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APPENDIX C

LIST OF ACRONYMS

2M	Miniature/Microminiature
3-M	Maintenance and Material Management
A&I	Alteration and Improvement
ACN	Advanced Change Notice
AEL	Allowance Equipage List
AOE	Fast Combat Support Ship
APL	Allowance Parts List
AT	Acceptance Trial
ATG	Afloat Training Group
AWP	Availability Work Package
BAWP	Baseline Availability Work Package
BDT	Builder's Dock Trial
BST	Builder's Sea Trial
BT	Builder's Trial
BUPERS	Bureau of Personnel
CAGE	Commercial and Government Entity
CASREP	Casualty Report
CD-ROM	Compact Disc Read Only Memory
CFE	Contractor Furnished Equipment
CHT	Collection, Holding and Transfer
CNO	Chief of Naval Operations
CO	Commanding Officer
COMFLTFORCOM	Commander, Fleet Forces Command
COMLANTFLT	Commander, Atlantic Fleet
COMNAVSEASYSCOM	Commander, Naval Sea Systems Command
COMNAVSURFLANT	Commander Naval Surface Force Atlantic
COMPACFLT	Commander, Pacific Fleet
COMSUBDEVRON	Commander Submarine Development Squadron
COMSUBRON	Commander, Submarine Squadron
COMUSFLTFORCOM	Commander, United States Fleet Forces Command
COSAL	Coordinated Shipboard Allowance List
CPA	Carrier Planning Activity
CS/CCS	Command and Control Systems
CSCT	Combat Systems Certification Trial
CSMP	Current Ship's Maintenance Project
CT	Combined Trial
CVN	Nuclear-Powered Aircraft Carrier
CW	Continuous Wave
DDG	Guided Missile Destroyer
DIRSSP	Director, Strategic Systems Programs
DPMA	Docking Phased Maintenance Availability
DRA	Dead Reckoning Analyzer
DRAI	Dead Reckoning Analyzer Indicator
DRT	Dead Reckoning Tracer
EAB	Emergency Air Breathing
EDORM	Engineering Department Organization and Regulations Manual
EEBD	Emergency Escape Breathing Device

EGL	Equipment Guide List
EMBT	Emergency Main Ballast Tank
EOSS	Engineering Operational Sequencing System
EPM	Emergency Propulsion Motor
ESM	Electronic Warfare Support Measures
FBW SCS	Fly-By-Wire Ship Control System
FCT	Final Contract Trial
FDRMC	Forward Deployed Regional Maintenance Center
FIT	Fleet Introduction Team
FMA	Fleet Maintenance Activity
FMR	Field Modification Request
FOSAT	Fitting Out Supply Assistance Team
FRP	Fleet Readiness Plan
GFE	Government Furnished Equipment
GFI	Government Furnished Information
GMI	Guarantee Material Inspection
GPETE	General Purpose Electronic Test Equipment
HF	High Frequency
HMR	Headquarters Modification Request
IEM	Inactive Equipment Maintenance
IFF	Identification Friend or Foe
IMP	Incremental Maintenance Plan
INSURV	Inspection and Survey
ISE	Independent Ship Exercise
ISEA	In-Service Engineering Activity
ISIC	Immediate Superior in Command
JFMM	Joint Fleet Maintenance Manual
JFMMBOD	Joint Fleet Maintenance Manual Board of Directors
JSN	Job Sequence Number
LCPC	Life Cycle Planning Conference
LHD	Amphibious Assault Ship
LOA	Light-Off Assessment
LOEP	List of Effective Pages
LSD	Dock Landing Ship
MACHALT	Machinery Alteration
MARMC	Mid-Atlantic Regional Maintenance Center
MBT	Main Ballast Tank
METCAL	Metrology and Calibration
MHC	Coastal Minehunter
MIP	Maintenance Index Page
MRC	Maintenance Requirement Card
MRMS	Maintenance Resources Management System
MSW	Main Seawater
MT	Magnetic Particle Testing
MT	Maintenance Team
MTR	Metrology and Calibration Technical Representative
NAVAIR	Naval Air Systems Command

i. (Submarines only) Conducting a material inspection consisting of a vertical audit of Ship's Force and Fleet Maintenance Activity Submarine Safety (SUBSAFE), Deep Submergence Systems Scope of Certification and FBW work and URO completion status per Volume V, Part I, Chapter 9 of this manual.

j. (Submarines only) Additional ISIC responsibilities are defined in Volume II, Part I, Chapter 3 of this manual.

k. If deficiencies exist and/or it appears that extension of time is required to correct training/material deficiencies, the TYCOM shall be immediately advised by telephone and message. The Supervising Authority will be included as an information addressee. The TYCOM retains the prerogative to authorize corrective action by the Industrial Activity in the case of material deficiencies.

l. When authorized by the TYCOM, direct the ship to get underway for Sea Trials.

2.6 BUILDING YARD. The Building yard is an industrial activity responsible for construction of the ship, correction of shipbuilder responsible deficiencies and additional logistic support products as delineated in the contract. The following is a sample listing of the shipbuilder's products and responsibilities.

a. Technical Manuals for Contractor Furnished Equipment (CFE).

b. Ship Information Book (SIB)/Ship Systems Manual (SSM).

c. PMS for new systems when tasked by Navy Shipbuilding Program Managers or cognizant NAVSEA code.

d. Selected Familiarization Training.

e. Ship Drawings.

f. Advising the Accepting Authority and the TYCOM of the date of initial criticality.

g. Builder's Trials (non-nuclear) to include:

(1) Taking the ship to sea.

(2) The testing of all equipment and systems with the exception of weapons.

2.7 DESIGN YARD/PLANNING YARD. The Design Yard/Planning Yard, which may also be the Building Yard, is an industrial activity responsible for maintaining the Ship's Drawing Index current with configuration. The Planning Yard is responsible for updating ship's drawings to reflect PSA changes.

2.8 COMMANDING OFFICER, PROSPECTIVE COMMANDING OFFICER, OFFICER IN CHARGE.

2.8.1 General.

a. The responsibilities of a PCO for a new construction ship are set forth in U.S. Navy Regulations. In the case of a nuclear powered ship under construction, the PCO has additional responsibilities associated with the operation of the nuclear propulsion plant as specified in references (a) and (b). In order to provide him with authority commensurate with this responsibility the PCO will be designated in his orders as CO of the PCU, a separate and detached command, with responsibilities as specified in references (a) and (b) and U.S. Navy Regulations.

b. Following completion of the required training and material readiness certification, the CO/PCO/OIC must keep the ISIC fully informed of any changes in personnel, training and/or material status which could affect the validity of certification. Prompt notification is required to permit revision of Operational Orders and services required.

2.8.2 Pre-Commissioning. Specific responsibilities of the PCO during the primary construction phase are as follows:

a. The preparation and execution of training plans, operational and emergency bills, procedures and organization manuals in support of his responsibilities.

b. The demonstration of his crew's operational and administrative readiness in accordance with the inspections required by Volume I, Chapter 3, paragraph 3.3.4 of this manual.

c. Verifying that all required Navy Enlisted Classification Codes or other skill requirements are met by BUPERS or by the ship's training programs.

d. The presentation of the crew for the platform applicable inspections described within this volume.

e. The designation of a Miniature/Microminiature (2M) Repair or Module Test and Repair Manager.

f. The designation in writing of a Calibration Coordinator.

g. Ensuring that at least two NAVSEA/Naval Air Systems Command certified Field Calibration Activity/Aircraft Intermediate Maintenance Department technicians are available to support certification.

h. Verifying that all pertinent alongside tests, inspections and trials are completed.

i. The establishment of "Lessons Learned Files". These files are to be turned over to the incoming PCO of the next ship of the class to be built. DDG 51 Class Destroyers should pass their files to the PMS 400 tasked contractor. MHC Class ships can provide this data to the FIT while all others should pass Lessons Learned to the Supervising Authority if the next PCO has not yet arrived.

j. The establishment of PMS in accordance with reference (g) and Volume I, Chapter 3, paragraph 3.4.1 of this manual.

k. Concurring with the Navy Shipbuilding Program Manager's request to the TYCOM for the conduct of a Habitability Inspection.

l. The designation of system/space experts to assist the ISIC with the Habitability Inspection.

m. The establishment of early liaison with the ATG team OIC to define training needs and the agenda for assist visits in preparation for LOA and Initial Light-Off.

n. (Nuclear Powered Ships only) The development and execution of training plans and documents in support of his responsibilities for inspection and operation of the nuclear propulsion plant. These plans and documents shall be in conformance with the instructions and procedures approved by NAVSEA.

o. (Nuclear Powered Ships only) The preparation of ship's engineering/reactor personnel for examination by the Nuclear Propulsion Directorate (NAVSEA 08).

p. (Nuclear Powered Ships only) Review the findings of the ISIC's Pre-RSE Inspection Team and make necessary adjustments to the ship's training program to ensure the crew's readiness for the RSE. Keep the ISIC advised of the ship's training plan and provide an assessment of the crew's progress.

q. (Nuclear Powered Ships only) Maintain the Reactor Plant in accordance with reference (k). Ensure records are ready for the ISIC's audit prior to Fast Cruise.

r. (Nuclear Powered Ships only) Review test and trial schedules and agendas and signify concurrence to the TYCOM and the designated ISIC. Copies of detailed schedules and agendas for underway trials will be forwarded to the designated ISIC, the escort ship (Submarines) and the TYCOM Embarked Representative.

s. (Nuclear Powered Ships only) Assume duty as the OIC and accept custody and responsibility for special nuclear material, after the ship is placed "In-Service". Report to the Fleet Commander In-Service status. Appendix A of this chapter provides a sample message.

t. (Nuclear Powered Ships only) The preparation of Ship's Force Dock Trial Agenda.

u. (Nuclear Powered Ships only) In accordance with the specifications and information in this volume, the conduct of dockside and underway trials. Critical operation of the reactor will be conducted in accordance with reference (l).

v. (Aircraft Carriers only) Prior to Fast Cruise, report to the TYCOM the successful completion of Crew Certification and recommend commencement of Fast Cruise and Builder's Trials via message. Appendix B of this chapter provides a sample message.

j. (Submarines only) Undergo a salvage inspection in accordance with Volume IV, Chapter 18 of this manual.

k. (Submarines only) Maintain Planned Maintenance Management Plan in accordance with reference (n) and Scope of Certification/FBW Controlled Work Packages/SUBSAFE Re-entry Control in accordance with Volume V, Part I, Chapter 5 of this manual. Ensure records are ready for an ISIC audit prior to Fast Cruise.

l. (Submarines only) Additional PCO/CO responsibilities are defined in Volume II, Part I, Chapter 3 of this manual.

2.9 PRE-COMMISSIONING UNIT. The PCO and crew will monitor the ship's construction, prepare ship's directives, regulations and administrative programs, and observe and/or demonstrate the operation of installed systems to ensure the ship is safe and habitable prior to commissioning. The shipyard period is an opportunity for the crew to familiarize themselves with the ship. The ship will be required to complete various certifications leading up to introduction into the fleet. This section provides some insight into the administrative requirements and personnel related issues associated with the initial man-up.

2.9.1 Initial Man-up. New construction ships are manned based on a Crew Scheduling and Phasing Plan. Dependent upon the platform type, crew manning is accomplished in two, three, four or as many as eight increments. The quantitative and qualitative requirements of these increments are based on the platform type, test and construction schedule. The objectives of the Crew Scheduling and Phasing Plan are to:

a. Ensure adequacy of schooling for personnel assigned.

b. Ensure appropriate course convening dates.

c. Ensure there are no conflicts/redundancies between Navy and contractor courses.

d. Ensure sufficient training for anticipated maintenance and operating skill requirements.

e. Ensure the optimization of training opportunities for personnel in the pipeline en route to the ship. A senior crew member from the first increment shall be assigned with the responsibility of tracking and reviewing manning issues. For some ships, the Navy Shipbuilding Program Manager has provided support contractors to assist either partially or entirely in the management of the Crew Scheduling and Phasing Plan. Regardless of the class or type of ship, the initial increment of personnel must quickly organize. If a detachment concept is used, Appendix P of this chapter provides a basic listing of requirements that the first increment of personnel should be pursuing. Appendix Q of this chapter provides similar information for the non-detachment approach.

2.9.2 Training.

2.9.2.1 Shipboard Training. The Industrial Activity presents a unique environment with special circumstances not routinely encountered by operating forces. The incremental assignment of personnel to PCUs and the pace of new construction demands a comprehensive training strategy. A well established training program is the key to the ship being ready for introduction into the Fleet. Consistent with the objectives of a shipboard training program, the TYCOM training manuals and references (j) and (o) through (t), a new construction training program will ensure that:

a. (Nuclear Powered Ships only) The qualification of all Engineering/Reactor Department personnel in strict accordance with reference (u). Included is the CO's responsibility to personally conduct an RSE of each key propulsion plant watchstander.

b. Personnel are trained in any special Quality Assurance (QA) procedures that may be used during the construction period.

c. Personnel assigned are knowledgeable of the platform, system and equipment installations and operation of installed equipment.

d. Watchstander qualifications support a watch section of fully or provisionally qualified personnel for all scheduled events.

e. Training designated for assigned personnel supports the platform/equipment configuration.

f. Intensified special training is provided to support:

(1) Cold Operations.

(2) Hot Operations.

(3) RSE.

(4) LOA.

(5) Criticality/Power Range Testing.

(6) Combat Systems Installation Certification.

(7) Crew Certification.

(8) Fast Cruise and Sea Trials.

(9) Piloting Party/Navigation Detail.

(10) Damage Control Team.

(11) Fire Fighting Team.

(12) Tactical Team.

(13) Special details.

g. All billets requiring specific Navy Enlisted Classifications are filled.

h. Established Naval Schools and Trainers are used to the maximum extent possible.

i. Factory training on systems/equipment for which Naval Schools are not established is provided.

j. Special training in accordance with TYCOM directives is provided for provisional certification to load, handle, stow and maintain a weapons load-out specific to the class of ship.

k. Weapons/Combat Systems training is sufficient to enable the Weapons/Combat Systems Department to operate its systems while complying with existing safety rules, technical directives and governing operating procedures promulgated by the CNO, the Defense Nuclear Agency, NAVSEA, Space and Naval Warfare Systems Command, the TYCOM or other commands as applicable.

l. Industrial Activity/contractor familiarization training courses are monitored for content and value. Provide supplemental instruction where necessary and inform the Supervising Authority and Navy Shipbuilding Program Manager of significant problems or shortfalls.

m. The enlisted training program is started as soon as the Leading Petty Officers for the major divisions arrive. The Officers and senior enlisted personnel will develop the content and scope of the training programs for implementation with the arrival of the first large increment of enlisted personnel.

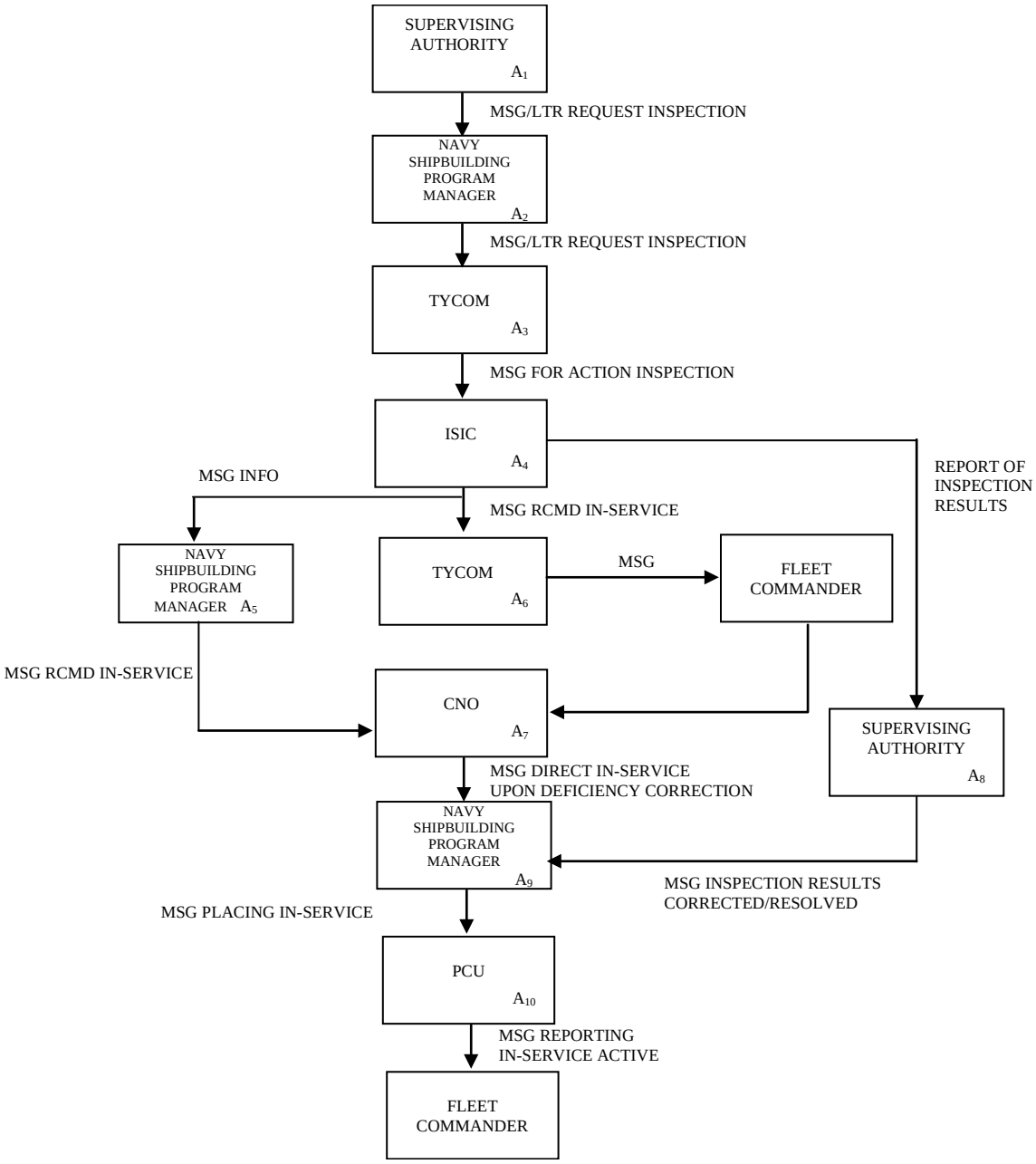
n. Aircraft Launch and Recovery Equipment Maintenance Program training shall be conducted in accordance with reference (v).

2.9.2.2 Industrial Activity Training. The Industrial Activity/FIT will provide familiarization training in accordance with the shipbuilding contract on ship's characteristics and systems. This training generally is not sufficient for "System Expert" qualification, but will provide an excellent opportunity for School of the Boat/Ship, and at the same time provide an opportunity for Divisional Training Petty Officers to develop a more detailed and in depth training program. In most cases the Industrial Activity will allow the ship to control the scheduling of topics.

2.9.2.3 Training Support Center. Surface ships utilizing the Pre-Commissioning Detachment Concept at a Training Support Center (TSC), either in Norfolk, VA or San Diego, CA, are provided with an outstanding opportunity to ensure pipeline training is obtained. This concept also provides for the easy access to many of the basic courses such as firefighting, damage control, Repair Parts Petty Officer training, Drug and Alcohol Program Advisors, Component Change Control, etc., which are needed to ensure assigned personnel can effectively function as a ship's crew upon delivery. For ships not utilizing the TSC Detachment Concept, such as submarines, an individual should be assigned to monitor and track training and manning issues as they develop.

APPENDIX A

Message Scenario and Sample Messages/Letters For Habitability Inspections and In-Service



APPENDIX A_1

SAMPLE SUPERVISING AUTHORITY LETTER TO NAVY SHIPBUILDING PROGRAM MANAGER RECOMMENDING HABITABILITY INSPECTION AND IN-SERVICE

From: Supervisor of Shipbuilding, Conversion and Repair, USN, (Applicable Supervising Authority)

To: Commander, Naval Sea Systems Command (Attn: Navy Shipbuilding Program Manager)

Subj: PLACING (SHIP NAME) (HULL NUMBER) IN-SERVICE

Ref: (a) OPNAVINST 9080.3
(b) OPNAVINST 4700.8

1. In accordance with references (a) and (b), recommend Habitability Inspection of (Ship Name) (Hull Number) commence on (Date) with active status of In-Service on or about (Date).

Program Department Head

Copy to: (As Applicable)
CNO Washington (N77)
DIRSSP Washington (SP201)
TYCOM
ISIC
Parent ISIC
PRECOMUNIT (Ship Name)
NRRO (Location)

technical manuals or directives. The message will also specify the ship's current certification status, including deficiencies that preclude full certification for the operational capabilities specified by the CNO.

(3) Certification. NAVAIR or NAWC grants or rescinds certification via message after review of the recommendation from the NAWC team coordinator and any other information that may be available. The certification message will be addressed to the TYCOM and other appropriate commands. It will specify the ship's present aviation status, including any corrections that must be accomplished to achieve full certification for the operational capabilities specified by the CNO. Certifications granted will remain in effect until such time that major equipment modifications or alterations are accomplished or until the next overhaul (not to exceed two years on Air Capable Ships and Amphibious Assault Ships unless rescinded by NAVAIR or NAWC.

c. Technical Publications. A listing of technical publications required for Air Certification can be obtained from the TYCOM. References (b) and (q) list specific certifications required for aviation platforms.

3.3.7 Salvage Inspection (Submarines only).

a. Purpose. To determine the readiness of submarine rescue and salvage equipment.

b. Conduct. Submarine Salvage Inspections will be conducted in accordance with the direction of Volume IV, Chapter 18 of this manual.

3.3.8 NAVSEA Calibration Activity/Aircraft Intermediate Maintenance Department Calibration Laboratory Initial Certification (Submarines, Aircraft Carriers and Surfaces Forces, as appropriate).

a. Purpose. To verify the NAVSEA/NAVAIR Designated Command has in place the necessary documentation, facilities, equipment and trained personnel to support calibrations of Test, Measurement and Diagnostic Equipment (TMDE) as specified in references (t), (u) and (v).

b. Conduct. Initial certification is conducted by the NAVSEA/NAVAIR Metrology and Calibration (METCAL) Technical Representatives in accordance with the requirements of references (v) and (w). NAVSEA METCAL Technical Representatives are the NAVSEA METCAL Quality Manager and NAVSEA METCAL Engineering Agent.

c. Scheduling. Initial certification should be accomplished after approval of Establishment of Field Calibration Activity Request and prior to or concurrent with delivery. Coordination between the TYCOM METCAL Point of Contact, METCAL Technical Representative, the Navy Shipbuilding's Program Manager and Ship's Calibration Coordinator is required to insure all participants can support the certification date and that all required TMDE is available.

d. Reports. Reports will be per the requirements of reference (v) and submitted by letter to the applicable TYCOM and Commanding Officer (CO).

e. Additional information concerning calibration can be found in Volume VI, Chapter 9 of this manual.

3.3.9 National Policy on the Control of Compromising Emanations Inspection.

a. Reference (x) promulgates the Navy's implementation of the National Policy on the Control of Compromising Emanations (TEMPEST). Reference (y) provides installation criteria for shipboard secure electrical information processing systems.

b. All ships are considered to be operating under an "acceptable risk" category until such time as they have been certified to meet National Policy. Two types of inspections are conducted to certify ships:

(1) Instrumented TEMPEST Survey. The Instrumented TEMPEST Survey is a comprehensive inspection which will only be done on selected ships to certify the ship class.

(2) Visual TEMPEST Inspection (VTI). The VTI is a less comprehensive inspection to certify compliance with class and CNO standards. VTIs can be conducted by Regional Maintenance Centers (RMC), industrial activities and Navy Command, Control, and Ocean Surveillance Center Naval In-service Engineering.

c. A VTI will be accomplished on all new construction ships. This inspection will be scheduled upon the completion of the installation of all Radio Room/secure electrical information processing equipment. In addition, a TEMPEST file needs to be established to include all actions pertaining to installations, modifications or alterations to secure electrical information processing equipment or centers. The specific information to be retained is identified in reference (x).

3.3.10 Diesel Inspection.

a. Purpose. To validate/certify engine alignment, foundation integrity, engine frame integrity, shimming and stressing requirements, hold down bolts, blower operation and engine performance.

b. Conduct. Diesel inspections shall be conducted in accordance with Volume IV, Chapter 4 of this manual.

3.3.11 Habitability Inspection. Navy ships are built to meet habitability standards for berthing areas, messing areas, water closets, laundry and barber facilities as set forth in reference (z). Prior to certifying readiness for In-Service the ISIC will conduct a Habitability Inspection to determine that the ship is materially ready for the crew to move aboard. The results of the Habitability Inspection shall be reported to the TYCOM by message (see Volume I, Chapter 2, Appendix A_4 of this manual for sample message).

a. The Habitability Inspection for submarines is conducted two to four weeks prior to certifying the ship's readiness for In-Service, two to four months prior to this certification for aircraft carriers and just prior to delivery and crew move aboard for all others.

b. Compartment Surveillance Guide. Appendix D of this chapter has been included to serve as a guide when preparing for the Habitability Inspection and In-Service. Appendix E of this chapter is a sample checklist which can be tailored to any platform.

3.3.12 Requirements for In-Service. Assigned Ship's Force constitutes the only group of personnel authorized to operate naval nuclear powered ships during dockside testing and Sea Trials. Because of this requirement, references (c) and (d) specify that nuclear powered ships in construction are assigned an active status of In-Service prior to commencement of the first Sea Trial (two to four weeks for submarines, two to four months for aircraft carriers) and retains that status until delivery of the ship. To support this event the contractor is required to make the ship available to the Navy for a period of two days for a Habitability Inspection two to four weeks prior to In-Service. At In-Service, the responsibility for, and custody of, fissionable materials is transferred from the Supervising Authority to the Officer In Charge (OIC) of the ship. The PCO becomes the OIC of the ship and continues in this capacity until Commissioning at which time the OIC becomes the CO.

a. Responsibilities for Safety of the Ship. Placing the ship In-Service has an impact upon the established responsibilities for safety of the ship.

(1) Prior to In-Service, or Delivery for Surface Ships, the industrial activity's responsibilities for the safety of the ship are all inclusive. The Supervising Authority is responsible for monitoring the industrial activity's safety and fire protection program.

(2) At In-Service the PCO assumes the duties of OIC and the responsibility for the safety of the ship. Reference (aa) states that the OIC of a ship In-Service has the same responsibilities for the safety of the ship as a CO of a commissioned ship.

b. Division of Responsibility. In order to establish clear lines of responsibility at In-Service and to eliminate unnecessary duplication of effort, the following shall apply:

(1) Ship's Force. At In-Service, Ship's Force must have operational control of all ship's systems required to maintain ship safety (i.e., ventilation, firefighting and flood control) in the ship and will stand all shipboard watches, making all security patrols of the ship, the moorings, and the immediate adjacent pier.

(2) Industrial Activity. The industrial activity continues to perform all contract requirements until delivery. The industrial activity will support Ship's Force in the performance of those requirements assumed by Ship's Force as required.

APPENDIX E

SAMPLE PRE-COMMISSIONING HABITABILITY INSPECTION CHECKLIST FOR NEW CONSTRUCTION SHIPS

Ref: (a) OPNAVINST 4700.8 - Trials, Acceptance, Commissioning, Fitting Out, Shakedown and Post Shakedown Availability of U.S. Naval Ships Undergoing Construction or Conversion

1. A pre-commissioning habitability inspection is required for new construction ships by reference (a). The purpose of the inspection is to verify that living and messing spaces are clean, safe and ready to receive the crew. Upon completion of the inspection, the inspection team leader will provide copies of the deficiency list to the Navy Shipbuilding Program Manager's representative, the Supervising Authority, the Commanding Officer of the ship's pre-commissioning unit and the TYCOM.

2. This assessment is not of the magnitude or detail required by the Supervising Authority to ensure shipbuilder compliance with all building specifications in the contract or by the Board of Inspection and Survey during acceptance trials. This assessment is a qualitative judgment of the ability of the crew to live on board safely and comfortably during the fitting out period. This assessment does not fulfill shipboard system certification requirements or other inspection requirements related to food service sanitation, laundry and dry cleaning, potable water and marine sanitation devices.

3. Areas to be inspected include general safety and sanitation, galley, scullery, messing, dry food storage spaces, refrigerated food storage spaces, berthing spaces, washrooms, showers, heads, lounges and potable water. Only spaces designated to support initial crew move aboard will be inspected. For example, if only the aft galley will be used at move aboard, the forward galley will not be inspected.

4. It is understood that not all equipment, spaces and systems aboard the ship will be completed and transferred to Ship's Force at the time of the assessment. If a space/system to be inspected has not been transferred to the crew, the shipbuilder and Supervising Authority will present the space/system to the inspector. If a space/system has been accepted by the crew, the crew will present the space; cognizant shipbuilder and Supervising Authority personnel should be present. As remaining habitability related spaces/systems are completed after crew move aboard, the Supervising Authority and Ship's Force are responsible for inspecting spaces/systems per the turnover procedure specified in the contract.

5. The pre-commissioning habitability inspection team will evaluate the following areas utilizing the enclosed inspection checklists:

A. General
B. Food Service
C. Living Spaces
D. Freshwater
E. Collection, Holding and Transfer (CHT) System (See Note)
F. Laundry and Dry Cleaning (See Note)

Note: Operational laundry facilities and waste removal systems are considered desirable to support crew move aboard. If requested by the Supervising Authority the inspection team will assess the readiness of these areas during the habitability inspection. Other crew support spaces, such as Barber Shops, may also be included in the inspection if requested by the Supervising Authority and agreed upon by the inspection team.

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SAMPLE PRE-COMMISSIONING HABITABILITY
INSPECTION CHECK LIST FOR NEW CONSTRUCTION SHIPS (Cont'd)

Compartment Number: _____ Division:_____

	YES	NO
A. GENERAL		
1. All trash and rubbish removed.		
2. Spaces neat, clean and in a usable condition.		
3. Wireways and other exposed areas that could serve as a path for rats are free of foreign matter.		
4. Electrical wires or plugs are not located so as to be easily tripped over.		
5. Drains open with covers attached.		
6. Ventilation (heating and cooling) and lighting adequate to maintain healthful and comfortable conditions.		
7. Electrical outlets required for habitability are installed and operable.		
8. Spaces are free of major safety discrepancies.		
9. Damage Control equipment installed per ship plan and labeled.		
B. FOOD SERVICE		
1. Facility		
a. Decks sloped properly to allow drainage into deck drains.		
b. Adequate and convenient hand washing facilities with hot and cold running water, dispensed soap and single service disposable towels provided in or adjacent to food service facility (OPNAVINST 5100.19, Section IV CH2, Part D.2).		
c. Drain lines from refrigerators, ventilator hoods and other food service equipment drain through an air gap into a deck drain or funnel with removable grating (NAVSUPINST 4061.11; GEN SPECS sect. 528 (if cited in the contract)).		
d. Signs posted reminding personnel to wash hands and to not smoke (NAVMED P-5010, Article 1-6).		
e. Equipment operating and safety instructions prominently posted on or conspicuously near the equipment to which it relates (OPNAVINST 5100.19, Section V).		
f. Steam and hot water lines properly lagged and sheathed (OPNAVINST 5100.19, Enclosure (1), Section III).		
g. Furniture installed in prescribed arrangement and neat, clean and in usable condition.		

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	YES	NO
h. Racks and bins installed in storerooms.		
2. Equipment		
a. Deck mounted equipment sealed to the deck or elevated on legs that provide at least 8 inches of clearance between the deck and equipment (NAVMED P-5010, Article 1-8).		
b. Decks in food service areas maintained in good repair (NAVMED P-5010, Article 1-15).		
c. All equipment accessible.		
d. Food contact surfaces made of smooth, corrosion resistant, non-toxic (FDA Food, Drug and Cosmetic Act guidelines), stable non-absorbent materials that will not impart odors, color or taste, nor contribute to adulteration of food (NAVMED P-5010, Article 1-8 (3)).		
e. Vegetable peelers, vegetable slicers, can openers, meat slicers, ranges, ovens, grills, deep fat fryers, microwave ovens, toasters, mixing machines, pressure cookers, steam jacketed kettles, steam tables, steam table and salad bar inserts, soft ice cream machines, baking and roasting pans, cooking and serving utensils, food carts, storage racks and shelving properly installed, sanitized and operationally tested (NAVMED P-5010, Article 1-17; NAVSUP P-421, Chapter 2).		
f. On/off toggle switches on food service equipment have toggle switch guards installed to prevent inadvertent operation (OPNAVINST 5100.19, Section V).		
g. Safety interlocks on food preparation equipment maintained in proper operating condition.		
h. Steam Jacketed Kettles.		
(1) Equipped with functional steam safety release valve (GEN SPECS, Section 528, Article C 1905 g(4)) if applicable.		
(2) Chains at least 18 inches long attached to steam safety release valves (GEN SPECS, Section 528, Article C1905 g(4)) if applicable.		
(3) Steam discharge piped down to kettle coamings and directed away from operators feet (GEN SPECS, Section 651 b) if applicable.		
i. Equipment free from salt water connections except NAVMEDCOM approved garbage grinders or refrigeration units (NAVMED P-5010, Article 1-8 (3)).		
j. Food service spaces and equipment free from cross connections with non-potable liquids or submerged freshwater inlets (NAVMED P-5010, Articles 1-47, 1-61 and 1-8 (3)).		

Inspector: _____ Date:_____

	YES	NO
d. Operating instructions posted on, or conspicuously near, the machine (OPNAVINST 5100.19, Section V. 16).		
C. LIVING SPACES		
1. Bunks and lockers neat and in usable condition and bunk curtains installed.		
2. Plumbing fixtures installed in washrooms, showers and water closets, including shower heads and soap dishes and other necessary items.		
3. Prescribed deck covering installed.		
4. Adequate furniture and equipment installed to provide reasonable comfort, relaxation and entertainment in lounge areas.		
5. Berthing spaces are clean, adequately ventilated and well illuminated (OPNAVINST 9640.1 and NAVMED P-5010, Chapter 2).		
6. Drinking fountains are of the jet-angle type with clean bowls, orifices and orifice guards (NAVMED P-5010, Chapter 2).		
7. No Category I flammables, combustibles or aerosol containers stored in berthing spaces (NSTM 670).		
8. Sinks, urinals and commodes are clean, odor free and operable (NAVMED P-5010, Chapter 2).		
9. The temperature of the hot water supplied for personal use of the crew does not exceed 130°F (NSTM 533).		
10. Temperatures in berthing and messing spaces do not exceed 80°F (OPNAVINST 9640.1).		
11. Temperatures in living, sanitary, messing, medical, control spaces, and normal working stations are not lower than 65°F (OPNAVINST 9640.1).		
12. There are separate sleeping quarters for males and females (OPNAVINST 1300.17).		
D. FRESHWATER		
1. Surveillance		
a. Halogen residual present (NAVMED P-5010, Chapter 6, Article 52).		
b. Bacterial analysis obtained from points representative of the entire distribution system (NAVMED P-5010, Chapter 6, Article 53).		

Inspector: _____ Date:_____

	YES	NO
c. Ice machines tested for bacterial contamination (NAVMED P-5010, Chapter 6, Article 53).		
d. Potable water processed or obtained from an approved source (NAVMED P-5010, Chapter 6, Article 54).		
2. Bromination System and Equipment (when applicable)		
a. Brominators are properly installed and functional (NAVMED P-5010, Chapter 6, Article 21).		
b. Warning plate installed next to unit (NSTM Chapter 533, Section 3.1.3.2.3 and Figure 533-5).		
c. Four foot hose with quick opening valve and vacuum breaker installed nearby (NSTM Chapter 533, Section 3.1.3.2.2).		
d. Bromine cartridges stored in dry, clean, well-ventilated storeroom (NSTM Chapter 533, Section 3.1.3.2.1).		
e. Locker or bin has label plate inscribed “Bromine Cartridges” (NSTM Chapter 533, Section 3.1.3.2.1).		
f. Storage locker has warning plate (NSTM Chapter 533, Section 3.1.3.2.1 and Figure 533-6).		
3. Chlorination System and Equipment		
a. HTH stored in a metal box with three 1/4” holes, painted gray and labeled with red letters on white or black background “HAZARDOUS MATERIAL, CALCIUM HYPOCHLORITE” (OPNAVINST 5100.19, Chapter 23).		
b. HTH lockers not installed in machinery space, flammable liquids store room, berthing space or oil and water test lab areas (OPNAVINST 5100.19, Chapter 23).		
4. Sounding Tubes		
a. Equipped with screw caps (NAVMED P-5010, Article 6-8.3).		
b. Screw caps have keeper chains attaching them to sounding tubes (NAVMED P-5010, Article 6-8.3).		
c. Padlocks secure caps (NSTM, Chapter 533, Section 2.3.6).		
d. Label plates present (NAVMED P-5010, Article 19.1).		
e. Caps color coded dark blue (NAVMED P-5010, Article 19.1).		
5. Potable Water Hoses		
a. New hoses disinfected with solution not less than 100 ppm FAC for at least 2 minutes (NSTM, Chapter 533, Section 3.3.3).		
b. Labeled “Potable Water Only” at 10 foot intervals (NAVMED P-5010, Article 6-19 and NSTM Chapter 533, Section 2.1.3).		

Inspector: _____ Date:_____