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SUBSECTION 9-0 OVERVIEW OF SECTION 9

9-0.1 Scope of Section 9

This section of the Fleet Modernization Program (FMP) Management and Operations Manual addresses a variety of special alteration programs. Procedures, policy and guidance is provided for the preparation, submission and approval of Machinery and Ordnance Alterations (MACHALTs and ORDALTs) as well as Combat Systems (CSs) and Electronic Equipment and Systems Field Changes (FCs), Anti-Submarine Warfare (ASW)/Combat Systems (CSs) Engineering Changes (ECs), the Submarine Ship Alteration (SHIPALT) Package Program, the U.S. Coast Guard (USCG) SHIPALT Program, the Military Sealift Command (MSC) Alteration Program, the Marine Gas Turbine (MGT) Technical Directive (TD) Program, and the Space and Naval Warfare Systems Command (SPAWAR) FC Implementation Program (FCIP).

9-0.2 References for Section 9

S9(a) NAVSEAINST 4720.15 (Series), Machinery Alterations (MACHALTs) on HM&E Equipment and Systems

S9(b) MIL-HDBK 61 (Series), Configuration Management Guidance

S9(c) NAVSEA Technical Specification 9090-310 (Series), Alterations to Ships Accomplished by Alteration Installation Teams

S9(d) NAVSEAINST 4130.12 (Series), Configuration Management Policy and Guidance

S9(e) NAVSEA Technical Specification 9090-210, (Series) Justification/Cost Form

S9(f) OPNAVINST 4790.4 (Series), Ship's Maintenance and Material Management (3-M) Manual

S9(g) NAVSEA Technical Specification 9090-700 (Series), Ship Configuration and Logistics Support Information System

S9(h) MIL-STD-1662 (Series), Ordnance Alteration (ORDALT) Instruction, Preparation of

S9(i) NAVSEAINST 8020.6 (Series), Navy Weapon System Safety Program

S9(j) NAVSEA Itr 63E:BAS, Ser 237 of 19 Oct 83; Subj: ASW Engineering Change (EC) Installation Program for Sonar/Acoustic Warfare Equipment

S9(k) ASW/Undersea Warfare Systems Internal Management Directive #5 of 18 Apr 83; Subj: Procedures for the Conduct of Configuration Audits

S9(l) ASW/Undersea Warfare Systems Internal Management Directive #3 of 18 Apr 83; Subj: ASW/Undersea Warfare (ASW) System Configuration Control Boards (CCBs); charter for

S9(m) NAVSEAINST C3501.2 (Series), Navy Warfare Mission Areas and Required Operational capability/Projected Operational Environment (ROC/POE) Statement

S9(n) NAVSEAINST 4160.3 (Series), Technical Manual Management Program (TMMP)

S9(o) T9234-AB-PRO-010/MGTE TD Guide, Marine Gas Turbine Technical Directive Manual

S9(p) NAVSEAINST 5400.57 (Series), Delegation and Technical Responsibility and Authority to Engineering Agents

S9(q) NAVSEAINST 4130.11 (Series), Joint Configuration Management of Marine Gas Turbine Engineering Control System Equipment

S9(r) NAVSEAINST 9234.1 (Series), Procedures for Shipboard Marine Gas Turbine Replacement Authorization

S9(s) NAVSEAINST 4442.1 (Series), Marine Gas Turbine Item Accounting and Inventory Control System

S9(t) NAVSEA Technical Specification 9090-1500 (Series), Provisioning, Allowance and Fitting Out Support (PAFOS) Manual, Chapter 5

S9(u) NAVSEA Technical Specification 9090-500 (Series), Ship Alteration Record

S9(v) NAVSEA Technical Specification 9090-600 (Series), Ship Alteration Drawing Preparation

S9(w) OPNAVINST 4000.79 (Series), Policy for U.S. Navy Support of the U.S. Coast Guard

S9(x) NAVSEA and MSC Memorandum of Understanding dated 25 March 1992

S9(y) SPAWARINST 4130.1 (Series), SPAWAR Configuration Management (CM) Policy and Procedures

S9(z) NAVSEAINST 4720.14 (Series), Temporary Alterations To Active Fleet Submarines

S9(aa) CINCLANTFLT/CINCPACFLTINST 4790.3 (Series), Joint Fleet Maintenance Manual

SUBSECTION 9-1 MACHINERY ALTERATION (MACHALT) PROGRAM

9-1.1 Scope of Subsection 9-1

This subsection and reference S9(a) define policies, procedures, and responsibilities associated with the performance of the MACHALT Program. The MACHALT Program permits changes to Hull, Mechanical and Electrical (HM&E) equipment/systems where the changes are contained within boundaries of the individual equipment/system and have limited system ramifications. The MACHALT Program uses kits to enable HM&E changes to be accomplished in an expeditious manner, eliminating these changes from the formal SHIPALT process. A MACHALT is defined as a planned change, modification, or alteration of any HM&E equipment in service (shipboard or shore activities). This occurs when the Configuration Control Board (CCB) determines that the alteration or modification meets all of the following conditions:

- Can be accomplished without changing a major interface external to the equipment/system.
- Is a modification made within the equipment boundary or is a direct replacement of the original equipment design.
- Can be accomplished without the ship being in an industrial activity.
- Will be accomplished individually and not in conjunction with a SHIPALT or other MACHALT.

9-1.2 General Machinery Alteration Process Overview and Policies

This paragraph describes the MACHALT Program, beginning with identification of proposed improvements and concluding with update of documentation incident to installation.

The first step, the proposal development phase, begins with the identification of an HM&E improvement and includes developing data necessary to prepare a Preliminary Engineering Change Proposal (PECP). The PECP fully describes the improvement, identifies major material requirements, and estimates the number of installations and the cost of each. The PECP must be approved by the MACHALT CCB, Chief of Naval Operations (CNO) N43, and the Fleet before prototype installation engineering is undertaken.

The second step, the proposal prototype phase, is accomplished by the Naval Surface Warfare Center, Carderock Division-Ship Systems Engineering Station (NSWCCD-SSES) MACHALT Program Office (MPO) and results in a formal Engineering Change Proposal (ECP). The formal ECP is prepared based upon the satisfactory completion of a prototype installation on a Fleet unit where production quality hardware and draft procedural documentation and Integrated Logistics Support (ILS) products are used. Fleet evaluation of the prototype installation is a function of the prototype phase. Until approval of the formal ECP by the Technical Directorate (TD) (Naval Sea Systems Command (NAVSEA) 05L) or Life Cycle Manager (LCM) and the MACHALT CCB, the alteration shall not be programmed for accomplishment on any ship or class of ships.

The final step of the MACHALT process, the execution phase, begins after the MACHALT CCB has approved the formal ECP for accomplishment. At that time, the MACHALT Instruction, fully describing the work to be done, is validated by NSWCCD-SSES MPO. NSWCCD-SSES also enters and programs the MACHALT in the Navy Data Environment-Navy Modernization (NDE-NM) Module, formerly the Fleet Modernization Program Management Information System (FMPMIS). Each MACHALT Instruction and all related ILS products are verified

during the proof-in installation (the first production installation) for incorporation into the Technical Information Bulletin (TIB). The TIB is approved by the LCM and MPO for distribution before other installations are performed.

9-1.2.1 MACHALT Proposal Development Phase

9-1.2.1.1 Proposed HM&E Improvement

HM&E deficiencies that can be resolved by installation of a MACHALT are initiated by submittal of a PECP to the NSWCCD-SSES MPO for review and prioritization. The MPO is responsible for presenting the PECP to the MACHALT CCB for approval. The MACHALT CCB uses the PECP, with its accompanying cost benefit analysis, to determine whether to proceed with development of the alteration. Upon approval by the MACHALT CCB, the PECP is submitted to CNO N43 and the Fleet for approval. Upon approval, the TD or the appropriate Ship Program Manager (SPM) budgets for the acquisition of the prototype and production MACHALT kits in the appropriate Other Procurement, Navy (OPN) funding lines.

9-1.2.2 MACHALT Proposal Prototype Phase

9-1.2.2.1 Prototype Engineering and Installation

Upon approval of the PECP by the Fleet, NSWCCD-SSES MPO will solicit funding and task the development of a draft installation and test procedure with material and tool lists for use during the prototype installation. Production quality hardware is purchased and ILS products changes are developed based on the draft installation procedures and material list as well as the ship class selected for the prototype installation. NSWCCD-SSES MPO schedules via the appropriate Type Commander (TYCOM) and directs the prototype installation when all of the above actions are complete. Following initial shipboard testing of the prototype installation by the installation activity, Fleet evaluation of the prototype installation over extended normal equipment operation is arranged. The prototype effort may be waived only by the authority of the MACHALT CCB.

9-1.2.2.2 Formal ECP Development

The formal ECP provides a detailed technical description (including sketches and list of material) of the MACHALT, delineating exactly what additions and deletions are required to accomplish the alteration. The formal ECP also identifies the ships and facilities where the MACHALT applies; identifies MACHALT kit procurement and installation costs; identifies the kit installation agent; identifies all requisite ILS products and costs to introduce and maintain the MACHALT; and provides an installation plan by hull and a lead time required to procure each kit. The formal ECP is prepared by NSWCCD-SSES MPO for approval by the MACHALT CCB. Upon approval of the formal ECP, the MACHALT CCB issues a directive authorizing procurement and installation of the MACHALT kits.

NAVSEA 08 shall concur with PECPs and formal ECPs prior to execution of all MACHALTs on propulsion plant equipment in accordance with NAVSEA 08 and platform memorandum of understanding for each nuclear powered ship.

9-1.2.3 MACHALT Execution Phase

Development of the MACHALT Instruction and ILS products and acquisition of production

MACHALT hardware is not authorized until the formal ECP is approved by the MACHALT CCB for installation on ships and entered in NDE-NM. After the formal ECP is approved, the MACHALT CCB Secretariat will assign a MACHALT name and number. NSWCCD-SSES MPO will update NDE-NM with the kit delivery dates and the installation plan by hull. The MACHALT CCB Secretariat will forward the implementing directive to appropriate SPM and other shore activities.

Upon receipt of the CCB Directive (CCBD), NSWCCD-SSES will develop specifications for procurement of MACHALT kit hardware and develop ILS products required for all applications. NSWCCD-SSES will schedule and accomplish a proof-in installation, as the initial production installation, to verify the adequacy and accuracy of the hardware and ILS products in the MACHALT kit. NSWCCD-SSES will also develop a MACHALT management plan that will schedule and track procurement of material, ILS products, and installation of each production quality MACHALT kit.

9-1.2.3.1 MACHALT Instruction

Upon issuance of the MACHALT CCBD, a MACHALT Instruction is developed. A MACHALT Instruction is the document that contains the detailed installation and checkout procedures and other related information required to perform the modification to an HM&E system or equipment. A MACHALT Instruction will be one element of a MACHALT kit. The MACHALT Instruction shall reference the other elements (ILS products, and other related information) that are contained in the MACHALT kit. The MACHALT Instruction will be written to enable it to be integrated in an Engineered Time Value (ETV) format for use by Intermediate Maintenance Activity (IMA) personnel. NSWCCD-SSES MPO will provide the preliminary MACHALT Instruction and draft ILS products to the LCM for review and approval. Only draft copies of the MACHALT Instruction and the PECP may be submitted to SPMs and shore activities, including Planning Yards (PYs) for applicability review.

9-1.2.3.2 MACHALT Proof-In Installation

The initial production installation of a MACHALT kit is called the proof-in installation. The proof-in is used to verify the accuracy of the hardware and ILS products in the MACHALT kit. NSWCCD-SSES MPO will schedule and direct installation of a MACHALT proof-in kit. This verification effort will ensure accuracy of MACHALT Instruction procedures; form, fit, and function of the kit hardware; completeness of the ILS products; and availability of supporting tools and test equipment as well as Installation and Checkout (I&C) spares. NSWCCD-SSES MPO will certify validation of the MACHALT Instruction through the proof-in installation process.

9-1.2.3.3 MACHALT Installations

Upon completion of the proof-in installation and subsequent approval of the MACHALT Instruction and ILS products, NSWCCD-SSES MPO will accomplish the following:

- Provide final assembly of all MACHALT kits.
- Direct installation of MACHALT kits.
- Interface with each TYCOM to schedule installation of each MACHALT.
- Release the MACHALT kit for installation after ensuring that all ILS products for the new configuration are available.

- Direct shipment of the kit to the hull/activity scheduled for a MACHALT installation.
- Stage MACHALT kit prior to release.
- Maintain an on-line tracking system for applicable installations and kit materials.
- Submit the required configuration updates electronically to the cognizant Configuration Data Manager (CDM) via Configuration Data Managers Database-Open Architecture (CDMD-OA).
- Provide the CDMD-OA Electronic Configuration Change (ECC) Report for each MACHALT installation to cognizant ship's force personnel.
- Notify Original Equipment Manufacturers (OEMs) of changes made to their equipment.
- Notify PYs of the pending changes to Ship Selected Records (SSRs).

9-1.2.3.4 MACHALT Kit

The MACHALT kit is an assemblage of installation and checkout materials and ILS products required to alter an HM&E system or equipment by accomplishment of a MACHALT. A MACHALT kit is made up of the MACHALT Instruction, installation materials, ILS products and other related information required to accomplish and support a MACHALT installation.

9-1.3 Technical, Engineering and Platform Directorate Policies and Responsibilities

The TD will ensure the integrity of MACHALT development by establishing the policy for the development, documentation and execution processes. NAVSEA 05L is designated as the NAVSEA agent for administration of the MACHALT Program.

The LCM for specific HM&E equipment and systems on all ships, modified by the proposed MACHALT will guide and support the development and documentation of all alterations. The LCMs will act as the command advocate for application of advanced technology and design concepts to machinery and systems under their cognizance, and must approve critical technical matters affecting their equipment.

The SPM acts as LCM of all assigned ships. In concert with the equipment LCMs, they act as the command advocate for application of advanced technology and design concepts to ships under their cognizance, and must approve critical technical matters affecting their ships. Accordingly, the SPMs serve as permanent members of the MACHALT CCB, chaired by the TD.

9-1.3.1 Technical Directorate (TD) Responsibilities

The TD is responsible for the following functions in the administration of the MACHALT program:

- Act as prime NAVSEA point of contact in the MACHALT development process.
- Monitor technical and ILS aspects of MACHALTs and review MACHALT development performance.
- Collect data for inclusion in the OPN budget in justification of the following MACHALT phases:
 - Preliminary ECP
 - Formal ECP
 - MACHALT Instruction
 - MACHALT kit procurement

- MACHALT kit installation
- Act as primary point of contact with CNO N43 for emergent requirements, defining execution steps and monitoring system development progress.
- Identify compensation or request re-programming of funds via the OPN Financial Manager or FMP Financial Manager or Fleet Commanders to cover development efforts that exceed established cost estimates and cannot be otherwise funded.
- Budget for MACHALT kit acquisition funds via appropriate hardware lines and advanced acquisition programs.
- Monitor the MACHALT Program to assure quality maintenance and reliability in all SSRs throughout a ship life cycle.
- Approve, as chair of the MACHALT CCB, in conjunction with SPMs, all changes, waivers, and deviations to HM&E systems and equipment to be executed under the MACHALT Program.
- Assess the cumulative impact of MACHALTs on SHIPALT program actions to ensure that contradictory or redundant efforts do not result.
- Approve the MACHALT Instruction for use after completion of proof-in installation.

9-1.3.2 Ship Program Manager (SPM) Responsibilities

The SPMs are responsible for the following functions in support of the MACHALT Program:

- Provide permanent membership on the MACHALT CCB.
- Assign Proposed Technical Improvements (PTIs) nominated for SHIPALT program qualification to the MACHALT Program when the proposed improvement meets MACHALT Program criteria.
- Identify compensation or request reprogramming of funds via the FMP Financial Manager or Fleet Commanders to cover development efforts that exceed established cost estimates and cannot otherwise be funded.
- Budget for MACHALT kit acquisition funds via appropriate hardware lines.

9-1.3.3 FMP Financial Manager Responsibilities

Responsibilities for NAVSEA 013, as the FMP Financial Manager, are described in Section 6 of this manual. Line item manager responsibilities regarding budgeting and financial management are also specified in Section 6 of this manual.

9-1.4 NAVAL SURFACE WARFARE CENTER CARDEROCK DIVISION-SHIP SYSTEMS ENGINEERING STATION (NSWCCD-SSES) MACHALT PROGRAM OFFICE (MPO) Responsibilities

NSWCCD-SSES MPO, the NAVSEA technical and management agent for the MACHALT Program, is responsible for the following functions in the management of the MACHALT Program:

- Act as prime NAVSEA point of contact in the MACHALT development process.
- Develop and maintain Configuration Status Accounting (CSA) for all PECPs and formal ECPs.
- Conduct technical studies in support of development of PECPs and formal ECPs.
- Maintain the technical adequacy and accuracy of MACHALT Program documents.
- Provide permanent membership on the MACHALT CCB as secretariat, and publish and

distribute minutes from each CCB meeting.

- Develop and maintain MACHALT Instructions.
- Develop the required changes to ILS products required to support MACHALT installations. This will include new or revised equipment and system Technical Manuals (TMs), Planned Maintenance System (PMS) products, Allowance Parts Lists (APLs), Allowance Equipage Lists (AELs), Training, etc as described in Section 8 of this manual.
- Procure MACHALT kits.
- Schedule MACHALT installations via the TYCOM scheduling process.
- Provide technical oversight for MACHALT installations.
- Direct prototype installation efforts and certify validation of MACHALT Instructions through the proof-in process.
- Submit the required configuration updates electronically to the CDM via CDMD-OA.
- Provide the CDMD-OA ECC Report for each MACHALT to cognizant ship's force personnel.
- Update NDE-NM for each MACHALT installation with installation planning data and accomplishment data after each MACHALT installation is completed.
- Ensure that all SSR requirements are fulfilled during MACHALT acquisition.
- Notify OEMs of changes made.
- Notify PY of MACHALT installation.

SUBSECTION 9-2 - ORDNANCE ALTERATIONS (ORDALTs)

9-2.1 Scope of Subsection 9-2

This subsection defines the policies, procedures and responsibilities associated with the preparation and installation of ORDALTs in non-expendable ordnance items. It applies only to installations under the cognizance of the FMP (see Section 1 of this manual). ORDALTs to expendable ordnance items are not part of the FMP process. However, the general policy and procedures for non-expendable ordnance items, except for FMP installations, apply to expendable ORDALTs.

9-2.2 Definitions for Subsection 9-2

For purposes of this subsection, the following definitions are provided:

- a. Combat System (CS) - A functional grouping of all shipboard equipment and systems that are designed to detect, track, identify, communicate, process, evaluate and control the engagement of enemy forces, either actively or passively. The CS includes: command and control, missiles, guns, fire control, launchers, torpedoes, rockets, sensors, electronic warfare, communications, navigation, associated computer programs and related off-board assets, for example, Light Airborne Multipurpose System (LAMPS). The CS is the totality of the war-fighting capability of a surface ship or submarine.
- b. Configuration Control Board Directive (CCBD) – A document that authorizes the implementation and the commitment of resources for an approved ECP and associated ORDALT.
- c. Conjunctive SHIPALT – ORDALTs that impose an impact on a ship's system (such as increase in ship's power, increase in cooling requirements, change in weight and moment, and impact on water tight integrity) may, as determined by the CCB, require a conjunctive SHIPALT. The ORDALT will become a part of the SHIPALT's bill of material and will be accomplished concurrently with and be funded by the SHIPALT.
- d. Conjunctive ORDALT – A conjunctive ORDALT is one that must be accomplished before, with or after another ORDALT or other alteration type for the system/equipment to operate as designed.
- e. Embedded Equipment - A configuration item that is resident within or associated with another system or equipment and is therefore identified as an integral component of that host system or equipment. Embedded computer resources, usually comprising an embedded computer and its associated computer programs, typically define embedded equipment.
- f. Latent Defect - A defect that existed at the time of government acceptance of the equipment/system but was not detectable with existing inspection or test procedures.
- g. Ordnance Alteration (ORDALT) - Any modification, other than a SHIPALT, in the configuration of ordnance equipment or systems (including embedded equipment and computer programs) after establishment of the product baseline. An ORDALT involves a change in design, material, quantity, installed location, ILS, supportability, or the relationship of the component parts of an assembly within the ship or shore installation. ORDALTs include the addition, deletion, rework or replacement of parts, assemblies or equipment; or changes in assembly procedures. Alterations to associated computer programs include the incorporation of different computer program versions, and approved modification or corrections to both operational test and maintenance programs. ORDALTs are initiated by approved Class I ECPs, in accordance with reference S9(b) and apply equally to changes installed in delivered systems

and equipment, and changes installed in systems and equipment in production to identify differences from an established product baseline. ORDALTs may be initiated to correct a design defect, to change equipment operational capability, to eliminate safety hazards, to update obsolete components, or for any combination of these reasons.

h. ORDALT Instruction - ORDALT Instructions are technical documents that provide directions, drawings, test procedures and list of parts and material supplied or required to accomplish an alteration and the procedures for reporting the change as being installed at a specific site.

(1). ORDALT Instruction Change - A correction, addition or deletion to the text to improve clarity, for changes in applicability, to correct latent defects or for other simple corrections such as typographical errors. A change does not affect the entire ORDALT Instruction but rather affects existing pages or may add pages to the instruction.

Changes are identified numerically, for example, ORDALT 12345 Change 1.

(2). ORDALT Instruction Revision - A complete rewrite of an existing ORDALT Instruction retaining the same ORDALT Instruction number together with a revision letter, for example, ORDALT 12345 Revision A. A revision is employed when a major correction, rewrite or revision to the technical data is required, or to correct latent defects discovered after government acceptance of the basic ORDALT. Revisions shall not be used when form, fit or function is affected.

(3). New (Superseding) ORDALT Instruction - An instruction issued instead of a revision whenever: (a) the material to be supplied with the new ORDALT is not completely interchangeable with the content of the original ORDALT kit and (b) the changes are such as to require the submission of a new completion report even though the original ORDALT has been completed. New ORDALT Instruction numbers are assigned to superseding ORDALTs.

i. ORDALT Kit - An assemblage of the ORDALT Instructions, publications, ILS package (TM changes, revised PMS documentation, and updated APLs, On Board Repair Parts (OBRPs), I&C spares, Maintenance Assistance Modules (MAMs), special tools, special test equipment), the required hardware to accomplish the alteration, revised computer programs/software, alteration identification plates. The kit may contain Interim Supply Support (ISS) material to support the alteration until the Material Support Date (MSD) has been achieved.

j. Performing Activity - An activity performing any of the requirements of a contract or any instrument implementing an agreement between a tasking activity and a performing activity. A performing activity can be either a commercial or government activity.

k. Product Baseline - For in-service equipment/systems, the product baseline is the currently approved product baseline plus government approved changes thereto for deployment, operation and reprourement. For new equipment and systems in production, the product baseline is considered established when Functional and Physical Configuration Audits (FCAs and PCAs) have been successfully completed, the procurement documents defined in reference S9(c) are in place and the baseline APL has been created and entered into Level C of the Weapon Systems File (WSF).

l. Tasking activity - An activity imposing the requirements of a contract on a performing activity, for example, a government contracting activity awarding a contract, a government program management office tasking a performing activity; or a contractor tasking a sub-activity.

m. Technical Documentation - Documents that transmit the technical data, instructions and safety procedures related to the operation, installation, maintenance and modification of the

system/equipment being altered. These documents include new and revised TMs, PMS documentation (including Maintenance Index Pages (MIPs) and Maintenance Requirement Cards (MRCs)), test procedures, revised APL/AEL and other documentation required to maintain and support the equipment being altered.

9-2.3 Organizational Responsibilities

Roles and responsibilities required for the approval, development, installation, and support of ORDALTs are described below.

9-2.3.1 Equipment Life Cycle Manager (LCM)

The LCMs (sometimes referred to as Participating Manager (PARM)) for ORDALTs have technical and ILS responsibility for assigned equipment. Specific responsibilities of the LCM include:

- Process Class I ECPs to effect the transition of an approved Class I ECP into an ORDALT.
- Prepare and process a Justification/Cost Form (JCF) if a conjunctive SHIPALT requirement is indicated.
- Issue the CCBD initiating each alteration.
- Recommend priority levels for FMP ORDALT accomplishment.
- Plan, program and budget for ORDALT procurement and ILS.
- Provide procurement budget detail as well as estimated cost and schedule for ORDALT installation to NAVSEA 04M313.
- Provide accurate and timely ORDALT planning and installation information and input this data into the NDE-NM.
- Plan and monitor the development and implementation of ILS products as detailed in Section 8 of this manual.
- Maintain configuration control and CSA information for cognizant equipment and systems.
- Direct evaluation or proof-in of ORDALT, including computer programs and other documentation changes.
- Approve the ORDALT Instruction, changes and revisions.
- Direct ORDALT kit assembly, shipment, storage, inventory, maintenance, and kit issue to the installing activity.
- Direct cannibalization and disposal of material removed by ORDALT Instructions and obsolete kits still in inventory.
- Interface with the SPM and ORDALT Program Manager (PM) regarding required escrow changes in FMP funding.

9-2.3.2 Combat Systems Engineer (CSE)

- Conduct cognizant Ship Class Combat System Engineering reviews of all ECPs for CS interface impact if required under subsection 9-2.5.2.
- Review and provide technical approval for JCFs for conjunctive SHIPALTs.
- Review alteration installation waiver requests and provide concurrence as appropriate.

9-2.3.3 FMP ORDALT Line Item Manager (NAVSEA 04M313)

- Establish ORDALT program policies and procedures.
- Define ORDALT program requirements and establish tasking and planning estimates for the accomplishment of ORDALTs by installing activities.

- Formulate ORDALT installation budget requirements for inclusion in the FMP budget prepared for the FMP Financial Manager (NAVSEA 013) and act as NAVSEA's execution agent for ORDALTs installed under the FMP. Line item manager responsibilities regarding budgeting and financial management are also specified in Section 6 of this manual.
- Forward signed funding requests to the FMP Financial Manager (NAVSEA 013) for installation funding as detailed in Section 6 of this manual.
- Prepare the ORDALT portion of the SHIPALT Authorization Letter.
- Obtain SPM's and FMP Financial Manager's (NAVSEA 013) concurrence prior to releasing any correspondence that changes the scope of ORDALT work to be accomplished by shipyards or contractors under the cognizance of the Naval Supervising Activity (NSA).
- Manage and maintain the NDE-NM and associated functions including alteration installation scheduling activities and conference, ILS certification and ORDALT release information, alteration installation waivers, data input and validation and verification of system data.
- Prepare, support and defend ORDALT installation funding requirements.
- Interface with the LCM and the SPM regarding required escrow changes in FMP funding.

9-2.3.4 FMP Financial Manager (NAVSEA 013)

The roles and responsibilities of the FMP Financial Manager are detailed in Section 6 of this manual.

9-2.3.5 Ship Program Manager (SPM)

- Approve equipment ECPs that impact SPM funding, ship design interface (i.e., conjunctive SHIPALTs) or schedule.
- Include approved ORDALTs in the authorization letter for ORDALTs that will be installed during an industrial availability.
- Provide tasking and funding to SHIPALT Alteration Installation Team (AIT) activities as requested by the LCM.
- Interface with the SPM and ORDALT Program Manager regarding required escrow changes in FMP funding.

9-2.3.6 Field Activities Designated to Execute ORDALTs

The designated activity will act as the technical direction and management agent for the program relating to the ORDALT. Specific functions include:

- Provide alteration index data as defined herein, for all alterations under its cognizance.
- Review preliminary ORDALT Instructions and documentation changes for technical adequacy and accuracy.
- As directed by the PM, incorporate revisions to the ORDALT Instruction based on feedback (problem reports) from installing activities, technical review of data from Naval Inventory Control Point-Mechanicsburg (NAVICP-M), and revisions to the CCBD.
- Prepare and maintain ORDALT Instructions.
- Authenticate ORDALT Instructions, when directed by the cognizant PM.
- Direct the inspection and quality monitoring of the ORDALT kit.
- Authorize shipment of each ORDALT kit from the stocking and issuing activity.
- Maintain liaison with ORDALT OBRP staging facilities, when required.
- Initiate the cannibalization or disposition of ORDALT kits in Not-Ready-For-Issue, inactive or unaccomplished status, when directed by the cognizant PM.

- Develop and recommend to the PM solutions to ORDALT installation problems.
- Update or ensure update of local CSA records, the NDE-NM, Configuration Overhaul Planning Data, and the CDMD-OA record for each CS Configuration Item (CI).
- Store Foreign Military Sales (FMS) alteration kits and issue, as directed by the SPM, to the foreign countries.

9-2.3.7 Naval Inventory Control Point-Mechanicsburg (NAVICP-M)

- Provide information for revision of APLs/AELs lists.
- Identify the MSDs for the OBRPs required by the ORDALT.
- Budget for, procure and provide OBRPs and Operating Space Items (OSIs) as required to support ORDALTs after MSD is achieved.

9-2.3.8 Fleet Technical Support Centers

- Provide scheduling and coordination for non-industrial availability alterations.
- Host the Alteration Scheduling Conferences.
- Supervise and augment, as necessary, non-industrial availability AITs.
- Provide technical and logistics Quality Assurance (QA) checks for equipment alterations as directed.

9-2.3.9 Installing Activity

- Check in with the local Regional Maintenance and Modernization Coordination Office (RMMCO) with the proper documentation prior to going onboard the ship for ORDALT accomplishment.
- Validate alteration completion data prior to submission to the CDM.
- Technically accurate alteration installations.
- Pre-installation and Post-installation testing.
- Completion of the AIT ILS Verification Statement Checklist, as described in reference S9(c).

When an AIT accomplishes the ORDALT installation, both the installation and ILS certifications remain the responsibility of the government representative designated by the PM.

9-2.3.10 Embedded Equipment Activities

Embedded equipment has an “owner” and various “users”. The owner is the PM for the embedded equipment, and the users are the PMs for the equipment or systems in which the equipment is embedded.

a. Owner PM

- Develop and provide ORDALT Instructions to all users of embedded equipment.
- Procure embedded equipment and ILS products for user PM accepting the ORDALT.

b. User PM

- Provide change requirements to owner PM for embedded equipment used in their systems.
- Determine applicability of ORDALTs to their systems.
- Plan, budget and fund for procurement and installation of applicable ORDALTs.
- Update CSA records for all ORDALTs installed, and provide as necessary to the owner PM.

9-2.4 Embedded Equipment

A Memorandum Of Agreement (MOA) shall be developed between the embedded equipment PM and user PMs for change control. The MOA will designate responsibility for development of the ORDALT Instruction, procurement of the kit, and installation of the ORDALT.

The owner PM is responsible for overall life-cycle management, technical direction of engineering, Configuration Management (CM) and ILS of the embedded equipment.

Owner originated changes to embedded equipment, i.e., Equipment Alterations, shall be offered by the embedded equipment owner PM to all users of the item. Users of the item have the option of accepting or rejecting Equipment Alterations. If a user PM determines a change is required, the requirement will be executed in accordance with the MOA.

9-2.5 ORDALT Process

9-2.5.1 Overview

All ORDALTs are generated from approved Class I ECPs prepared in accordance with reference S9(d). ECP DD Forms 1692 and 1693 are available electronically in the NAVSEA local network Form Flow directory or on line at <http://www.dior.whs.mil/forms/dd1692>. Other activities may obtain this form through normal supply channels per Naval Supply Systems Command (NAVSUP) Publication 2002, through their local networks or on line at <http://www.dior.whs.mil/forms/dd1692>. Weapons and CS equipment/system LCMs and SPMs are responsible for review and approval or disapproval of these ECPs.

9-2.5.2 ORDALT Engineering Change Proposal (ECP) Evaluation Phase

Each system/equipment manager will establish a CCB for CIs under their cognizance and delegate approval authority to the CCB Chairpersons appointed within each organization. An ECP for an alteration to in-service-use equipment, when approved by the CCB Chairperson, will be implemented under the FMP only after it has been assigned an ORDALT number in accordance with Subsection 9-2.5.12. If the proposed improvement is required to support (or is designated) a Proposed Military Improvement (PMI), it will be processed in accordance with Section 4 of this manual.

All ECPs will be evaluated for interface impact. If there is an interface impact within or between system/equipment organizations, the interfacing system/equipment technical manager affected and the CSE will be a member of the CCB. ECPs that impose an impact on ship's systems (such as an increase in ship's power or cooling requirements) shall be submitted as PTIs to the SPM for approval and determination of a requirement for a conjunctive SHIPALT. The LCM having the greatest responsibility or impact will be designated the lead for development of the JCF in accordance with reference S9(e). The resulting ORDALT will become a part of the SHIPALT and its installation will be funded by the SHIPALT. Final approval and issuance of the SHIPALT is the responsibility of the SPM. Minor shipboard work associated with an ORDALT installation, that meets the criteria for incorporation into the ORDALT Instruction, will be included in the ECP for review and evaluation by the cognizant CCB and the appropriate SPMs. The criteria for minor shipboard work are as follows:

- The work consists of picking up spare wires existing in cables or installing cables between

- two ordnance equipment cabinets or associated junction boxes in the same space.
- The work has no effect or only negligible effect on weight and moment (less than 50 pounds).
 - The work shall not exceed existing electrical power, coolant or air conditioning levels available in the work compartments affected.
 - The work area is accessible without creating special access.
 - The work is in the accomplishment level of an IMA and can be accomplished within a reasonable time (i.e., 20% of total hours on the job).
 - The work requires a minimum of additional work centers (welding, fabrication or painting) support.

Completion data such as marked-up drawings, modified wiring diagrams, or other data for update of the SSRs shall be forwarded to the SPM. The SPM will be responsible for forwarding the completion data to the appropriate PY.

9-2.5.3 Configuration Control Board Directive (CCBD)

Delegation of functions to designated performing field activities, such as ORDALT development and evaluation or proof-in functions, shall be documented in each CCBD, as required by reference S9(d). Any additional delegation of functions or termination of delegated functions for specific alterations shall be fully documented and recorded in the CCBD by the appropriate CCB Secretariat.

9-2.5.4 ORDALT Planning Phase

Procurement and installation funding guidelines for alterations are provided as follows:

- a. OPN and Weapons Procurement, Navy (WPN) funds will be used to procure and install alterations for FMP installations, and non-FMP installations at shore sites and training activities.
- b. Alterations to be installed in new construction ships that are within the Shipbuilding and Conversion, Navy (SCN) obligation work limiting date will be procured and installed using SCN funds. FMP funds may be used during Post Shakedown Availabilities (PSAs) to install alterations procured under OPN or WPN appropriations.
- c. Research and Development (R&D) funds are appropriately used to fund Engineering and Manufacturing Development (EMD) prototypes and test and evaluation of some types of alterations prior to the installation of the production alteration kit.
- d. Separately planned and budgeted Operation and Maintenance, Navy (O&MN) funds are used to support the NDE-NM database, as described in Section 6 of this manual.

Once an ORDALT number has been assigned to an approved ECP, ORDALT information (number, description, key point check and applicability) is entered into the NDE-NM by the system/equipment LCM or a designated In-Service Engineering Agent (ISEA). The LCM validates the NDE-NM ORDALT data and recommends installation priorities.

The ORDALT number, a brief description of the alteration and key point check data, identifying physical and functional features of the equipment in sufficient detail to enable determination with certainty the accomplishment status of the alteration, will be provided by the designated field activity (i.e., ISEA, Technical Support Activity (TSA)) or other performing activity, to the NDE-NM for incorporation into the index of all alterations. This is in addition to information,

including the loading of total applicability, already provided to the NDE-NM.

9-2.5.5 ORDALT Preparation Phase

a. Upon receipt of the CCBD, associated ECP procurement package, required funding, and first production article hardware/computer program package changes, the performing activity(s) designated by the CCBD shall initiate the preparation of the ORDALT Instruction and kit. Unless otherwise directed by the cognizant PM, initial preparation shall be as a preliminary alteration instruction and evaluation change kit.

b. Concurrent with the preparation of the ORDALT Instruction, the cognizant PM shall ensure that the designated performing activities provide the following data:

- (1) Revisions to TMs.
- (2) Revisions to Technical Data Packages (TDPs), including drawings, Military Specifications, Weapons Specifications (WSs), Ordnance Specifications (OSs), Critical Item Fabrication Specification.
- (3) New required documentation (TDPs, specifications or publications).
- (4) Justification for use of proprietary items/data.
- (5) Preliminary Provisioning Technical Documentation (PTD).
- (6) Test and evaluation data supporting complete design evaluation of the alteration.
- (7) Requirements for general or special purpose test equipment additions or deletions.
- (8) Requirement for special tools.
- (9) Change to training documentation or requirements.
- (10) Recommended changes to tactical publications.
- (11) Changes to PMS Documentation.
- (12) Changes to equipment documentation/tests.
- (13) Computer program revisions.

c. Unless otherwise directed by the cognizant PM, the preliminary ORDALT Instruction and supporting information developed by the procurement activity, contractor, or field activity shall be submitted to the designated control activity for review. A copy of the preliminary ORDALT Instruction, along with Program Support Data (PSD) sheets, and the PTD shall be submitted to NAVICP-M for processing allowance list changes, and final disposition of replaced material and material recommended by the PM to be returned to the supply system. NAVICP-M will also verify previously provided supply data during this review.

d. The designated control activities will review the preliminary ORDALT Instruction and documentation changes for technical adequacy and accuracy and for compatibility with the CCBD and ECP procurement package. The designated control activities will accomplish the following:

- (1) Verify ships, stations, and equipment applicability in light of those stipulated by the CCBD.
- (2) Develop a distribution list and initiate the distribution process.
- (3) Revise applicable documentation, as necessary.
- (4) Advise NAVICP-M, PM, and SHIPALT preparing activities and others of any changes to the preliminary ORDALT Instruction and propose appropriate amendments to the CCBD, if any.
- (5) Incorporate supply data furnished by NAVICP-M.
- (6) Prepare or verify final ORDALT Instructions for authentication. Authentication must be by signature of a SPM official and will constitute approval of the ORDALT

Instruction. Signature authority may be delegated to an official of the designated control activity.

Alterations may be blocked (e.g., CIWS Block 12 may consist of ORDALTs 18001, 18002 and 18003) for the convenience of installation.

9-2.5.6 ORDALT Proof-in Phase

The proof-in is part of the ORDALT preparation and is the responsibility of the LCM or the designated ISEA. A proof-in should demonstrate that the ORDALT would achieve the change approved by the CCB. The activity responsible for the proof-in of the ORDALT is identified in the CCBD. Proof-ins are preferably accomplished in a shipboard environment by technicians having the same skill level as those who will generally be installing the alteration. The functions of the proof-in are to ensure:

- The accuracy of the ORDALT Instruction procedures.
- The form, fit and function of kit material.
- The accuracy and completeness of all ILS products.

The activity performing the proof-in is responsible for providing all required ILS products, including sufficient OBRPs for any proof-in that remains as a permanent installation until MSD is achieved.

Proof-in and evaluation determine whether immediate action must be initiated to correct discrepancies in the initial alteration design package (hardware or computer program packages) and/or related documentation prior to authorizing subsequent installations or additional procurement. Proof-in and evaluation, including validation and verification of the alteration instruction, alteration kit and ILS products shall be certified by the performing activity as directed by the PM.

9-2.5.7 ORDALT Implementation Phase

ORDALT kits shall be released for installation by the PM or designated control activity after ensuring that all ILS products for the new configuration, or an approved waiver is in place and a successful proof-in has been accomplished. ILS data shall be entered in NDE-NM. Unless otherwise directed by the cognizant PM, alteration kits shall be delivered to designated control activities. As directed by the PM, stocking and issuing activities for kits shall receive and store kits delivered from the manufacturer. They shall also inspect, perform quality monitoring, cannibalize and dispose of kits.

When individual kit issue control functions have been delegated to the designated control activity for a specific system/equipment, requisitions for ORDALT kits shall be forwarded to the designated control activity by the performing activity responsible for the installation of the ORDALT. If the request is in accordance with the PM's planned implementation schedule or FMP priority, the designated control activities will direct shipment from the stocking and issuing activity. When a request is not in accordance with the implementation plan, the designated control activity shall obtain concurrence from the cognizant PM. A designated control activity shall not release for shipment any ORDALT kit that is not fully logistically supported unless a waiver has first been obtained in accordance with Section 8 of this manual. The designated

control activity also will not release for shipment any ORDALT kit subject to the FMP process that is not appropriately scheduled for installation under that process.

The designated control activity will maintain ORDALT Instructions by the preparation and issuance of revisions and changes, as directed by amendment to the CCBD. In response to feedback (problem reports) from installing activities, the designated control activity will notify the PM, and initiate corrective action within three working days.

The designated control activities will review ORDALT accomplishment reports and update, or ensure update of, the CSA record for each ORDALT in accordance with references S9(f) and S9(g).

9-2.5.8 ORDALT Installation Phase

ORDALTs are installed in accordance with the policies and guidance contained in this manual. Prior to the installation of an ORDALT, the equipment is pre-tested to ensure that it is operating within the prescribed parameters.

After installation of the ORDALT, the equipment is again tested to ensure that the equipment remains operational and that the change has been correctly installed. These tests are prescribed to minimize equipment failures.

Most ORDALTs can be accomplished by IMAs or by AITs in accordance reference S9(c). For ORDALTs installed outside a depot level availability, the NSA will verify the completeness and adequacy of an installation and the support provided in accordance with this manual. These ORDALT installations will be scheduled by inputting the scheduling data into NDE-NM and working through the TYCOM's Alteration Installation Scheduling Conference process.

9-2.5.9 Integrated Logistic Support (ILS)

The impacts of an alteration on ILS products shall be identified in the ECP. The LCM for an ordnance item is responsible for procuring or initiating the development of all ILS products for ORDALTs. All required ILS products shall be available in final form at the time the ORDALT is installed as indicated on the approved ILS Certification Form. For further details on ILS requirements and certification refer to Section 8 of this manual.

9-2.5.10 ORDALT Installation Reporting

ORDALT installation completions shall be reported by the installing activity to the appropriate ISEA and to the assigned CDM in accordance with reference S9(g) for entry into CDMD-OA. For those activities using a Shipboard Non-Tactical ADP Program (SNAP) computer, ORDALT completions shall be reported by entry into the configuration change screen display using one of the following methods:

- Keyboard entry into the SNAP computer.
- Unsequenced Automated Shore Interface (ASI) tape entry into the SNAP Computer.

The ISEAs shall also report ORDALT installation completions by updating the NDE-NM.

9-2.5.11 ORDALT Information Management

The LCM, or the designated ISEA is responsible for CSA for equipment under their cognizance and for accurate and timely reporting of ORDALT planning information. The purpose of this information is to facilitate the procurement, scheduling and reporting of ORDALT installations. The LCM or designated ISEA reports the ORDALT planning information to the NDE-NM and to the appropriate CDM for entry into CDMD-OA. The following is a brief description of each system.

9-2.5.11.1 Navy Data Environment-Navy Modernization (NDE-NM) Information Reporting

NDE-NM is the system that supports the planning and information reporting objectives for ORDALTs installed under the FMP. This system contains the ORDALT planning details, such as, applicability, scheduling and installation information. The LCMs or ISEAs are responsible for timely submission of status and planning information to NDE-NM. Refer to Section 11 of this manual for detailed description of NDE-NM.

9-2.5.11.2 Configuration Data Managers Database-Open Architecture (CDMD-OA) Information Reporting

CDMD-OA is the Navy's designated system for management and control of ship configuration and logistics per reference S9(g). The types of ORDALT information reported to CDMD-OA include scheduling information, planned equipment installations or removals, planned alteration installations and installation status reports. Action steps and milestones for CM are contained in Section 8 of this manual.

9-2.5.12 ORDALT Instruction Numbers

Instructions for the alteration or modification of ordnance equipment in-service (shipboard or shore activities), in store or awaiting installation shall be issued as ORDALT Instructions and prepared in accordance with reference S9(h). ORDALTs also apply to changes installed in systems/equipment in production to identify differences from an established baseline. Policy and procedural guidance for ORDALT Instruction preparation, acquisition and ORDALT installation are contained in references S9(d) and S9(h). ORDALT Instructions direct (or describe) configuration changes to ordnance equipment/systems after delivery from production, or during production after establishment of the product baseline.

The following general rules apply to the assignment of a single ORDALT number to multiple ECPs and multiple ORDALT numbers assigned to a single ECP.

a. Multiple ECPs that are technically and logistically related may be combined into a single ORDALT number. For example, one ECP for a change to a CS Fire Control Switchboard and a second ECP for the Switching Control Panel for that switchboard may be assigned the same ORDALT Instruction number.

b. A single ECP for the same change or for related changes that are to be installed in systems/equipment having different nomenclature may be assigned more than one ORDALT Instruction number. For example, a single ECP may contain changes for a hardware item and changes for a related computer program. That ECP will have two ORDALT numbers (a hardware number and associated computer program number) assigned to it.

c. Changes which are to be installed in different configurations of equipment that require unique parts or installation instructions to accomplish a specified purpose will be treated as

separate changes and will be assigned separate ORDALT numbers.

As a prerequisite for obtaining ORDALT Instruction numbers, Class I ECPs that apply to any Combat Weapons System equipment/system that are to be installed as ORDALTs must have been reviewed by the cognizant CSE.

For specified Gun Weapon Systems, a completed and signed concurrence form from the Weapons System Explosives Safety Review Board (WSESRB) must also accompany the request for assignment of an ORDALT Instruction number in accordance with reference S9(i).

When the proposed change imposes an impact (is conjunctive to or with a SHIPALT) on a ship's system or any external interface with a ship's system, a JCF shall be prepared in accordance with reference S9(e) and submitted to the SPM for approval. When the impact imposed by the change affects a new construction ship, an ECP shall be prepared in accordance with reference S9(d) and submitted to the SPM for approval. A copy of the approved JCF or ECP shall be part of the ORDALT number assignment request (Figure S9-1).

The assignment and control of ORDALT Instruction numbers, instruction change numbers, and revision letters are the responsibility of NAVSEA 04M313.

Prior to being signed, issued or certified for installation, ORDALT Instructions will be reviewed and evaluated per reference S9(h). The equipment PM will be responsible for obtaining approval for release of ORDALTs, with intended applicability to foreign ships, to a foreign government.

Stocking and distribution of ORDALT Instructions will be as directed by the ORDALT Instruction and usually kept at the ISEA's facility. There is no central repository for instructions. Revisions and changes to ORDALT Instructions will have the same distribution as the basic ORDALT Instruction.

ORDALT Instructions will be issued as technical documentation. Accordingly, the title page of these instructions will carry a distribution statement. Revisions and changes to ORDALT Instructions will, in most cases, carry the same distribution statement as the basic ORDALT Instruction.

ORDALT numbers will be assigned according to the following convention: 10,000 series for expendable ordnance items, 16,000 series for generic non-expendable hardware ordnance systems/equipment, 20,000 series for AEGIS Weapon System, 23,000 series for Tomahawk weapon system, 30,000 series for computer program, and 45,000 series for submarine Combat Control System (CCS) changes.

The central database for all ORDALT numbers is NDE-NM. As such, NDE-NM shall be populated with pertinent information as soon as practicable after ORDALT number assignment. NDE-NM shall be loaded with ORDALT description, total applicability, key point check, system program, point of contact, installation support requirements, and ILS information. This information will be easily retrievable from NDE-NM using a view account.

9-2.5.12.1 Assignment of ORDALT Instruction Numbers

After approval of a Class I ECP the cognizant equipment PM will prepare and forward a memorandum requesting assignment of the ORDALT Instruction number in the format of Figure S9-1. A copy of the approved ECP, ECP control sheet, an ECP implementation plan (shown in Figure S9-2), and approved JCF, ship ECP or WSESRB endorsement, if applicable, will be attached to the memorandum. After assignment of the instruction number, NAVSEA 04M313 will prepare an endorsement to the memorandum and return it to the cognizant CCB Secretariat for implementation. The ORDALT Instruction number will be identified in the CCBD.

Emergency or advance assignment of ORDALT Instruction numbers will be requested by a memorandum in the format of Figure S9-3 as specified in reference S9(d). This memorandum shall contain, as a minimum, the ORDALT applicability, estimated work-hours for installation and checkout, level of accomplishment and a justification for the emergency assignment. The request must also attest to the availability of all required ILS products. NAVSEA 04M313 will assign the ORDALT Instruction number by endorsement of the memorandum. The endorsed memorandum will be returned to the requesting authority for appropriate action. An ORDALT Instruction number assigned on an emergency basis must be substantiated by a formal Class I ECP and CCB action within 60 days of the assignment and formal CCB approval within 90 days in accordance with reference S9(b).

9-2.5.12.2 Corrections to Issued ORDALT Instructions

After issuance, ORDALT Instructions remain subject to formal change control procedures in accordance with reference S9(d) but may be revised or changed. Under no circumstances will an ORDALT Instruction be revised without appropriate CCB authority. The use of kit numbers or other designators as ORDALT suffixes is specifically prohibited. Such use indicates a need for either a separate ORDALT Instruction or a revision to an existing ORDALT Instruction. Revisions and changes, or new superseding ORDALT Instructions, are used to correct latent defects discovered after government acceptance of the basic ORDALT. Changes are numbered consecutively and the next letter of the alphabet indicates revisions.

Proposals for revisions to ORDALT Instructions, or a new ORDALT Instruction superseding an existing ORDALT Instruction, will be prepared and submitted as Class I ECPs to the appropriate CCB on ECP DD Form 1692. Upon CCB approval, the cognizant equipment PM will submit a memorandum in the format of Figure S9-1 to NAVSEA 04M313 requesting assignment of an ORDALT Instruction revision letter or a new ORDALT Instruction number as determined by the CCB review. After NAVSEA 04M313 has assigned the revision letter or new instruction number, the CCB Secretariat will issue a CCBD implementing the action.

Changes to ORDALT Instructions will be prepared in complete narrative text in accordance with procedures contained in reference S9(h). The complete change will be attached to an approval and cover sheet prepared in the format of Figure S9-4 and submitted to the PM for approval. Approval will be signified by the PM's signature on the Approval and Cover Sheet. Signature authority for approval of changes may be delegated by the PM to a TSA or ISEA. NAVSEA 04M313 will be notified in writing of such delegation. A memorandum in the format of Figure S9-1 will be submitted to NAVSEA 04M313 identifying the proposed change number and requesting the assignment of that number. After the ORDALT Instruction change number has

been approved and endorsed by NAVSEA 04M313, the CCB Secretariat will issue an amended CCBD to implement the change.

9-2.5.12.3 Cancellation of ORDALT Instruction Numbers

ORDALT Instruction numbers can only be cancelled by documented action from the cognizant PM or the cognizant ISEA via the CCB, with a copy of the action to NAVSEA 04M313. Letter, memorandum or a superseding Class I ECP, if applicable, may make the cancellation.

Cancellations will become effective upon issuance of an amended CCBD. ORDALTs that have already been installed in at least one ship or system technically cannot be cancelled. Therefore, all letters and all CCBDs initiating or effecting cancellation will contain one of the following statements as applicable:

"There have been no installations of ORDALT (xxxxx) and none are planned." or

"ORDALT (yyyyy) has been installed in (XX) ships. No further installations are planned to be accomplished. For all intent and purposes, ORDALT (yyyyy) is considered 100 percent complete."

ORDALT number changes and revisions, cancellations and completions will be loaded in NDE-NM either on line or by file submission.

FIGURE S9-1**SAMPLE ORDALT Instruction Number (Change or Revision)
Request Memorandum**

4130
Ser
(Date)

MEMORANDUM

From: (Requesting Code)
To: NAVSEA 04M313

Subj: REQUEST FOR ORDNANCE ALTERATION (ORDALT) INSTRUCTION
NUMBER (CHANGE OR REVISION) ASSIGNMENT

Ref: (a) NAVSEA SL720-AA-MAN-010 (Section 9)

Encl: (1) ECP (with process control sheet)_____ (for original or revision), or (1) Change
_____ to ORDALT _____ (with Approval and Cover Sheet), or (1) Revision
_____ to ORDALT _____ (with Approval and Cover Sheet),
(2) Approved Justification/Cost Form (if applicable)
(3) Approved Ship ECP
(4) Approved WSESRB Process Control Form (if applicable)

1. In accordance with reference (a), request ORDALT number, ORDALT Change number or
ORDALT Revision letter be assigned to enclosure (1).

2. (Use as many paragraphs as required to provide justification or explanatory data as
necessary).

3. The point of contact regarding this request is _____, Code _____, phone
_____.

(Requesting Official)

FIGURE S9-2

Sample ECP Implementation Plan

ECP ORIGINATOR _____

ECP NUMBER _____

CHANGE DESCRIPTION _____

SYSTEM/EQUIPMENT AFFECTED _____

SHIP AND SHORE SITE APPLICABILITY _____

RECOMMENDATION FOR APPROVAL/
DISAPPROVAL REVIEW ACTION _____

EMERGENCY ACTION _____

CCB SECRETARIAT ACTION _____

CCB ACTION _____

SUPPORTING DOCUMENTATION
JCF _____
SHIP ECP _____
WSESRB _____

SUPPORTING INFORMATION
INTERFACE IMPACT _____
EMBEDDED EQUIPMENT _____
COMPUTER PROGRAM _____
PROOF IN DATA _____
PROCUREMENT FUNDING _____
ILS _____

FMP CHECK SHEET
\$ VALUE OF FMP REQUIRED FUNDS _____
CHANGE PROGRAMMED IN FMP AND
LOADED IN NDE-NM _____
CONJUNCTIVE ALTERATIONS
PROGRAMMED AND LOADED _____
SAFETY _____

SCN CHECK SHEET _____

FIGURE S9-3**SAMPLE Emergency or Advance ORDALT Instruction
Number Request Memorandum**

4130
Ser:
(Date)

MEMORANDUM

From: (Requesting Code)
To: NAVSEA 04M313

Subj: REQUEST FOR EMERGENCY (OR ADVANCE) ORDALT INSTRUCTION
NUMBER ASSIGNMENT (Circle appropriate one.)

Ref: (a) NAVSEA SL720-AA-MAN-010 (Section 9)

1. In accordance with reference (a), request an emergency (advance) ORDALT number assignment for Engineering Change Proposal (ECP) (ECP Number) for (System or Equipment, MK and MOD or JETDS Designation.)

2. The following data applies:

- a. Alteration applicability: _____.
- b. Estimated installation and checkout man-hours: _____.
- c. Level of accomplishment: _____.
- d. Justification: _____.
- e. Availability of support documentation: _____.

3. Formal Class I ECP will be submitted as required to substantiate the emergency/advance ORDALT number assignment not later than 30 days after the date of this request.

4. The Point of Contact regarding the above is _____,
Code _____, telephone _____,
email _____.

(Requesting Authority)

FIGURE S9-4

**Sample ORDALT Instruction Change Number
Assignment Approval and Cover Sheet**

TITLE: CAGE CODE 53711
ORDALT No. XXXXX
CHANGE NO. X

SUBJECT: Date:

Approved By: _____
Position _____
Code: _____

After attached enclosures have been inserted, place this page immediately following the title page of basic ORDALT Instruction.

1. Purpose:
2. All holders of ORDALT Instruction No. XXXXX should incorporate this change upon receipt.
3. Except as indicated, remove the following pages and replace with new pages attached.

REMOVE

INSERT

DISTRIBUTION STATEMENT - (Should be same as on basic ORDALT Instruction)

SUBSECTION 9-3 COMBAT SYSTEMS ELECTRONIC EQUIPMENT AND SYSTEMS FIELD CHANGES (FC)

9-3.1 Scope of Subsection 9-3

This subsection defines the procedures, roles and responsibilities associated with the preparation, development, and installation of FCs in CS electronic equipment/systems under the cognizance of the FMP.

9-3.2 Definition of a Field Change

A FC is any modification made to electronic equipment/systems (e.g. search RADARs, combat system switchboards, electronic warfare equipment) with the exception of ASW equipment/systems after establishment of a product baseline and after delivery to the Navy. Electronic equipment modifications are initiated for one or more of the following reasons:

- To correct a design defect
- To change equipment operational capability
- To eliminate safety hazards
- To update obsolete components

9-3.3 Policies Concerning Field Changes

All approved modifications to configuration baselines of CS electronic equipment/systems, except ASW systems, and their associated components shall be accomplished as formal FCs. FCs shall not be installed until such time as the required ILS products are certified available. FC availability, along with the FC kit National Stock Number (NSN) and ordering data may be published in the Engineering Information Bulletin (EIB). However, the EIB is not to be used in place of a formal FC Instruction or Field Change Bulletin (FCB).

9-3.4. Organizational Responsibilities for Field Changes

Roles and responsibilities required for the approval, development and installation of FCs are described below.

9-3.4.1. Equipment Life Cycle Manager (LCM)

The LCMs for FCs have technical and ILS responsibility for assigned equipment. Specific responsibilities of the LCM include:

- Process ECPs to effect transition of an approved Class I ECP into a FC and assign FC numbers.
- Prepare a JCF if a SHIPALT is required.
- Plan, program and budget for FC procurement and ILS products.
- Provide procurement budget detail, estimated cost, and schedule for FC installations to the NAVSEA ORDALT Program (NAVSEA 04M313).
- Plan and monitor the development and implementation of ILS products for approved FCs.
- Maintain CM over assigned equipment.
- Provide accurate and timely FC planning and installation information and input this data into the NDE-NM.

9-3.4.2 Combat Systems Engineer (CSE)

The roles and responsibilities of the CSE in each cognizant SPM organization are as follows:

- Conduct CS engineering reviews for a ship class for CS interface impact.
- Provide technical approval for JCFs, if the requirement for a SHIPALT is established.

9-3.4.3 FMP ORDALT Line Item Manager (NAVSEA 04M313)

The roles and responsibilities of the FMP ORDALT Line Item Manager are as follows:

- Establish FC policies and procedures.
- Define program requirements and establish tasking and planning estimates for the accomplishment of FCs by installing activities.
- Formulate FC installation budget requirements for inclusion in the FMP budget prepared for the FMP Financial Manager (NAVSEA 013) and is NAVSEA's execution agent for FCs installed under the FMP. Line item manager responsibilities regarding budgeting and financial management are detailed in Section 6 of this manual.
- Forward signed funding requests to the FMP Financial Manager (NAVSEA 013) for installation funding as detailed in Section 6 of this manual.
- Prepare the ORDALT portion (including FCs) of the Industrial Activity Authorization Letter.
- Obtain SPM's and the FMP Financial Manager's (NAVSEA 013) concurrence prior to releasing any correspondence that changes scope of FC work to be accomplished by shipyards or contractors under the cognizance of the NSA.
- Manage and maintain the NDE-NM and associated functions including alteration installation scheduling activities and conference, alteration installation waivers, data input, and validation and verification of system data.

9-3.4.4 FMP Financial Manager (NAVSEA 013)

The roles and responsibilities of the FMP Financial Manager are detailed in Section 6 of this manual.

9-3.5 Field Change Process

The following subsections provide a brief description of the FC process.

9-3.5.1 Overview of Field Change Process

FCs are developed from Class I ECPs prepared in accordance with reference S9(b). The CCBD directs the implementation of a FC in accordance with reference S9(d). All ECPs are evaluated for interface impact within or between the system/equipment organizations, the interfacing system/equipment technical manager affected, and the CSE who will all be members of the CCB. ECPs that impose an impact on ship's systems, such as an increase in ship's power or cooling requirements, shall be submitted as PTIs to the SPM for approval. The SPM must also determine if a SHIPALT is required. When a proposed FC requires or is part of a SHIPALT, the LCM having the greatest responsibility or impact will be designated the lead for development of the JCF in accordance with reference S9(e). Under these circumstances, the FC becomes a part of the SHIPALT and is funded by the SHIPALT. Final approval and issuance of the SHIPALT is the responsibility of the SPM. An alteration or modification to in-service equipment, when approved by the CCB is implemented under the FMP only after it has been assigned a FC number. If the FC requires a SHIPALT, it is processed in accordance with Section 4 of this manual.

9-3.5.2 Field Change Development and Implementation

FCs are developed under the direction of the equipment LCM. FCs are normally procured in two phases:

- Evaluation or pre-production phase.
- Production phase.

9-3.5.2.1 Field Change Evaluation Phase

The purpose of the FC evaluation phase is to:

- Determine the military suitability of a pre-production FC.
- Determine the adequacy of the modification to correct the problem identified in the ECP prior to preparation of a production FC.

9-3.5.2.2 Production Field Change

A production FC provides the material necessary to accomplish an approved modification to applicable electronic equipment and to correct related publications. A production FC is identified by an assigned FC number. Production FCs fall into the following types:

- Type I - A FC that requires parts, all of which are included in a kit consisting of publications, parts, materials and special tools required to accomplish the change to one equipment and to revise existing equipment nameplates, publications and charts as required.
- Type II - A FC that requires parts, none of which are included with the FC. The Type II FC may be either a kit consisting of a publications package or articles for a publication providing instructions for accomplishing the FC and for correcting related publications.
- Type III - A FC that requires parts, some of which are included in a kit. The FC kit consists of a publication package and some of the parts, materials and special tools required to accomplish the FC to one equipment and to revise existing nameplates, publications and charts as required.
- Type IV - A FC that does not require parts or the use of special tools. This FC may be either a kit consisting of a publications package or articles for a publication providing instructions for accomplishing the FC and for correcting related publications.

9-3.5.3 Field Change Funding Class

Funding and installation responsibility for production FCs is designated by classes. The following classes apply:

- Class 1 - A FC approved for accomplishment by forces afloat or station personnel; no installation funding is required.
- Class 2 - A FC that requires Fleet Installation and TYCOM funding.
- Class 3 - A FC that normally requires industrial assistance for installation. The appropriate Systems Command funds it.

All approved FCs shall be designated as Class 1 or Class 3, whichever is most appropriate. Class 2 FCs generally will not be used. Once the FC number has been assigned to an approved ECP, the FC number is entered into the NDE-NM by the system/equipment LCM or a designated ISEA. The LCM validates the NDE-NM data and recommends installation priorities in accordance with reference S9(f). FCs requiring installation with a SHIPALT are funded as part of that SHIPALT under the FMP. Most FCs can be accomplished outside depot availabilities by IMA personnel or AITs in accordance with reference S9(c). These FCs will also be funded by

the FMP.

9-3.5.4 Field Change Installation

Prior to the installation of a FC, the equipment is pre-tested to ensure that it is operating within the prescribed parameters. After the installation of the FC, the equipment is again tested to ensure that the equipment remains operational and that the change has been correctly installed. These tests are prescribed to minimize equipment failures.

For FCs installed outside a depot availability, the NSA will verify the completeness and adequacy of an installation and the ILS products provided in accordance with reference S9(c) and this manual. These FC installations will be scheduled by inputting the scheduling data into NDE-NM and coordinating with the TYCOM's Alteration Installation Scheduling Conference process.

9-3.6 Integrated Logistics Support (ILS)

The LCM for electronic CIs is responsible for procuring or initiating the development of all required ILS products for FCs. All required ILS products must be available in final form at the time the FC is installed, which is indicated by a formal alteration release letter, or ILS Certification Form by the program office certifying that all ILS products are in place. For further information detailing the ILS requirements and certification process refer to Section 8 of this manual.

The impact of an alteration on ILS shall be identified in the ECP. Changes to TMs and the PMS shall be developed concurrently with the preparation of the FC bulletin and the FC kit. At the end of the installation, all required OBRPs will be provided or the FC installer will advise the ship to requisition the allowance changes identified in the FC Instruction. Requisitions for initial outfitting OBRPs will be sent to the initial outfitting Technical Operating Budget (TOB) holder, Fleet and Industrial Supply Center (FISC) Puget Sound. If an APL has not yet been developed for the system, a Preliminary Allowance List (PAL) will be developed. ISS shall only be used on unstable design equipment for which provisioning cannot be accomplished. The NSA shall verify the delivery of all required ILS products in accordance with the requirements of Section 8 of this manual.

9-3.7 Field Change Installation Reporting

FC installation completions shall be reported by the installing activity to the appropriate ISEA and to the assigned CDM in accordance with references S9(f) and S9(g) for entry into CDMD-OA. For those activities using a SNAP computer, FC completions shall be reported by entry into the configuration change screen display using one of the following methods:

- Keyboard entry into the SNAP computer.
- Unsequenced ASI tape entry into the SNAP computer.

The ISEAs shall also report FC installation completions by updating NDE-NM.

9-3.8 Field Change Information Management

The LCM, or designated ISEA, is responsible for CSA for equipment under their cognizance and for accurate and timely reporting of FC planning information. The purpose of this information is

to facilitate the procurement, scheduling and reporting of FC installations. The LCM or designated ISEA reports the FC planning information to the NDE-NM and to the appropriate CDM for entry into CDMD-OA.

The following is a brief description of each system.

9-3.8.1 Navy Data Environment-Navy Modernization (NDE-NM) Information Reporting

NDE-NM is the system that supports the planning and information reporting objectives for FCs installed under the FMP. This system contains the FC planning details, such as, applicability, scheduling and installation information. The LCMs or ISEAs are responsible for timely submission of status and planning information to NDE-NM. Refer to Section 11 of this manual for detailed information on NDE-NM requirements.

9-3.8.2 Configuration Data Managers Database-Open Architecture (CDMD-OA) Information Reporting

CDMD-OA is the Navy's designated system for management and control of ship configuration and logistics in accordance with reference S9(g). The types of FC information reported to CDMD-OA include scheduling information, planned equipment installations or removals, planned alteration installations required ILS products and installation status reports. Action steps and milestones for CM are contained in Section 8 of this manual.

SUBSECTION 9-4 ANTI-SUBMARINE WARFARE/COMBAT SYSTEM ENGINEERING CHANGES (ECs)

9-4.1 Scope of Subsection 9-4

This subsection defines the procedures, roles, and responsibilities associated with the preparation, development, and installation of ASW/CS ECs. It applies only to installations under the cognizance of the FMP. This includes all SONAR/Acoustic Warfare systems and equipment except:

- AN/BQQ-5, AN/BSY-1, AN/BSY-2
- TRIDENT SONAR Defensive Weapons System (DWS)
- SSBN Unique SONARs
- Ordnance Items and Expendables
- Mine Warfare Expendables
- Mobile Targets
- Ranges

9-4.2 Definitions for Subsection 9-4

An ASW/CS EC is the medium by which an approved modification or alteration is incorporated into ASW/CS equipment after the establishment of the product baseline and delivery to the Navy. ASW/CS ECs are initiated for one or more of the following reasons:

- To correct a design defect
- To change equipment operational capability
- To eliminate safety hazards
- To update obsolete components

Other definitions that apply to this subsection are:

- ASW/CS Engineering Change Order (ECO) - An ASW/CS ECO is the document that provides detailed step-by-step instructions, test procedures, and lists of parts and materials supplied or required, to accomplish the ASW EC.
- ASW/CS Engineering Change Kit - An ASW/CS EC Kit contains all parts and materials necessary to support an EC. These could include the ECO, publications correction material (for example, TM change pages, revised PMS or updated APLs), all hardware, software, OBRPs, and I&Cs and other materials.

9-4.3 Policies Concerning Anti-Submarine Warfare (ASW)/Combat System (CS) ECs

Policies concerning ASW ECs developed for SONAR/Acoustic Warfare systems and equipment are defined in reference S9(j).

9-4.4 Organizational Responsibilities for ASW/CS ECs

Roles and responsibilities required for the approval, installation, and support of ASW/CS ECs are described below.

9-4.4.1 ASW/CS Equipment Life Cycle Manager (LCM)

The LCM, upon receipt of the CCBD, in conjunction with NAVSEA Contracts Directorate (NAVSEA 02), will issue formal contractual actions for Class I ECP approval and EC

preparation and procurement, including associated ILS products. Specific responsibilities of the LCM include:

- Process ECPs to effect transition of an approved Class I ECP into an EC and assign EC numbers to approved Class I ECPs.
- Prepare a JCF if a conjunctive SHIPALT requirement is indicated.
- Establish EC alteration priority level in accordance with reference S9(j).
- Plan, program and budget for EC procurement and ILS products. Provide procurement budget detail as well as estimated cost schedule for EC installation to the SPM.
- Plan and monitor the development and implementation of ILS products for approved ECs.
- Maintain CM over assigned equipment.
- Report EC planning and installation information accurately and timely and input this data into the NDE-NM.
- Depending upon the complexity and extent of the EC, a FCA and a PCA may be required and as deemed necessary by the LCM. These audits are conducted in accordance with reference S9(k).
- Process alteration installation waiver requests.

9-4.4.2 Combat Systems Engineer (CSE)

The responsibilities of the CSE in each cognizant SPM organization are as follows:

- Conduct CS engineering reviews of all Class I ECPs for a ship class for CS interface impact, if the requirement for a conjunctive SHIPALT is established during the ECP evaluation phase.
- Prepare and provide technical approval for JCFs, if the requirement for a conjunctive SHIPALT is established during the ECP evaluation phase.
- Review alteration installation waiver requests and provide concurrence as appropriate.

9-4.4.3 FMP ORDALT Line Item Manager (NAVSEA 04M313)

The responsibilities of the ORDALT FMP Line Item Manager are as follows:

- Establish FMP ASW EC policies and procedures.
- Define program requirements and establish tasking and planning estimates for the accomplishment of ASW ECs by installing activities.
- Formulate ASW EC budget requirements for inclusion in the FMP budget prepared by NAVSEA 013 and be NAVSEA's execution agent for ASW ECs installed under the FMP. Line item manager responsibilities regarding budgeting and financial management are also specified in Section 6 of this manual.
- Forward signed funding requests to the FMP Financial Manager (NAVSEA 013) for installation funding as detailed in Section 6 of this manual.
- Prepare the ORDALT portion (includes ASW ECs) of the SHIPALT Authorization Letter.
- Obtain SPM's and FMP Financial Manager's (NAVSEA 013) concurrence prior to releasing any correspondence that changes scope of ASW EC work to be accomplished by shipyards or contractors under the cognizance of the NSA.
- Manage and maintain the NDE-NM and associated functions including alteration installation scheduling activities and conference, alteration installation waivers, data input, and validation and verification of system data.

9-4.4.4 FMP Financial Manager (NAVSEA 013)

The roles and responsibilities of the FMP Financial Manager are detailed in Section 6 of this manual.

9-4.4.5 ASW/CS Configuration Control Board (CCB) Secretariat

The ASW CCB Secretariat will ensure that proposed modifications or alterations are prepared as Class I ECPs in accordance with reference S9(b). Class I ECPs are processed by the CCB Secretariat and approved by the CCB in accordance with references S9(d), S9(j) and S9(l). CCBDs, documenting the disposition of ECPs and authorizing EC kit procurement, are prepared and distributed by the CCB Secretariat. Approved ECPs are developed for implementation as ASW ECs. EC numbers are assigned by the ASW CCB Secretariat.

9-4.4.6 ASW/CS EC Preparing Activity

A Navy or contractor organization will prepare the ASW EC. The ASW EC shall consist of the following:

- Engineering Change Order
- Publications Correction Material
- Engineering Change Kit

9-4.5 ASW/CS EC Process

The following provides a brief description of the ASW EC process.

9-4.5.1 Overview of ASW/CS EC Process

All ASW ECs are generated from approved Class I ECPs prepared in accordance with reference S9(b). In accordance with references S9(d) and S9(l), implementation of the ASW EC is directed by a CCBD. When a conjunctive SHIPALT is required a JCF must be prepared, evaluated, and approved in accordance with reference S9(e).

9-4.5.2 Evaluation Phase for ASW/CS ECs

An alteration or modification to in-service equipment, when approved by the CCB Chairperson, is implemented under the FMP only after it has been assigned an EC number. If the proposed improvement is required to support a PMI, it is processed in accordance with Section 4 of this manual.

All ECPs are evaluated for interface impact. If there is an impact within or between the system/equipment organizations, the interfacing system/equipment technical manager affected and the CSE will all be members of the CCB. ECs that impose an impact on ship's systems, such as an increase in ship's power or cooling requirements, shall be submitted as PTIs to the SPM for approval and determination of a requirement for a conjunctive SHIPALT. The LCM having the greatest responsibility or impact will be designated the lead for development of the JCF in accordance with reference S9(e). The resulting EC will become a part of the SHIPALT and its installation will be funded by the SHIPALT. Final approval and issuance of the SHIPALT is the responsibility of the SPM.

9-4.5.3 Planning Phase for ASW/CS ECs

Once an ASW EC number has been assigned to an approved ECP, the EC number is entered into

the NDE-NM upon receipt of the CCBD. The LCM recommends priorities in accordance with reference S9(m).

9-4.5.4 Proof-in Phase for ASW/CS ECs

ASW/CS ECs are proofed and evaluated to ensure that the change achieves its intended purpose. Test procedures are submitted by the EC preparing activity to the LCM or the designated ISEA for review of technical content. Subsequent to completion of testing, which may be performed as part of the FCA, a test report documenting test results is submitted to the LCM.

9-4.5.5 Approval of ASW/CS ECs

Approval of ASW/CS ECs is contingent upon the following:

- ECO review and approval by the LCM.
- Technical Manual Identification Number (TMIN)-Request (TMIN-R) preparation by the LCM and assignment of TMIN by Naval Sea Data Support Activity (NSDSA) in accordance with reference S9(n).
- Evaluation Test Report acceptance and concurrence by the LCM.

9-4.6 Integrated Logistics Support (ILS)

The LCM for an ASW system/equipment is responsible for procuring or initiating the development of all ILS products for ASW ECs. The ILS products must be available at the time the EC is installed as indicated by a formal alteration release letter or ILS Certification Form completed by the program office. For further information concerning ILS requirements and certification refer to Section 8 of this manual.

- The impacts of an alteration on ILS shall be identified in the ECP. Changes to TMs, PMS and other support documentation shall be developed concurrently with the preparation of the ASW EC Instruction and kit. OBRPs and MAMs are either provided as part of the EC kit or the ASW EC installer will advise the ship to requisition allowance increases. Requisitions for initial outfitting spares will be sent to the TOB holder, FISC Puget Sound. An ASW EC must be supported with ISS until MSD is achieved. If a system/equipment does not have an existing APL, a PAL will be issued for the interim until the APL has been completed. ISS shall only be used on unstable design equipment for which provisioning cannot be accomplished. The ILS products for ASW ECs are detailed in Section 8 of this manual.

9-4.7 EC Installation Reporting

EC installation completions shall be reported by the installing activity to Naval Undersea Warfare Center (NUWC) Division Newport, Norfolk Detachment and to the assigned CDM in accordance with reference S9(g) for entry into the CDMD-OA. For those activities using a SNAP computer, EC completions shall be reported by entry into the configuration change screen display using one of the following methods:

- Keyboard entry into the SNAP computer.
- Unsequenced ASI tape entry into the SNAP computer.

The ISEAs shall also report EC installation completions by updating the NDE-NM.

9-4.8 EC Information Management

NUWC Division Newport, Norfolk Detachment, as designated by the LCM, is responsible for the CSA for ASW SONAR/Acoustic equipment and for the accurate and timely reporting of EC planning information. The purpose of this information is to facilitate the procurement, scheduling and reporting of EC installations. NUWC Division Newport, Norfolk Detachment, reports the EC planning information to the NDE-NM and to the appropriate CDM for entry into CDMD-OA. The following is a brief description of each system.

9-4.8.1 Navy Data Environment-Navy Modernization (NDE-NM) Information Reporting

NDE-NM is the system that supports the planning and information reporting objectives for ECs installed under the FMP that are not installed as part of a SHIPALT. This system contains the EC planning details such as applicability, scheduling and installation information. NUWC Division Newport, Norfolk Detachment, is responsible for timely submission of status and planning information to NDE-NM. Refer to Section 11 of this manual for details on NDE-NM.

9-4.8.2 Configuration Data Managers Database-Open Architecture (CDMD-OA) Information Reporting

CDMD-OA is the Navy's designated system for management and control of ship configuration and logistics in accordance with reference S9(g). The types of EC information reported to CDMD-OA include scheduling information, planned equipment installation or removals, planned alteration installations and installation status reports. Action steps and milestones for CM are contained in Section 8 of this manual.

SUBSECTION 9-5 MARINE GAS TURBINE (MGT) TECHNICAL DIRECTIVE (TD) PROGRAM

9-5.1 Scope of Subsection 9-5

This subsection defines the procedures, roles and responsibilities associated with the preparation, development and installation of MGT TDs. It applies to all installations under the cognizance of the FMP. This includes all MGT systems and equipment.

9-5.2 Background for Subsection 9-5

NAVSEA has established a MGT TD Program as the authorizing medium for directing the accomplishment and recording of modifications and one-time inspections to MGT Equipment (MGTE) and Engineering Control System Equipment (ECSE) on MGT ships. The TD Program, as part of the Maintenance and CM Program, is an important element in maintenance of the hardware to a configuration that provides the optimum conditions of safety, and operational and material readiness.

The NAVSEA MGT TD Program provides for the issuance of documents authorized and promulgated by NAVSEA or as specifically delegated by NAVSEA. Each document contains the information necessary to properly inspect or alter the configuration of MGTE or ECSE on MGT ships subsequent to the establishment of a baseline configuration for each respective equipment.

9-5.3 Definitions for Subsection 9-5

A MGT TD is the medium by which an approved modification or alteration is incorporated into MGTE after the establishment of the product baseline and delivery to the Navy. MGT TDs are initiated for one or more of the following reasons:

- To correct a design defect
- To change equipment operational capability
- To eliminate safety hazards and/or
- To update obsolete components.

Other definitions applicable to this subsection are:

a. MGT ECP - the proposed EC document that provides detailed step-by-step instructions, test procedures and lists of parts and materials supplied or required to accomplish the MGT TD once the ECP is officially approved.

b. ECP Kit – the assemblage of the ECP, publications, correction material (for example, TM change pages, revised PMS or updated APLs) and all hardware, software, OBRPs, I&C spares and other materials necessary to install and support an engineering change.

9-5.4 Policies Concerning Marine Gas Turbine (MGT) Technical Directives (TDs)

Policies concerning MGT TDs developed for MGT systems and equipment are defined in reference S9(o).

9-5.5 Organizational Responsibilities for Marine Gas Turbine (MGT) Technical Directives (TDs)

Primary roles and responsibilities required for the approval, installation and support of MGT

TDs are summarized below. Detailed responsibilities are contained in reference S9(o).

9-5.5.1 Marine Gas Turbine (MGT) Life Cycle Manager (LCM)

The LCM (NSWCCD-SSSES Code 933), upon joint approval of a MGT ECP and the formalization of the Joint CCB (JCCB) Directive (JCCBD), issues formal contractual actions for ECP approval and TD preparation and procurement, including associated ILS products. Specific responsibilities of the LCM include:

- Process ECPs to effect transition of an approved ECP into a TD and assign TD numbers to approved ECPs.
- Direct the preparation of a JCF or MGT ECP if a conjunctive SHIPALT or TD requirement is indicated and to establish NAVSEA LCM TD/alteration priority level in accordance with references S9(p) and S9(q).
- Establish NAVSEA LCM TD/alteration priority level in accordance with references S9(p) and S9(q).
- Plan, program and budget for TD procurement and ILS. Provide procurement budget detail as well as estimated cost schedule for TD installation.
- Plan and monitor the development and implementation of ILS for approved TDs.
- Maintain CM over assigned equipment.
- Report TD planning information accurately and timely.
- Depending upon the complexity and extent of the TD, a FCA and a PCA may be required and as deemed necessary by the LCM. These audits are conducted in accordance with reference S9(p).

9-5.5.2 Marine Gas Turbine (MGT) System Engineering Group

The responsibilities of the MGT Systems Engineering Group (NSWCCD-SSSES) are as follows:

- Conduct MGT system engineering reviews of all ECPs for a ship class for MGT system interface impacts, if the requirement for a conjunctive alteration is established during the ECP evaluation phase.
- Prepare and provide technical approval for ECPs or JCFs as applicable, if the requirement for a conjunctive alteration is established during the ECP evaluation phase.

9-5.5.3 Marine Gas Turbine (MGT) Joint Configuration Control Board (JCCB)

The MGT JCCB consists of representatives from the MGT Systems Engineering Group, the MGT PM, the MGT LCM and the SPM as well as depot and other Supply Support and support agents deemed appropriate by the MGT PM. This board will ensure that proposed modifications or alterations are prepared as ECPs in accordance with reference S9(b). ECPs are processed and approved by the JCCB in accordance with references S9(p) and S9(q). JCCBDs, documenting the disposition of ECPs and authorizing ECP kit procurement, are prepared and distributed by the MGT PM, who functions as the chair of the JCCB. Approved ECPs are developed for implementation as MGT TDs. TD numbers are assigned by the MGT JCCB Chairs.

9-5.5.4 Marine Gas Turbine (MGT) Technical Directives (TDs) Preparing Activity

A Navy or contractor organization will prepare the MGT TD in accordance with reference S9(o). The MGT TD shall consist of the following:

- ECP scope and description of change incorporated into TD format.
- Publications Correction Material (Technical Documentation; e.g.: PMS, TM, etc.)

- EC Kit (hardware), to include installation hardware and, if applicable, OBRPs.
- Procedures necessary for executing the change.

9-5.6 Marine Gas Turbine (MGT) Technical Directives (TDs) Process

A brief description of the MGT TD process follows. Detailed processes and procedures are provided in reference S9(o).

9-5.6.1 Overview of the Marine Gas Turbine (MGT) Technical Directives (TDs) Process

All MGT TDs are generated from approved ECPs prepared in accordance with reference S9(o). A JCCBD directs implementation of the MGT TD in accordance with reference S9(r). When a conjunctive alteration is required, an ECP or JCF, as applicable, must be prepared, evaluated and approved in accordance with references S9(e), S9(o), S9(p) and S9(q). The alteration must be evaluated and approved by the JCCB.

9-5.6.2 Evaluation Phase for Marine Gas Turbine (MGT) Technical Directives (TDs)

An alteration or modification to in-service equipment, when approved by the JCCB, is implemented under the FMP only after it has been assigned a TD number in accordance with reference S9(o). All ECPs are evaluated for interface impact. If there is an impact within or between the system/equipment organizations, the interfacing system/equipment technical manager affected and the MGT System Engineer will all be members of the JCCB. ECPs that impose an impact on ship's systems, such as an increase in ship's power or cooling requirements, shall be submitted as PTIs to the SPM for approval and determination of a requirement for a conjunctive alteration. The LCM having the greatest responsibility or impact will be designated the lead for development of the ECP or JCF. The resulting ECP/JCF will become a part of the formal TD or SHIPALT and its installation will be funded accordingly. Final approval and issuance of a TD is the responsibility of the LCM.

9-5.6.3 Prioritization Phase for Marine Gas Turbine (MGT) Technical Directives (TDs)

Once a MGT TD number has been assigned to an approved ECP, the TD number is entered into the NDE-NM by NSWCCD-SSES upon receipt of the JCCB Approval and Implementation letters issued by the JCCB Chair. The LCM recommends priorities in accordance with reference S9(o). Priorities must be discussed and approved at a MGT Program Steering Committee Conference chaired by the MGT PM.

9-5.6.4 Proof-in Phase for Technical Directives (TDs)

MGT TDs are proofed and evaluated to ensure that the change achieves its intended purpose and relevant documentation and procedures are validated prior to full scale TD deployment. Test procedures are submitted by the TD preparing activity to the LCM and the designated ISEA (NSWCCD-SSES) for review of technical content. Subsequent to completion of testing, a test report documenting test results is submitted to the LCM.

9-5.6.5 Approval of Marine Gas Turbine (MGT) Technical Directives (TDs)

Approval of MGT TDs is contingent upon the following:

- ECP review and approval by the LCM.
- TMIN-R preparation by NSWCCD-SSES, and assignment of TMIN.
- Evaluation Test Report acceptance and concurrence by the LCM.

9-5.7 Integrated Logistics Support (ILS)

The LCM for a MGT system/equipment is responsible for procuring or initiating the development of all ILS products for MGT TDs. All required ILS products must be available at the time the TD is installed. When an ILS product is missing, a waiver for installation must be authorized as detailed in Section 8 of this manual.

The impacts of an alteration on ILS shall be identified in the ECP. Changes to TMs, PMS and other support documentation shall be developed concurrently with the preparation of the MGT ECP Instruction and kit. Initial OBRPs and MAMs are either provided as part of the EC kit per reference S9(s) or the MGT EC installer will advise the ship to requisition allowance increases that are identified in the MGT EC instruction. Requisitions for initial outfitting spares will be sent to the TOB holder, FISC Puget Sound. A MGT TD must be supported with ISS until MSD is achieved.

If a system or equipment does not have an existing APL, a PAL will be developed in accordance with reference S9(t) for the interim until the APL has been completed. ISS shall only be used on unstable design equipment for which provisioning cannot be accomplished. Refer to Section 8 of this manual for a description of ILS requirements.

9-5.8 Technical Directive (TD) Installation Reporting

TD installation completions shall be reported by the installing activity to NSWCCD-SSES, and to the assigned CDM in accordance with reference S9(g) for entry into the CDMD-OA. Changes to engine configuration shall be reflected in the applicable engine logbook. TD completions shall be reported by entry into the configuration change screen display using one of the following methods:

- Keyboard entry into the SNAP computer.
- Unsequenced ASI tape entry into the SNAP computer.

9-5.9 Technical Directive (TD) Information Management

NSWCCD-SSES, as the designated LCM, is responsible for the CSA for MGT equipment and for the accurate and timely reporting of TD planning information. The purpose of this information is to facilitate the procurement, scheduling and reporting of TD installations. NSWCCD-SSES reports the TD planning information into the NDE-NM and to the appropriate CDM for entry into CDMD-OA in accordance with reference S9(g). The following is a brief description of each system.

9-5.9.1 Information Reporting

NDE-NM is the system that supports the planning and information reporting objectives for TDs installed under the FMP that are not installed as part of a SHIPALT. This system contains the TD planning details such as procurement, scheduling and installation information. NSWCCD-SSES is responsible for timely submission of status and planning information. Refer to Section 11 of this manual for detailed information concerning NDE-NM.

9-5.9.2 CDMD-OA Information Reporting

CDMD-OA is the Navy's designated system for management and control of ship configuration and ILS in accordance with reference S9(g). The types of ECP information reported to CDMD-

OA include scheduling information, planned equipment installation or removals, planned alteration installations and installation status reports. Action steps and milestones for CM are contained in Section 8 of this manual.

SUBSECTION 9-6 SUBMARINE SHIPALT PACKAGE PROGRAM

9-6.1 Scope of Subsection 9-6

This subsection describes the policies, procedures, and responsibilities that encompass the SHIPALT development process leading to the selection and issue of improvements as a SHIPALT in the Submarine SHIPALT Package Program.

9-6.2 Background for Subsection 9-6

The Submarine SHIPALT Package Program for Title "K-P" SHIPALTs concept was instituted to improve the Forces Afloat's capability to accomplish urgent improvements in operating Submarines during the period between regular overhauls.

Title "K-P" is assigned to alterations that change the military or technical characteristics of a submarine and can involve installations of NDE-NM identified Centrally Provided Material (CPM) and Headquarters CPM (HCPM), but are within Forces Afloat or AIT capability for installation. Development of Title "K-P" alteration packages may only be authorized by the SPM. The accomplishment of a Package SHIPALT may be authorized by the SPM or the appropriate TYCOM. Except for HCPM and CPM, all funds to support preparation of packages, including technical assistance for installation, shall be FMP funded. All required material and documentation are assembled by an Industrial Activity and provided to Forces Afloat or AIT for installation. Refer to Section 12 of this manual for details of the Submarine TYCOMs package alterations program.

In order to meet standardized requirements and facilitate package preparation by various activities for installation by Forces Afloat, each package shall be prepared to contain the software and hardware in accordance with reference S9(c).

9-6.3 Justification/Cost Form (JCF)

The JCF shall normally be prepared by the cognizant engineer in the SPAWAR Engineering Directorate (ED) or the NAVSEA ED or his designated agent, in accordance with reference S9(e). The JCF will normally be forwarded to Submarine Maintenance, Engineering, Planning and Procurement (SUBMEPP) or the PY/Design Agent for comment. The ED will analyze Forces Afloat capability to accomplish the SHIPALT and recommend whether to include the SHIPALT in the Package Program.

9-6.4 SHIPALT Package Process

The process that leads to the accomplishment of a Package SHIPALT is complex and requires the closely coordinated efforts of many separate functional organizations at both Headquarters and field activity levels. The essential steps in the process, many of which must be accomplished simultaneously, are often highly interdependent and repetitive in nature. These steps include:

- Evaluate proposed and existing SHIPALTs that have been determined to be technically feasible for the practicability of accomplishment as a Package SHIPALT.
- Determine if the priority or urgency of the proposed SHIPALT is such to warrant inclusion in the SHIPALT Package Program.
- Develop the detailed installation drawings.
- Budget for and obtain material required for the SHIPALT.

- Schedule the SHIPALT for accomplishment within the constraining considerations of ship's force or industrial assistance availability, and funds limitations.
- Authorize the alteration for accomplishment for a given hull as a SHIPALT Package.
- Accomplish the installation of the approved package SHIPALT.

9-6.5 Title "K-P" Alteration Identification

When the proposed SHIPALT is identified to the Package Program, a Ship Alteration Record (SAR) will be prepared in accordance with reference S9(u), designating it as a Title "K-P" SHIPALT. The following elements of the package will be identified as may be required by its contents:

- SHIPALT Installation Software
- Marked-up SSRs
- Equipment Level TM Changes
- Pertinent Reference Documents
- Major Installation Material
- Initial Complement of OBRPs
- Procedures for Engineering Assistance

9-6.6 Cognizant Command and Activity Responsibilities for Title "K-P" SHIPALTs

To provide for the management of the Package SHIPALT Program, the responsibility for the functions required are assigned as indicated below.

9-6.6.1 Ship Program Manager (SPM)

NAVSEA PMS392 is the PM for the Submarine SHIPALT Program and is responsible for the following FMP-related functions:

- Develop and approving PTIs and Technical Improvement Plans (TIPs).
- Ensure Cost & Feasibility (C&F) Studies are conducted when required (NAVSEA 05 performs C&F Studies).
- Act as NAVSEA Representative at Fleet Modernization (FLTMOD) Conferences.
- Manage the development of SHIPALT documentation, such as SARs, SHIPALT Installation Drawings (SIDs), and other SHIPALT documentation.
- Develop and providing alteration development status and material requirement information.
- Issue Advance Planning and SHIPALT Authorization letters to the NSA/IA and concur with the installation planning and accomplishment of SHIPALTs by any other method, such as AIT.
- Manage the day-to-day coordination of individual ship availability through dialogue with NSAs/IAs, TYCOMs, CNO, etc., which includes:
 - Establish and negotiate cost estimates and fund requirements for shipyard work.
 - Receive, evaluate, and negotiate estimates and fixed-price offers.
 - Task the PYs and SUBMEPP, as necessary, to accomplish assigned responsibilities assuring configuration of their assigned ships.

9-6.6.2 Title "K-P" SHIPALT Package Program Manager

Within NAVSEA PMS392, PMS392A41 acts as the Package PM and will:

- Provide management functions to ensure implementation of this package program.

- Analyze alterations for possible inclusion in the SHIPALT Package Program. In the analysis, consider technical content, packaging feasibility, cost, and schedules.
- Provide direction in the planning and approval stages of SHIPALTs for the Package Program and review SHIPALTs recommended for inclusion in the Package Program.
- Provide funds to the package activities for the procurement of SHIPALT packages within the limitations of the funds authorized in the FMP.
- Arrange for the identification of subsequent fiscal year Package Program SHIPALTs in the FMP each year.
- Task or contract government or private industrial activities for the fabrication and packaging of SHIPALT packages. Assure that ordering documents stipulate that package preparation will be in accordance with this manual.
- Assure SIDs are prepared in accordance with reference S9(v).
- Provide necessary direction and coordination of the package activities.
- Coordinate with NAVSEA 05, SPAWAR, and cognizant material managers regarding the availability of CPM under their cognizance for timely delivery and incorporation in SHIPALT packages.
- Coordinate information with NAVSEA 013 to ensure funding availability.
- Monitor SHIPALT package preparation and installation by conducting annual audits of selected packaging and user activities.
- Arrange with the TRIDENT Refit Facility, Kings Bay, Georgia and other Naval Supply activities, as required, for the stocking of SHIPALT packages.
- Direct shipment of completed packages to points other than stock point as required by the TYCOMs. SHIPALT packages will not normally be shipped to the package stock point or to Forces Afloat until the packages are completed. However, in urgent cases, TYCOMs may request from the PM delivery of a partial SHIPALT package.
- Resolve problems due to damage or loss during shipment from the package activity to the designated activity.
- Identify and maintain all data required in NDE-NM for the SHIPALT Package Program.

9-6.6.3 Title “K-P” SHIPALT NAVSEA Engineering Directorates (EDs)

The NAVSEA EDs assist in resolving engineering problems during development of the SHIPALT package and are responsible for technical approval of all JCFs and SARs.

9-6.6.4 Planning Yard (PY)

The PY will normally be responsible for:

- Preparation of SARs and associated cost estimates.
- Preparation of requisite SIDs in accordance with reference S9(v).
- If SIDs are prepared by an activity other than the PY, the PY will be responsible for the technical review and approval.

9-6.6.5 Cognizant Material Managers

Cognizant material managers shall:

- Procure NDE-NM HCPM and CPM as required for SHIPALT package assembly as programmed in the FMP.
- Provide information on the procurement and delivery status of such material as requested by

NAVSEA PMS392.

9-6.6.6 Title “KP” SHIPALT Packaging Activity

A Naval Shipyard, when tasked by the PM, or a commercial activity, when contracted, will:

- Prepare SHIPALT packages suitable for specified ships in accordance with reference S9(c) and this manual. SIDs will be in accordance with reference S9(v).
- Submit to NAVSEA PMS392 and the PY information on any necessary changes in SHIPALT design.
- Submit PTD to the cognizant Inventory Control Point (ICP) (NAVICP-M or others).
- Submit proposed SIDs and other NAVSEA-approved Title "K-P" SHIPALT drawings to the PY together with a complete list of the drawings being provided. NAVSEA PMS392 shall be provided a copy of the listing of drawings forwarded to the PY.
- Submit quarterly status reports to NAVSEA 013, NAVSEA PMS392, TYCOMs and Squadrons reporting the status of package preparation and the expenditure of funds obligated.
- Furnish TYCOMs, Squadron Commanders, and other interested commands a quarterly report of packages under preparation, completed, and distributed.
- Submit as-installed drawings to the PY for record keeping purposes.

9-6.6.7 Title “K-P” SHIPALT Stock Point

The Stock Point for SHIPALT packages will:

- Provide secure storage of SHIPALT packages received from the Package Activity and assign each a local control number unique to the SHIPALT Package Program.
- Inventory the contents of any package received in a damaged condition or which appears to have been previously opened and report findings to the PM and Package Activity.
- Issue SHIPALT packages to Forces Afloat as authorized by the TYCOM.
- Provide a narrative report of inventory monthly to NAVSEA 92L, NAVSEA PMS392A41, NAVSEA 013, TYCOMs, and all Submarine Squadrons.

9-6.6.8 TYCOMs Title “K-P” SHIPALTs

Commander, Submarine Force, U.S. Pacific Fleet (COMSUBPAC) and Commander, Submarine Force, U.S. Atlantic Fleet (COMSUBLANT) shall:

- Review recommendations concerning alterations that are candidates for the Package Program and advise NAVSEA PMS392A41 of Forces Afloat capability to accomplish these SHIPALTs.
- Provide the PM with a current priority of required package SHIPALTs.
- Update NDE-NM with all SHIPALT completions.
- Assume cognizance of SHIPALT packages designated for assigned Submarines once they are delivered to a Fleet activity stock point and maintain strict accounting and control of packages by Forces Afloat.
- Establish procedures and promulgate instructions for SHIPALT Package installation by Forces Afloat.

9-6.6.9 Forces Afloat Title “K-P” SHIPALTS

Forces Afloat responsibilities include:

- Accomplish the SHIPALT in accordance with instructions, drawings, and technical directives

provided with the SHIPALT packages as directed by the TYCOM.

- Ensure proper storage, accountability, and control of SHIPALT packages in accordance with TYCOM instructions.
- Report completion of SHIPALT packages to the TYCOM.

9-6.7 Financial Execution for Title “K-P” SHIPALTs

NAVSEA 013, as the FMP Financial Manager, prepares the FMP budget, maintains FMP financial records, serves as the primary point of contact with CNO N43 for FMP financial and reprogramming matters, and prepares FMP funding documents. Therefore, the PM will coordinate all budgeting and funding matters related to the Submarine SHIPALT Package Program with NAVSEA 013. Line item manager responsibilities regarding budgeting and financial management are detailed in Section 6 of this manual.

SUBSECTION 9-7 U.S. COAST GUARD SHIP ALTERATION PROGRAM

9-7.1 Scope of Subsection 9-7

This subsection describes the FMP procedures associated with the Navy's support of the USCG SHIPALT Program. FMP procedures delineated in other sections of this manual will be followed except as modified by this subsection.

9-7.2 Background for Subsection 9-7

During times of national emergency, upon declaration of war or when the President directs, the USCG will operate as part of the Navy. It is Navy policy to ensure that the USCG is prepared to carry out naval warfare tasks and to provide the USCG with Navy-owned equipment and appropriate support to perform Navy mission requirements.

The Support Ships/Boat/Craft PM (PMS325) is designated as the USCG PM at NAVSEA and is responsible for managing all FMP efforts associated with the installation of Navy-owned equipment aboard USCG Cutters. Reference S9(w) provides the policy for Navy support of the USCG and contains the Basic Agreement between the Navy and the USCG for Interservice Logistics Support. Under the terms of this agreement, the Navy is responsible for providing Navy-owned equipment to the USCG with associated design, engineering, technical and ILS. This equipment is installed aboard USCG Cutters as Title "K" SHIPALTs.

9-7.3 U.S. Coast Guard SHIPALT Types

All USCG SHIPALTs that install Navy-owned equipment fall into one of the following categories:

- Initial Issue/New Capability SHIPALTs - These SHIPALTs provide a new mission capability to a particular Cutter class and provide the initial issue of associated Navy-owned equipment aboard that Cutter class.
- Replacement/Upgrade SHIPALTs - These SHIPALTs replace existing Navy-owned equipment that improves or upgrades current mission capabilities.

9-7.4 U.S. Coast Guard SHIPALT Funding

The cost of all Navy-owned equipment, including all HCPM and CPM, the initial issue of required ILS products, ORDALTs, FCs, I&C spares, and all other support materials and information required for the installation of USCG SHIPALTs, will be borne in full by the Navy. The Navy will also fund the SHIPALT development process up to and including SAR preparation for USCG SHIPALTs. After SAR preparation, funding responsibilities differ depending on the type of SHIPALT. These differences are delineated as follows:

- Initial issue/New Capability SHIPALTs - All installation and incidental material costs, and the cost of associated design and engineering work, including SID development, will normally be borne by the USCG.
- Replacement/Upgrade SHIPALTs - All installation and incidental material costs, and the cost of any necessary design and engineering work required to ensure proper form, fit and function, and to ensure proper interface with existing Navy or USCG equipment, including SID preparation, will be borne by the Navy.

Installation costs include all expenses associated with the installation, testing and checkout of

Navy-owned equipment/ systems including pointing/firing cut-out cam installations and CSs alignment support. Navy Installation, Validation and Certification Team visits are also chargeable to installation funds.

9-7.5 U.S. Coast Guard SHIPALT Review/Approval

The USCG will review and approve all documentation that requires NAVSEA or CNO approval under standard FMP procedures.

9-7.6 U.S. Coast Guard SHIPALT Exclusions

Certain FMP related functions would be accomplished internally by the USCG. Others are not applicable to the USCG Program, or are applicable only under certain conditions. The following areas fall into this category and FMP procedures do not necessarily apply. Additional information is provided as follows:

- Advance Planning, Authorization, Funding and Tasking Letter preparation may be accomplished by either the USCG or NAVSEA PMS325, depending on funding and contractual arrangements.
- SSR maintenance is an internal USCG function. SSR update may be accomplished by the USCG or the Navy PY, as funded and tasked by the USCG.
- Miscellaneous Documentation Support (MDS) procedures do not apply to the USCG.
- MACHALTs do not apply to the USCG.
- Title "D" and "F" SHIPALTs are not applicable to the USCG.
- TYCOM functions are not applicable to the USCG.
- CM for Cutters is an internal USCG function. However, CNO and NAVSEA PMS325 participate as members of the Permanent Joint Working Group on Cutter CS Equipment, which functions under the auspices of the Navy-Coast Guard (NAVGARD) Board.
- Weight Control is an internal USCG function.

9-7.7 U.S. Coast Guard SHIPALT Responsibilities

Responsibilities for the USCG SHIPALT Program are as follows.

9-7.7.1 CNO

- Jointly, with the Commandant, Coast Guard identify Navy missions and warfare tasks to be accomplished by the USCG.
- Establish SHIPALT priorities for Navy-owned equipment installations.
- Perform all Planning, Programming and Budgeting System (PPBS) functions required for the installation of Navy-owned equipment aboard USCG Cutters.
- In conjunction with NAVSEA PMS325 and through the NAVSEA PMS325 CCB, approve PMIs and Proposed Survivability Improvements (PSIs).
- Provide funding to the appropriate Systems Commands for the procurement of SHIPALT material, ORDALT material, FCs, Coordinated Shipboard Allowance List (COSAL) Outfitting Material and associated support material.
- Provides Design Services Allocation (DSA) and installation funding to the USCG PM (NAVSEA PMS325) for the development and installation of USCG SHIPALTs.
- Program for USCG SHIPALTs through the CNO Gaming System to NDE-NM.
- Co-chair and participate as a member of the Permanent Joint Working Group on Cutter

Combat System Equipment.

9-7.7.2 U.S. Coast Guard

- Jointly with CNO, identify Navy missions and warfare tasks to be accomplished by the USCG.
- Review/generate PMIs and PSIs.
- Participate in the SHIPALT prioritization process.
- Establish and promulgate overhaul, industrial availability and SHIPALT installation schedules.
- Designates engineering design agents and funds SID preparation required for Initial Issue/New Capability USCG SHIPALTs. Fund the installation of these SHIPALTs.
- Review and comment on SHIPALT documentation and participates in the NAVSEA PMS325 CCB for approval of JCFs and SARs.
- Document and issue USCG SHIPALTs upon receipt of approved SARs.
- Resolve Liaison Action Records (LARs) generated during the USCG SHIPALT development and installation process in concert with NAVSEA PMS325.
- Monitor the delivery of Navy Government Furnished Material (GFM) and provides receipt discrepancy reports to NAVSEA PMS325 as required.
- Monitor SHIPALT installation progress in conjunction with NAVSEA PMS325.
- Fund and task the Navy PY to update applicable SSRs if required.
- Issue Advance Planning, Authorization, Funding and Tasking Letters for USCG FMP work as required in conjunction with NAVSEA PMS325. This requirement is determined by funding and contractual arrangements.
- Maintain Cutter CM and manages the USCG CM process.
- Manages all requirements related to weight and vertical moment compensation. Task all weight and moment control actions.
- Co-chair and participate as a member of the Permanent Joint Working Group on Cutter Combat System Equipment.

9-7.7.3 Systems Commands (NAVSEA, Naval Air Systems Command (NAVAIR), SPAWAR)

- Budget for and provide the SHIPALT material, ORDALTs and FCs required to support the USCG.
- Budget for and fund ORDALT and FC installations.
- Fund and task Navy field activities as required in support of the USCG SHIPALT Program.
- Provide all ILS products required to support Navy equipment installations including: APLs/AELs, technical data, TMs and PMS.
- Provide all required ILS products as defined in Section 8 of this manual and any other documentation required for the installation, testing and checkout of Navy-owned equipment.
- Provide all support material required for USCG SHIPALTs including: I&Cs spares, COSAL Outfitting Material and associated Special Purpose Support and Test Equipment.

9-7.7.4 U.S. Coast Guard Program Manager (NAVSEA PMS325)

- Act as the central point of contact at NAVSEA for Navy-owned equipment installations aboard USCG Cutters and coordinate the USCG FMP process.

- In concert with CNO and USCG, review and approve all JCFs and SARs through the NAVSEA PMS325 CCB process.
- Budget for USCG SHIPALT DSA and installation funding requirements.
- Issue Advance Planning, Authorization, Funding and Tasking Letters for USCG FMP work to the Navy PY and other Navy activities as required. This requirement is determined by funding and contractual arrangements.
- Act as the primary interface between the USCG and the PY, and provide management support for all PY functions.
- Fund the preparation of SARs required for USCG SHIPALTs.
- Fund SID preparation for Replacement/Upgrade USCG SHIPALTs and the installation of these SHIPALTs.
- Resolve and approve all applicable LARs concurrently with the USCG.
- Monitor GFM deliveries and resolves material discrepancy reports and any other associated ILS related problems.
- Enter USCG SHIPALT information into NDE-NM in accordance with standard FMP procedures and resolve NDE-NM Discrepancy Reports. Ensure that the database is current and accurate.
- Monitor SHIPALT installation progress in conjunction with the USCG.
- Participate as a member of the Permanent Joint Working Group on Cutter Combat System Equipment.

9-7.7.5 Navy Planning Yard (PY)

- Acts as the Navy engineering design agent for USCG SHIPALTs.
- Prepare SARs for USCG SHIPALTs as funded and tasked by NAVSEA PMS325.
- Develop SIDs for Initial Issue/New Capability SHIPALTs and conducts related ship checks as funded and tasked by the USCG.
- Develop SIDs for Replacement/Upgrade SHIPALTs and conduct related ship checks as funded and tasked by NAVSEA PMS325.
- Update Cutter SSRs as funded and tasked by the USCG.
- Initiate LARs as required during the USCG SHIPALT development process.
- Perform other PY functions related to the USCG program as funded and tasked by NAVSEA PMS325.

SUBSECTION 9-8 MILITARY SEALIFT COMMAND SHIP ALTERATION PROGRAM

9-8.1 Scope of Subsection 9-8

This subsection describes the responsibilities of the NAVSEA and the MSC for the modernization of MSC ships (T-ships). FMP procedures delineated in other sections of this manual will be followed except as modified by this subsection

9-8.2 Background for Subsection 9-8

Traditionally, the SPM has had the responsibility for ship life cycle and CM for all Navy ships not specifically assigned to MSC. As ship class CM responsibility transfers from one command to another, it is necessary that a clear audit trail be confirmed especially since some classes are being transferred ship by ship rather than as an entire class. As these transfers occur, it is important that standardization of interoperability features between MSC and other Navy ships/forces be maintained. The MSC ship classes that require the most interoperability interfaces are the Naval Fleet Auxiliary Force (NFAF) for which NAVSEA and MSC both have life cycle responsibilities.

The Support Ships/Boats/Craft PM (NAVSEA PMS325) is responsible for CM for the NFAF ships. Reference S9(x) provides the policy for Navy support of MSC ships and contains the Basic Agreement between the Navy and the MSC for interagency support.

9-8.3 Definitions for Subsection 9-8

Interoperability alterations are those modernizations to ship characteristics affecting the ability of MSC ships to operate effectively with other Navy ships or units as well as those alterations otherwise agreed to be common to both MSC and other Navy ship classes for reasons of standardization. These will generally include communications and Underway Replenishment (UNREP) alterations as well as those specifically directed by the CNO (see Table S9-1).

9-8.4 Coverage of Subsection 9-8

The seven ship classes specifically covered by this section are:

- TAE-26 (single ship only)
- TAF-58 Class
- TAFS-8 Class
- TAFS-1 (MSC conversion ships only)
- TAO 143 and 187 Classes
- TATF-166 Class

9-8.5 Exception to Ships in Subsection 9-8

Three ship classes; TAE-26, TAFS-1, and TAO-187 are exception cases. For TAE-26 and TAFS-1 Classes, NAVSEA reserves a higher level of CM than for other classes. CM of the TAO-187 Class will be shared between MSC and NAVSEA due to DSA funding/tasking concurrent with AO-177 Class ship design efforts.

9-8.6 Responsibilities for MSC Modernizations

Responsibilities for the modernization of MSC ships as delineated in Subsection 9-8.4 are as

follows.

9-8.6.1 Modernization Related Ship Maintenance

MSC will retain all responsibility for planning, funding, and execution including SHIPALTs and TRANSALTs considered to be maintenance rather than modernization. This would include MSC equivalents of Title “D” and “F” SHIPALTs and Alterations Equivalent to Repair (AERs).

9-8.6.2 MSC Non-Interoperability Modernization

MSC will be responsible for planning, designing, installing and funding all non-interoperability modernization alterations.

9-8.6.3 Interoperability Modernization (Non-AIT)

9-8.6.3.1 NAVSEA PMS325

- During the SHIPALT development and review process, provide copies of draft JCFs to MSC for applicability review and analysis.
- Develop SHIPALT products through the SAR for the TAE-26, TAFS-1, and TAO-187 Classes.
- Jointly, with MSC, approve all interoperability SARs for the ship classes listed in Subsection 9-8.4.
- Approve the technical content only for MSC developed SARs.
- On a case basis and upon request by MSC and agreement by CNO N76, fund and accomplish selected SIDs.

9-8.6.3.2 MSC

- Develop SHIPALT products through the SAR for all other NFAF classes not specifically listed in Subsection 9-8.6.3.1
- Jointly, with NAVSEA PMS325, approve all interoperability SARs for the ship classes listed in Subsection 9-8.4.
- Develop SIDs from both MSC and NAVSEA PMS325 provided SARs.
- Manage and fund the installations of all interoperability modernizations for the ship classes listed in Subsection 9-8.4.

9-8.6.4 Communication Alterations/Upgrades (AIT Installations)

9-8.6.4.1 NAVSEA PMS325

Develop all SARs for communication AIT modernization for the TAE-26, TAFS-1, and TAO-187 classes and provide to MSC for approval. Upon final approval, provide copies to MSC.

9-8.6.4.2 MSC

- Develop SARs for communication AIT modernization for all other NFAF ship classes not specifically listed in Subsection 9-8.6.4.1.
- Develop SIDs for all ship classes listed in Subsection 9-8.4.
- Coordinate installation management with the Separate Funding Line Manager.

9-8.6.5 Configuration Management

MSC will be responsible for CM for all ship classes listed in Subsection 9-8.4. This responsibility will include all NDE-NM updating and management of modernization material provisioning and ILS.

9-8.6.6 Planning Yards (PYs)

9-8.6.6.1 NAVSEA PMS325

PMS325 will task DSA efforts to MSC in those interoperability areas for which NAVSEA is responsible. (see Table 9-1)

9-8.6.6.2 MSC

MSC is the PY for class CM for all ship classes listed in subsection 9-8.4 and for the development of all MSC-responsible DSA products and services with the exception of TAE-26, TAFS-1, and TAO-187 Classes.

9-8.6 NAVSEA PMS325/MSC Coordination

Upon review and approval of the JCF, responsibility for initiating SARs for interoperability alterations will be split between NAVSEA PMS325 and MSC. In all cases, however, both NAVSEA PMS325 and MSC must approve the technical content of the final product.

9-8.6.7.1 NAVSEA PMS325

For the TAE-26, TAFS-1, and TAO-187 Classes, NAVSEA will:

- Initiate SARs for interoperability alterations and communication AIT alterations.
- Provide all necessary documentation to MSC to enable them to carry out their responsibilities as CM manager.
- Include MSC in all NAVSEA planning evolutions and coordinate MSC's participation in CNO sponsored FMP evolutions including FLTMOD and Alteration Verification Conferences (AVCs).
- Prepare and release the Advance Planning and SHIPALT Authorization Letters.

9-8.6.7.2 MSC

- Initiate SARs for interoperability and communication AIT alterations for all NFAF ship classes except TAE-26, TAFS-1, and TAO-187 Classes.
- Approve the technical content of SARs for all NFAF ship classes.
- Serve as CM manager for all NFAF ship classes.
- Attend FLTMOD and AVC conferences.
- Prepare and release the Advance Planning and SHIPALT Authorization Letters for all NFAF ship classes except TAE-26, TAFS-1, and TAO-187 Classes.
- Develop quarterly availability schedules and provide to CNO N43 for entry into NDE-NM.

9-8.7 Funding for MSC Modernization

All modernization funding for the NFAF ship classes listed in Subsection 9-8.4 will come from CNO N43 through the FMP funding processes detailed in Section 6 of this manual. CNO N76 will provide funding to NAVSEA 013 for those CNO programmed or required Title "K" SHIPALTs to be accomplished on MSC ships. This includes Title "K" SHIPALTs to be

accomplished during regular MSC Availabilities and by AITs.

9-8.7.1 Title “K” SHIPALTs Accomplished During Regular MSC Availabilities

Upon receipt of the SHIPALT Authorization Letter, MSC will provide a written request to NAVSEA for time-phased funds required to accomplish the Title “K” SHIPALT package.

9-8.7.2 Title “K” SHIPALTs Accomplished by AIT

After consultation with MSC regarding the type and number of MSC ships scheduled to receive the installation, NAVSEA will provide the required funds to the appropriate ISEA/LCM/Separate Funding Line (SFL) Manager.

9-8.7.3 MSC Desired Title “K” SHIPALTs

Title “K” SHIPALTs that MSC desires to install must be funded by MSC.

9-8.7.4 Program Objectives Memorandum (POM) and Budget Estimates

9-8.7.4.1 MSC

MSC will provide POM and budget estimates for all MSC-responsible FMP efforts (design and PY CM support (DSA), advance planning and installation costs) to CNO N76, via NAVSEA PMS325 for coordination, in accordance with normal FMP POM and budget submission procedures. MSC AIT funding estimates will be coordinated by MSC but provided to CNO N76 by the Separate Funding Line Manager.

9-8.7.4.2 NAVSEA PMS325

PMS325 will be responsible for providing POM and budget estimates for their MSC FMP DSA efforts and coordinating them with the MSC POM and budget submissions to CNO N76. In addition, NAVSEA PMS325 will include MSC in all regular FMP POM and budget planning and execution evolutions.

9-8.7.4.3 CNO

All execution funding provided by CNO N76 to NAVSEA 013 for MSC FMP efforts will be provided directly to MSC and NAVSEA PMS325 (or their designated PY) in response to their funding requests. MSC AIT funding will be provided to the requesting Separate Funding Line Manager as requested.

TABLE S9-1 MSC/FMP INTEROPERABILITY ALTERATION MATRIX

<u>SHIP/ CLASS</u>	<u>COMMUNICATIONS</u>	<u>UNREP</u>	<u>SURFACE SHIP SURVIVABILITY</u> (2)	<u>FLIGHT DECK FIREFIGHTING</u> (2)	<u>AVIATION FACILITIES</u> (2)
TAE	X	X	(1)	(1)	(1)
TAF-58 (3)	X	X			
TAFS-8CL	X	X	(1)	(1)	(1)
TAFS-1CL	X	X	(1)	(1)	(1)
TAO-143CL (4)	X	X			
TAO-187CL	X	X	(1)	(1)	(1)
TATF-166CL	X		(1)		

NOTE: (1) TO BE DETERMINED ON A CASE BASIS

(2) AS DIRECTED BY CNO

(3) WILL DECOMMISSION SOON - UNLIKELY TO MODERNIZE

(4) INACTIVATION COMPLETE IN FY92 - UNLIKELY TO MODERNIZE

SUBSECTION 9-9 SPAWAR FIELD CHANGE IMPLEMENTATION PROGRAM (FCIP)

9-9.1 Scope of Subsection 9-9

This subsection describes the SPAWAR FCIP. This program aids in enforcing the FMP policy and guidance for a systematic FC implementation to SPAWAR cognizant equipment/systems throughout the Fleet. The FCIP provides a central point of contact for all SPAWAR FCs and provides consolidated installation of all SPAWAR minor FCs. References S9(b) and S9(y) provide specific policies as well as detailed procedures relevant to the development and installation of FCs by the FCIP.

9-9.2 Background for Subsection 9-9

A FC is any modification made to electronic equipment or systems after establishment of a product baseline and after delivery to the Navy. A FC must meet all of the following conditions:

- Can be accomplished without changing interface external to the equipment or system.
- Is a modification made within the equipment or system boundary.
- Can be accomplished without the ship being in an industrial activity.

A minor FC must meet all of the above described conditions in addition to the following:

- Have no impact on Battle Force Interoperability (BFI).
- The estimated time for the FC installation, pre-test and post-test takes less than 60 hours and assistance from ship's force is minimal.
- Will be accomplished individually and not in conjunction with a SHIPALT or MACHALT.

The need for equipment modifications occurs for one of the following reasons:

- Defects in the original design.
- A need to change equipment operational capability.
- Correction of safety hazards.
- Replacement of obsolete components.

The need for a modification in configuration may originate from the Fleet, the cognizant ISEA, the equipment manufacturer, a Navy industrial activity/depot, or may be directed by higher authority.

9-9.2.1 SPAWAR Engineering Change Proposal (ECP) Development

Once the need for a configuration change is identified, the task of developing the formal ECP is assigned, usually to the ISEA or the equipment manufacturer.

ECPs are prepared in accordance with reference S9(y) with additional amplifying information as specified in its appendix. ECPs must contain sufficient data to justify the expenditure of resources prior to approval by the SPAWAR CCB.

9-9.2.2 SPAWAR ECP Review and Approval

ECPs are reviewed and approved by SPAWAR CCBs in accordance with reference S9(y). The CCB issues a CCBD that provides detailed actions required to develop and to implement the ECP. When a conjunctive SHIPALT is required, SPAWAR will generate the necessary JCF and

submit it to the SPM for approval.

9-9.3 SPAWAR Field Change Development and Implementation

FCs are the modifications resulting from approved ECPs. FCs are prepared in accordance with references S9(b) and S9(y). All authorized FCs for SPAWAR cognizant equipment are developed under the direction of the SPAWAR equipment acquisition and LCM. SPAWAR notifies the SPMs of all FCs to be installed. FC procurement is normally a two-phase process:

- Prototype Field Change
- Production Field Change

9-9.3.1 SPAWAR Prototype Field Change

A Prototype FC is developed to:

- Determine the military suitability of a proposed modification.
- Determine the adequacy of the proposed modification.

A Prototype FC contains all the parts, materials, and instructions required to accomplish and to evaluate the change. The Prototype FC kit is installed by personnel of the same technical level as the personnel required to install the Production FC.

9-9.3.2 SPAWAR Production Field Change

Once the Prototype FC has been successfully installed, evaluated and tested, manufacturing of Production FCs can begin. Production FCs are prepared in accordance with references S9(b) and S9(y) and are designated by types as follows:

- Type I – A FC that requires parts, all of which are included in a kit consisting of publications, parts, materials, and special tools required to accomplish the change to one equipment and to revise existing equipment nameplates, publications, and charts as required.
- Type II – A FC that requires parts, none of which are included with the FC. The Type II FC may be either a kit consisting of a publications package or articles for a publication providing instructions for accomplishing the FC and correcting related publications.
- Type III – A FC that requires parts, some of which are included in a kit. The FC kit consists of a publications package and some of the parts, materials, and special tools required to accomplish the FC to one equipment and to revise existing nameplates, publications, and charts as required.
- Type IV – A FC that does not require parts or the use of special tools. This FC may be either a kit consisting of a publications package or articles for a publication providing instructions for accomplishing the FC and correcting related publications.

Additionally, Production FCs require a class designation signifying the accomplishment responsibility. The following class designations apply to Production FCs:

- Class A – A FC approved for accomplishment by Forces Afloat or station personnel; no installation funding is required.
- Class B – A FC that requires Fleet Installation funding.
- Class C – A FC that normally requires industrial assistance for installation. The appropriate Systems Command funds it.

It is SPAWAR policy that all approved FCs be designated Class A or C, whichever is most

appropriate.

9-9.4 SPAWAR Logistics Support

It is SPAWAR policy that no modifications be incorporated in equipment in the fleet unless all ILS products are provided concurrently. For further ILS requirements and certification information see Section 8 of this manual.

The LCM for electronics CIs is responsible for procuring or initiating the development of all required ILS products for FCs. All required ILS products must be available in final form at the time the FC is installed which is indicated by a formal alteration release letter, or ILS Certification Form by the program office certifying that all logistics products are in place.

The impact of an alteration on ILS shall be identified in the ECP. Changes to TMs and PMS shall be developed concurrently with the preparation of the FCB and the FC kit. At the end of the installation, all required OBRPs will be provided or the FC installer will advise the ship to requisition the allowance changes identified in the FC Instruction. Requisitions for initial outfitting OBRPs will be sent to the initial outfitting TOB holder, FISC Puget Sound. If an APL has not yet been developed for the system, a PAL will be developed. ISS shall only be used on unstable design equipment for which provisioning cannot be accomplished. The NSA shall verify the completeness and adequacy of an installation and the support provided in accordance with the requirements of Section 8 of this manual.

9-9.5 SPAWAR Field Change Installation

Class C FCs can be accomplished by supporting AITs or FCIP installation teams. It is recommended to maximize the use of FCIP for installing SPAWAR FCs, with routine accomplished priority, for cost effectiveness.

FCIP installation teams, located in San Diego and Norfolk, provide consolidated installations for minor FCs to SPAWAR cognizant equipment and systems. Visits are made periodically to install any applicable new and outstanding FCs. The frequency of visits will be determined by the availability of funds, ships' operating schedules, needs determined by the Fleet and shore activity Commanders, and the availability of FC related materials.

Prior to the installation of a FC, the equipment is pre-tested to ensure that it is operating within the prescribed parameters. After the installation of the FC, the equipment is again tested to ensure that the equipment remains operational and that the change has been correctly installed. These tests are prescribed to minimize equipment failures.

For FCs installed outside a depot level availability, the NSA will verify the completeness and adequacy of an installation and the support provided in accordance with Section 8 of this manual. These FC installations will be scheduled by entering the scheduling data into SPAWAR Installation Database, NDE-NM and working through the TYCOM's Alteration Installation Scheduling Conference process.

For minor FCs to be accomplished during periodic visits by FCIP installation teams, the D-30 process in accordance to S9(c), the NAVSEA BFI CCB secretariat process and Advanced

Planning availability authorization process are not required.

9-9.6 SPAWAR Field Change Configuration Audit

Concurrent with FC installation, FCIP installation teams perform periodic audits for SPAWAR FC configuration current status and ILS review. Shipboard documentation is reviewed and updated as required to ensure adequate support for installed FCs. This includes the incorporation of temporary or permanent changes to technical publications, review and update of APLs, and validation and update of PMS cards.

FCIP maintains a database to record FC configuration status for all SPAWAR equipment and track all approved SPAWAR FCs.

9-9.7 Field Change Installation Reporting

FC installation completions shall be reported by the installing activity to the appropriate ISEA and assigned CDM in accordance with references S9(f) and S9(g) for entry into CDMD-OA. For those activities using a SNAP computer, FC completions shall be reported by entry into the configuration change screen display using one of the following methods:

- Keyboard entry into the SNAP computer.
- Unsequenced ASI tape entry into the SNAP computer.

The ISEAs shall also report FC installation completions by updating NDE-NM.

In addition to the above, all work performed by the FCIP installation teams is documented and reported in a FCIP Activity Report (FAR). The FAR is normally provided to the ship within 30 days of the FCIP team visit. The FAR also contains recommended actions to be taken by ship's force, as determined necessary by the FCIP team, but beyond the scope of the program. Recommended actions include such things as ordering additional copies of TMs, APLs, or PMS cards.

9-9.8 SPAWAR Field Change Information Management

The LCM, or designated ISEA, is responsible for CSA for equipment under their cognizance and for accurate and timely reporting of FC planning information. The purpose of this information is to facilitate the procurement, scheduling and reporting of FC installations. The LCM or designated ISEA reports the FC planning information to the NDE-NM and to the appropriate CDM for entry into CDMD-OA.

The following is a brief description of each system.

9-9.8.1 Navy Data Environment-Navy Modernization (NDE-NM) Information Reporting

NDE-NM is the system that supports the planning and information reporting objectives for FCs installed under the FMP. This system contains the FC planning details, such as, applicability, scheduling and installation information. The LCMs or ISEAs are responsible for timely submission of status and planning information to NDE-NM. Refer to Section 11 of this manual for detailed information on NDE-NM requirements.

9-9.8.2 Configuration Data Managers Database-Open Architecture (CDMD-OA)

Information Reporting

CDMD-OA is the Navy's designated system for management and control of ship configuration and logistics in accordance with reference S9(g). The types of FC information reported to CDMD-OA include scheduling information, planned equipment installations or removals, planned alteration installations and installation status reports. Action steps and milestones for CM are contained in Section 8 of this manual.

SUBSECTION 9-10 TEMPORARY ALTERATIONS (TEMPALTs)

9-10.1 Scope

This subsection outlines the policy, process and responsibilities for development and approval of TEMPALTs proposed for accomplishment on operational Fleet ships.

9-10.2 Exemptions

This subsection does not apply to the following:

- Submarines - TEMPALTs proposed for accomplishment on submarines or submersibles are covered by reference S9(z).
- Availability Testing - TEMPALTs performed as part of dry-dock or dockside testing during overhauls and other availabilities.
- Test Gauges - Temporary installation of mechanical gauges that connect to fittings designed and installed for test equipment attachment. The use of test gauge fittings for other than test equipment attachment will be approved by the SPM before usage.
- Temporary Equipment Alterations in the form of ORDALTs, MACHALTs, FCs AND ECs.

9-10.3 Definition

A TEMPALT is any alteration that provides new or improves existing capabilities on a temporary basis (not to exceed one year or one operational deployment in duration) in support of Research Development, Test and Evaluation (RDT&E) or military exercise or mission requirements. Budgeting and funding for TEMPALT accomplishment is usually part of the applicable project or program for RDT&E alterations, or the cognizant FLTCINC, TYCOM or CNO Resource Sponsor for mission support alterations. Budgeting for TEMPALTs shall include sufficient funding to remove the alteration and restore the ship to its original configuration. TEMPALTs are not funded as part of the FMP.

9-10.4 TEMPALT Categories

The following are the general TEMPALT categories:

- At-sea testing and evaluation, i.e., including sea trials, fast cruise, SONAR certification, and weapon or missile system certification trials
- Research and development
- Operational Evaluation/Technical Evaluation (OPEVAL/TECHEVAL)
- Special Mission/Battle Group
- Military Exercise or Contingency Operations
- CS PMIs and PSIs

9-10.5 Policy

TEMPALTs shall be reviewed and technically approved by the cognizant SPM before being authorized for accomplishment by the cognizant TYCOM. Alterations that are intended to be installed for a period in excess of one year or one operational deployment shall be considered a permanent change to a ship's configuration and shall be accomplished as a SHIPALT. After completion of testing requirements, mission or exercise support requirements or one year, whichever comes first, TEMPALTs must be removed and the ship restored to its previous configuration. The activity sponsoring the accomplishment of the TEMPALT shall be responsible for funding the removal of the TEMPALT and the restoration of the ship.

If the intent/functionality of a TEMPALT is accomplished by a follow-on SHIPALT, that TEMPALT will be cancelled and not authorized for further installations. TEMPALT installation drawings that are not developed by the PY shall be forwarded to the PY for review and approval.

TEMPALTs that may affect Battle Group Interoperability will be coordinated with the cognizant CINC /NAVSEA 53 prior to installation scheduling.

9-10.6 TEMPALT Process

TEMPALT planning, development and execution closely mirrors the process for permanent SHIPALTs. The sponsoring activity will submit a JCF to the cognizant SPM to obtain a TEMPALT number and concept approval. However, the JCF is not used to obtain funding. Funding associated with TEMPALTs will be borne by the sponsoring activity not the SPM.

TEMPALTs do not require the development of a formal document like the SAR, which is required for SHIPALTs. However, alteration design development for TEMPALTs is the same as for SHIPALTs. A Plan of Actions and Milestones (POA&M) will be developed by the sponsoring activity which outlines requirements for design shipcheck, design development, drawing approval, assembly fabrication, testing (e.g. land-based, pre-and-post installation, at-sea), alteration accomplishment and alteration approval. The POA&M should include all personnel associated with the TEMPALT during its entire installed timeframe, as well as the identification and mitigation of all topside impacts to the CS. The SPM, TYCOM and PY are required to review the POA&M and provide comments to the sponsoring activity. The SPM, TYCOM and PY will be provided copies of the final POA&M.

After the POA&M is issued, the sponsoring activity must coordinate detailed planning with the TYCOM and SPM to establish which ship is to receive the TEMPALT (if not previously identified in the tasking document) and to determine dates that the ship will be available for design shipcheck and alteration accomplishment.

TEMPALT installation drawings, similar to SIDs are also required. The sponsoring activity is responsible for developing detailed installation drawings and for providing them to the SPM with adequate time for the applicable PY to review. Minimal review time is 30 days.

While the SPM does not “certify” the adequacy of TEMPALT logistics products as it does for SHIPALTs, and the FMP ILS Certification Milestones do not apply, any and all ILS products that will be provided for the purposes of supporting the operation, testing and maintenance of the TEMPALT shall be documented on an ILS Certification Form. It is recommended that a completed ILS Certification Form be provided to the SPM in sufficient time, prior to installation, to allow the SPM ample time to review and resolve any potential supportability issues surrounding the installation and support of the TEMPALT (preferably 4 months prior to installation, but NLT 2 months prior to installation). Furthermore, TEMPALT Configuration Status Accounting (CSA) requirements shall be documented in the ship’s Current Ship Maintenance Project (CSMP) using the Departure From Specification (DFS) process as well as through the CDMD-OA process used for SHIPALTs.

Scheduling for TEMPALTs shall be performed in the same manner as SHIPALTs.

9-10.6.1 TEMPALT Installation and Removal Messages

The sponsoring activity will notify the cognizant SPM, CINC, and TYCOM by naval message when any TEMPALT installation is accomplished on any active ship and when any TEMPALT installation is relocated or removed. At a minimum, installation messages will contain the TEMPALT number and title, ship's name and hull number, date of installation, any preliminary ILS provided, proposed removal date, the sponsoring activity's point of contact and references to the SPM approval and TYCOM's authorization. In addition, the installation message will include a statement certifying that the installation was accomplished in accordance with the TEMPALT installation drawings; and any discrepancies were adjudicated in accordance with reference S9(aa), as applicable. If training is required, the installation message will also include names of ship's personnel trained to operate and maintain the TEMPALT equipment. Removal messages will contain the TEMPALT number and title, ship's name and hull number, date of removal, and a statement certifying that the ship was restored to original configuration or any outstanding related item preventing restoration.

9-10.7 Responsibilities

9-10.7.1 Sponsoring Activity

- Identify those TEMPALTs which support a special mission for the duration of a specific deployment and which are being considered for class and multi-ship approval.
- Provide project or program funding and coordination for all phases of TEMPALT development, including detailed design packages, installation, and restoration of the ship to its original configuration.
- Identify installation test and evaluation requirements of all TEMPALTs.
- Develop the TEMPALT JCF and submit to the SPM for approval.
- Develop TEMPALT installation drawings.
- For the purpose of adjudicating nonconformance, TEMPALT drawings are considered nondeviation drawings. In cases where the approved TEMPALT design must be modified to suit a particular installation, the required nonconformance to TEMPALT design will be adjudicated by the IA in accordance with DFS procedures of reference S9(aa) Volume V Part I Chapter 8.
- Develop the TEMPALT POA&M.
- Ensure that the design documentation for TEMPALTs has been approved by the SPM prior to the start of ship-work in accordance with the policy and procedures of this subsection.
- Ensure that authorization has been obtained from the applicable TYCOM prior to installation.
- Ensure all TEMPALTs impacting CS equipment are reviewed by the CSE as well as the Warfare Area Manager (WAM).
- Establish a MOA for all work to be performed and accomplish all work in accordance with reference S9(aa).
- Notify the SPM and applicable TYCOM(s) by naval message whenever a TEMPALT has been accomplished, relocated, or removed.
- Provide a copy of the approved technical data package to the ship each time the alteration is accomplished.

- Provide all ILS products, including Training, required for the operation and maintenance of the TEMPALT equipment during its installed time frame or use aboard ship.
- Provide the CDM CDMD-OA records for TEMPALT equipment after installation.

9-10.7.2 SPM

- Ensure that TEMPALTs are technically satisfactory (e.g., safe, weight and moment, stability, missile hazard, access to and operation of vital equipment, etc.).
- Obtain PY review and input on TEMPALTs. Ensure ship impacts (e.g. cabling, foundations, new/relocated equipment, power, etc.) are considered in TEMPALT installation drawings.

9-10.7.3 TYCOM

- Authorize accomplishment of only those TEMPALTs that have been approved for accomplishment by the SPM.
- Adjudicate non-conformance to approved TEMPALT design in accordance with DFS procedures or Reference S9(aa) Volume V Part I Chapter 8.
- Maintain administrative control and monitor installation and removal of TEMPALTs.
- Notify CNO when authorizing installation of TEMPALTs that may impact ship mission or operational capabilities.

9-10.8 Configuration Status Accounting (CSA)

CSA for TEMPALTs shall be documented in CDMD-OA as it is for SHIPALTs, AERs, and equipment alterations, as well as the ship's CSMP using the DFS process. Configuration development will normally be to the top-level configuration to provide for the general identification of the equipment installed by the TEMPALT. This allows the CDM to identify the equipment and establish a CI record in CDMD-OA for purposes of CSA once the installation has been validated as complete. This data will be provided by the sponsoring activity in accordance with the requirements of references S9(c) and S9(g) and Section 8 of this manual. CSA for TEMPALTs shall also be accomplished utilizing the DFS process as described in reference S9(aa) Volume V Part I Chapter 8. This process requires that the DFS be entered into the CSMP and the installing activity database until such time as the ship's original configuration is either restored or permanent approval of the TEMPALT is authorized.

Ship's Force shall provide the sponsoring activity a DFS number. The subject line of the DFS shall read: "DFS Request-New Technology Test Initiative." The sponsoring activity shall provide the following information in block 14 of the DFS.

- Description of TEMPALT. (Include anticipated benefit)
- Product and Manufacturer
- Sponsoring Agencies (i.e. Port Engineer, Depot Facility, SPM, SPAWAR, FTSCCLANT, NSWC, ISEA, Contractors, etc.)
- Technical and other assists if required (Ship's Force, SIMA, RRC, etc.)
- Estimated Date of Installation
- Define Test initiative and compartment location (system, equipment, component, hull structure, etc)
- Describe long/short term ILS plans, if available (for parts support, other new maintenance requirements, PMS, and technical documentation)

- Provide estimated test completion date and sponsoring agency evaluation POA&M

Ship's Force shall forward the DFS to the applicable TYCOM for approval. The TYCOM shall provide a copy of the approved DFS to the requesting ship and TEMPALT sponsor.