NAVAL SHIP SYSTEMS ENGINEERING STATION

Ref: (a) OPNAVNOTE 5450 Ser 09B26/144436 of 19 Oct 79; Subj: ESTABLISHMENT OF THE NAVAL SHIP SYSTEMS ENGINEERING STATION
(b) NAVSEAINST 5400.81; Subj: DESIGNATION OF IN-SERVICE ENGINEERING AGENTS
(c) SPAWAR 9405 ltr Ser PMW 153-2/105 of 17 Jul 86; Subj: SUBMARINE COMMUNICATIONS ANTENNA FIELD ACTIVITY MANAGEMENT (NOTAL)
(d) NAVSEAINST 5400.1D; Subj: NAVAL SEA SYSTEMS COMMAND (NAVSEASYSCOM) HEADQUARTERS ORGANIZATION MANUAL
(e) NAVSEA Publication S0300-A9-MAN-010
(f) OPNAVINST 5450.169; Subj: ESTABLISHMENT, DISESTABLISHMENT, OR MODIFICATION OF SHORE ACTIVITIES OF THE DEPARTMENT OF THE NAVY

Encl: (1) Mission and Functions of the Naval Ship Systems Engineering Station, Philadelphia

1. Purpose. To revise and promulgate additional functions of the Naval Ship Systems Engineering Station, Philadelphia (NAVSSES) in support of its overall mission established in reference (a) and the policies described in references (b) and (c).

2. Cancellation. NAVSEAINST 5450.48 of 7 November 1983.

3. Status and Command Relationship. NAVSSES is an official Navy shore activity in an active status with a commanding officer operating under the Commander, Naval Sea Systems Command (COMNAVSEA) as a field activity of the Deputy Commander for Ship Design and Engineering (SEA 05). It is subject to the local area coordination authority of the Commander in Chief, U.S. Atlantic Fleet, as exercised by the Commander, Naval Base, Philadelphia.

R) 4. Background

a. The responsibility for managing hull, mechanical, and electrical (H,M&E) ship systems life cycle engineering is vested in the Deputy Commander for Ship Design and Engineering (SEA 05). SEA 05 has delegated engineering and logistic authority to specific managers within that directorate and designated them life cycle engineering managers (LCEM). Authority for ship systems rests with these NAVSEA managers as described in reference (d). A similar relationship is established in the Weapons and Combat Systems Directorate (SEA 06) for submarine periscope systems, and the Space and Naval Warfare Systems Command (SPAWAR) who is responsible for submarine communications systems.

b. Reference (a) established NAVSSES and assigned its mission to be the principal center for test and evaluation of ship systems (hull, mechanical, and electrical) and as an in-service engineering agent (ISEA) of NAVSEA. Reference (c) established it as the ISEA for designated submarine antenna equipment. Specific system and equipment assignments for in-service engineering are made by formal agreement identifying responsibilities and resources to carry out the functions described in enclosure (1). Reference (e) is maintained as a directory of ISEA assignments that have been made by NAVSEA LCEMs of surface H,M&E equipment and systems.

R) 5. Discussion. The responsibilities of NAVSSES are focused on testing and evaluating potential service models of equipment, replacement with units incorporating improvements and monitoring the operational performance of delivered systems throughout a ship's operational life. This responsibility encompasses monitoring configuration and operational availability, identifying deficiencies, and developing engineering and logistic corrections.

6. Policy

R) a. Ship System (H,M&E) and Submarine Antenna and Periscope Systems Test and Evaluation (T&E). NAVSSES is the principal test and evaluation center for ship H,M&E systems and designated submarine antenna systems. NAVSSES supports the LCEM in developing test proposals, integrated test packages, test and evaluation plans, and master plans. Life cycle engineering managers shall assign production and improved model testing and evaluation to NAVSSES.

b. Ship Systems In-Service Engineering Agent (ISEA)

(1) NAVSSES is the ISEA supporting SEA 05, SEA 06, SPAWAR and its LCEMs to improve the reliability, maintainability, and availability of ship systems and equipment. NAVSEA LCEMs will assign in-service engineering effort to NAVSSES where it is the designated ISEA. Exceptions to this must be approved by the group head.

(2) NAVSSES will maintain accurate, up-to-date records and assessment on ship equipment and system configuration, its technical documentation, and fleet problems. As assigned, NAVSSES will review configuration changes of H,M&E systems and equipments for applicability, design and life cycle support.

(3) The station functions in direct support of the LCEMs and should initiate action to anticipate and resolve problems or deficiencies. NAVSSES shall obtain approval of the LCEMs prior to modifying configuration or operational characteristics of in-service systems and equipment, before recommending mission degrading operational restrictions to fleet units, or modifying approved integrated logistics support plans (ILSPs) for in-service H,M&E, or submarine antenna and periscope systems and equipment. LCEM approval shall also be obtained in cases where NAVSSES is recommending action different from that intended or previously taken by NAVSEA. NAVSEA will remain the initiator of actions which change the operational capability of a ship. (R

(4) Reference (c) describes NAVSSES responsibilities for submarine antenna systems. (R

c. Exceptions

(1) Deviations from policy require the specific approval of SEA 05.

(2) This instruction does not apply to or modify any instruction relating to work under the cognizance of the Deputy Commander for Nuclear Propulsion (SEA 08).

R) 7. Action. Commanding Officer, NAVSSES, and the LCEMs shall conform to the policy of this instruction and the functions as set forth in enclosure (1). He, and the area coordinator, Commander, Naval Base, Philadelphia, must advise COMNAVSEA of any proposed modifications to the mission or functions of NAVSSES in response to changing circumstances. Reference (f) provides guidance relative to changes in resources including location, people, equipment, material, real property and funding.

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Deputy Commander for
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MISSION AND FUNCTIONS OF THE NAVAL SHIP SYSTEMS ENGINEERING STATION, PHILADELPHIA

1. Mission. To perform assigned engineering and technical management functions for ship systems, equipment, and material in support of the Naval Sea Systems Command. To serve as the principal center for test and evaluation of ship systems (HM&E), and to provide in-service engineering support for those systems and equipments; and to perform such other functions and tasks as directed by higher authority. (A

2. Ship Systems and Equipment Test and Evaluation Center (R

a. Test and evaluate ship systems and equipment in the research and development process as assigned by the LCEM.

b. Test and evaluate ship systems and equipment to determine and demonstrate their acceptability and suitability for naval service.

c. Provide non-competitive engineering and facilities assistance to vendors for testing and evaluating systems and equipment intended for ship installation.

d. Support implementation of the total ship test program for ship production, and for the acquisition, execution and maintenance of standardized testing programs for ship systems installation, test and checkout in designated ships and land-based test sites.

3. Ship Systems and Equipment In-Service Engineering Agent (R

a. Configuration and Data Management

(1) Collect and analyze systems performance data to identify problems in reliability and availability to prioritize in-service engineering corrective action, and to determine the effectiveness of past action.

(2) Monitor ship systems configuration by maintaining access and providing feedback to the Ship Configuration and Logistics Support Information System (SCLSIS) data base. Make technical reviews of baseline models, system equipment patterns, and equipment functional descriptions. Provide technical guidance to configuration data managers in accordance with SCLSIS requirements.

(3) Provide technical guidance to NAVSEA LCEMs on all engineering change proposals, deviations and waivers which impact in-service H,M&E systems. Review proposed changes for applicability, adequacy of design, and life cycle supportability. Provide technical review of ship alteration proposals and records of H,M&E systems for the LCEM. Where assigned, act as the single point of contact for the LCEM on in-service systems configuration management, participate in configuration boards, and track change implementation.

(A b. Integrated Logistics Support

(1) Provide life cycle logistics support for all assigned equipment and systems including training, manning, technical documentation, supply and maintenance support.

(2) Provide technical information and guidance, training and training aids to the fleet, specialized inspectors, and facilities. Monitor programmed training to ensure that the technical content of training material is current and accurate. Recommend manning levels and rates and monitor ships force for necessary skills and adequacy of training.

(3) Review allowance parts lists (APL) for new equipment. Provide technical guidance for resolution of parts problems, specification and quality assurance requirements. Recommend and coordinate necessary APL changes to the coordinated shipboard allowance lists and advise the LCEM of supply stockpoint requirements. Review provisioning technical documentation as assigned by the LCEM.

(4) Assist in NAVSEA's preparation of class maintenance plans and recommend additions or changes to existing plans.

(5) Guide and assist repair facilities in obtaining and maintaining procedures and equipment to execute approved maintenance strategies.

(6) Develop and monitor technical manuals, maintenance procedures, and operating directions; submit changes. Review and update other technical documentation on an as needed basis.

(7) Monitor Naval Sea Support Centers (NAVSEACENS) fleet support activity in ILS matters.

c. Engineering (A

(1) Support the LCEM for the design, developmental testing and evaluation, installation and repair, and operational testing, fleet introduction and certification of assigned new and modified H,M&E and submarine antenna and periscope systems and subsystems. Integrate these systems into the fleet and monitor their performance.

(2) Identify and diagnose design deficiencies which present safety hazards or detract from a system's or equipment's required performance. Make frequent and routine contact with the NAVSEACENs and industrial activities, visit ships, analyze engineering data, examine failed parts, etc., to develop engineering changes, machinery alterations, equipment and operating improvements as assigned. With concurrence of the LCEM, work directly with original equipment manufacturers to solve technical equipment, maintenance, repair and documentation problems.

(3) Review engineering changes and alterations for safety, performance, reliability, availability, and maintainability. Conduct shipboard proof-ins of hardware improvements as requested by the LCEM.

(4) Support the LCEM in preparing new or revised system and equipment specifications and designs, including new construction.

(5) Investigate shipboard H,M&E reliability, maintainability, availability, and logistics support problems on assigned systems. Receive and comment on engineering and logistic recommendations from the SEACENs.

(6) Monitor SEACEN direct fleet support and equipment casualties to track the progress of restoration efforts and gather data on their nature and extent. When correcting the problem is beyond the technical capability of the fleet and the sea centers, provide consultant engineering services and assistance to the type commanders and fleet units upon request. Provide engineering consultant services to all levels of installation and repair where procedures do not exist or are inadequate.

(7) Act as principal test and evaluation agent and ISEA of H,M&E and submarine antenna and periscope systems and subsystems; provide program plans encompassing short, mid, and long range efforts. The plans shall provide a perspective of workload and resources required by NAVSEA sponsors including LCEMs.

(8) Manufacture prototype antenna systems and develop techniques and procedures for control of manufacturing, restoration, installation, and system modification.

(9) Support the LCEM as his agent for engineering and logistics concerns for designated systems and equipments. Organize frequent and regular meetings with individual LCEMs, NAVSEACEN technicians, other systems commands and their field offices, and any laboratory or contractor working in the related area. Report progress, direction and expenditures to the LCEM, and review program goals within the LCEM's five year plan.

4. Land-Based Engineering Sites. As required by the LCEM construct and operate specialized land-based engineering sites which simulate shipboard operation, space, maintainability, and training constraints to permit the full range of engineering testing, and to verify shipboard maintenance, repair, and operating procedures, and adequacy of spare parts support packages.