

# SHIPBUILDING SPECIALIST (SBS)



## DESK GUIDE



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## DEPARTMENT OF THE NAVY

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### FOREWORD

Ref: (a) COMUSFLTFORCOMINST 4790.3 Joint Fleet Maintenance Manual  
(b) CNRMC Fleet Desk Guide (FDG)

1. This Shipbuilding Specialist (SBS) Role-Based Desk Guide (RBDG) provides the SBS with standardized procedures to assist in execution of his/her duties and responsibilities outlined in reference (a). Augmented by reference (b), it contains procedures for executing all phases of the maintenance availability end-to-end (E2E) process. All RMCs are directed to incorporate the SBS RBDG within their operations.

2. This RBDG can be accessed and downloaded through the CNRMC web portal at <https://dodcac.portal.navy.mil/navsea/CNRMC/fdg/default.aspx>. Any recommended changes should be submitted using the change request/feedback form located on the website, or forwarded to:

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## RECORD OF CHANGES

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# SHIPBUILDING SPECIALIST (SBS)



## DESK GUIDE VOLUME I



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## **The Shipbuilding Specialist**

Congratulations on becoming a Shipbuilding Specialist (SBS)! During your initial training and throughout your career as a SBS, you will find that this is one of the most unique jobs in the world. While no single job or group of jobs can fully prepare you to be a SBS, it is very helpful to have an industrial background as a base. This is only a starting point for the knowledge, skills and abilities needed by today's SBS. Additional knowledge will be needed to round out your ability to oversee the contractor work you are assigned to monitor and oversee. You will need to develop these skills as quickly as possible to ensure you can properly monitor and document the success or failure of your assigned projects. This will include acquiring additional trade skills, knowledge of the contract and contract oversight, Quality Control, Quality Assurance, and Technical Authority. Since changes in role responsibilities can be made on an almost daily basis, you will need to adapt your knowledge and abilities to these changes in order to support the needed maintenance and modernization requirements of today's modern warships. Continuous training to maintain skills is a must!

Two of the major areas where the SBS needs to develop and maintain superior skills and abilities are in communications and the ability to maintain focus as the customer representative. For communication skills, the SBS should keep in mind the C<sup>3</sup> concept:

Communication => Control => Compliance

Communication is the cornerstone of the SBS key skills. Without superior communication skills you will not be able to establish or maintain control of the work you are overseeing.

Without strong control of the work you are overseeing, you will not be able to assure the contractor has complied with the requirements of the contract you are executing. If compliance is not assured at the highest levels, there is a good chance the contract will not be completed successfully. Superior communication skills in both oral and written form is absolutely essential to the SBS position, since you are the face of the RMC for both the contractor and ship's company, along with virtually all other entities working to successfully execute the contracted work. You will be required to communicate with all levels of personnel, since the majority of communication goes

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through the SBS during execution of a contract, regardless of the type or work being accomplished. This includes discussion of production and interface issues with ship's company and the contractors assigned, Engineering Service Requests, assisting in resolution of contract modification issues, answering Conditions Found Reports (CFRs), requesting contract changes, etc.

With this in mind, the SBS needs to understand that communication equals control. Without communication, you cannot establish or effectively maintain control of your project on any level.

Control equals compliance. Without control, you cannot ensure contractor compliance with the requirements of the contract you are overseeing.

Compliance equals success!!! If the contractor meets all of the written requirements in the contract and provides the proper documentation, we will be successful. If the contractor does not, we will fail. It seems simple, right? Well, all of this means that you, the SBS, must be willing and able to communicate at all levels of the command structure, both internally and externally, and without delay. If you are unable or unwilling to do this, you will not be successful as a SBS.

The SBS should also understand that in order to ensure success, you will need to keep three major areas in mind at all times while providing contracted maintenance oversight. These areas support both the contract and Technical Warrant Holders (TWH) when executing a contract, or availability. They are Cost, Quality and Schedule. Each of these focal points carries equal weight.



As an SBS, it is your responsibility to ensure that the Navy (customer) receives the highest possible quality work and products at the cost agreed to by the contractor and the government, within the time allotted for the work to be accomplished. The products and services must always meet the requirements of the contract. You can only accomplish this through constant observation of the work being accomplished, or Material Survey.

Bottom Line: Make sure the job is completed and the components and associated systems all work! This is how our success or failure, and that of the contractor, will be determined. Remember: you cannot require the contractor to do anything that is not in writing. If you see that work item requirements are not sufficient to accomplish the actual actions needed to complete a repair, request a change to the contract that will include the new requirement, or modify existing requirements, to meet the actual need.

The SBS should always be aware that the government both wants and needs the contractor to be successful in his completion of the contracted work, and works toward that goal. The government also wants the contractor to receive the agreed upon amount of compensation and any awards or incentives he is entitled to, when the work is completed successfully and all requirements are met. But, the bottom line must always be that the repairs are accomplished correctly and documentation is completed, and that the equipment has been successfully demonstrated to work as designed at the end of the contract or availability period.

Among the newest changes to the SBS roles and responsibilities is work certification. While the major part of this responsibility rests with the Technical Authority, Engineering and the Test Engineers, the SBS plays a very large part in helping to assure this process is accomplished in an efficient and timely manner. This means making sure you are aware of the roles and responsibilities of other team members, so that you are able to support the team in this effort. Your efforts in monitoring the contractor work and ensuring the contractor meets all requirements for work and documentation is of the greatest importance in assuring total ship testing and certification is successful.

As a SBS, YOU are responsible for knowing the contents of this desk guide and for carrying out all duties assigned. The desk guide can be quoted as an instruction. It is NOT designed to be used as a micro-management tool, but to provide assistance to you in the execution of your roles and responsibilities.

Finally, as a SBS, you can expect new challenges on a daily basis. Your ability to successfully adapt to this changing work environment will be a major key to your success.

Good Luck and Congratulations!

**A Typical Day in the Life of an SBS looks something like this:**

- o Read and answer E-mails: (continuous process).
- o Read and answer Conditions Found Reports (CFR): (continuous process).
- o Enter Engineering Service Requests (ESR): (continuous process).
- o Generate requests for contract changes (RCC): (continuous process).
- o Morning walkthrough of ship (normally before the morning production meeting).
- o Attend morning (daily) production meeting.
- o Attend side meetings to assist contractor with any issues not resolved in the morning meeting.
- o Update progress by work item for weekly progress input to the Project Manager.
- o Attend weekly progress meetings when they are held.
- o Attend all scheduled check points.
- o Receive and process all check point notifications for night and weekend work.
- o Notify the Project Manager of any overtime requirements based on checkpoint notifications.
- o At a minimum the SBS should be walking through the Ship at least twice daily. It is strongly recommended that most of the SBS's time should be spent in material/equipment survey of assigned work.
- o Attend safety walk through with ship's force, contractor and safety representatives (Note: this should always be in the forefront for the SBS during any walk through or other time spent on the ship or at repair sites). While Cost Quality and Schedule are our major focal points, safety is always our number one concern! Safety should never be compromised! During the work day, the SBS will be

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continually updating both hard copy and electronic files, answering questions from the contractor and interfacing with the ship's company, contractor representatives, Port Engineer (PE), Project Manager (PM), Quality Assurance Supervisors (QAS), Engineering, Manufacturing representatives, and any other personnel necessary for successful completion of the work being executed. This includes receiving and reading all required reports and making sure that all responses are returned in a timely manner.

- o The SBS is required to keep a significant events log, which is kept in hard copy and is always hand written. The significant event log is to be provided to the PM on request for use in completing Contract Administration Quality Assurance Program (CAQAP) reporting and must be turned in at the end of CNO availabilities for inclusion in the contract Objective Quality Evidence (OQE) files, where they are turned over to the Administering Contracting Officer (ACO). They then become an official part of the contract records. A module is included in this desk guide for additional information.
- o Provide assistance to other maintenance team members when needed. Remember, we are all on the same team and we all have the same goal: successful completion of the availability.
- o Additional duties performed on a less frequent basis include, but are not limited to; initial investigation of mishaps, review of parts and material reports, assistance in auditing of contractors, requests through the planning yard on-site representative to provide additional information to the contractor or to make changes to existing prints and manuals.

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## Chapter 1

### Private Sector Ship Maintenance

- Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual  
(b) OPNAVINST 4700.7L, Maintenance Policy for U.S. Navy Ships  
(c) FAR Part 14 - Sealed Bidding  
(d) FAR Part 15 - Contracting by Negotiation  
(e) FAR 42.201 - Contract Administration Responsibilities  
(f) FAR 42.302 - Contract Administration Functions  
(g) FAR 42.2 - Contract Administration Services  
(h) FAR 42.3 - Contract Administration Office Functions

#### 1. Private Sector Ship Maintenance

a. Depot-level maintenance is that maintenance which requires skills or facilities beyond the level of the organizational and intermediate levels and is performed by naval shipyards, private shipyards, naval ship repair facilities, or item depot activities. Approved alterations and modifications which update and improve the ship's military and technical capabilities are also accomplished.

b. The duties and responsibilities of the SBS will be focused on depot level maintenance performed primarily by Master Ship Repair (MSR) and Agreement for Boat Repair (ABR) contractors including their subcontractors. There will be interface with other government agencies and ships force, however, the knowledge and understanding of how the contractor is expected to perform work is paramount. The SBS should be familiar with references (a) and (b) for details concerning ship maintenance and private sector contractors including the role they play.

#### 2. Contracted Ship Repair and Regional Maintenance Center (RMC)

a. RMCs have assumed responsibility, within their geographic region, for all contracted ship maintenance work to be accomplished by commercial shipyards. The following provides an overview of the RMC functions, responsibilities, organizational relationships and standards of conduct resulting from that transfer.

b. General Functions and Responsibilities. This section outlines RMC functions and responsibilities for ship repair and

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modernization work that is contracted to the private sector for accomplishment. These may include:

(1) Performing functions of Procurement Contracting Officer (PCO) and Administrative Contracting Officer (ACO).

(2) Developing specifications necessary to solicit contract proposals and bids for assigned PCO functions and Naval Sea Systems Command (NAVSEA) procurements.

(3) Providing planning and estimating, workload forecasting and oversight for planned and unplanned availabilities.

(4) Conducting engineering, technical and design oversight, evaluation and surveillance.

(5) Performing engineering and design services in support of waterfront (emergent) technical issues.

(6) Budgeting, administering and accounting for funds.

(7) Providing management coordination and oversight of contracts to ensure requisite quality, schedule attendance and cost propriety.

(8) Monitoring and evaluating integrated logistics support and procurement of Government Furnished Material.

c. Procurement and Contract Functions and Responsibilities. This section touches specifically on the functions and responsibilities that tie the SBS to contract oversight at each RMC location.

(1) The RMC performs the functions of the PCO for purposes of placement of job orders under the Master Agreement for Repair and Alteration of Vessels, Master Ship Repair Agreement (MSRA) or the Agreement for Boat Repair (ABR) as described in Chapter 3 of this Volume. The RMC also exercises the options under Multi-Ship/Multi-Option (MSMO) contracts and other contracts as assigned.

(2) The RMC is responsible for performing all of the contract administration services listed in references (e) and (f) to the extent applicable to MSRA job orders, MSMO contracts and to other contracts assigned at commercial shipyards under RMC cognizance.

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(3) With respect to the administration of contracts other than shipbuilding, conversion and repair, the RMC will perform contract administration functions listed in references (g) and (h) when requested by the Procuring Contracting Officer (PCO). When resources are not available to perform such functions, the RMC will advise the activity awarding the contract which functions cannot be performed and why.

d. Relationship with Contractors. (This section highlights some very important concepts and rules that every SBS should practice).

(1) In official transactions with contractors, the RMC Contracting Officer is the direct representative of the U.S. government and NAVSEA as Head of Contracting Agency. Therefore, contractors will address any correspondence on such matters directly to the RMC Contracting Officer who, if deemed advisable, may discuss it with or refer it to NAVSEA for resolution. When making referrals to NAVSEA, the RMC will include definitive recommendations for action. NAVSEA, after resolving referrals, should keep the RMC informed of the proposed resolution prior to initiating discussions with or instructions to the contractor.

(2) The RMC shall ensure that contractors are not given access to Navy files, even when requested under the Freedom of Information Act, unless approved by counsel. Neither should contractors be furnished copies of correspondence or included as an addressee on correspondence pertaining to a claim, controversial subject matter or any subject matter on which it may become necessary for the command to issue instructions or render decisions.

(3) RMC personnel shall exercise good judgment when originating constructive changes. This refers to any communication, other than a change order or formal contract modification, received by a contractor from a representative of the government, or as an act of omission of the government, that has the effect of requiring a contractor to perform work different from or in addition to that which the contract prescribes. When RMC correspondence is sent to a contractor that will have a significant impact on operations, progress payments, responsibility, etc., it shall be signed by a contracting officer or an authorized representative, and a receipt shall be obtained for mail or hand-carried delivery.

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(4) Contractual direction can be given only in writing by the PCO or ACO.

e. Standards of Conduct. Because the SBS will be found in a variety of relationships and business dealings with all types of contractors, vendors and suppliers, it is critical they understand their actions are subject to monitoring and review.

(1) The executive branch has promulgated government-wide regulations addressing the standards of ethical conduct expected of government employees, both military and civilian. There are stringent guidelines and regulations that are specifically imposed on personnel who represent the government in business dealings with representatives of industry and occupy positions of trust and responsibility that require them to observe the highest ethical standards. Practices that may be acceptable in the private business world are not necessarily acceptable for naval personnel. Acceptance of favors, gratuities or entertainment may be a source of embarrassment to the Department of the Navy (DoN) and to the naval personnel involved. These favors may affect the objective judgment of the recipient and may impair public confidence in the integrity of business relations between the DoN and industry.

(2) No person shall place himself or herself in a position in which conflict of interests might arise or might justifiably be suspected. Such a conflict might entail gratuities, entertainment of any kind or any other action that could influence or be reasonably interpreted as influencing the strict impartiality that must prevail in all business relationships involving the public interest. Favors, gratuities or entertainment bestowed upon members of the immediate household of naval personnel shall be considered in the same light as those bestowed upon Navy personnel.

(3) All personnel shall exercise special diligence to prevent fraud, collusion, larceny, embezzlement or other improper conduct within the area of their responsibilities and shall report immediately to the RMC any instance of fraud or other improper conduct they observe or suspect.

3. Contracts, Contractors and Availability Types. Each SBS may be expected to provide contractor oversight in a variety of locations and perform administrative duties for all types of contracts and ships availabilities. It is expected that every SBS knows the different type of contracts and availabilities. The following briefly describes the common types of contracts

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and availabilities plus the relationships of associated contractors.

a. Contract Types

(1) Fixed Price (FP) Type Contracts - Firm Fixed Price (FFP) and Fixed Price Incentive (FPI)

(a) FP contracts usually stipulate a firm price. Under some variations of the FP type contract, it may leave portions of the price open and provide for a later adjustment.

(b) Specifications for FFP contracts are typically developed by government planners and awarded to a single contractor that may subcontract out portions of the work. However, the contractor awarded the contract remains responsible for the execution and administration of the work that is performed.

(c) Market conditions and or work load may directly influence the competition between contractors that bid on FFP contracts. It is common for some contractors to submit very low bids just to win the contract. They then try to find any and every opportunity through contract modifications to turn their profit margin around. The SBS must know when these conditions exist and be diligent to hold the contractor to only those requirements that are necessary.

(2) Cost Type Contracts (i.e., Cost Plus Fixed Fee (CPFF), Cost Plus Award Fee (CPAF) and Cost Plus Incentive Fee (CPIF))

(a) Cost reimbursement contracts are used when the estimate of costs is as reasonable as the circumstances permit, but because of the magnitude of uncertainties involved in the procurement, the risk is too great to expect a contractor to accept a FP arrangement of any type. In the CPFF type contract, the government agrees to pay all allowable costs that are incurred under the contract, plus a fixed-dollar amount of fee. A CPIF type contract provides for an initially negotiated fee to be adjusted later by a formula based on the relationship of total allowable costs to total target costs. Under the CPAF, the allowable costs are paid plus a fee. The fee typically consists of two parts, a fixed amount that does not vary with performance, and an award amount. The award amount is based upon a subjective evaluation of contractor performance by the Government, judged in light of criteria set forth in the

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contract. The criteria and rating plan are tailored to the specific procurement in order to provide the most positive way to motivate the contractor toward improved performance.

(b) The majority of the contracts in place with RMC oversight today are Cost type contracts and in most cases the specifications are developed by the contractor that is awarded the contract. These are usually MSMO contracts.

(c) Indefinite Delivery, Indefinite Quantity (IDIQ) Type Contracts

(1) These contracts IDIQ are used when there is a recurring demand for an item and the timing and extent of demand cannot be determined at the time of award. The contract establishes all terms and conditions except those to be included in orders issued there under.

(2) Commercial Industrial Services (CIS) are typically handled with these type contracts.

b. Contractors

(1) Master Ship Repair Agreement (MSRA) Contractors

(a) These contractors are most commonly referred to as the Master Ship Repair (MSR) contractor. Due to the complexity of ship repair and the conditions under which work is performed, it is required that NAVSEA contract only with ship repair companies that are fully capable of conducting most aspects of shipboard work. The compact arrangement of machinery and systems aboard ship, the sophistication of systems installed in Navy ships and the Navy's absolute requirement for reliable operation create a unique repair environment that demands special experience and capability. Any MSR that is certified will be capable of providing and performing a large number of services and resources as indicated below and as described in detail in reference (a).

(1) Be capable of accomplishing a Selected Restricted Availability (SRA) on a FFG 7 class ship or larger.

(2) Have the capability to perform at least 55% of a SRA on a FFG 7 class ship (or larger) using their own facilities and their own workforce.

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(3) Possess or have access to a pier with the requisite support and technical services available. (There is no requirement for a dry dock.)

(b) While it is not a specific requirement for obtaining an MSRA, the contractor must be capable of providing a Remote Site Work Performance Plan to the contracting officer prior to issuance of the job order that permits the start of the work performance period.

(2) Agreement for Boat Repair (ABR) Contractors. An ABR contractor must possess the same basic characteristics listed for MSRAs, but to a lesser degree. Reference (a) clearly delineates these characteristics. Since ABR firms have the potential to perform a diverse scope of repair work, from boat and/or craft overhauls to selected topside repairs to major vessels, ABR firms will also be evaluated on their ability to accomplish the following:

- (a) Shipfitting type work
- (b) Sheet metal work
- (c) Welding
- (d) Pipefitting
- (e) Machinist/Mechanical (shop and marine)  
Electrical
- (f) Electronics
- (g) Woodworking
- (h) Rigging

(3) Primes, Subs, MSMO and Team Contractor relationships. In all cases with any contract type or contractor there shall only be one contractor per contract that will be held responsible for the administrative tasks related to the contract. That contractor is referred to as the prime contractor. A prime contractor may perform work on any contract awarded to them alone or may allow other contractors with a variety of resources and skill sets to accomplish portions of the contract. These contractors are referred to as subs or subcontractors to the prime. The SBS may interface with the

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subcontractor however all direction and oversight should be done through the prime contractor.

(a) Current contracting practices may include some FFP and IDIQ contracts, however, the majority of work is managed through cost type contracts set up to accommodate multiple ships for multiple periods of time. These are referred to as MSMO type contracts and are only awarded to MSR certified contractors. The MSMO method of contracting encourages the prime contractor to both team up with other MSR's and also utilize subcontractors. The MSR contractors that a prime contractor may team up with are, as expected, referred to as a MSMO contract team member. Team members are also encouraged to use subcontractors.

(b) As the SBS moves from one ship's availability to another they must understand these relationships and always remember the dynamics that are in place when providing contractual direction.

c. Availabilities. An availability refers to a specific time frame that a ship is made available for work to be performed on it with a known beginning date and completion date. The work itself that is accomplished will normally be planned or scheduled in advance of the availability. However, there are cases when unexpected maintenance or emergencies occur and the work is required to be done and planned simultaneously

(1) Chief of Naval Operations (CNO). The type of work, duration of availability and who is funding the work often play in determining what type of availability will be used. Annual or bi-annual scheduled maintenance periods are determined in advance by the CNO. These availabilities typically will run between nine and 12 weeks (sometimes as long as one year) and are usually longer than other availabilities. It is during the CNO availabilities that the ship may be dry-docked for routine maintenance and modernization. Often, large items or routine work will be accomplished during a CNO availability.

(2) Continuous Maintenance Availability (CMAV). Ships require maintenance (and sometime modernization) that cannot wait for a CNO availability. To complete this required work, ships are scheduled for a CMAV each calendar quarter. CMAVs are conducted during the periods of time in between CNO availabilities. They are not conducted during the same time as a CNO availability

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(3) Window of Opportunity (WOO). WWO type availabilities happen as the name suggests. There will be times throughout the operational schedule of the ship where it may be in port for a week or two. We look upon this time in port as a WWO to accomplish some work. These type of availabilities usually represent smaller type jobs that may be done in shorter periods of time.

(4) Emergent (EM). When something on board the ship breaks down or becomes inoperable, it may significantly degrade the ship's operational capability. In these situations, the work may be segregated into an availability of its own and referred to as an "EM Availability". EM work will typically take precedence over other work in order to restore the ships operational capability. In EM availabilities the contractor may also receive verbal authorization from the ACO to perform the work, but must be followed up with the submission of required documentation.

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## Chapter 2

### The Role of the Shipbuilding Specialist

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual  
(b) NAVSEA Standard Items

1. The Role of the Shipbuilding Specialist (SBS). SBS' are individuals that possess a primary trade background but who can effectively perform across trade lines in two or more trade skill disciplines. Team assignments are made to balance trade expertise appropriately with the type of work in the project. A wide variety of comprehensive duties and responsibilities are assigned to these individuals who are expected to act as decision makers with comprehensive knowledge of each work item assigned in order to ensure quality of work is completed within cost and on schedule. Refer to reference (a) for an overview of practices and procedures that each SBS should be familiar with.

2. The SBS represents the government when making technical decisions - this is seen as serving as an agent for the government. Never forget that both verbal and/or written direction made by the SBS may constitute a constructive change to the contract. A constructive change order is an informal change to the contract resulting from government actions or inactions that require the contractor to perform work beyond that which is required by the contract. These constructive changes can result in unauthorized commitment of government funds, claims or litigation against the government. The SBS might commit the government to unexpected costs if not careful. Only the Contracting Officer is authorized to make contract changes.

a. Constructive Change. A constructive change occurs when:

(1) The contractor performs work beyond that required by the contract without a formal change order, and

(2) It is perceived that the work originated from a government informal order or is due to government fault. A government informal order can be defined as words or deeds excluding advice, comments, suggestions, or opinions.

b. There are four general categories of constructive changes:

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(1) Disagreement over contract requirements.

(2) Failure of the government to cooperate during contract performance.

(3) Defective specifications and misleading information.

(4) Acceleration of contract performance to finish sooner than what is stated in the contract schedule.

3. Reference (a), Chapter 7 lists 15 duties & responsibilities for the SBS. Typical assignments include the following duties and responsibilities (as with Project Managers (PM), this may vary depending on the supporting organization):

a. Provides current information relating to assigned work items to the team leader who is usually a PM.

b. Attends meetings, resolves production problems, develops scope of work requirements, assists in the development of government test analysis report (TARs) and negotiation positions, assesses contractor capabilities, work progress and performance, provides technical support to the Administrative Contracting Officer (ACO), participates in claims avoidance and provides other technical support as required.

c. Interfaces with members of ship's force to provide current project information, notifies responsible personnel of scheduled evolutions and solicits required or desirable Ship's Force personnel when needed.

d. Receives and investigates contractor reports, assists with the development of the independent government's technical response, requests engineering support, prepares necessary contract modifications, develops the government cost estimates, estimates the delay and disruption that may occur because of a contract modification, assists with negotiation preparation relative to Technical Advisory Review/Reports (TARs) and contract modifications (as authorized by the ACO), provides the ACO support in negotiations and maintains records of actions taken.

e. Performs/witnesses government G notification points, identified in the work specifications, when the contractor calls them out. Accomplishes random Product Verification Inspections (PVI) utilizing checklists or an attribute system to determine contractor compliance with the quality and technical

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requirements of the work specifications/contract. Writes a Corrective Action Request (CAR) when nonconformities are detected per Chapter 6 of this desk guide.

f. Participates in various government evolutions such as boat inspections, hull inspections, combat systems inspections, dry-docking and undocking, habitability inspections, pre-light off assessments (LOA) and other evolutions that may require or benefit from technical trade expertise.

g. Determines the physical progress, as a percentage of work completed, of each work item and each contract modification assigned. This information is updated weekly in a comprehensive progress report that is used in calculating the contractor's entitlement to progress payments as well as in evaluating the contractor's schedule performance.

h. Monitors the Government Furnished Material (GFM) and Contractor Furnished Material (CFM) report to anticipate actions that may be necessary to preclude schedule impact by unsatisfactory material delivery dates. Initiates material orders to replace unsatisfactory GFM or to provide items with unique government control and confirms the necessity for the contractor to make cash purchases from the Naval Supply System when it is in the best interest of the government.

i. Monitors the contract guarantee period to help determine whether failure of equipment or systems covered by the guarantee clause is the responsibility of the government or the contractor. Ensures that the work determined by the ACO to be the responsibility of the contractor, whether it is covered by guarantee or was an exception to the completion of the contract, is repaired per the specification requirements; and, provides cost estimates for incomplete work so that the ACO can ensure that appropriate contract funds are retained in the event that the work must be deleted from the contract requirements or be procured from another contractor.

j. Provides positive lessons learned along with feedback related to deficient or inefficient work specifications or work authorizations to the appropriate planning group for use in improving future procurements.

k. Conducts oversight coordination and inspection of work-related environmental issues associated with Ship's Force and contractor's operations. This effort includes, but is not

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limited to, hazardous material (HAZMAT) and hazardous waste (HW) handling, removal, storage, transportation and disposal.

l. Conducts safety inspections jointly with the contractor, ship's force and government Environmental Safety and Health (ESH) representative(s).

m. Maintains a significant events log.

n. Provide written reports to support award fee evaluations and Contractor Performance Assessment Reporting System (CPARS).

o. Maintains the following records:

(1) Work item specifications, references and estimates for the work package, updated to reflect all modifications.

(2) Contractor condition reports including government replies.

(3) New work identified and not authorized.

(4) GFM delivery status.

(5) Quality Assurance (QA) records.

(6) Records relating to the contractor's capabilities and capacity.

(7) Contractor performance evaluations.

4. The SBS position is a critical position within the Regional Maintenance Center (RMC). The SBS is responsible to ensure any repair activity contracted to perform ship repair work does so per the work item(s) and provides the requisite quality and documentation required by the contract.

#### 5. SBS Elements

a. The SBS' primary function is to ensure contractors meet their contractual obligations as set forth by the contract and work items.

b. The SBS is the RMC Commander's on-site representative. He/she ensures that the product presented to the government is per work item requirements and the contract.

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c. The SBS shall not serve as an adjunct to or replacement for the contractor's own inspection system.

d. The SBS shall not require higher quality or additional requirements other than those requirements already authorized for accomplishment per the contract and work specification(s) without the authorization of the contracting officer.

e. The SBS shall not advise any contractor how to accomplish work. When notifying a contractor of a nonconformity, the SBS shall address the contractual requirements the contractor failed to meet and if warranted, initiate corrective action. The SBS shall notify the PM of the procedure or process used by the contractor that resulted in an unsatisfactory product.

f. Each SBS is assigned to a ship project/availability by the class team leader, and assigned work on that project availability by the respective PM. Each SBS shall ensure the contractor awarded the project/availability accomplishes the requirements of each work item assigned per contractual requirements.

#### 6. SBS Action Items

a. The following are, but not limited to, the responsibilities of the SBS:

(1) Review and comply with all applicable laws, references, instructions and guidance provided by the U.S. government, CNRMC, and the local RMC.

b. After assignment to a project/availability by the class team leader and assignment of work items by the PM, obtain and review all drawings, technical manuals, design memos, manufacturer's instructions and references required by the work item(s).

(1) Review the references for applicability to actual conditions and ensure the contractor is using the references that were in place at contract award.

(2) Ensure the contracted version of the reference (b) is utilized.

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(3) Review all work specifications assigned to him/her for technical and quality accuracy in addition to compliance with reference (a), Volume VII, Chapter 4 Appendix 4-E.

(4) Review/update the Navy Maintenance Database (NMD) checkpoint module for each work item assigned to the SBS ("G" points only).

(5) During advance planning, the SBS will conduct specification reviews and develop an Independent Government Estimate (IGE) as required. Further discussion on this subject is in Chapter 4, paragraph 2 of this desk guide.

c. Inspect the work site, when allowed by the PM, before the start of the contract and note any conditions that are not per work items, will disrupt schedules, or cause additional work requirements. Document these conditions and alert the PM for direction.

(1) Examples include, missing lagging, loose deck plates, piping interferences, etc.

d. Review the references for applicability to actual conditions and ensure the contractor adheres to the requirements of all work items and is using references that were in place at contract award.

e. Maintain a significant events log per reference (a). The significant events log is discussed in further detail in Chapter 5, paragraph 2. See also SBS Procedure 7 of this desk guide.

(1) All significant events must be recorded in the significant events log as specified in reference (a). The significant events log must be turned over to the ACO, via the PM, at the completion of the availability.

(2) Events and/or information that are not required in the significant events log may be documented in a separate log, if desired, but are not required. If an additional log is maintained for events and/or information outside of, or in addition to, the significant events log, do not use it to record significant events specified in reference (a).

f. Review contractor's schedules for purchase orders/GFM/CFM, long lead time material (LLTM) lists, as applicable, to ensure material required is ordered and has acceptable estimated

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delivery dates (EDD) to support the schedule. Anticipate and initiate actions that may be necessary to minimize schedule impact by unsatisfactory material delivery dates.

(1) Inform the PM of any anticipated or ongoing work stoppage or problems concerning a work item based on government furnished equipment (GFE), GFM or delay in government furnished information (GFI), such as issues with contracting a work item to a subcontractor or answering of reports. These instances shall be documented per Chapter 5, paragraph 2. See also SBS Procedure 7 of this desk guide.

(2) The SBS shall promptly inform the PM when it appears that the contractor may not meet scheduled completion dates and reasons for the expected delays, such as lack of resources; progress, or material issues.

g. Conduct oversight coordination and inspection of work-related environmental issues associated with ship's force and contractor's operations. This effort includes but is not limited to, HAZMAT and HW handling, removal, storage, transportation and disposal.

(1) Conduct a safety inspection jointly with contractor, ship's force and government ESH representatives. Chapter 7, paragraph 3 of this desk guide provides detailed information on Environmental, Occupational Safety, and Health Compliance.

h. Observe check points identified in the work specification(s) when they are presented by the contractor, witnessing required equipment or systems tests, accomplishing random in-process inspections at the work site to determine contractor compliance with the requirements of the specification, and determining the effectiveness of the contractor's QA program.

(1) Enter all G-checkpoints in the NMD. Further discussion on the process of witnessing checkpoints is in Chapter 6, paragraph 4. Additionally, ensure the appropriate engineering representatives are on hand for critical systems checkpoints.

(2) Recording of PVIs for each contract shall be per Chapter 6, paragraph 5. See also Standard Operations Procedure 17 of this desk guide. The engineering code has a stand-alone database on the shared drive where personnel PVI data is stored.

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i. The SBS shall review, evaluate and answer Contractor's Condition Found Reports (CFRs), including their recommendations for additional work and provide rationale for approval or disapproval. Refer to Chapter 5, paragraph 3 and Standard Operations Procedure 9 of this desk guide.

j. Make decisions to ensure quality of the product such as, but not limited to, work item clarity, material requests, quality assurance requirements, etc. within their span of control and are not constructive changes or deviations to the contract.

(1) A constructive change to a contract occurs whenever the government, through its action or lack of required action,, causes the contractor to depart from plan or perform other than as specified in the contract. Ensure a Request for Contract Change (RCC) is written for any contract modification to prevent a constructive change to occur.

(2) A deviation is defined as any action which is not per the work item, no matter how minor. Deviations require technical authority action and if approved, an RCC will be required to initiate the work (either to add or delete requirements). Failure to write an RCC will cause a constructive change to occur.

(3) When working outside of his/her specialized skill set, request assistance from other SBS, QA Specialists, engineering liaisons, or the PM as required in order to achieve the best decision possible.

k. Initiate action(s) such as, but not limited to, writing/reviewing RCCs, engineering service requests (ESRs), progress reports or the coordination of efforts to prevent problems or work stoppages. See also standard operations procedures 13 and 14 of this desk guide.

(1) Initiate either a method A or method B CAR when required. Refer to Chapter 6, paragraph 6 and Standard Operations Procedure 18 of this desk guide.

(2) Write/review new and growth work items, as discussed in Chapter 3 and Chapter 5, paragraph 4 of this desk guide, when requested by the PM and create/review RCCs when an existing work item requires contractual modification. See also Standard Operations Procedure 14 of this desk guide.

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(3) Calculate estimates using historical costs in NMD, the Flat Rate Estimating Guide, Uniform Methods and Standards, trade knowledge, vendor quotes, ship checks, business climate, information from PM and other SBS.

(4) Develop, review and assist in negotiating modifications to original/new work specifications for work to be accomplished by contractors. Assist the ACO with the government negotiation position.

l. Determine the physical progress, as a percentage of work completed, of each work item and each contract modification assigned, including monitoring of required reports, test and inspections plans, schedules, and completed checkpoint submissions. Progress is updated weekly in the NMD and is used in calculating the contractor's entitlement to progress payments as well as in evaluating the contractor's schedule performance. Further discussion is in Chapter 4, paragraph 4 of this desk guide.

m. When assigned to a MSMO contract, the SBS shall accomplish cost monitoring duties using Chapter 4, paragraph 3 of this desk guide as guidance.

n. Maintain effective lines of communication between the PM, contractor, ship's force, planning yard on-site representatives, AIT's for the purpose of problem solving, coordination and mutual discussion of work items.

(1) Provide current information and progress updates relating to assigned work items to the PM.

(2) Interface with members of ship's force to provide current project information, notify responsible personnel of scheduled evolutions and solicit required or desirable ship's force assistance.

(3) Work with planning yard on-site representatives and engineering liaisons to help resolve technical problems.

o. Attend daily coordination; weekly progress; work coordination; work item scoping meetings as well as other meetings scheduled and unscheduled as determined by the PM.

p. The SBS may be assigned weekend or night shift duties as discussed in Chapter 2, paragraph 4 of this desk guide.

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q. Investigate as necessary the contract guarantee and special warranty clause to help determine whether failure of equipment or systems covered by the guarantee clause and special warranty clause is the responsibility of the government or the contractor.

r. Provide lessons learned and feedback reports related to deficient or inefficient work specifications or work authorizations to the appropriate planning group for use in improving future maintenance requirements.

s. Provide written reports to support Lessons Learned Conferences, Award Fee Evaluations and the CPARS.

## **7. Night and Weekend Responsibilities**

a. Working a night shift or weekend is typically considered as a temporary assignment however all actions previously listed in section C above apply while working a night shift or weekend. Additional responsibilities will be added to oversee and manage work that is typically handled by other SBSs that cover regular weekly daytime schedules. Each regular shift SBS shall provide the night/weekend shift SBS with a turnover of all work that will be accomplished on the night/weekend shift. In addition, all scheduled checkpoint sheets shall be turned over to the night/weekend shift SBS. Turnovers shall contain the following information:

(1) Location and time the checkpoint will be held.

(2) Work item number and title.

(3) Include any pertinent details that need to be specifically observed during the contractor's performance and checkpoint.

b. The day shift SBS or PM shall inform the night/weekend shift SBS of critical/ priority jobs or any problem (coordination, single valve, etc) that may be encountered during the night or may need to be inspected, monitored or reported on for informational purposes.

c. The SBS shall inform the PM when workload cannot be accomplished so priorities can be established.

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d. The night/weekend shift SBS shall witness checkpoints and accomplish PVI per Chapter 6, paragraph 6 of this desk guide.

(1) The SBS shall enter all accomplished "G" points and other observations into NMD.

(2) The night/weekend shift SBS shall provide a signed copy of the checkpoint sheet to the regular shift SBS for inclusion into the master records.

(3) The PM shall ensure completed checkpoint forms are submitted for filing in master files as further discussed in chapter 5, paragraph 7. See SBS Procedure 17 of this desk guide.

e. The night/weekend shift SBS shall initiate a Method A or B CAR when required per Chapter 6, paragraph 6. See SBS Procedure 17 of this desk guide.

f. The night/weekend shift SBS shall inform the assigned PM, class team leader, duty officer and Waterfront Operations Department Head immediately when a defect and/or non-action of the contractor will impact a ship's movement, critical event, and contract completion schedule, etc. The specifics and a plan of action shall also be reported.

g. The night/weekend shift SBS shall submit a written turnover of contractor observed work accomplished to the cognizant PM.

(1) Turnover shall include details of discussions with contractors, ship's force, duty officers or other RMC personnel pertaining to work related progress and problems encountered.

(2) Turnover shall also include details of events recorded in the significant events log as required by reference (a) and discussed in Chapter 5, paragraph 2. See also SBS Procedure 7 of this desk guide.

(3) The PM shall review the night shift turnover report and follow-up when required.

(a) Report all accidents, injuries or safety issues to the PM and Waterfront Operations Department Head.

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## Chapter 3

### Advance Planning

Ref: (a) COMNAVSURFOR Notice 4702, Surface Ship Work Package Preparation  
(b) CNRMC Fleet-Wide Desk Guide Website  
(c) COMUSFLTFORCOMINST 4790.3B, Joint Fleet Maintenance Manual  
(d) NAVSEA Standard Items

1. Introduction. Maintenance planning is an essential part of the Navy maintenance process. Planning ensures that:

- a. The scope of work being performed addresses and is limited to the amount of work required to correct the defined problem.
- b. Appropriate initial conditions are established to support the work.
- c. Special qualifications required to perform the work are identified.
- d. Work is performed in the correct sequence.
- e. The correct procedures are used to accomplish the maintenance.
- f. The right material is ordered to support the work.
- g. Quality assurance requirements and appropriate tests are identified.
- h. Valid estimates are provided to support accurate scheduling and measurement of maintenance activity efficiency and validity of contractor estimates.
- i. Work is efficiently packaged.

2. The Shipbuilding Specialist (SBS) plays a significant role in the maintenance planning process, ensuring the specifications written for each work item are thorough and accurate in order to prevent additional costs and schedule delays during the availability due to improperly written or ambiguous specification requirements. The SBS must be very familiar with

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the content and direction provided in references (a) through (e).

### 3. Executing Activity

a. As discussed in reference (a), the Executing Activity (EA) is the public or private enterprise that is assigned or awarded the responsibility for accomplishing the actual production work to effect modernization and repairs to surface ships.

b. For most aspects of Multi-Ship Multi-Option (MSMO) type contracts the EAs perform the planning for accomplishment of the work they will execute. All work, whether Chief of Naval Operation (CNO) availability, continuous maintenance or emergent work will have a Ship Specification Package (SSP) prepared in the Navy Maintenance Database (NMD) work planning and execution tool.

(1) Package preparation milestones have been developed that support the continuous maintenance philosophy. These milestones are designed to allow a more continuous flow of work to create a work package. Three major milestones to be aware of are:

(a) 50% of Depot-level Package Lock. This refers to 50% of the work, measured by 50% of the budgeted funds for the availability being committed, be locked at A-240.

(b) 80% of Depot-level Package Lock. This milestone requires that 80% of the depot level work package be committed, and 100% of the ship's force and intermediate-level work that is planned to be executed during the availability concurrently with the Depot-level work be identified.

(c) 100% of Depot-level Package Lock. At this milestone, 100% of the depot level package must be identified, with the activity accomplishing the planning to complete planning by A-60. The EA will then have 30 days to produce an integrated work schedule that will be reviewed at a Work Package Execution Review (WPER) at A-30.

c. In many cases, as part of the planning effort, the SBS will prepare the actual work specification in NMD for depot level work. The exceptions to when the EA may perform work item preparation are if or when the government elects to accomplish

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the work item development efforts "in house". This may be due to time constraints or conflicts with contract type. Also when an opportunity presents itself to train government personnel in the critical skill sets used during the work item development process and/or to provide surge capabilities for the EA during peak work loading.

#### 4. Master Specification Catalog (MSC)

a. The MSCs provide a ready resource of technically correct and current work items that are universally accessible for use. The vast majority of these documents can be reused for planning future repair actions, provided the SBS or responsible Planner validates applicability. The primary purpose of the MSC is to reduce maintenance costs by:

- (1) Reducing planning efforts.
- (2) Identifying and promoting best practices.
- (3) Effectively managing lessons learned.
- (4) Minimizing delays associated with maintenance planning.
- (5) Providing a cost estimate for the work item.

b. Use of the MSC by Maintenance Teams and Planners at maintenance activities is mandatory. Two types of MSC are discussed in references (a) and (c) - Depot level and I-level MSC. Only the depot level MSC will be discussed where the SBS is directly involved. RMC Planners conduct the planning for I-level work.

(1) The Depot level MSC can be accessed through the NMD application. Its catalog consists of master specifications, specifications used directly without any modification, and templates that can be used with minor modifications. Appendix B in reference (c) provides the general guidelines for template preparation, processing and maintenance. D-Level MSC is maintained at SUPSHIP Bath by the MSC Maintenance Office who is assigned to standardize all templates to maximum extent possible to ensure the specifications are technically correct and reflect the most current guidance. Reference (a) provides further details on the NMD application for depot level MSC. NMD has been modified to capture the contractor's planning and actual

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return costs. This allows standard costs to be developed for the specifications residing in MSC.

#### 5. Depot Level Work Item Planning Process

a. The ship identifies a problem and requests a maintenance action via the Office of the Chief of Naval Operations 2-Kilo Maintenance and Material Management Action Form (OPNAV 4790/2K) using the ship's Maintenance Data System. Each 2-kilo may be referred to as a 2K or AWR (Automated Work Request) as well.

b. The request is transferred to the fleet brokering system-Regional Maintenance Automated Information System (RMAIS). The Port Engineer or Ship Superintendent screens the request and it is brokered to a maintenance activity.

c. The maintenance activity planner receives a valid 2K in the NMD queue. The planner verifies the information on the 2K is valid, includes a clearly defined scope of work and all the information required to start the planning of the work item.

d. If at all possible a ship check is performed. This is required to minimize risk related to a work item being planned. The PM will identify if a ship check team is required from selected Shipbuilding Specialists and develop a plan to perform the ship checks. Travel may be required if the ship is on deployment, so ensure your passport and immunization requirements are up-to-date. As the ship check is conducted, the SBS will capture details of conditions found and ensure the data is incorporated in the work item planning.

f. Based on information determined by the planner, a decision is made on whether or not the work item can be planned and executed in the assigned availability. If not, the work is rejected back to the Broker with comments to recommend the 2K be re-written, re-screened or rescheduled.

g. When the planner decides the work item can be planned and executed, he/she checks for SWLIN (Ships Work List Number) or MSC information. If there is MSC information that identifies a master specification, or if an appropriate master specification is identified through the SWLIN, the planner uses the specified pre-planned MSC specification and adds the new specification to the work package without additional MSC planning review.

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h. If there is SWLIN or MSC information that identifies a template or if an appropriate template is identified, the planner will go through a series of process steps in using the template to create a fully developed specification that is ready for external review.

i. If there is no SWLIN or MSC information, the maintenance activity planner verifies there is no appropriate master or template. After verification, the activity plans the work using the established planning and planning review processes. In addition, the new work item is forwarded to the MSC Maintenance Office and local standards personnel as a proposed template.

j. The external review is conducted by fellow Planners, Planning Supervisors and Execution oriented Shipbuilding Specialist. He/she will ensure the specifications meet the requirement to accomplish the work specified in the AWR. A dialogue will be established with the EA planner to resolve any issues with the written specs.

k. When faced with writing a work item and there is no previously written standard or template to be found in the MSC, the SBS must resort to knowing the basics about work item development. The following are helpful tips and information that every SBS should be aware of and strive to become skillful in performing. Finding a previously written work item to exactly match the requirements of the job you must write is often more the exception than the rule.

(1) Maintaining the basic format and structure of a work item is very important because over the years a precedent has been set and the industry has accepted what is referred to as the "4E" format. This format is required to be used by most Ship maintenance contracts and is spelled out and defined in detail in reference (a) Volume VII, Chapter 4 "Appendix 4E". This format has been set and will apply to any work item written from scratch if the MSC "basic shell" template is selected.

(2) In addition to using the 4E format it is also a requirement that the person planning a work item is familiar with reference (d) and how they are applied. Reference (d) is used as both general and specific requirements that must be incorporated into every work item that is planned. The SBS should be very familiar with and when the requirements of Category I or Category II Standard.

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Items apply and are generally familiar with what every NAVSEA Standard Item covers as requirements. This is important because it minimizes what the work item has to spell out if the requirements of a Standard Item apply.

(3) When faced with writing a work item on a system or piece of equipment unfamiliar to the SBS it must be clearly understood by the planner that a degree of research and information gathering is mandatory in order to write a comprehensive and accurate work item. Specific requirements written into the body of the work item must clearly address all standard requirements as well as any unique procedures, practices or tests that apply. This means a thorough review of all applicable technical manuals, drawings and conditions found at the location of work is acquired.

(4) Whenever possible time should be taken to physically look at the system or equipment requiring work. The "Ship Check" should be performed in every situation for every case here a requirement will be written into a work item. The simplest review of the on-site conditions will reveal issues like potential interferences, access routes needed to remove or install components, potential Gas Free related spaces adjacent to potential Hot Work and things of that nature. In every one of these type cases special requirements and costs may be associated with writing the work item. All conditions must be addressed in the work item or they will pop up during the execution of work in the form of CFRs and RCCs. If a ship check is not possible on the ship you are writing work for then it is strongly suggested a sister ship be visited for these details. A common term to keep in mind is: Don't Site until you Sight".

(5) The SBS is often cramped for time and if a ship check is not possible then they must take the time and contact someone very familiar with the systems or equipment identified on the AWR. Do not hesitate in calling a fellow SBS, the Port Engineer, a Ships Force contact or Planning Yard type representative. It is imperative the SBS become as familiar as possible with what they are expected to write into a work item. In all cases and every step of the way the SBS must document who was contacted, what information was gathered and why special requirements were or were not included in the work item.

(6) While researching the details of each work item the SBS must take note of any and all material requirements. Ask questions if you are not familiar with materials and parts that are affected by the removal, repair or installation of systems

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or equipment. The SBS must be aware of any material related issues such as Long Lead Time Material (LLTM) items, hazardous waste disposal requirements or even if the material should be Government Furnished Material (GFM) vice Contractor Furnished Material (CFM). Clear definition of material requirements will make or break a work item getting done within schedule and within budget. Review material requirements on drawings and ask questions if you are not sure.

(7) Learn if there are special Technical Representatives required for oversight or if there will be mandatory certifications of systems or equipment as with weapons systems, communications or aircraft landing markings. Not only identify any special requirements but also contact the appropriate representatives to schedule required tests and inspections. Be aware that an Original Equipment Manufacturer (OEM) may be needed for various systems or equipment. Knowing this requirement ahead of time will go a long way into creating a well thought out work specification.

(8) Concerning tests and inspections. Be mindful as you research the requirements you will write into a work item and take note as to when you must include a check point requirement. Calling out check points in the work item will ensure that not only work gets done but that it is done within specifications and meets established standards of performance. This also ensures that work cannot continue until a satisfactory check has been accomplished.

(9) Regardless if you are writing just one or several work items, be mindful of any other work items planned by someone else that may be invoked within the same package of specifications yours will be a part of. Communicate openly with all others that are writing work items to ensure the requirements of your work item do not duplicate or conflict with the others and vice versa. Although the PM may be responsible to coordinate the distribution of work they may not be as familiar with the details and potential conflicts. It is the responsibility of the SBS to notify the PM of any and all potential conflicts or problems associated with writing your work item requirements.

(10) The common work item errors in paragraph 6 below are taken directly from reference (c) and reproduced here only as a quick reference. It cannot be overemphasized how important it is for the SBS to fully understand and be familiar with reference (c) Vol VII, Chapter 4, Appendix 4E.

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## 6. Common Work Item Errors

a. There is no substitute for good judgment and forethought on the part of the Work Item author. The task of writing definitive work requirements is complicated by the fact that no matter how technically correct the Work Item is, if the wording can be misunderstood or causes confusion, the Work Item is not a satisfactory contractual document. The following are examples of wording to be avoided in Work Item writing. They attempt to highlight some of the mistakes commonly made.

(1) Ambiguous requirements. Ambiguities normally occur because of poor sentence structure and result in two or more interpretations of what is required. Contractors will invariably choose the least expensive interpretation. An example of an ambiguous requirement is: Install 12 storage bins (2ftx2ft) in the GSM (4-107-2) and dry provision (4-107-1) storerooms. Does this require a total of 12 or 24 bins?

b. Non-definitive requirements. Non-definitive requirements occur when accept or reject criteria is not included in the requirements. Some examples are:

- (1) Check bearing temperature and vibration.
- (2) Support new pipe with adequate hangers.
- (3) Prove gaskets and bolting satisfactory.
- (4) Close up as original.

c. Requirements for inspections and tests shall include definitive accept or reject criteria required for contractor and SUPSHIP/RMC Quality Assurance evaluations.

(1) Non-definitive phrases. Use of non-definitive phrases results in either non-definitive requirements or cancels the effect of stated requirements. Examples are:

- (a) As applicable
- (b) Per latest requirements
- (c) Or other recognized methods
- (d) As practicable

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- (e) As necessary
- (f) Or other suitable method
- (g) Check for proper values

(2) Catch-all phrases. The tendency is to use catch-all phrases to cover unforeseen conditions or developments and thereby avoid a contract modification. In reality, use of these methods is more costly to the Government than an occasional contract modification because the contractor will include contingency money in his bid for catch-all phrases. Examples are:

- (a) Included, but not limited to.
- (b) As required.
- (c) Any and all or Each and every.
- (d) When and where necessary.
- (e) Etc.

(3) Arbitrary statements. Statements that assign arbitrary authority to an activity or individual. Examples are:

- (a) Where directed by the Ship's Force.
- (b) To the satisfaction of the SUPSHIP/RMC representative.
- (c) Per NAVSEA directives
- (d) As directed by the NAVSSES (NAVSEC) representative.

(4) Arbitrary Authority. The contractor is not required to meet the expectations of:

- (a) The on-scene surveyor.
- (b) The Commanding Officer's representative.

7. DOs AND DON'Ts. The following are examples to keep in mind when writing your specification:

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- a. DO use clear, simple language, free of terms subject to variation in interpretation.
- b. DO define unusual technical terms.
- c. DO write for the understanding of those who will have to use your product.
- d. DO give specific and sufficient requirements and directions so that the users will not be in doubt as to what is required.
- e. DO make each Work Item as detailed as necessary to describe the work to be accomplished.
- f. DO use "shall" when the provision is mandatory; "may" when expressing a non-mandatory provision; "will" when expressing a simple future tense or to express a declaration of purpose on the part of the Government.
- g. DO make positive, concise statements that cannot be misinterpreted.
- h. DO verify that reference material is available and applicable.
- i. DO use attachments to improve clarity.
- j. DO become familiar with available background and reference material before preparing Work Items. It will aid in drafting a good Work Item. Include only those essential references in the Work Item itself.
- k. DO convey the information as if you did not understand who would do the job or where it would be done. Release a job only with the knowledge that it can be satisfactorily accomplished as you intended with no further communication.
- l. DO describe in clear, concise, and complete language exactly what you expect the contractor to do. This is what you are willing to pay for and this, and only this, is what you can expect him to deliver.
- m. DO provide a manday and material pool when frontloading Work Items "as designated by the SUPERVISOR".

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n. DO use "when directed by the SUPERVISOR" when the start date in a frontload statement is not known.

o. DO use spell-check on all Work Items.

p. DON'T use colloquialisms.

q. DON'T use non-definitive statements such as "as required" or "as directed".

r. DON'T use statements that assign arbitrary authority to an activity or individual.

s. DON'T use catch-all phrases such as "as necessary", "excessive" or "as required".

t. DON'T use extraneous words like "thoroughly clean" or "extreme care is to be taken". Say "clean" (and indicate criteria).

u. DON'T use redundancy in an attempt to clarify or emphasize. Make each statement stand by itself.

v. DON'T put multiple thoughts in a single subparagraph. Keep each subparagraph short, concise and complete, expressing a single thought or requirement.

w. DON'T use such words as "proper" or "adequate" to signify a degree of acceptance. Include definitive acceptance or rejection criteria.

x. DON'T try to salvage a poor sentence or Work Item by indiscriminately jamming in words. Rewrite.

y. DON'T issue a Work Item with unresolved problems; you may be providing misguidance and misdirection.

z. DON'T use attachments or references to avoid writing requirements into the Work Item.

aa. DON'T impose unrealistic requirements on the contractor. Exercise care in developing Work Items to ensure that requirements are always capable of being performed.

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bb. DON'T use symbols to define dimensions (except when used in drawing titles). For example: % for percent, " for inch, ' for foot. Spell it out: 30 percent, One FT, two FT, 24 inches.

cc. DON'T call it plate in one sentence and plating in other sentences or cable in one sentence and wire in other sentences. Say it the same way throughout the same Work Item. Be consistent.

dd. DON'T use the numeral one alone except in numbering paragraphs. Write it out as "One" or "one" as applicable.

ee. DON'T include anything in the Work Item that is not necessary to describe the desired product.

ff. DON'T use test requirements such as 1-1/2 times the working pressure. Instead say test at 150 PSIG. Give definitive test criteria.

gg. DON'T direct the contractor to provide and install \_\_\_\_\_. He is required to provide material not specifically listed as GFM.

hh. DON'T direct the contractor to "replace with material in kind" or "replace with material same as existing". The existing material could be the cause of the failure. Specify the material to be used.

ii. DON'T write open and inspect type Work Items unless directed by the work request.

jj. DON'T change the intent of the work request by writing more or less than what is called for.

kk. DON'T use "quantity" descriptions in paragraph 3 when called out in paragraph 1.3.

## 8. Technical Document Fundamentals

a. Technical documents consisting of Standards, Instructions, Manuals and Drawings make up a huge part of any ship repair work item. The SBS must be very familiar with the practice of acquiring and interpreting the many variations and aspects of all forms. The importance to have the ability to accomplish this practice cannot be over stated. It is the responsibility of the SBS to ensure specifications and

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production procedures are per the most current technical documents and drawings. It is too late to discover something is being done wrong or installed in the wrong place after it is completed. This is a key factor in the SBS being able to provide efficient oversight.

(1) Each SBS must be very adept in reading technical references that pertain to their specific trade discipline and very familiar with technical reference materials related to other disciplines. At a minimum the SBS must be able to demonstrate the ability to:

(a) Identify the types of technical documents as they apply to the Structural, Piping, Machinery, HVAC (Heating Ventilation & Air Conditioning), Electrical and Electronics areas of interest. Related to each kind of document there should be a general knowledge and ability to understand the elements of these drawings. This involves knowing if they are general arrangement in nature or system overview and whether they are installation and/or removal types of drawings. The SBS must be capable of looking for the right reference to support the work that is being done.

(2) The SBS must understand the differences between manufacturer's drawings and production drawings plus the importance of using the correct Revision of each document as it applies. This includes knowing the current process to locate copies of documents and how to order them if necessary. Most ships drawings may be located after first reviewing the applicable Ships Drawing Index (SDI) where drawings are separated into categories determined by SWBS (Ship Work Breakdown Structure). Today's references are largely available via the internet and repositories controlled by formal access request procedures. Contact the Technical Documentation department in your command for the latest web addresses and access requirements.

(3) Critical information required to perform work on most jobs will be found in technical drawings. The SBS must be able to recognize information in different information blocks, find material details like size or composition from "Material Lists", etc. Operational criteria, torque requirements and such details will be identified in General Notes. Plan Views, Elevation Views and Sectional Details will clearly illustrate exact locations and measurements required to properly install equipment. Once again the ability for the SBS to locate and interpret technical documents cannot be over stated.

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## Chapter 4

### Estimating, Costs and Progress Monitoring

Ref: (a) Flat Rate Estimating Guide (located in the NMD System)  
(b) NAVSEA Cost Estimating Guide  
(c) NAVSEA Standard Items

1. Introduction. Throughout the availability, the Shipbuilding Specialist is responsible for monitoring the contractor's work and evaluating its processes to minimize waste and efficiencies. They are also required to develop an independent assessment of progress. Assessing the physical progress of a ship contract or job order shows potential delays requiring corrective actions and identifies completed, acceptable work.

#### 2. Developing the Independent Government Estimate (IGE)

a. The SBS is expected to provide an Independent Government Estimate (IGE) of any type of work. This infers you either already know or are capable of finding out all aspects related to shipbuilding and repair. This includes the ability to determine expected costs and also to support the governments' position on establishing a fair and reasonable cost to do work. It is not reasonable to believe each SBS has sufficient technical knowledge of every trade discipline, however, each SBS must know how to assess any job and break it down into fairly accurate labor and material costs. Utilizing SBS Procedure 5 is a good starting place to begin the process.

(1) The following concepts, steps, methods and techniques may be used to determine the IGE and they are spelled out here for your benefit. It is expected that every SBS is capable of developing a true IGE and that each one will practice the use of what is suggested below vice just looking at what the contractor submits to determine your estimate. Using what the contractor provides as the IGE is unacceptable.

(a) First look at the following Acrostic and think about each element when facing the development of an IGE.

(b) Examine - Research the requirements including tech manuals, drawings and history.

(c) Ship check - Go look at what you are developing an estimate for.

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(d) Trades & Subs - Identify who will be needed to do the work.

(e) Interferences - Identify and make note of costs associated with interferences.

(f) Material - Determine material costs and potential availability problems.

(g) Actual Work - From beginning to end review the actual work that will be performed.

(h) Tests - Identify tests and inspections that may require additional costs.

(i) Environment - Consider all conditions of where and when work will be done.

(2) If the SBS is not familiar with the system or equipment that will be included in the estimate, it is imperative they learn all they can that pertains to the work item requirements. The SBS must obtain copies of reference materials and always have the latest version of NAVSEA Standard Items handy.

(a) Take time to look over the details of how something works or performs its required function and recognize what is required to bring it back into an operational status. Take particular note of what equipment or structures are attached to or that supports its operation. In some cases special attention must be taken to blank off, secure or provide additional support to surrounding systems or structures due to removals. Look at all related to reference (c) to include related costs. Keep in mind when some adjacent structure or equipment is disturbed by your repairs that there may be subsequent procedures, testing or certifications needed. Make sure you know what you are estimating.

(b) Look for historical records of similar type work performed on the same type equipment on similar Class ships. Contact other subject matter experts such as Port Engineers (PE), Project Managers (PM), Planning Yard representatives or another SBS that may be familiar with the equipment or systems you are estimating. Ask for their insights and recommendations. When in doubt, it's always best to ask. Help from these government subject matter experts can be invaluable in developing an IGE.

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(c) In almost every case, if possible, a SBS must perform a ship check to properly determine all aspects related to IGE development. Go physically look at what you will need to estimate. There will be situations where a ship's location or lack of time will not allow a proper visit to the ship. Look at a sister ship, call or e-mail someone that can place a set of eyes on the problem. The importance of doing this cannot be over stated because every ship and situation is unique and viewing the actual problem may reveal that the repair is only applying a band aid to a larger problem.

(1) Since the ship check is so important it is highly recommended that the SBS take pictures and make copious notes while on site. Record the size, color and composition of anything that may be associated with the repair or installation. Look at the route that will be taken to remove and reinstall the item. Take drawings or manuals with you if possible to compare details like equipment or part numbers. Take note of any Gas Free requirements and related hazardous material removal needs that may exist. Identify anything and everything which will result in a cost being incurred. Those costs must be reflected in your IGE. A helpful habit to establish is to put yourself in the position of the contractor who will be making the repairs. Visualize yourself as the deckplate mechanic doing the work. Getting a prospective on what he/she will be doing will go a long way to clarify what needs to be accounted for.

(d) While evaluating the details of what your IGE will include, take time to consider ALL trades and any Subcontractors that may be required to perform the work. At first glance it may appear only a couple of Machinists will be needed to do the job. However, don't forget the Riggers that will need to get the Pump off its foundation, then off the ship, back on the ship, and back on its foundation. Think about the transportation time of the driver to take the pump where ever it may need to go. Likewise consider the fact that a crane may be required. A ship check may reveal that bolts may need to be cut or a foundation repaired. Don't forget the Marine Chemist, gas free requirements, welder, firewatch, lagging/insulation or Painting costs. As the SBS you should always be going over the job in your mind and anticipating the trades or subcontractors that may be required to do the work. Likewise be mindful that the contractor may also be very efficient and not really need all the trades or subcontractors he claims he will. That is why you must know what is being done and what it takes to do it. This will become relevant when it comes time to negotiate the work.

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(f) During your ship check, or based on information you gather about the work, consider the costs associated with interference removal and re-installation. The SBS should know reference (c) Section 009-23 inside and out. Reference (c) Section NSI 009-23 is a Category I standard which means every contractor on every job must accomplish the requirements therein. Significant costs may result in the removal of interferences because in several cases re-installation is not an option and installing new material is required. DO NOT overlook the costs associated with interferences.

(g) The contractor in most cases will be responsible for the purchase and provision of materials associated with their doing the work. This doesn't relieve the SBS from being able to determine an estimated cost for material purchase or disposal. While doing research of reference materials, and especially drawings, the SBS should always be looking for any special notes or special attention being made to material so you will not be surprised.

(1) It is the responsibility of the SBS to investigate material costs. This may be done via quotes from vendors, online material services or from records kept by the SBS or their co-workers. Another option may be to look at recent estimates or return costs for jobs using similar materials. The SBS must be very careful when reviewing return cost to be used as the source of his/her estimate as return cost is not necessarily what the job should cost. The goal of the IGE is to identify what the job should cost. It is helpful to develop and maintain sources of material prices and have them available. Reoccurring material requirements will allow the SBS to establish formulas and tables that they may simply apply total square feet, total weight or quantities to for a quick estimated cost.

(h) As stated earlier it is more the exception than the rule that a SBS will find previously written work items that match exactly with similar work on different ships. However, it is more the rule than the exception that the SBS will find previously written processes that closely match with similar work on different ships, and especially with similar work on ships of the same class. As the SBS becomes more familiar with the processes for work that needs to be done, he/she should be able to walk through the entire job from beginning to end and account for all associated costs.

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(1) As the SBS gains experience with different types of work items it will become easier to estimate work outside of his/her area of expertise. Using estimates from similar work to accomplish similar process steps and applying labor standards will eventually reduce the time and effort to complete a work item.

(i) As with material costs, the SBS must locate and use resources that indicate standard labor estimates (i.e., it takes three men eight hours each to sandblast 100 square feet of surface area). There are several Labor Standards available including but not limited to the Master Specification Catalog, Flat Rate Book, and the Uniform Engineered Methods and Standards Book. Labor Standards include tasks like replacing valves, applying deck covering, boiler overhaul, pump overhaul, replacing bulkhead/hull plating, pulling cable, etc. The SBS simply needs to do some homework to identify total quantities to apply against the Standards.

(1) Generally speaking, most work items will require the following steps:

- (a) Setup Job
- (b) Remove Interferences
- (c) Remove Equipment
- (d) Repair Equipment
- (e) Re-Install Equipment
- (f) Test Equipment
- (g) Replace Interferences

(2) The point being is that the SBS needs to break every work item down to sub parts and estimate costs associated with each process step. Upon totaling costs, the SBS will have arrived at an Independent Estimate vice a guess.

(j) Not all work that is accomplished during an availability will require performance testing however almost every work item will require in-process inspections. As the SBS works out the IGE, they must be very familiar once again with what they are estimating because every inspection and/or test will result in costs. The SBS should be mindful that not every

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inspection or test will be successful upon the first attempt to pass. Take into account for costs to inspect and test realizing that if for any reason outside of the contractors control an inspection or test fails, the government may be paying for multiple attempts. Aside from labor costs there may be costs associated with equipment required to perform the tests (i.e., a crane is required to weight test an Accommodation Ladder).

(k) The SBS must always consider the conditions that exist around the work they are estimating. This is not limited to the physical location on board the ship. Where the ship will be located during work execution may influence cost such as EPA regulations to control pollutants entering the atmosphere or weather conditions that would require shelters to be built. These type of issues need to be considered because there are often costs associated with them.

(1) Other factors that must be considered include economic or port loading conditions that play a big part on how much work may be accomplished by a contractor's personal work force and how much work may need to be subcontracted out. The costs of subcontracting may result in higher estimates and these should be reflected in the IGE when they exist.

(l) As a reminder, the SBS will be required to participate in scoping and negotiating of work items and RCCs when required. You will, if determined by negotiations, revise your IGE to reflect changes in scope.

(a) The ACO will provide the maintenance team the Direct Labor categories for each Contractor and Sub-Contractor for an availability. However, the SBS should not be concerned about the labor rates; rates are the responsibility of the ACO/CS and are audited by the Defense Contract Audit Agency (DCAA).

(b) The types of estimates you may be asked to provide are:

(1) Class A- Variance is not expected to exceed 10%.

(2) Class C- Variance is not expected to exceed 15%.

(3) Class D- Variance is not expected to exceed 20%.

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(4) Class F- Variance is not expected to exceed 40%.

(5) Class X- Directed, or Modified.

### 3. Cost Monitoring Duties

a. When assigned to a MSMO contract, accomplish cost monitoring duties using the following as guidance:

(1) Notify the PM of the findings when monitoring the Contractor's work, but do not stop or redirect contractor.

(2) Observe the number of contractor personnel assigned to your work items, noting all productive and non-productive contractor personnel per compartment or space. Record the number of individuals working along with those sitting, standing, or just talking about non-work issues. Record your findings and submit daily reports (one-liner) to PM for review. See SBS Procedure 8 of this desk guide.

(3) Review the CFM report/Provisioning Parts List (PPL). Report any excessive or questionable items such as Computers, TV's, Flashlights, Batteries, etc. to the PM.

(4) Monitor the contractor's material warehouse and material system. Ensure CFM and GFM are separated, tagged, and accounted for.

### 4. Progress Monitoring Duties

a. Definitions

(1) Progress Assessment. The assessment of progress represents the PM's appraisal of progress for each work item. The contractor's input, if available, may be considered as part of the appraisal. Care should be exercised to ensure the progress accurately reflects physical performance. Progress percentages cannot be adjusted as a punitive measure in attempting to resolve a problem with the contractor.

(2) Progress Reporting. Labor progress percent reporting is based on observed physical progress, excluding any unsatisfactory or deficient work. Material progress percent reporting is based on receipt of satisfactory contractor furnished material at the contractor's facility and allocated to the contract or job order. Subcontractor material shall not be

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included until it is delivered to the prime contractor's facility.

(3) The SBS shall discuss and resolve with the contractor any disparity >5% between the contractor reported progress and the SBS reported progress.

(4) The following tables, Table 4-1 and 4-2, illustrate suggested guidelines to determine progress based on physical performance per reference (a) Volume VII, Chapter 7, and Appendix E of this desk guide.

| "ACTIVITY" PROGRESSING METHOD<br>EXAMPLE |            |
|--|------------|
| Rip out                                  | 10%        |
| Ship to Shop                             | 5%         |
| Disassemble                              | 10%        |
| Shop Report                              | 5%         |
| <b>Repairs accomplished</b>              | <b>20%</b> |
| Reassemble                               | 15%        |
| Shop Test                                | 5%         |
| Shop to Ship                             | 5%         |
| Reinstall                                | 10%        |
| Test in Place                            | 10%        |
| Final Acceptance                         | <u>5%</u>  |
|  | 100%       |

**Table 4-1. Work Activity Progressing Method Example**

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| PROGRESS GUIDELINES          |           |                             |          |                        |          |
|------------------------------|-----------|-----------------------------|----------|------------------------|----------|
| <b>In-Shop Repair</b>        | <b>%</b>  | <b>On-Ship Repair</b>       | <b>%</b> | <b>SHIPALTs</b>        | <b>%</b> |
| Interferences Removed        | 5         | Interference Removed        | 5        | Interference Removed   | 5        |
| Equipment Removed            | 15        |                             |          | Rip Out Started        | 15       |
| Equipment Opened             | 25        | Equipment Opened            | 20       | Rip Out Complete       | 25       |
| Inspection Report Submitted  | 30        | Inspection Report Submitted | 25       | Installation Started   | 35       |
| Repairs Started              | 35        | Repairs Started             | 30       |                        |          |
| Repairs Completed            | 60        | Repairs Completed           | 60       |                        |          |
| Equipment Reassembled        | 70        | Equipment Reassembled       | 75       | Installation Complete  | 70       |
| <b>Equipment Reinstalled</b> | <b>75</b> |                             |          |                        |          |
| Interferences Replaced       | 85        | Interferences Replaced      | 85       | Interferences Replaced | 75       |
| Testing Completed            | 95        | Testing Completed           | 95       | Testing Completed      | 90       |
| Test Report Submitted        | 98        | Test Report Submitted       | 98       | Test Report Submitted  | 95       |
| Touch-Up Completed           | 100       | Touch-Up Completed          | 100      | Touch-Up Completed     | 100      |

**Table 4-2. Work Progress Guidelines****b. Shipbuilding Specialist Responsibilities**

(1) Determines the physical progress, as a % of work completed, of each work item and each contract modification assigned.

(2) Calculate and maintain an independent assessment of PROGRESS on each original, new and RCC work item. The actual % of work completion is then determined independently for labor completion and material purchases for each work item. An RCC may be considered a separate item for progressing purposes. The progressing of material separately is typically negligible as it usually represents a small % of overall progress; however, material progressing is necessary. Material progress assessments are made on the basis of the estimated dollar value of satisfactory material received by the Contractor. This amount is divided by the overall material amount to determine the % of material completion.

(3) After each SBS has made his assessment, it is entered into the NMD execution module on a weekly basis. By doing so, the PM is able to develop a comprehensive progress report that is used in calculating the Contractor's entitlement to progress payments and for evaluating the Contractor's schedule performance. The assessment starts upon the first week of the availability and continues weekly until availability completion.

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(4) When necessary, bring to the PM's attention any work items identified with potential delays that could affect key events, milestones and scheduled completion dates. These items will be addressed to the contractor through weekly progress meetings and appropriate correspondence.

(5) Reference (b), Appendix H, is an excellent source for Cost Estimating references with regards to:

- (a) DOD Directives, Instructions, and Mil-standards.
- (b) Navy Instructions and other Publications.
- (c) Cost Estimating Tools and Models.
- (d) Helpful Web Resources.
- (e) Professional Societies.
- (f) Other Government Policies and Circulars and Source Material.

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## Chapter 5

### Processing Reports and Maintenance Records

- Ref:
- (a) NAVSEA Standard Item
  - (b) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual
  - (c) CNRMCINST 7570.2, Process for Adding Work to Ship Repair Contracts
  - (d) NAVSEA Contracts Handbook Sep 2011
  - (e) FAR 43.105 - Availability of Funds
  - (f) NAVSEA Instruction 5400.108, Policy For Quality Management of Work on Non-Nuclear Surface Ship Critical Systems
  - (g) CNRMCINST 4700.5, Standard Operating Procedure (SOP) for Expanded Process Control Procedures (EPCP) on Surface Ships
  - (h) CNRMCINST 4700.8, Ready To Start (RTS) Standard Operating Procedure (SOP) For Expanded Process Control Procedure (EPCP) and Controlled Work Package (CWP)
  - (i) NAVSEA Technical Specification, 9090-100 Rev 1

Appendix A: Condition Found Report (CFR) Sample

Appendix B: Letter of Transmittal (LOT) Sample

Appendix C: Liaison Action Request (LAR) Sample

#### 1. Introduction

a. Throughout the entire availability, the Shipbuilding Specialist (SBS) manages and maintains various types of reports. Proper handling of documentation and reports ensures a well-executed availability.

(1) The Government's actions or inactions in providing Government Furnished Material (GFM) and Government Furnished Information (GFI), approving or disapproving of contractors' requested contractual actions, responding to contractor reports and participating in conferences to discuss technical and contractual issues as well as performance, could have a significant impact on the contractors' ability to perform contract requirements.

(2) These responsibilities make the Government an active participant in the management of contracts. Two of the more important general areas of responsibility are

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(a) Personal conduct in working with the contractor to ensure the terms and conditions of the contract are complied with; and

(b) The necessity to validate observations and maintain accurate records of these observations in "significant events" logs that include action that was taken to resolve the issues.

(3) Significant Events are personal observations of conditions or actions by or to any party to the contract which would affect the performance of the contract. These events must be recorded to assist in maintaining adequate documentation to be used to verify, qualify or refute matters relating to a contractor's claim or request for equitable adjustment.

(4) The following sections outline the process of maintaining the Significant Events Log, processing and handling of contractor generated reports and procedures, processing and handling of requests, and maintenance of records for each availability. It also briefly discusses reports provided to support Award Fee Evaluations and Contractor Performance Assessment Reporting System.

## 2. Significant Event Log

a. The SBS is responsibilities for maintaining a continuous real-time notebook to record significant events that occur during the contract period as detailed in reference (b), Chapter 7, paragraph 7.2.4 and 7.3.4. The Significant Event Log is a key element in contractor claims avoidance and settlements. Significant Event Logs are not to place blame but are used as a means to gather and record facts. Ensure all events and/or actions that affect contract performance are officially documented on a Conditions Found Report (CFR) and supported by log entries.

(1) The documentation of significant events is required for all contracts in excess of \$5 million or for which a claim is or may be expected. A claim can be expected against any contract associated with ship modernization and repair. All Government personnel who are responsible for observing a contractors' performance, production processes, observing "G" check points and monitoring operational tests and evaluations shall document their observations and maintain a continuous real time notebook of significant events. Notebooks shall be turned over to the ACO, via the Project Manager, at the completion of the availability. The Contracting Officer retains this

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documentation in the Significant Events file. All Government personnel involved in the performance of such contracts shall maintain this continuous real time notebook to record significant events that occur during the contract period.

(2) The individual's significant events notebook should be a ledger-type, bound notebook having sequentially numbered pages. Events shall be recorded in black ink as they occur. Use one log book for each CNO availability and use a separate log book for any other type of availabilities. Each log book shall include your name, ship name/hull number, type of availability, dates, time, availability/contract number, contractor name, berthing/docking location, etc. Pages of the log book can be labeled to correspond with each day of the availability, including days before ship's arrival in plant, days after departure from plant, warranty periods, etc. Specify if information pertains to prime contractor, subs, AITs, SF, etc. Recorded information needs to be brief but completely describes the event. The information also needs to be legible in order for others to be able to read and understand it at a later date. No page shall be removed. Mistakes shall be deleted with only a single line through the text and initialed, permitting an unobstructed view of the mistake. This notebook and related memoranda will become a part of the "Significant Events" file and will be marked "FOR OFFICIAL USE ONLY."

b. The significant events documented in the Significant Events Log shall include, but are not limited to, those matters that have a bearing in the following areas:

(1) Contract Delivery schedule changes or problems that could impact the contract schedule.

(2) Drawings, designs, and specifications that are ambiguous, defective or affect contractor performance.

(3) Differences in interpretation of contractor provisions.

(4) Delay and disruption of contractor effort.

(5) Changes in method or sequence of work.

(6) Late or defective Government-furnished property or information.

(7) Rejections, rework, waivers, and deviations.

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(8) Planned versus actual performance milestones.

(9) Delays in Government actions dealing with such issues as condition reports, engineering change proposals, consent to subcontracts, and review of technical data.

(10) Contractor error and noncompliance with contract terms.

(11) Any other Government actions or inactions which have the effect of requiring the contractor perform work different from that prescribed by the original terms of the contract.

c. In addition to the significant events above, the following circumstances should be documented by the contractor or SBS, and then supported by entries in the Significant Event Logbook:

(1) If the contractor believes the Government has superior knowledge of any aspect of the job and withheld that knowledge from the contractor.

(2) If the contractor believes that Government action or conduct from one contract adversely affects contractor performance on another contract.

(3) If the contractor believes that the Government has improperly performed contract administration duties, which interfered with the contractor conducting its own business.

(4) Any contractor's failure to adhere to a schedule or to control costs that may lead the company to seek recovery of consequent losses. Ensure these events have been properly addressed via the CFR or CAR processes as well.

d. As a guide, the following information for each significant event shall be recorded:

(1) The event nature and important circumstances.

(2) The date of the event and the identification of Government and contractor personnel involved, including name and function of the respective individuals.

(3) Identification of any document involved.

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(4) Synopsis of oral communications.

(5) Statement of the possible consequences or effects of the event described, including contract cost, schedule or technical performance changes.

(6) Any actions/corrective measures that have been or should be pursued.

e. Significant Events Logs must be kept in format required by reference (a) and SBS Procedure 8.

f. The SBS shall inform the PM of any significant event noted in the Significant Event Log so that it can be reported to higher authority if necessary.

g. Significant Event Logs shall become part of the master files on all availabilities. Submit your Significant Events Log for review by appropriate personnel (Supervisor, Project Manager, Contracting Officer, QA Manager, and Internal/External Auditor). Upon notification of job reassignment, promotion, or prior to departure for retirement or any other reason, discuss the contents and disposition of your Significant Events Log with your Supervisor. Your Significant Events Log will be turned over and retained with the job or contract master files.

### 3. Condition Found Report and Letter of Transmittal

a. A Condition Found Report (CFR) is a document that contractors typically prepare and submit per NAVSEA Standard Item 009-01; however, government representatives may generate them as well. The CFR is used to transmit specific information concerning inspections or deficiencies or to propose additional work which requires a government response. It may identify additional work requirements that exceed contractual work requirements or otherwise request a change to contract requirements. Each CFR is serialized, tracked and dated, and will become an official contractual document of record. See sample of a CFR, enclosure (1), at end of this Chapter. Also see SBS Procedure 9 of this desk guide.

b. A Letter of Transmittal (LOT) is a document which contractors use to submit routine information relating to the requirements of a job order. See enclosure (2), of this chapter.

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c. The following sections establish procedures and responsibilities for processing and handling contractor generated reports and procedures per reference (a).

(1) Most contractors enter CFRs in the NMD application; accordingly the SBS shall monitor NMD daily for new CFRs. NMD maintains a CFR Summary Report with the following information: Last Name, Answered, Outstanding, Urgent, CT (Cycle Time) and Total.

(2) Some Contractors do not have electronic interface with NMD. In these cases the SBS will enter information from the hard copy into NMD for record keeping purposes.

(a) SBS shall review the CFR for all pertinent data per reference (a) Section 009-01. The SBS will address any issues that appear out of place with the PM as necessary and then contact the contractor if any of the following conditions exist:

1. Insufficient or incomplete information or data.
2. Inaccurate, false or misleading statements.
3. Enclosures are missing.
4. Request for overtime, lost time, stolen material equipment, or request for an availability change.
5. Insufficient number of vendors contacted (minimum of three required), when original material is unavailable and a request for substitution of material is required. Any CFR returned to the contractor because of the aforementioned shall be done expeditiously and if warranted, initiate corrective action as discussed in Chapter 6, paragraph 6 of this desk guide.

(b) SBS shall investigate the conditions cited in the CFR, including alleged constructive changes, delays, and disruptions and annotate all copies with conditions found and remedial action recommended or being considered. The response must address each contractor question or recommendation.

(c) SBS shall use sound judgment, trade knowledge, readily available specifications, standards and manuals, as well as assistance from engineering liaisons and other SBSs to

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resolve problems of conditions noted by the contractor (any requested deviation and/or material substitution by the contractor shall only be done with Design concurrence).

(d) A CFR shall not be answered with only "Received and Noted," but must also list follow up action. For instance: if the answer to a CFR is "no action required (NAR)", the SBS shall explain why (e.g., required report, work deferred to future availability, covered in an existing paragraph, forwarded to engineering for approval, etc).

(e) The timing of the condition report review process is critical. Reports shall be time stamped upon receipt from the contractor and returned within three days. When issues raised in a condition report require a longer processing time, the contractor should be advised as to the expected response time.

(f) Forward each answered CFR to Project Manager for review.

(g) If Design action is required, submit an Engineering Service Request (ESR) and notify the Engineering Liaison and Project Manager and forward the CFR/LOT. Take appropriate action as recommended by the engineering memo when it is returned. Provide feedback to Design on action taken and results obtained. The SBS can clarify but not modify any ship systems or drawing, etc.

(3) In summary, the government's response to the CFR must be clear, concise and address each of the contractor's findings.

(a) Distribute the CFR/LOT as follows, However if CFR/LOT is submitted/answered electronically, then copies are not required:

1. Contractor, annotated original.
2. Contracting Officer, one copy of annotated original CFR. This copy shall be filed in the "Official Contract File".
3. PM, one copy.
4. Ship, one copy.

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5. Port Engineer, one copy.

6. SBS working file, one copy.

(b) CFRs received readdressing a previous CFR or CFR answer shall be answered by the PM and the Contracting Officer should be made aware of the disputed answer.

(c) CFR answers that may result in a RCC being issued due to contractual direction, interpretation of a work item specification or address previous answers must be reviewed by the PM and the associated RCC must be approved by the Contracting Officer.

(d) A CFR to be returned to the contractor due to work being previously covered in specifications will be reviewed by the cognizant SBS and contract specialist. If the contract specialist is in agreement, the CFR will be annotated, "Covered by paragraph \_\_\_\_\_ of work item and/or Modification Number \_\_\_\_\_".

#### 4. Process for Growth and New Work

a. Reference (c) outlines the process for addition of work to ship repair contracts. When a Condition Found Report (CFR) for additional work has been approved or growth work has been otherwise identified by the PM, the Shipbuilding Specialist will prepare a Request for Contract Change (RCC) per SBS Procedure 14, which will provide the statement of work.

b. The PM will review the RCC to ensure that the RCC adequately documents growth work required to be performed. The PM will release the RCC for contractor pricing.

c. The contractor will propose and submit an estimate of the work to be performed (e.g., a Change Order Price Analysis or COPA) while the SBS develops an Independent Government Estimate (IGE), previously discussed in Chapter 4 and as outlined in section two of SBS Procedure 5 of this desk guide. For work items over \$700K, a TAR will be required. The SBS will assist Code 400 by answering any questions on the IGE in support of the TAR process.

d. The Contract Specialist (CS) will determine a fair and reasonable price with Maintenance Team (MT) support, as required, in scoping and negotiations.

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e. Per reference (e), the ACO will ensure adequate funding is available. If funding is not adequate, the ACO in conjunction with the PM shall either request and obtain additional funding or decide not to add the estimated work to the contract.

f. Once the ACO has determined the proposed/negotiated cost is fair and reasonable and the proper funding is available to cover the growth task, the ACO may authorize the contractor to proceed with the work. If the ACO authorizes the contractor to proceed with the work in advance of a formally executed contract modification, then the ACO shall document his/her granting of authority to proceed with an email to the contractor. These emails shall be retained.

g. The ACO will draft the contract modification, also known as a Supplemental Agreement, (SA) to add the growth work to the contract. For the purpose of efficiency, RCCs may be batched together for purposes of executing a contract modification. The ACO and contractor must both sign the contract modification to fully execute it. Additional information is contained in reference (d).

#### 5. Process Control Procedures (PCP) and Expanded Process Control Procedures (EPCP)

a. Reference (a) Section 009-09, technical publications/technical manuals, reference (f) and Work Items invoke the requirements for contractors to develop PCPs and EPCPs. PCPs are invoked on specific technical work processes where the performance of inspections and tests alone cannot assure a quality product. EPCPs are also required on work being performed on critical systems identified in and per reference (f).

(1) All PCP/EPCPs developed by the contractor shall be submitted to the designated Code 200 representative for logging, review, and distribution.

(2) Quality Management Division and the Engineering Department (Code 130/200) reviews the contractor procedures and maintains records of their review findings on the contractor procedure including: procedures, Coating Application Product Summary (CAP) Sheets and PCP/EPCPs accepted or rejected as appropriate. They also review all PCP/EPCPs to the requirements of reference (a) Section 009-09, reference (b) and/or the requirements document that specified the development of the

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procedure. The MT and the contractor are informed of the acceptability of the procedures.

(3) Any changes to the accepted PCP/EPCP shall be requested by the contractor via a serialized letter or CFR and accepted by Quality Management Division and the Engineering Department (Code 130/200) before the contractor is allowed to proceed.

b. SBS shall ensure appropriate procedure requirements are invoked in the Work Item and its modifications.

c. SBS shall also ensure all necessary requirements for development of PCP/EPCPs are incorporated in the Work Item and its modifications referencing applicable specification.

## 6. Internal Reports

a. The following sections establish procedures and responsibilities for processing and handling of requests.

b. Liaison Action Record (LAR). The LAR system was established by reference (i) to provide an easy method to communicate technical questions about ship alterations from the field to the Planning Yards and receive timely answers in return.

(1) LARs are generally prepared by Design personnel, Shipbuilding Specialists, and Planning Yard On-site Representatives (OSR), but can be initiated by any RMC personnel who needs direction on a Shipalt installation or any other technical question from a Planning Yard or NAVSEA Headquarters.

### (2) Processing a LAR

(a) Originator has a technical question requiring PY or NAVSEA HQ resolution.

(b) Originator contacts the Engineering Department, Design Division, to get a LAR form (see enclosure 1) and draws a LAR record number. The LAR record number consists of 3 parts: the SHIPALT number + ship's hull number + unique record number (from list in binder). If the issue is not ship related, the first part is left blank.

(c) Originator enters the following information on the LAR form:

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(1) Addressee's name and address, LAR number, date, subject of the LAR, a brief but clear description of the technical issue, originator's name and code, and the required deadline date for the answer. (Assistance in filling out the form is available from any Planning Yard OSR or Design Supervisor).

(d) The LAR is then submitted to the Engineering Department for review and signature.

(e) Upon approval, the LAR is passed to NAVSEA HQ or the appropriate Planning Yard (PY) by the Engineering Department with info copy to originator via fax/email.

(f) Replies will be written at the bottom of the LAR form and transmitted back to the PY OSR or Engineering who will then distribute the document to the LAR originator, completing the process.

c. Reverse Liaison Action Record (RLAR). The PY needed a similar vehicle to quickly disseminate information about changes to SHIPALT design. This variation of LAR is called a Reverse Liaison Action Record. Using the same basic LAR format, the RLAR announces changes to an existing SHIPALT design to installing activities in the field. The information provided by RLARs is quickly prepared and informal but technically complete. It can consist of revised drawings, sketches, marked-up drawing prints and/or lists of technical requirements that can be incorporated directly into contract specifications during either the planning phase or during contract execution. All technical direction presented by RLARs are considered mandatory by definition and must be incorporated into the specifications.

(1) Processing an RLAR

(a) RLAR is initiated or received by the PY OSR or Engineering and upon review is forwarded to the PM for the availability involved.

(b) PM provides the RLAR to the person responsible for including it into a specification. If received during contract execution, the SBS will be required to develop an RCC to incorporate the RLAR into ongoing work.

(c) Upon incorporation of the RLAR in contract specifications, the PM will annotate this fact on the bottom of the RLAR form and return it to Engineering.

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(d) Engineering will then fax a copy of the completed RLAR form to the originating Planning Yard.

d. Engineering Service Request (ESR). The SBS shall initiate ESRs when the following instances occur; however, usage is not limited to these specific instances.

(1) Contractor requests for deviation from specification requirements.

(2) Changes to work specifications including SHIPALTs that may alter location of equipment, dimensions shown on drawings, or material.

(3) Material deviations not reflected in work specifications, equipment technical manuals and/or drawings.

(4) Data provided by contractor does not match with information available in the Work Item references.

(5) The requirements called out in references listed in Work Item are vague.

(6) Evaluation of chemical analysis and shall include the following:

(a) Date and serial number of the letter forwarding the lab report along with the name of the prime contractor.

(b) Type of waste being analyzed, i.e. waste oil, fuel oil, bilge water, etc.

(c) The approximate quantity of waste from which the sample was taken.

(7) Dependent upon the urgency, the SBS shall initiate a phone call to the Engineering Department for the required action and, when possible, verbally obtain the desired technical information and follow-up with written notification.

(8) SBS shall report all ESRs not answered within three days to the PM.

(9) SBS shall initiate action to implement changes in requirements due to the answered ESR into the Work Item via a CFR or RCC.

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(10) An ESR is a government issued document and shall not be issued to the contractor. Information from the ESR shall be extracted for answering CFRs. The ESR number shall be annotated in CFR for government reference.

e. Material Request (MR)

(1) SBS/contractor shall initiate an RCC to cover costs related to work item changes when Government Furnished Material (GFM) is changed to Contractor furnished material on work being accomplished by the contractor.

(2) SBS/contractor shall initiate an RCC to cover costs related to work item changes when GFM is added to the work being accomplished by contractor.

(3) SBS shall initiate an unsatisfactory request via the MT ILS support personnel when contractor reports defective Government furnished material.

f. Safety Reports

(1) SBS, when assigned by the PM, will accomplish a joint Daily Safety Inspection of the vessel with Ship's Force, the contractor's Safety Representative, a government safety representative and an Alteration Installation Team (AIT) sponsor representative (when applicable). Walk throughs are to discover any deficient conditions and potential hazardous situations. All discrepancies are to be documented and a responsible party assigned to correct the problem. A follow up is then conducted to ensure corrective action has been taken.

(2) SBS shall ensure the contractor develops and distributes a written report of any unsafe conditions found during the Safety Inspection. Reports shall be placed in the ship's Safety Log with a copy to be provided to the contractor's and the government's safety representative for corrective action.

(3) SBS is responsible for documenting safety observations as well as deficiencies in the PVI database. The SBS shall contact the Safety Office and/or the assigned QAS representative for all "Method B" safety CAR violations.

g. Lessons Learned Improved Feedback Reporting. The SBS shall ensure that a "Lessons Learned" is entered in the NMD program and given to the PM for inclusion into the Lessons

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Learned Conference (LLC) when problems occur, such as when specifications are encountered that result in excessive in-scope growth work, new work, schedule delays and/or equipment/system damage and waste and could be of a reoccurring nature.

(1) A Lessons Learned is a U.S. military and government term used to describe the "after-action" discussions and evaluations of an agency's (or multiple agencies') performance following an exercise, training session, or major event, such as a CNO availability.

(2) Lessons Learned feedback shall be accomplished as items/changes are initiated.

## 7. Master Files and Logs

a. Maintenance and Disposition requirements for Quality Assurance (QA) Inspection Records establish procedures and responsibilities for the retention and disposal of QA Inspection Records for each Availability/Job Order.

b. Per reference (b), each SBS shall establish and maintain quality assurance records for each Availability/Job Order. These records may be established and maintained electronically in NMD; if it is computer generated or it is on a CD, it must be accessible. As a minimum, the following documentation/records shall be a part of each master file:

- (1) Work specifications (Basic plus all related RCCs)
- (2) Completed Product Verification Inspection (PVI)  
computer database checklists
- (3) Inspection logs
- (4) Checkpoint verifications
- (5) Process Control Procedures (PCPs) and Expanded  
Process Control Procedures (EPCPs)
- (6) Corrective Action Request (CAR) records
- (7) Condition Found Reports (CFR)
- (8) Engineering Service Requests (ESRs).
- (9) Inspection/Test Reports (NDT, Level I, P-1, etc).

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(10) Completed Corrective actions and results.

(11) Records, correspondence and other documents concerning violations of work place safety regulations, respiratory safety, ventilation, and dust level controls which pertain to the use/removal of insulation materials.

(12) All notification of insulation removals, whether asbestos or non-asbestos.

(13) All reports concerning air monitoring results, space certification and final fiber count resulting from insulation rip outs.

(14) Control of shipboard removal of thermal insulating material process control procedures.

(15) SBS shall provide copies of all asbestos reports to the Environmental Manager for review.

(16) Material Identification and Control (MIC) for piping systems records per reference (a) Section 009-27.

c. SBS will maintain the master files in an auditable condition. Review records for completeness and forward to the PM who will submit records (these include SRA, DSRA and EDSRA availabilities) to the local RMC Quality Management Division no later than 30 business days after the completion of the availability.

d. Quality Management Division shall maintain all records/reports for a period of one year after the end of the availability/Job Order, after which the master files shall be boxed and maintained in assigned staging/storage area for a period of two additional years. Upon completion of three years onsite storage, records may be shipped to the nearest Federal Records Reserve Center or archive site for three additional years. Following the total six years retention period, inspection records, excluding Level I records, may be disposed of unless legal action is pending with contractors for which these records pertain.

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## Appendix A

Sample

SWRMCINST 4730.2

JAN 26 2005

CONDITIONS FOUND REPORT (CFR)

Company XYZ  
1234 My Street  
My Town, CA 91950-  
(619) 555-1212

Serial No: XX-4109  
Date Submitted: 12/30/03  
Contract No: N00024-05-C-WXYZ  
SWRMC Planner: Joe Government  
Prime Contractor: XYZ

TO: Southwest Regional Maintenance Center (SWRMC), USN  
San Diego, California

VIA: SWRMC Field Representative

Title or Work Item: PORT SHAFT SEAL; REPAIR

Vessel: LCU Hull No: 1648

Spec No: Art No: 243-12-001 Mod No:

Reference: Basic Date of Inspection: 12/29/03

CONDITIONS FOUND (not covered in original specification)

DURING REMOVAL OF THE PORT SHAFT SEAL, CONTRACTOR NOTED THAT THE SEAL HOUSING IS GROOVED AND WILL REQUIRE MACHINE AND POSSIBLE WELD BUILD UP.

WITNESSED BY THE PORT ENGINEER.

CONTRACTOR'S RECOMMENDED ACTION

ISSUE THE CONTRACTOR A CHANGE ORDER TO REMOVE SEAL HOUSING, WELD/MACHINE HOUSING AND RE-INSTALL.

Est Time: XXX  
Est MD: XXX  
Est Material: XXX

Failure to respond by \_\_\_\_\_  
Will result in schedule impact.

\_\_\_\_\_  
Joe Contractor, Machinery Supervisor  
Signature of Originator, Title & Auth

SWRMC Field Representative  
Findings and/or Recommendations  
CHIT#15 applies when negotiated

\_\_\_\_\_  
Date Received from Contractor:  
12/30/0X

\_\_\_\_\_  
Joe Government  
SWRMC Representative  
Date Submitted: 12/30/0X

Form 40 Rev (1)

Encl (1)

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## Appendix B

Letter of Transmittal (Sample)

SWRMCINST 4730.2

JAN 26 2005

TO: South West Regional Maintenance Center  
 (SWRMC) USN  
 U.S. NAVAL STATION, BOX 119  
 SAN DIEGO, CA 92136  
 CODE#: \_\_\_\_\_

LETTER NO: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 CONTRACT NO: \_\_\_\_\_  
 PROJECT NO: \_\_\_\_\_  
 VESSEL: \_\_\_\_\_  
 WORK ITEM NO: \_\_\_\_\_  
 MOD: \_\_\_\_\_

Gentlemen:

We are sending you \_\_\_\_\_ Attached \_\_\_\_\_ Under separate cover, via the following items:

\_\_\_\_\_ Specifications \_\_\_\_\_ Prints/Drawings \_\_\_\_\_ Report(s): \_\_\_\_\_  
 \_\_\_\_\_ Quotation \_\_\_\_\_ Change Order \_\_\_\_\_ Paragraph: \_\_\_\_\_

Company XYZ Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_ For Approval \_\_\_\_\_ Corrected as Noted \_\_\_\_\_ For Disposition Instructions  
 \_\_\_\_\_ For Your Use \_\_\_\_\_ Rejected \_\_\_\_\_ Return of:  
 \_\_\_\_\_ As Requested \_\_\_\_\_ For Closing \_\_\_\_\_ Return Reply Requested

SWRMC REMARKS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 SWRMC Signature DATE

\_\_\_\_\_  
 Company XYZ QA Signature DATE

Encl (2)

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**Appendix C****SAMPLE**

LIAISON ACTION RECORD (LAR)

TECH SPEC:

ACTION NO:

FROM:

DATE:

TO:

Subj:

Enclosure:

---

ORIGINATOR:

CODE:

APPROVED:

---

QUESTION OR ACTION REQUIRED:

REPLY IS REQUESTED BY:

---

|  |              |       |
|--|--------------|-------|
| For "answer or action taken comments" see below. |              |       |
| COMPLETED BY:                                    | APPROVED BY: | DATE: |

---

ANSWER OR ACTION TAKEN:

---

---

DISTRIBUTION:

PM, PE, CSPE &amp; PEO SHIPS PMR

Planning Yard Code:

Overhaul Yard Code:

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## Chapter 6

### Quality Assurance Program

- Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual  
(b) CNRMCINST 4700.9, Availability Quality Management Plan (QMP) Standard Operating Procedure (SOP)  
(c) NAVSEA Standard Items  
(d) Naval Surface Treatment (NST) Manual

Appendix A - Sample Memorandum of Understanding (MOA)  
Appendix B - Sample Minor Non-Conformity CA Form (Method "A")  
Appendix C - Sample Major Non-Conformity CA Form (Method "B")  
Appendix D - Sample Systematic/Critical Non-Conformity CA Business Letter Format

1. Introduction. This chapter establishes the basic provisions for the RMC repair Contract Administration Quality Assurance Program (CAQAP) for hardware and technical data. This includes provisions for tailoring the implementation of these programs to the particular need, based on contractual requirements. There are seven elements of the CAQAP that are designed to provide a systematic program for ensuring contractor compliance with contract requirements. These elements, which are based on the deliverable product and contractual requirements, are Planning, Document Review/ Procedure Review (PR), Procedures Evaluation (PE), Product Verification Inspection (PVI), Quality Audits, Corrective Action and Quality Data Evaluation (QDE). Each RMC will develop, apply and maintain an effective program for performing Government QA actions consistent with the CAQAP.

a. It is the role of the SBS to determine if the contractor's performance of work complies with the requirements of the contract. Accordingly, the SBS will determine the effectiveness of the contractor's quality effort, as well as perform the product inspections necessary to ensure contractor's conformance to the specification.

b. The following sections outline the requirements for Shipbuilding Specialists to effectively implement CAQAP as set forth by NAVSEA and reference (a), Volume VII, Chapter 11.

## 2. Quality Assurance Inspection Team

a. Although the RMC is the Contract Administration Activity and the authority for acceptance of accomplished work per the

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contractual agreement, the ship's Commanding Officer should be in agreement that the work performed on the ship is satisfactory. Therefore, it is encouraged that RMC inspection teams are augmented with ship's force personnel to assist with observing and accepting Government Inspections (G-Point) and Process Verification Inspections (PVI).

(1) Reference (a) specifies that a Memorandum of Understanding (MOU) be established between the ship and the other commands involved. The MOU establishes procedures and functional responsibilities for joint RMC/Ship's Force Quality Assurance inspection team operations. Appendix A is an example of a MOU.

b. The inspection team will be comprised of a designated QAS (Quality Assurance Specialist) and three groups of people:

(1) RMC Shipbuilding Specialists (SBS)

(2) Ship's Force TAD personnel assigned to RMC Quality Assurance

(3) Contractor Quality Assurance inspection personnel

c. Government personnel partners with the contractor to resolve quality issues and improve quality processes. Government personnel will not serve as a replacement for the contractor's own quality management system, nor will Government personnel be used by the contractor as a progressive inspection device to determine end product acceptability.

3. Quality Plans. Waterfront Operations (WFO) maintenance teams will use the QA Plan developed by the QA Department to provide PVI's and inspections of the contractor's production efforts. Per reference (b) the use of the QA Plan and development of the QA Package to be turned over to the QA Department at the end of the availability.

#### 4. Government Notification Points (Checkpoints)

a. Witnessing the contractor's performance of checkpoints is the responsibility of the SBS. The contractor is responsible for scheduling all checkpoints per reference (c) Section 009-04. The insertion and format requirements of a G-Point are spelled out and defined in detail in reference (a), Volume VII, Chapter 4, appendix 4E. Reference (c) further states that the supervisor (NSA) is to direct the contractor specifically how

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and by what method(s) the supervisor (NSA) is to be notified for G-points.

(1) This should be decided and communicated to the prime contractor at the beginning of the availability. If the specified method is not effective, change it until you find one that is effective. Any G-point that was missed due to improper notification will result in a CAR being issued to the contractor. It is not your responsibility to perform the checkpoint and accept the work. This is the contractor's responsibility. Your job as an SBS is to observe and ensure that the work meets the requirements of the contract and all aspects of the inspection or test observed have met the contractual requirements you sign as a witness. An exception to this is for critical coated area inspections. For these inspections you are performing the duties of the third party inspector and your signature on the documents indicates acceptance of the product by the Government. Ensure you have the required certification before signing for government acceptance.

(2) In addition, while evaluating the contractor's Non-Destructive Testing (NDT) on a specific product, the SBS must have the specialized training, experience, and certification in NDT. The QA Department has developed a training program for nondestructive method testing. Experience required as a prerequisite for NDT certification can be obtained by actual experience or by performance of procedure evaluation or process quality audits of a contractor's inspection functions in the applicable NDT method.

(a) Prior to start of an availability (or whenever continuous maintenance and emergent work is being done), the PM will assign an SBS, as well as a back-up SBS, who will be responsible for each work item. All checkpoints shall be witnessed by the SBS as required by work item(s) and/or reference (c) and documented in the NMD.

(b) When the contractor is ready to call out a checkpoint, proper notification will be sent for action to the assigned SBS, back-up SBS and QA Ship's force personnel. The contractor shall notify the RMC, per reference (c) Section 009-04, a minimum of four hours in advance for all checkpoints with time, date, and location noted. For nights and weekends, the contractor shall notify the RMC a minimum of four hours prior to the end of the preceding day shift.

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(c) To cancel test and inspection G-Points scheduled after normal day shift working hours, on a weekend or Federal holidays, the contractor is to notify the supervisor (NSA) as soon as known, but no later than two hours prior to the scheduled event.

(d) The SBS determines the best way to cover the checkpoint and ensure it is completed. If the SBS is unable to attend a checkpoint due to another previously scheduled event, he/she will notify the Project Manager so that another SBS or other qualified project team member can be assigned to accomplish the check point. Rationale for missing a checkpoint shall be documented in NMD. No "critical coating" checkpoints will be missed. Request overtime from the PM if required.

b. While evaluating the contractor's performance of work on a specific product, the SBS shall require the contractor only meet those requirements set forth in the contractual documents and will not require higher quality work than that set forth in the specifications. Doing so provides the contractor with grounds for requesting an increase in price to cover the higher costs of performance. Lower quality work or work of a lesser scope than specified in the contractual documents should not be accepted. Work performed will only be accepted when the work conforms to the specification and contract requirements including applicable changes.

c. If a government checkpoint has been requested and the product is not ready for inspection or items accepted by the contractor are found to be nonconforming during the government inspection, the SBS will notify the contractor that contractual requirements have not been met. In addition, the SBS will discontinue the checkpoint and initiate a Corrective Action Request (CAR). See Appendixes (B) and (C) of this chapter.

d. SBS/PM shall meet with the ship and establish procedures for notifying the ship of checkpoints. As mentioned in section B, the CO will normally assign members of ship's force to inspect work performed on the ship. If the ship is dissatisfied with the quality of the contractor's work on an individual item, the ship's inspector will not attempt to require contractor personnel to redo or otherwise amend the work performed. Instead, they will relay the findings or concerns to the MT/cognizant QAS who will then take the appropriate action.

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e. To guarantee proper documentation of checkpoints, the SBS shall: (See SBS Procedure 15 in Volume II of this desk guide).

(1) Ensure the contractor's checkpoint notification form/inspection record includes the ship's name and hull number, Job Order and Work Item numbers, date, time, and signature of the contractor's authorized representative who witnessed or performed the test or inspection.

(2) Ensure the contractor's/subcontractor's inspectors who witness or perform and sign for all inspections are qualified and appropriately certified.

(3) Ensure the contractor has accept/reject criteria identified and any applicable government authorized deviations available at the checkpoint site.

(4) Verify that the contractor has marked the appropriate SAT or UNSAT block of the Inspection record, after the contractor has accepted or rejected the inspection, and before you sign.

(a) You are required to print and sign your name in the customer or regulator signature line of the Contractor's original QA Form. This identifies you concur/do not concur with contractor results of the test/inspection accomplished. If you do not concur (i.e. UNSAT is checked), a CAR shall be initiated as discussed in paragraph 6 of this chapter. You shall also indicate your disagreement by writing "do not concur" by your name.

(b) Additionally, for preservation/non-skid of critical coated area checkpoints, the SBS shall also sign the QA Checklist form appendices required by reference (c) section 009-32. This signature represents the government rep has validated all information/data/results identified on the appendices are complete and all requirements were met (or that a deviation/waiver was approved supporting any non-adherence to requirements). In order to witness this type of check point, the SBS shall be NBPI (Navy Basic Paint Inspector) or NACE (National Association of Corrosion Engineers) Session 1 Certified in order to inspect critically coated surfaces.

(c) Document reasons why checkpoints were not accomplished in NMD. Examples of reasons could include:

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confidence in the contractor's inspection system, overtime not authorized, and lack of personnel.

(d) Ensure the signature block will reflect if ship's force failed to show when requested.

(e) Enter the checkpoint information into the NMD program upon completion of the checkpoint. If the SBS who witnessed the checkpoint is not the SBS of record for that work item, the attending SBS shall give a copy of the checkpoint inspection to the SBS of record.

(f) Ensure the contractor records the results in his test and inspection plan within 72 hours and that the signatures are legible.

(g) Incorporate the checkpoint notification form/inspection record into the master files.

f. SBS must have specialized training, experience, and certification in NDT while evaluating the contractor's NDT on a specific product. SBS shall inform Code 130 of all checkpoint notifications for radiographic (RT) and ultrasonic (UT) inspections. If the SBS is certified but does not have the specialized training, they need to contact the RMC Code 130 to assist in the witness of inspections.

## 5. Product Verification Inspection (PVI) Documentation

a. PVI is an element of CAQAP which verifies the product offered by the contractor to the RMC for acceptance conforms to contract requirements. This is accomplished by the Quality Assurance Inspection Team via physical examination, verification, testing, concurrent witnessing, or monitoring of all aspects of the overhaul process. Normally, these inspections are accomplished by the SBS.

(1) PVI is conducted utilizing checklists or an attribute system that includes Government notification points discussed in paragraph 4 above), critical inspection points, and those areas that may be concealed from further inspection using Objective Quality Evidence (OQE). Refer to reference (a), Volume VII, Chapter 11.5.4 for additional information and SBS Procedure 17 of this chapter.

(a) OQE is any statement of fact, quantitative or qualitative, pertaining to a quality of a product or service

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based on observations, measurements or tests that can be verified.

b. Each SBS assigned to an availability will establish and maintain a "QA Package" to be turned over to the assigned Quality Assurance Specialist (QAS) at availability completion. If a QAS has not been assigned, notify the Quality Management Division to pick up records.

(1) Package will include the following documentation:

(a) Hard copy of each assigned work item and a QA plan for that work item. The PVIs identified in the QA plan will be performed and documented within 24 hours of accomplishment or the reason why it was not documented.

(b) Complete copy of each checklist and/or attribute list will be included. PVI results will include the number of observations/inspections and nonconformities.

(c) Complete copy of each CAR issued referenced by number on the QA plan.

(d) Each "in process" inspection will be annotated with the item(s) inspected and SAT/UNSAT noted.

(e) Any inspection accomplished by Ship's Force TAD QA personnel assisting with work assigned to an SBS will be documented in the SBS QA package.

(f) A copy of the QA plan will be maintained in the QA package for each work item.

(g) PVI checklists for areas identified in Risk Management Memorandum (RMM) as high risk, or identified in the QA plan.

## 6. Corrective Action Program

a. RMC has implemented a comprehensive corrective action program to deal with problems occurring on the waterfront. The SBS should be intimately familiar with the Correction Action Report (CAR) process as discussed in reference (a), Chapter 11, Paragraph 11.5.6.

b. Corrective action is required to ensure product quality is maintained when the Contractor's Quality Control or

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inspection system breaks down. If the contractor identifies a non-conformance, the contractor's staff including their Quality Assurance Inspector (QAI) will jointly investigate the non-conformance. If a RMC representative identifies a non-conformance, the same process takes place with the RMC representative involved in the investigation. The investigation will entail:

- (1) Sighting of the non-conformance;
- (2) Discussion of the contractual requirements;
- (3) Discussion of the cause;
- (4) Discussion of the method of documentation required;

and

- (5) Discussion of the required actions.

c. The SBS shall initiate either a Method A or Method B Corrective Action Request (CAR) when contractor non-conformances to contract requirements are identified. If the SBS decides to allow the contractor to write and issue the CAR, they must request a copy of the issued CAR and completed CAR. Route all CARs through your QAS. This is necessary so we can keep track of them and provide a detailed report for CPARS. Contractor's responses to CARs and requests for extension of time to answer are to be routed to your QAS for approval, close out, resolution and tracking. Your QAS is the single point of contact for CAR sign off and resolution acceptance. The following are definitions of the various types of Non-Conformities:

(1) MINOR (Method "A") - May be used to identify and document any nonconformance that is minor in nature and easily correctable. Each nonconformance shall be described in sufficient detail to allow an understanding of the contractual noncompliance. See Appendix B of this chapter for a sample of a Method "A" Form.

(2) MAJOR (Method "B") - Used to identify and document any nonconformance that requires correction. Each Corrective Action (CA) shall quote the specific requirements and will include a description of the nonconformance that clearly indicates the contractual nonconformance. See Appendix C of this chapter for a sample of a Method "B" Form.

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(3) Systemic/Critical Non-Conformity CA (Method "C" or "D") - A Systemic (Method "C") or Critical (Method "D") Nonconformity CA is a business letter, on letterhead signed by the appropriate RMC representative, notifying the Contractor's appropriate level of management that a Systemic or Critical problem exists and immediate management action must be taken to comply with the provisions of the contract. This method is used when problems exist which the Contractor has failed to control or upper management's attention to the problem is necessary. See Appendix D of this chapter for sample letter format.

## 7. Preservation Process Oversight

a. Preservation of Naval ships, boats and craft has become increasingly more complex and expensive as new coating systems and increased quality assurance requirements are invoked due to technological advances and product sophistication in an effort to obtain improved coating life and reduce the effects of heavy metals and volatile organic compounds (VOCs) on the environment.

(1) NAVSEA Standard Item updates will be periodical coinciding with other technical guidance. Notice of updates will be sent to all personnel as changes occur.

(2) Reference (d), Chapter 631 for preservation and NSTM Chapter 634 for Non-skid and deck coverings are the documents from which requirements are derived. However, reference (c) section 009-32 is the contractual document for technical and administrative requirements for surface ships. Reference (c) section 009-32 and Appendices are held at the Naval Surface Treatment (NST) Center website, <http://www.nstcenter.biz>. It is highly recommended that all Shipbuilding Specialists familiarize themselves with this site.

b. Once again, the SBS must have specialized training (i.e.: NBPI and/or NACE) and be certified to inspect critical coating applications and preservation.

8. Government Quality Assurance Actions at Source. When the contractor sends work outside of a 50 mile radius from the site of contract performance they are required to notify the supervisor (NSA) so that a decision can be made on the need to ask various other Government agencies to perform any required oversight of the work that we would normally be able to perform. When you are presented this circumstance, contact your QAS for assistance before the equipment is crated and shipped so that all necessary requirements can be accomplished.

## 9. Specification Review

a. There are requirements to review work items to ensure they have appropriate Inspections as delineated in reference (a) Volume VII, Chapter 4, Appendix 4E, and any additional ones that you might feel are necessary or required based on your experience. Work items also need to include the appropriate accept/reject criteria, written tolerances, etc. Keep in mind the following:

(1) Ensure that assigned Design Liaison(s), Quality Assurance Specialist(s), Contract Specialist(s), and Administrative Contract Officer (ACO) are part of the specification reviews.

(2) Review work items to ensure that they adequately address the repair requirements requested via the work request.

(3) Ensure work items comply with technical requirements.

(4) Provide feedback and or corrective action request to preparing activity to formally report work item non conformities and/or errors using NMD.

(5) Ensure work items contain any recommended changes, where applicable, prior to issue to contractors or another RMC/activity.

(6) Request support for any safety and environmental concerns arising from the review process.

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**Appendix A****SAMPLE**

DEPARTMENT OF THE NAVY  
SOUTHWEST REGIONAL MAINTENANCE CENTER  
3755 BRINSER ST SUITE 1  
SAN DIEGO, CA 92136-5105  
DEPARTMENT OF THE NAVY

USS SHIP NAME (HULL #)  
FPO AP 96667-1291

SOUTHWEST RMC  
4855  
Ser 600/  
Date

USS SHIP NAME (HULL #)  
4855  
Ser 00/  
Date

MEMORANDUM OF UNDERSTANDING  
BETWEEN  
SOUTHWEST REGIONAL MAINTENANCE CENTER  
AND  
COMMANDING OFFICER, USS SHIP NAME (HULL #)

Subj: SWRMC/SHIP'S FORCE QUALITY ASSURANCE INSPECTION TEAM FOR  
USS SHIP NAME (HULL #)

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance  
Manual

1. Purpose. To establish procedures for functional responsibilities for Southwest Regional Maintenance Center (SWRMC) and Ship's Force performance of the Contract Administration Quality Assurance Program (CAQAP) as outlined in Volume VII, Chapter 11 of reference (a).

2. Background. The mutual goal of the Commander, SWRMC and Commanding Officer, USS SHIP NAME is to ensure compliance with the requirements throughout the depot level availability. This goal can be realized by the development of a team of personnel, from both SWRMC and Ship's Force, who are committed to monitoring the contractor's work for quality. This team is made up of four components. First, the Ship's Force QA organization will provide a broad base of surveillance over contractor work. Second, the assigned SWRMC Shipbuilding Specialists (SBS) and Liaison Engineer (LE), augmented by three to five Ship's Force personnel assigned TAD per this Memorandum of Understanding (MOU) (note: actual number should be tailored to fit availability requirements) and a Quality Assurance Specialist

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(QAS) assigned to the availability, will perform necessary government oversight of contractor oversight, as well as Corrective Actions and Product Verification Inspections. Ship's Force TAD Quality Assurance representatives are a valuable resource in that through intensive training, they can act with greater authority than the members of the Ship's Force QA team due to contractual relationships. The efforts of the QA team will be a principal contribution to the quality of USS SHIP NAME.

### 3. Responsibilities and Actions

a. The Commander, Southwest Regional Maintenance Center shall:

(1) Assign three to five SBSs and a QASs to USS SHIP NAME's availability. The QAS will be designated to act as the primary point of contact for the Ship's Force QA team.

(2) Establish and maintain a system which will effectively utilize Ship's Force Quality Assurance personnel to augment the SWRMC Quality Assurance organization, including the designation of the QAS to serve as the primary point of contact.

(3) Provide formal and on-the-job training to the ship's Quality Assurance personnel on the purpose, techniques and documentation requirements of the SWRMC and contractor Quality Assurance/Inspection system as required.

(4) Provide documentation, forms and other necessary support for the performance of Ship's Force Quality Assurance functions.

(5) Establish a system for review, processing and follow-up of Corrective Action Requests (CAR) to include feedback informing the originator of the final disposition.

(6) Contact USS SHIP NAME's Availability Coordinator as soon as possible after contractor notification, to disseminate applicable Government Inspection Point ("G" Point) information.

b. Commanding Officer, USS SHIP NAME shall:

(1) Assign sufficient Ship's Force Officers, Chief Petty Officers and Petty Officers who are experienced and familiar with the ship for the duration of the availability to the Ship's Force Quality Assurance Division.

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(2) Ensure assigned personnel are provided ample opportunity for familiarization with the contract work specifications.

(3) Ensure that Quality Assurance functions are the primary responsibility of assigned personnel.

(4) Assign the Availability Coordinator to coordinate the interface between SWRMC personnel and the Ship's Force Quality Assurance assigned personnel.

(5) Ensure Ship's Force personnel perform surveillance of Ship's Force and contractor work ensuring ship's safety procedures are observed (e.g. safe use of pneumatic and electrical tools).

(6) Assign three to five Quality Assurance personnel to the RMC under the following guidelines:

(a) For QA matters, report to the QAS assigned to the availability.

(b) For military matters, such as leave and other authorized absences, report to their assigned Availability Coordinator.

(c) Personnel will be allowed to leave for required training and drills during designated times.

(d) Assigned personnel will be exempt from the ship's watchbill.

c. Ship's Force members of the Quality Assurance Team shall:

(1) Report to the ship's Availability Coordinator for all military and personnel matters.

(2) Perform surveillance of the contractor's work including observation of "G" checkpoints, inspections and tests, and review of the records as necessary to track contractual conformity as specified in reference (a).

(3) Be present at all "G" checkpoints on work being performed in the local area as identified by the contractor for the areas/jobs assigned.

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(4) Observe and/or document "MINOR" type work nonconformance as described in paragraph 11.10.2.1 of reference (b). When MINOR type corrective action is appropriate, the assigned Ship's Force QA personnel shall call the nonconformance to the attention of the SWRMC SBS or QAS. They must not tell the contractor what must be done to correct it or direct the contractor's action. However, an approach such as calling the contractor's attention to a deficient installation, missing tag, valve, etc., is in order. If "on the spot corrective action" is not taken by the contractor, the problem will be referred to the SWRMC counterpart as soon as possible.

(5) Document all inspections, witnessing of tests, "G" checkpoints, and contractual surveillance on necessary forms provided by SWRMC representative as described in reference (b).

4. The concept of using Ship's Force personnel to augment the SWRMC Quality Assurance staff is fully supported. However, it should be understood the Ship's Force personnel shall not direct actions by the contractor.

"If a ship's inspector is dissatisfied with the quality of the contractor's work on an individual item, he will not attempt to require contractor personnel to redo or otherwise amend the work performed. Rather, he will relay his criticism to the cognizant SWRMC representative who will take appropriate action."

---

RMC CO NAME  
COMMANDER  
SOUTHWEST RMC


---

SHIP CO NAME  
COMMANDING OFFICER  
USS SHIP NAME (HULL #)

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## Appendix B

MINOR NONCONFORMITY CA FORM

|   |                                     |  |                     |
|---|-------------------------------------|--|---------------------|
|  | <b>METHOD A - CORRECTIVE ACTION</b> |  | <b>Ref No:</b>      |
|   | <b>TO:</b>                          |  | <b>FROM:</b>        |
| <b>SUB-KTR</b>  |                                     | <b>2<sup>nd</sup> SUB-KTR</b>                                |                     |
| <b>Ship/Hull:</b>   |                                     | <b>Availability:</b>   | <b>Contract No:</b> |
| <b>Work Item No.:</b>   | <b>Para:</b>                        | <b>Dwg/Ref No:</b>   |                     |
| <b>Statement of Discrepancy (Include Contract Requirements):</b>                  |                                     |  |                     |
| <b>Corrective Action Taken:</b>   |                                     |  |                     |
| <b>Verification and Evaluation of Corrective Action Taken:</b>                    |                                     | <input type="checkbox"/> SAT <input type="checkbox"/> UN-SAT |                     |
| <b>Comments:</b>  |                                     |  |                     |
| _____<br>Printed Name and Signature of Govt. Representative                       |                                     | _____<br>Date  |                     |


Copy to: QAS, File

SWRMC C130-Method A CA (Rev 7/8/10)

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## Appendix C

|   |                                  |  |              |
|---|----------------------------------|--|--------------|
|    | <b>SWRMC ♦ CORRECTIVE ACTION</b> |  | Ref No:      |
|   | TO:                              | FROM: Southwest Regional Maintenance Center<br>3755 Brinser Street, Ste. 1<br>San Diego, CA 92136-5105 |              |
| SUB-KTR   |                                  | 2 <sup>nd</sup> SUB-KTR  |              |
| Ship/Hull No:   |                                  | Availability No:   | Contract No: |
| Work Item No:   | Para:                            | Dwg/Ref No:  |              |
| Corrective Action Type: B – Major Nonconformity   |                                  |  |              |
| Statement of Discrepancy (Include Contract Requirements):   |                                  |  |              |
| <p>It is Requested that a Reply as to Corrective Action be Submitted by:</p> <p>This Discrepancy Requires a Reply As To: <input type="checkbox"/> Correction of Defect <input type="checkbox"/> Correction of Cause</p> <p style="text-align: right;"><input type="checkbox"/> See Attachment</p> <p>_____<br/>Printed Name and Signature of Govt. Representative      Date      Reviewed by (Initials)</p> |                                  |  |              |
| <p>Extension Requested: <input type="checkbox"/> Yes <input type="checkbox"/> No      Date Requested: _____ Requested By: _____</p> <p>Extension Granted: <input type="checkbox"/> Yes <input type="checkbox"/> No      By: _____ Ext. Date: _____</p> <p style="text-align: center;">Printed Name and Signature of Govt. Rep. Granting Extension</p>   |                                  |  |              |
| Extension Comments:   |                                  |  |              |
| Reply:  |                                  |  |              |
| <p>_____<br/>Printed Name and Signature of Contractor Representative      Date      <input type="checkbox"/> See Attachment</p>   |                                  |  |              |
| <p>Verification and Evaluation of Reply: <input type="checkbox"/> SAT <input type="checkbox"/> UN-SAT      CA Elevated to Method: <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D</p> <p>Comments:</p> <p>_____<br/>Printed Name and Signature of Govt. Representative      Date      <input type="checkbox"/> See Attachment</p>  |                                  |  |              |
| <p>Follow Up Due By: _____ Effectiveness of Corrective Action Taken: <input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory</p> <p>Follow Up Comments:</p> <p>_____<br/>Printed Name and Signature of Govt. Representative      Follow Up Date      <input type="checkbox"/> See Attachment</p>  |                                  |  |              |

Copy to: Project Manager/Project Officer, Class Team Leader, C130, C400, QAS, File

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**Appendix D**

**Sample Systemic/Critical Nonconformity CA Business Letter Format**

DEPARTMENT OF THE NAVY  
SOUTHWEST REGIONAL MAINTENANCE CENTER  
3755 BRINSER STREET STE 1  
SAN DIEGO, CA 92136-5299

4855  
Ser 130/  
Date

Mr. John Smith  
ABC Company  
123 C Avenue  
San Diego, CA 92136

Dear Mr. Smith,

SUBJECT: METHOD "C" CORRECTIVE ACTION (CA)

1. The purpose of this Method "C" Corrective Action is to solicit senior Contractor Management involvement in the resolution of repetitive systemic contractual nonconformance's Occurring during the performance of work aboard the USS FISH (LPD 81) and to advise the Contractor that the work performed is not per the terms of the Job Order ABC 3-96. Some specific area of concern that led to this level of corrective action are as follows:

a. The specification directed the Contractor to reinstall valves using new fasteners per MIL-STD-777D.

b. MIL-STD-777C, paragraph 12(f), states: "Nickel-copper Alloy bolting shall be per class A hot rolled of QQ-N-281 for bolts and class B hot rolled or cold drawn of QA-N-281 for nuts. If not readily accessible for examination of maintenance in service, due to their location, and carbon steel bolting is specified for the rest of the system. Some examples are: bilges, below floor plates, tank, etc."

c. On 6 August 2010, CA No. 9288-TG-0318 was issued to ABC Company for failure to comply with the requirements of Work Item 521-11-004, paragraph 3.7, and 529-11-004, paragraph 3.7.

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d. The corrective action response provided on 29 August 2010, by Automatic Boiler Controls (ABC) Quality Assurance (QA) Manager, as documented on CA No. 9288-TG-0318, has been reviewed and found unacceptable.

2. The above stated management issues are not intended to be all-inclusive. We are very concerned about the apparent ineffective management and communication processes currently in place that allow these types of problems to occur.

3. Therefore, we consider it necessary for you to initiate and immediate review of your management system and processes.

4. Additionally, we request that you submit a management plan of action to me within seven (7) working days from the date of this letter depicting the actions you have taken or plan to take that will preclude these types of management problems from recurring on future job orders.

## Chapter 7

### Environmental, Occupational Safety & Health

- Ref: (a) 29 CFR Part 1915: OSHA Shipyard Industry Safety Regulations  
(b) 40 CFR Parts 63, 260, 300, USEPA Environmental Regulations  
(c) US Code Title 10 USC 7311, Hazardous Waste, Repair of Naval Vessels  
(d) OPNAVINST 5100.23G, Navy Safety and Occupational Health Program Manual  
(e) OPNAVINST 5090.1C, Environmental Readiness Program Manual  
(f) NAVSEA Standard Item (NSI)

Appendix A - Sample Standard Work Item 077-01

Appendix B - Marine Safety Inspection Guide

#### 1. Introduction

a. RMC policy is to be in compliance with all environmental, safety, and health laws, regulations, and requirements. RMC is also committed to provide oversight of contractor operations and compliance with environmental and safety requirements as specified under the contract. Environmental controls including proper disposal, reduction, and elimination of wastes requires constant vigilance by the project team. Prompt action shall be taken to minimize any environmental, safety, or health violations. In addition all violations shall be reported to the Waterfront Operations Officer and Code 106 as soon as possible.

b. RMC Code 106, Environmental and Safety Division, is committed to support the Waterfront Operations Department and Maintenance Teams. Due to manpower limitations however, it is impossible to provide a dedicated safety or environmental specialist for each availability. These limitations become more acute during periods of high work tempo and with the increasing use of MSMO and IDIQ contracts. It is incumbent on the Shipbuilding Specialist to be an extra set of eyes and ears on the waterfront and to notify Code 106 and the Project Manager of potential safety or environmental problems. Reference (u), Appendix B, provides guidance when conducting a safety inspection during an availability.

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c. References (a) through (c) provide the basis for management of hazardous material/waste by industry and the Federal Government and detail safety and health requirements. References (d) and (e) are the Navy (CNO) instructions for Occupational Safety and Health and Protection of the Environment. Reference (f) details contract specifications that provide specific direction to the contractor to ensure they comply with federal, state, and local environmental and safety requirements. These references shall act as a guide to environmental compliance for the SBS in monitoring management of material/waste including documentation, reporting, identification, removal, transportation and disposal.

(1) It is imperative that the SBS become familiar with all applicable regulations and Laws. Different parts of the country, and the world, have different regulations that must be strictly adhered to.

## 2. Safety

a. Shipbuilding Specialists shall maintain awareness of their work environment and shall perform all oversight and inspections per references (a) and (d). Shipbuilding Specialists shall wear proper personal protective equipment (PPE) required by the specific task that they are assigned. Before going aboard ship, all RMC personnel shall wear approved hard hats, steel toed shoes, and safety glasses, and shall have hearing protection available on their person. Additional PPE required of the SBS for performance of specific operations includes fall protection equipment and respirators.

b. Shipbuilding Specialists shall also maintain awareness of contractor work operations that may or may not be directly associated with their work assignment, but are in close enough proximity to present a hazard. Examples include crane operations, hot work, preservation/painting, etc. The SBS shall stop work if a situation is observed that presents immediate danger to personnel or ship's equipment.

### c. Fall Protection/Working Aloft

(1) Work "ALOFT" is considered to be work on board ship or ground supported structures at a height above normal working reach of the worker when not provided with support such as a working platform or ladder. The worker must rely on standing space afforded by the structure being worked on, such as mastheads, cross arms, smoke stacks, kingposts, etc. In

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addition, work performed from personnel boxes supported by cranes is considered to be aloft.

(2) Reference (a) requires that personnel working aloft wear an approved body harness with a personal fall arrest system (PFAS). This applies to the SBS while performing oversight and inspections. RMC personnel shall not work aloft unless they have been fitted for a body harness and have been trained in the proper use of the harness and PFAS. Contact Code-106 if you require this training.

(a) Per reference (d), Chapter 13, RMC Personnel shall:

1. Be accompanied aloft by a representative of ship's force who is qualified in rigging. A minimum of two additional ship's force personnel will be present on deck to render assistance as required and keep all personnel clear from below the working area.

2. Ensure good footing and good grasp at all times. Keep the safety or working lanyard secured at all times except when actually ascending or descending.

3. Secure all tools and equipment with safety lines.

4. Personnel working on the stack shall be particularly cautious to avoid dangerous gases and fumes, and where necessary, utilize appropriate breathing apparatus.

5. Whenever work aloft is conducted at night, the shipboard Petty Officer In Charge (POIC) shall make certain that proper lighting is provided. The POIC shall be in constant attendance whenever work involving unusual hazards is present.

6. Personnel working over water shall wear life preservers in addition to a safety harness.

7. Personnel shall not go aloft using a crane and skipbox, manlift or man basket without prior approval of the Safety Manager and/or Waterfront Ops Dept Head.

8. The ship's OOD shall be notified immediately upon completion of the work aloft.

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9. If multiple maintenance teams or work centers are to work aloft on separate jobs, each group shall obtain separate authorizations (Working Aloft - chits) from the OOD.

10. Personnel going aloft shall wear properly fitted clothing. Loose or baggy clothing presents the hazard of becoming caught or entangled. Excessively greasy clothing shall not be worn when performing hot work operations.

11. Personnel engaged in chipping/grinding shall wear safety goggles, hearing protection devices, and may require an approved respirator.

12. Personnel engaged in spray painting shall wear appropriate protective equipment, such as face shields and may require an approved respirator equipped with proper cartridges.

13. Personnel shall conform to ship's established tag out procedures. The SBS will not be performing hot work, chipping, grinding, painting, or tagging out equipment; however he/she will ensure the worker engaged in these activities is following correct safety procedures.

d. Respirators may be required in confined spaces or other areas where airborne hazards exist. The SBS shall not enter areas where respiratory protection is required unless they have been properly trained and have been fit-tested for the specific respirator to be used. If there is any question whether a respirator is required to enter a space or an area, contact Code 106 for verification prior to entry. Further discussion of Respiratory Protection is in reference (d), Chapter 15.

e. Ship repair and maintenance activities at RMCs include two types of activities that have the potential to endanger the health and safety of personnel, or to cause serious damage to Navy property. These activities include entry into or work within, on, or adjacent to confined or poorly ventilated enclosed spaces and hot work in the presence of flammable, explosive or toxic materials. The SBS shall be familiar with these conditions and activities to ensure proper safety procedures and practices are being performed.

(1) Definitions

(a) Confined Space: is a space large enough to enter, not designed for continuous occupancy, and

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limited/restricted for entry and exit. Confined spaces on vessels include tanks, voids, missile tubes and sonar domes.

(b) Poorly Ventilated Enclosed Space. Any enclosed space that lacks adequate airflow to dilute contaminated air with uncontaminated air and maintain general overall safe air quality. Examples: pits, vats, cargo holds and storage rooms.

(c) Hot Work. Includes all flame heating, welding, torch cutting, brazing, carbon arc gouging and any work that produces heat by any means of 400 degrees F or more. In the presence of flammables or flammable atmospheres, hot work includes ignition sources such as spark or arc producing tools or equipment, static discharges, friction, impact, open flames or embers, non-explosion proof lights, fixtures, motors or equipment.

(2) Maritime Gas Free Engineering Hazards. The following are the principal hazards of concern in Gas Free Engineering: Personnel who enter into, or perform work within, on, or adjacent to confined or poorly enclosed spaces, or perform maritime hot work, should be aware of these potential hazards. It is imperative that personnel are made aware of the following hazards and the procedures they must follow to avoid personal injury and prevent damage to Navy property. These responsibilities are dictated in Chapter 27 of reference (d).

(a) Confined Space Hazards

1. Potential for a hazardous atmosphere.
2. Potential for becoming entrapped.
3. Potential for being engulfed.

(b) Poorly Ventilated Enclosed Space Hazards

1. Potential for a hazardous atmosphere.
2. Inadequate ventilation for work activities.

(c) Hot Work Hazards

1. Potential flammable or explosive atmospheres.

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2. Hidden or unrecognized combustible, flammable, explosive or toxic materials.

3. Creation of a hazardous atmosphere during hot work.

4. Creating hazards in adjacent spaces.

(3) Because of the inherent potential hazards mentioned above, the following policy is established to meet the goals of the maritime shore Gas Free Engineering Program. Each Command policy is delineated from reference (f), Chapter 14, and applies to all activities involving confined spaces, poorly ventilated enclosed spaces and performing maritime hot work:

(a) Gas free Engineering personnel have the authority to permit or deny activities, or specify required actions for such activities based on their evaluation of the potential hazards involved.

(b) Personnel shall not enter a confined or poorly ventilated enclosed space until the space has been inspected and certified "Safe for Personnel" by the posting of a Gas Free Certificate.

(c) Personnel are not authorized to and shall not enter confined or poorly ventilated enclosed spaces certified by other agencies, commands or contractors to perform work. Access may only be gained for inspection purposes.

(d) When a Gas Free Certificate is posted at the entrance of a space, or posted for hot work, personnel shall read and comply with the written conditions and instructions before entering into a space or performing any authorized work.

(e) Evacuate a space or discontinue hot work if conditions have changed or deteriorated for continued safe activity. Contact the Gas Free Engineering personnel for a re-evaluation.

(f) No hot work shall be performed for the work sites listed below, until they have been certified "Safe for Personnel, Safe for Hot Work" on a Gas Free Certificate.

1. Within, or on any confined space

2. Aboard any maritime vessel

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3. On a structural void such as rudders, keels, fairwater planes, booms, support stanchions, jacketed vessels and similar structures

4. On any pipe, tubing, coil or similar device that enters or exits an enclosed space.

5. Within, on, or adjacent to any structure or fixture which has contained any flammable or combustible liquid or gas.

6. In areas that contain pressurized systems such as hydraulic systems and FREON systems.

7. On any closed structure or container.

8. When a nearby work process may produce flammable or combustible gases, vapors, dusts, or fumes.

(4) The SBS shall prevent untrained or unqualified personnel from entering confined or poorly ventilated enclosed spaces. Ensure the following are in place before entering, or allowing other personnel to enter a confined space:

(a) A qualified safety observer posted outside the confined space.

(b) Adequate communications between the safety observer and confined space entrants.

(c) Adequate procedures for an emergency rescue.

(5) Further requirements applicable to the contractor are detailed in reference (f) section 009-07, Confined Space Entry, Certification, Fire Prevention, and Housekeeping, and; section 009-88; CHT and Mogas Tanks, Spaces, and Piping, including Sewage or Mogas-Contaminated Tanks, Spaces, and Piping.

f. Fire Prevention and Housekeeping. Reference (f) section 009-07 is a Category I standard item and requires the contractor to perform a daily "housekeeping and fire prevention inspection", and to provide a written report of the results of this inspection to the supervisor. The title of this work item and title of this inspection have a legal significance and have been approved by SSRAC and NAVSEA legal counsel. This inspection is not a "safety walkthrough" or "safety inspection".

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RMC personnel, including SBS, PMs, QAS, and Safety or Environmental specialists, are encouraged to participate in the "Housekeeping and Fire Prevention Inspection" as their schedules permit. RMC Code 106 personnel will make periodic inspections of contractor operations aboard ship and will document the results of these inspections. These inspections are in addition to, and are independent of the requirements of reference (f) section 009-07. As previously stated Shipbuilding Specialists are required to maintain awareness of potential hazards aboard ship and are encouraged to notify Code 106 of their observations.

(1) During your daily shipboard walk-through and inspections, check for the following:

(a) Frayed and bare electrical cables carrying 110, 220, and 440 volts.

(b) Absence of explosion proof electrical fixtures as well as grounding leads.

(c) Absence of guards on electrical lights.

(d) Improper and hazardous electrical distribution systems.

(e) Absence of proper ventilation for work in deep holds or tanks and voids.

(f) Improper or faulty rigging, life lines, guard rails, ladders, brows.

(g) Improper use, stowage, and distribution of toxic, explosive, or inflammable solvents, paints, coatings and primers.

(h) Inadequate emergency fire-fighting equipment and rescue apparatus, as well as inadequate water pressure.

(i) Inadequate or improperly trained fire watches.

(j) Absence of lifelines or guards around open hatches.

(k) Unsafe scaffolding.

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(l) Absence of "NO SMOKING" signs, safety precaution, or other warning signs.

(m) Inadequate posting of fire watches during burning and welding operations.

(n) Generally poor housekeeping practices aboard ship and at pier side, as well as numerous unsafe workmanship practices in connection with welding, burning, spray painting, paint and solvent mixing, and in storage of material.

(o) Shipboard fire fighting organization commensurate with the hazards involved is provided each ship.

(p) Adequate fire-fighting equipment is available for shipboard fire fighting organizations.

(q) Adequate means of rapid egress from the ship be provided.

(r) Manhole covers over utility cut-off valves serving piers be painted and identified to prevent their obstruction.

### 3. Environmental

a. Environmental compliance is more difficult to manage than safety because the U.S. Environmental Protection Agency has delegated the management and enforcement of environmental laws to the states. For example, the rules for hazardous waste management are different in Florida vs. Virginia vs. California, and as a result, specific regulations and procedures for environmental compliance differ from state to state.

b. These different, state-by-state environmental rules require that local work items be developed and invoked in contracts to cover local requirements and procedures. The following is a series of Category I, reference (f) that detail mandatory contractor requirements:

(1) Reference (f) section 009-03 Toxic and Hazardous Substances; control

(2) Reference (f) section 009-04 General Environmental Requirements for Work at Contractor's Facility; accomplish

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(3) Reference (f) section 009-10 Shipboard Asbestos-Containing Material (ACM); control

(4) Reference (f) section 009-61 Shipboard Use of Fluorocarbons; control

(5) Reference (f) section 009-65 Polychlorinated Biphenyls (PCBs); control

(6) Reference (f) section 009-93 Emergency Planning and Community Right-to-Know Act (EPCRA) and Pollution Prevention Act (PPA) information; provide

(7) Reference (f) section 009-97 Shipbuilding and Ship Repair Operations National Emission Standard for Hazardous Air Pollutants (NESHAPS) for Surface Coating Information; provide

(8) Additional instructions that apply can be found in reference (e).

c. Regardless of where the work is being performed, environmental regulations (federal or state law) require specific procedures or reporting requirements covering a number of areas including air emissions, hazardous waste, water pollution, etc. Reference (f) sections 009-93 and 009-97 require the contractor to submit a number of reports to satisfy federal law requirements. RMC Shipbuilding Specialists are encouraged to spot check compliance and remind the contractor of the reporting requirements of these work items.

d. Hazardous Material vs. Hazardous Waste. The requirements for hazardous materials and hazardous waste are controlled by two different governmental agencies. The use of hazardous materials is governed by reference (a) and is concerned with the health of personnel who either use them or could be exposed to them. Hazardous waste is governed by reference (b).

(1) A hazardous material is any item or agent (biological, chemical, physical) which has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors. OSHA's definition includes any substance or chemical which is a "health hazard" or "physical hazard," including: chemicals which are carcinogens, toxic agents, irritants, corrosives, sensitizers; agents which act on the hematopoietic system; agents which damage the lungs, skin, eyes, or mucous membranes; chemicals

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which are combustible, explosive, flammable, oxidizers, pyrophorics, unstable-reactive or water-reactive; and chemicals which in the course of normal handling, use, or storage may produce or release dusts, gases, fumes, vapors, mists or smoke which may have any of the previously mentioned characteristics.

(2) Hazardous waste is a contaminated chemical or by-product of a production process that no longer serves its purpose and needs to be disposed of per the Environmental Protection Agency. This could include small amounts of chemicals such as parts washing solvents in a machine shop, or large amounts of construction by-products.

e. Hazardous Waste

(1) Congress waived sovereign immunity with respect to federal government facility compliance with local, state and federal environmental regulations. The Resource Conservation and Recovery Act (RCRA) authorize the Environmental Protection Agency (EPA) to regulate hazardous waste from "cradle-to-grave", meaning from generation to disposal. Those who generate, treat, store or dispose of hazardous waste are subject to strict waste management rules. RCRA also authorizes the EPA to delegate regulatory enforcement authority to the states.

(2) For the hazardous waste rules to be applicable to a particular substance, it must be first identified as a hazardous waste. The substance may be a "listed" waste, one of the hundreds of substances the EPA has placed on a list of hazardous wastes. Alternatively, the substance may be a "characteristic" hazardous waste, one that through testing exhibits any of the four hazardous waste characteristics: ignitability, corrosively, reactivity, or toxicity. A state, such as California, can enact more stringent regulations. Used oil, for example, is not a federal RCRA hazardous waste but it is a California hazardous waste.

(3) Naval vessels are not facilities and hazardous waste regulations do not apply to ship's force while the "used hazardous material" is located aboard the vessel. The ship must comply with the hazardous waste regulations once the "used hazardous material" is offloaded to the pier. This exemption was intended for ship's force. Contractors who stage waste aboard the ship must manage their waste per applicable regulations.

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(4) Reference (c) applies specifically to the handling of hazardous waste during the repair and maintenance of Naval vessels and requires the Navy to identify the types and amounts of hazardous waste that will be generated or removed by the contractor. Reference (f), enclosure (1), defines contractor generated hazardous waste as generated by the physical actions of the contractor, Navy generated hazardous waste as generated by the physical actions of the Navy and Co-generated waste as generated by the combined physical actions of the contractor and Navy. This generator classification places the hazardous waste management and disposal responsibilities on the contractor for the waste they generate. Ships at the contractors' facility maintain their hazardous waste management and disposal responsibilities for the waste they generate with the assistance of the local RMC Code 106.

f. Specific Problems

(1) Lead Paint

(a) Almost every drop of paint on every ship in the Navy has some Lead (Pb) in it. Most paints also contain small amounts of Cadmium (Cd) and Chromium (Cr). Lead has very good corrosion inhibiting characteristics when added to paint and it was used extensively from the 1940's through the 1970's in both construction (bridges, water towers, etc.) and in the shipyard industry. Navy personnel used to mix their own paint and would add powdered lead into their paints before application. Old "red lead" formulations contained lead contents of 25% or greater by weight.

(b) American manufactures no longer use lead as a corrosion inhibitor and take great effort in making paints that have as little lead as possible. However, lead is a very common chemical in nature and the materials that manufacturers use (pigments, binders, etc.) to make paint have small amounts of lead in them.

(c) Reference (f) section 009-32 directs the contractor to consider all marine coatings to contain heavy metals including lead, and directs the contractor to NSI 009-03 which is the primary work specification that directs the contractor to comply with reference (a), Toxic and Hazardous air contaminants. Since these requirements are very detailed, it is recommended that Shipbuilding Specialists consult with Code-106 as questions concerning this arise.

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**Appendix A****Sample Standard Work Template 077-001  
Control of Hazardous Waste Produced on Naval Vessels**

SHIP: \_\_\_\_\_ ITEM NO: 077-\_\_\_\_\_  
COAR: \_\_\_\_\_ PCN: \_\_\_\_\_  
SWT FILE NO: 077-001 \_\_\_\_\_ CMP: \_\_\_\_\_  
REVISED: 29 JUL 2011 \_\_\_\_\_ SURVEYOR: \_\_\_\_\_

**1. SCOPE:**

1.1 Title: Hazardous Waste Produced on Naval Vessels; control

1.2 Location of Work:

1.2.1 Throughout the Ship

1.3 Identification:

1.3.1 Not Applicable

**2. REFERENCES:**

2.1 Resource Conservation and Recovery Act (RCRA)

2.2 49 U.S.C. §5103, Federal Hazardous Materials Transportation Act

2.3 Applicable Hazardous Waste Manifest Form

2.4 10 U.S.C. §7311

**3. REQUIREMENTS:**

3.1 Manage and dispose of all hazardous waste listed in 3.5 in accordance with 2.1 and 2.2.

3.1.1 When a Navy generator number is required by this Work Item, submit the original of 2.3 to the SUPERVISOR for assignment of Environmental Protection Agency (EPA) or delegated state environmental agency identification number.

3.1.2 Manage and transport for Navy disposal, Navy-generated hazardous waste listed in 3.5 in accordance with 2.1 and 2.2, as designated by the SUPERVISOR.

3.1.3 Submit one legible copy of 2.3 signed by the owner or operator of the disposal facility to the SUPERVISOR within 48 hours of receipt from owner or operator of disposal facility.

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3.2 Complete documentation required by 2.1 and 2.2, using EPA or delegated state environmental agency identification number in accordance with 2.4.

3.2.1 Documentation related to hazardous waste generated solely by the physical actions of Ship's Force or Navy employees (termed Navy-Generated Hazardous Waste) on board the vessel shall only bear a generator identification number issued to the Navy pursuant to applicable law. The contractor shall obtain SUPERVISOR'S concurrence with the categorization of the waste as Navy-generated before completion of the manifest. The manifest prepared shall be presented to the SUPERVISOR for completion after the hazardous waste has been identified.

3.2.2 Documentation related to hazardous waste generated solely by the physical actions of contractor personnel (termed Contractor-Generated Hazardous Waste) shall bear a generator identification number issued to the contractor pursuant to applicable law. Regardless of the presence of other material in or on the shipboard systems or structure which may have qualified a waste stream as hazardous, where the contractor performs work on a system or structure using materials (whether or not the use of such materials was specified by the Navy) which by themselves would cause the waste from such work to be a hazardous waste, documentation related to such waste shall only bear a generator number issued to the contractor.

3.2.3 Documentation related to hazardous waste generated by the combined physical actions of Navy and contractor personnel (termed Co-Generated Hazardous Waste) shall bear a generator identification number issued to the contractor pursuant to applicable law and shall also cite in the remarks block a generator identification number issued to the Navy pursuant to applicable law. When the contractor merely drains a system and such drainage creates hazardous waste or the contractor performs work on system or structure using materials which by themselves would not cause the waste from such work to be hazardous waste but such work nonetheless creates a hazardous waste, documentation related to such waste shall bear a generator identification number issued to the contractor and shall also cite in the remarks block a generator identification number issued to the Navy. The contractor shall sign the generator certification on the Uniform Hazardous Waste Manifest whenever use of the manifest is required for disposal. The contractor shall obtain SUPERVISOR'S concurrence with the categorization of the wastes as co-generated before completion of the manifest. Manifests prepared shall be presented to the SUPERVISOR for completion after the hazardous waste has been identified.

3.3 If the contractor, while performing work at a Government facility, cannot obtain a separate generator identification number from the state in which the availability will be performed, the contractor shall notify the SUPERVISOR within 3 business days of receipt of written notification by the state. After obtaining approval of the SUPERVISOR, the contractor shall use the Navy site generator identification number and insert in the remarks block

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the contractor generator identification number issued for the site where his main facilities are located.

3.4 If, for availabilities at a contractor-owned or controlled facility, the Navy cannot obtain a separate generator identification number for use at a contractor facility, the Navy shall notify the contractor within 3 business days of receipt of notification by the state. The contractor shall dispose of hazardous waste in accordance with 2.1, 2.2, and 3.2.3.

3.5 Hazardous waste, as identified in 2.1, expected to be produced during performance of this Job Order:

| <u>TYPE</u>  | <u>NAVY</u> | <u>AMOUNT</u><br><u>CO-GENERATED</u> | <u>CONTRACTOR</u> |
|--|-------------|--------------------------------------|-------------------|
| Acid Solutions (may include spent sulfamic, citric, chromic, nitric, sulfuric, hydrochloric, etc.) | _____       | _____                                | _____             |
| Ethylene Glycol (Antifreeze)   | _____       | _____                                | _____             |
| Sodium Hydroxide   | _____       | _____                                | _____             |
| Cleaning Solvents  | _____       | _____                                | _____             |
| Sodium Phosphates (Tri, Bi, or Mono)   | _____       | _____                                | _____             |
| Fluorocarbons  | _____       | _____                                | _____             |
| Morpholine   | _____       | _____                                | _____             |
| Sodium Chromates   | _____       | _____                                | _____             |
| Hydrazine  | _____       | _____                                | _____             |
| Methyl Ethyl Ketone  | _____       | _____                                | _____             |
| Spent Abrasive Blast Material (contaminated with a known hazardous waste)                          | _____       | _____                                | _____             |
| Trichloroethane  | _____       | _____                                | _____             |
| Miscellaneous Chemicals (Ignitable)  | _____       | _____                                | _____             |
| Miscellaneous Chemicals  |             |                                      |                   |

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|   |       |       |       |
|---|-------|-------|-------|
| (Corrosive)   | _____ | _____ | _____ |
| Miscellaneous Chemicals<br>(TCLP Toxic)   | _____ | _____ | _____ |
| Miscellaneous Chemicals<br>(Reactive)   | _____ | _____ | _____ |
| Oil (Synthetic)   | _____ | _____ | _____ |
| Paints (enamel, latex,<br>epoxy, thinners, oil based,<br>rubber paint, nonskid,<br>lacquer, remover, varnishes) | _____ | _____ | _____ |
| Paints (may include lead,<br>cadmium, or chrome)  | _____ | _____ | _____ |
| Paint Strippers (phenols,<br>lead, chromium)  | _____ | _____ | _____ |
| Sludge (contaminated with a<br>known hazardous waste)   | _____ | _____ | _____ |
| Wool Felt (contaminated<br>with chromium and PCB's)   | _____ | _____ | _____ |
| Ventilation Debris/Residue<br>(heavy metals, e.g., cadmium,<br>chromium)  | _____ | _____ | _____ |
| (*1)  | _____ | _____ | _____ |

3.6 Notify the SUPERVISOR at least one working day prior to shipment of hazardous waste for disposal.

3.7 Submit one legible copy, in hard copy or **approved transferrable** media, of a report identifying type, amount, and disposal cost of waste listed in 3.5 that was removed during the performance of this Job Order to the SUPERVISOR.

3.7.1 The report shall include analysis or other method used to identify the waste and state whether each listed waste was hazardous (with generator assignment), non-hazardous, or did not exist.

3.7.1.1 Chemical analysis shall be accomplished by laboratories with state or EPA approved quality assurance programs.

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3.7.2 The contractor shall make an effort to minimize hazardous waste generation by reducing the volume or toxicity by neutralizing, recycling, or otherwise removing it from the requirements of Subtitle C of 2.1 and include a description of such efforts in the report.

3.8 Nothing contained in this Work Item shall relieve the contractor from complying with applicable federal, state, and local laws, codes, ordinances, and regulations, including the obtaining of licenses and permits in connection with hazardous waste handling and disposal in the performance of this contract.

4. NOTES:

4.1 The waste listed in 3.5 is based on the best information available at the time of preparation of the solicitation. Hazardous waste generated during the actual performance of the work may vary in type or amount from waste listed in 3.5 which may result in renegotiation for credit or increase pursuant to Paragraph (b) of 2.4. The contractor is expected to use best management practice to identify and dispose of all hazardous waste. Some of the substances listed in 3.5 may be neutralized, recycled, or otherwise removed from the requirements of Subtitle C of 2.1. Inclusion of these substances in the waste listed in 3.5 does not preclude the contractor from taking action consistent with 2.1 to reduce or eliminate the hazardous constituents of any waste required to be disposed of under the contract in accordance with 2.2. Processes that add hazardous constituents to the bilges may require that bilge water be disposed of as a hazardous waste.

4.1.1 The types and amounts of wastes listed in 3.5 are estimates of waste to be disposed of under this contract as required by 2.4. They are not estimates of the amount of the work involved in generating that waste. The work requirements of each individual Work Item specify the actual work to be accomplished.

4.2 Hazardous wastes are determined by one or more of the following methods:

4.2.1 Chemical analysis which shows that the material characteristics of ignitability, corrosivity, reactivity, and/or toxicity (Toxicity Characteristic Leachate Procedure - TCLP) exceed the limits for that material in 40 CFR 261.20 Subpart C.

4.2.2 Reference to a Material Safety Data Sheet (MSDS).

4.2.3 Applying knowledge of the hazardous characteristics of the waste in light of the materials or the process used.

4.3 Asbestos, bilge water, oil/water including sludge, debris and other contaminants, sludge which includes solids and sludge from ballast tanks, CHT tanks, voids, oily waste tanks, fuel ballast tanks, fuel oil tanks, skegs

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(West coast), PCB's (Maryland), etc., apply only in those states listing them as hazardous waste. When an availability is to be performed in a state where these items are hazardous waste, an estimate of the amount to be generated shall be included in 3.5.

5. GOVERNMENT FURNISHED MATERIAL (GFM):

5.1 None.

PLANNER'S NOTE: (1) To be used for hazardous waste not listed in 3.5.

|

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## **Appendix B**

### **Marine Safety Inspection Guide**

#### **General Safety**

1. All compressed gas cylinders (in-use or not) secured in racks, tied up or other-wise safely positioned to prevent tipping over?
2. Valve protection caps placed tightly on all compressed gas cylinders not in use?
3. Compressed gas cylinders placed where they cannot become part of any electrical circuit?
4. Compressed gas cylinders and manifolds located in the open air (not within enclosed spaces)?
5. (Chicago-type) high pressure air hose connections pinned or wired to prevent accidental disconnection?
6. Containers of industrial liquids and solids correctly and adequately labeled to identify contents and precautions for use?
7. Good industrial housekeeping conditions maintained?
8. First aid and emergency services available in a timely manner?
9. Air quality/ventilation adequate?
10. Work areas and access ways have adequate lighting?
11. Insulation/lagging (removal and handling) safe practices maintained?

#### **Personal Protection**

1. All employees, including sub-contractor personnel, utilizing required personal protective equipment (PPE)?
  - a. Approved hard hat head protection? (Does not include lightweight laceration caps, etc.)
  - b. Correct respirators?

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- c. Hearing protection? (ear plugs, muffs)
- d. Suitable footwear? (Does not include tennis shoes, sandals, fabric shoes)
- e. Adequate eye and face protection?
- f. Personal fall arrest system? (When exposed to fall hazard over five feet and fall prevention guardrails are not utilized)
- g. Personal Floatation Devices? (When working any distance over water and fall prevention guardrails are not utilized)

### **Fire Prevention and Protection**

- 1. Contractor notice of intent to perform hot work ("hot work chit") submitted to vessel prior to start of welding, burning, brazing, grinding, etc.?
- 2. Marine Chemist's (gas free) certificate, when applicable, posted at each access to affected space?
- 3. Competent Person's test/inspection record posted and updated, when applicable, prior to start of hot work and posted at each access to affected space?
- 4. Fire watch personnel in position during hot work, with special consideration to heat transfer to opposite sides of bulkheads?
- 5. Fire extinguishing equipment immediately available and accessible at hot work sites?
- 6. Flammable and combustible materials (paints, solvents, trash, paper, cardboard, petroleum products, etc.) protected or removed from the hazardous proximity of hot work sparks, slag, heat transfer, etc.?
- 7. Containers of flammable and combustible liquids covered when not directly in use?
- 8. Portable fuel gas and oxygen (distribution) manifolds labeled to identify gases and located in the open air (not in enclosed spaces)?
- 9. Protective (screw on) caps placed on all gas manifold outlets which are not in use?

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10. All gas hose connections secure?
11. All gas hoses arranged to prevent damage? (Pinching, cutting, chafing, etc.)
12. Equipment and fixtures (desks, flooring, etc.) protected from exposure to hot work sparks, slag, etc.?
13. Explosion proof lights in use where required?
14. Gas cylinder flow regulators tightly installed to prevent leaking?
15. Materials used for screening, protective coverings, shelters, etc., made of fire-retardant materials?
16. No smoking rules adhered to where applicable?
17. Service lines routed through fire zone boundaries have quick disconnects and connections marked, within ten feet of boundary and compressed gas hoses prohibited?
18. Access to firefighting equipment, including temporary water distribution manifolds, is clear and unobstructed?

#### **Walking and Working Surfaces**

1. Hoses, cables, ducting, etc., are elevated, covered, or otherwise safely arranged to prevent obstructions and trip hazards?
2. Substitute walkway planks are in place during absence of regular deck plates or grating?
3. Work areas and walkways are free from slip hazards? (oil, grease, etc.)
4. Primary access way (including ladders, steps) is clear, not obstructed by ship repair materials?
5. Hatch covers and lids, when open, are secured to prevent accidental closing?
6. Ladders, steps and gangways are in safe condition?
7. Adequate fall prevention guard railing is in place at all hazardous openings?

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8. All overhead equipment, materials, and tools are secured to prevent slipping/falling on to personnel below? Are they tied to ship's structure and not to piping, wiring, equipment, etc?

9. Personnel are working from approved elevated work platforms? (Does not include chairs, cans, loose bricks, or other unstable objects)

10. Scaffolding is in safe condition?

a. All components secure?

b. Platform planking complete (guardrail to guardrail) to prevent hazardous openings/gaps?

c. Platform planking in good condition, free from damage, splits, etc.?

d. Platform planks project beyond support ends by at least 6 inches, but not more than 12 inches?

e. Top and mid (horizontal) guardrails are in place at all work platform levels? (top guardrail = 42 to 45 inches from work platform) (mid guardrail + halfway) (Note: diagonal bracing alone does not satisfy guardrail requirements.)

f. Four inch toe boards in place around (work platform) perimeters, if necessary, to prevent tools and other construction equipment from falling onto personnel below?

g. Is there a green safety tag affixed to indicate that scaffolding is safe for use?

### **Material Handling**

1. Material handling (wood) pallets are in good condition, free from loose, broken, missing parts, etc?

2. Materials are adequately secured to pallets during hoisting?

3. Personnel warned of overhead hazard during hoisting operations?

4. Upper hooks of material rigging chain falls and other pull/lift devices secured ("moused") to prevent them from coming free from their attachment points?

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5. Cranes adequately guarded to keep personnel from within the swing radius of crane body?
6. Forklift trucks being operated safely?
  - a. Driven at a safe, reduced speed?
  - b. No personnel on or under loads/forks?
  - c. Loads and forks kept at a low level position when possible?
  - d. Motor turned off when unattended?
  - e. No unauthorized passengers on any portion of forklift?

**Electrical**

1. Frames of all arc welding and cutting machines are adequately and securely grounded?
  - a. All electrical equipment, tools, and other such components are safely positioned away from water, etc.?
  - b. All current-carrying cables are in safe condition? (no exposed wiring, insulation free from damage, grounding pins unaltered)
  - c. All current-carrying cables are safely arranged to prevent damage? (pinching, cutting, chafing, etc.)
  - d. Electric hand tools (drills, saws, etc.) are grounded to prevent shock?
  - e. Required safe practices are being observed prior to work on electrical circuits/systems? (Reference (a), reference (f) section 009-24, and reference (g)).
  - f. Temporary light stringers safely arranged? (elevated off decks and tied at intervals, not suspended by cords alone, etc.)

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## Chapter 8

### Utilization of Reservations

Ref: (a) CNRMCINST 7570.1, Process for Utilizing Historical Reservation Requirements in Ship Repair Contracts

#### Appendix A: Guidelines for Utilizing Historical Reservation Requirements in Ship Repair Contracts

1. Introduction. Known work which cannot be adequately assessed in advance due to operational restrictions or other limitations is routinely required to be included in repair contracts by Maintenance Teams. In order to provide the government with a tool for the rapid accomplishment of previously 'work not assessed in advance', time and material reservations are utilized. The following sections define the policy and procedures for the administration and reconciliation of time and material reservations identified within work item specifications. Reference (a) also provides the guidelines for utilizing historical reservation requirements in ship repair contracts.

#### 2. Guidelines - Historical Reservation Requirements

a. Time and material reservations may be used if there is a strong expectation that repairs will be accomplished based on past history and if either condition below exists:

(1) For work that is not readily accessible for inspection or is hidden by current conditions:

- (a) Diesel Engines
- (b) Boilers
- (c) Tanks and voids
- (d) Dry-docking items
- (e) Lagging and Insulation
- (f) Hazardous waste disposal
- (g) AIT Support Services
- (h) Oxygen-Nitrogen (O2N2) Plants

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(i) Messing and Berthing Barges

(2) For specific work requirements associated with items that receive routine inspections by government inspectors during an availability period.

(a) Aviation Certificate (AVCERT) discrepancies

(b) Dock Trials/Sea Trials

(c) Lite-Off Assessment (LOA/LOE) discrepancies

b. The following are Lite-Off Assessment (LOA) examples of information that shall be listed in paragraph 3 (Requirements) of the Work Item when using time and material reservations:

(1) Pumping and disposal of fluids

(2) Access and egress repairs (balanced doors, escape trunks, safety nets, etc)

(3) Piping system repairs

(4) Lagging replacement

(5) Electrical troubleshooting and repairs

(6) Equipment troubleshooting and repairs

(7) Gage calibration

(8) Intake/Uptake repairs

(9) Hull and attached structures

(10) Chemical cleaning of coolers/condensers/tube bundles

(11) Vent system repairs

c. Historical Documentation

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(1) The Magnetic Particle Test (MT) will provide the Contracts Department the usage from the last three similar availabilities to verify the historical requirement.

(2) MT's shall provide historical class requirements for similar work allowing for minor variation based on the ship's specific condition.

(3) A format similar to the following shall be utilized to provide historical usage to Contracts Department:

| Ship                   | USS<br>Neversail | (FFG 100) | LOA Assist   |               |                | Avail Comp         | 3/11/2008            |
|------------------------|------------------|-----------|--|---------------|----------------|--------------------|----------------------|
| WORK ITEM<br>/ MOD NO. | CHIT NO.         | PARA. NO. | TITLE  | HOURS<br>USED | MATL\$<br>USED | REMAINING<br>HOURS | REMAINING<br>MATL \$ |
| 980-90-002             | 1                |           | PROVIDE INSULATION/LAGGING                           |               | (5,420)        | 3,920              | 15,000               |
| 980-90-002             | 2                |           | RIG FM VALVES  | (72)          | (50)           | 3,848              | 9,580                |
| 980-90-002             | 3                |           | RIG COMPRESSORS / ELBOWS                             | (144)         | (50)           | 3,704              | 9,480                |
| 980-90-002             | 4                |           | PUMP #2 WASTE DRAIN TANK                             | (38)          |                | 3,666              | 9,480                |
| 980-90-002             | 5                |           | STRAIN FREE #3 FP INLET PIPING                       | (104)         | (150)          | 3,562              | 9,330                |
| 980-90-002             | 6                |           | PROVIDE SAFETY NET FOR #2 AMR<br>ESCAPE TRUNK        |               | (1,593)        | 3,562              | 7,737                |
| 980-90-002             | 7                |           | ELEC TO SUPPORT A/C FLUSH                            | (8)           | (25)           | 3,554              | 7,712                |
| 980-90-002             | 8                |           | RIG IN #3 AMR BALANCE DOOR                           | (24)          | (50)           | 3,530              | 7,662                |
| 980-90-002             |                  | PER PM    | RCC 154G INCREASE MATERIAL<br>30000                  |               | 30,000         | 3,530              | 37,662               |
| 980-90-002             | 9                |           | PROVIDE AND INSTALL GTM SOFT<br>PATCH GASKETS        |               | (6,733)        | 3,530              | 30,929               |
| 980-90-002             | 10               |           | REPAIR #2 WASTE HEAT COOLER                          | (16)          | (18,339)       | 3,514              | 12,590               |
| 980-90-002             | 11               |           | HAND SCRAPE & WIRE BRUSH 3 & 4<br>SUCTION ELBOWS     |               | (1,928)        | 3,514              | 10,662               |
| 980-90-002             | 12               |           | REPLACE SHELL & PIPING<br>INSULATION IN #3 SSDG ENCL | (336)         | (2,500)        | 3,178              | 8,162                |
| 980-90-002             | 13               |           | #2 PUMP ROOM JP-5 PPG MOD                            |               | (5,466)        | 3,178              | 2,696                |
| 980-90-002             | 14               |           | CALIBRATE POT WATER TLIS                             | (28)          | (50)           | 3,150              | 2,646                |
| 980-90-002             | 15               |           | INSTALL HANGER SUPPORT ON #4<br>SW                   | (16)          | (50)           | 3,134              | 2,596                |
| 980-90-002             | 16               |           | TROUBLESHOOT GROUNDS IN #2<br>LPAC                   | (14)          |                | 3,120              | 2,596                |
| 980-90-002             | 17               |           | WELD IN CROSS BRACE & TOUCH UP<br>AREA ON A/C'S      |               | (2,593)        | 3,120              | 3                    |
| RCC 157                |                  |           | DELETE BALANCE                                       |               |                | 0                  | 0                    |

### 3. Administration of Time and Material Reservations

a. The time and material reservations within the specifications are expended through the use of a chit system. This allows the government to expeditiously define the scope of effort and to reach agreement with the contractor on the number of man-hours and value of material required to accomplish work in situations when such action is essential to support readiness for critical availability evolutions.

b. Parts replacement allowance specifications, also known as credit/debit specifications, establish a defined monetary pool allowance for material only. These are frequently used in a work item where the contractor is tasked to identify parts needing replacement and then to replace those parts in order to complete the work requirements. Since there may be uncertainty

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as to the extent of parts replacement, a ceiling-funding amount is identified in the specifications with the provision that the funding allowance will be adjusted based on the value of the cost of the parts replaced.

c. The cumulative total value of all chit type hours and material shall not exceed 10% of the government estimate for the availability contract without prior approval of Codes 300/400.

d. Work statements shall be defined as much as practical to include location and equipment to allow the contractor to anticipate trade types.

e. Except for Boiler and LOA work items, reservations shall not be included in growth work specifications.

f. Reservations shall be deleted via the RCC process if not used within the scope of the original work specification.

g. Responsibilities. It is the Maintenance Team's responsibility to authorize and monitor the contractor's time and material expenditures relating to a time and material pool chit system(s) and parts replacement allowance credit/debit specifications.

(1) The PM has the overall responsibility for the authorization and management of work accomplished using utilization reservation specifications.

(a) Time and Material Reservation System

1. The SBS shall prepare a sequentially numbered chit to the applicable specification describing the required work or support to be performed. Each chit shall include the following information: ship, contract/job order number, serialized number, date chit issued, and description of work required in 4E format. Each chit shall be identified by a unique code composed of one of the following listed alphabetic codes followed by a three digit sequential number, i.e.: LO-078, CS-079 and BM-080.

a. CS = Correction of Combat System testing discrepancies.

b. LO = Pre-LOA/Pre-LOE or LOA/LOE assistance and minor repairs in support of pre- or post repair test/sea trials.

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c. SS = Support Services for AIT/government agencies performing shipboard work.

d. BM = Minor repairs to correct deficiencies to support and maintain personnel barges.

e. BR = Boiler repairs resulting from inspections.

f. DR = Diesel repairs resulting from inspections.

g. FM = FMS project and reactivation support.

h. IS = General Industrial support.

2. Maintain a complete log for each specification containing time and material reservation or parts replacement allowances. The chit number shall be recorded in the log.

3. Ensure the estimated value of the time and material reservation is less than \$25,000. Requirements shall not be issued via multiple chits in order to stay within limitations of this instruction.

4. Scope requested work effort with an empowered contractor representative and reach agreement on man-hours and material dollars.

a. For Firm Fixed Price (FFP) contracts, only actual production labor hours expended will be considered toward the contractor's obligation to provide the defined reservation labor hour effort. While supervision, quality assurance, and other nonproductive labor should be included in the pricing for reservations in the original bid, they shall not count toward satisfying the contractor's obligation to provide reserve labor hours. The production labor hour reservation shall not include any allowance for technical representatives or any government-directed source unless specifically addressed in the individual work item. For Cost Type contracts, only direct charge personnel required to accomplish the work shall apply.

b. Material dollars shall be based on actual cost to the contractor of acquiring materials provided. Material dollars may include freight or duties that would be

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reflected on the invoice for the material. The contractor shall not be allowed to add material handling charges, overhead (including G&A), or profit into the actual cost of materials expended toward the reservation. If no time and material agreement can be achieved, reject the tasking. The SBS does not have the authority to exceed the authority labor hour and material reservation.

5. The SBS and authorized contractor representative shall sign the chit.

6. Forward the log and a copy of each chit issued to the ACO/Contract Specialist within ten days after availability/contract completion.

(b) Parts Replacement Allowance Credit/Debit Specifications.

1. Prepare a consolidated list of credit/debit specifications by work item, identifying paragraph, and value of allowance. Provide a copy to ACO.

2. If a CFR requests an increase in the parts replacement allowance set forth in the work item specification, ensure adequate funding is available prior to authorizing an increase.

3. Reserve a Request for Contract Change (RCC) number to be used in answering contractor's CFR requesting reconciliation. Annotate CFR: "RCC\_\_\_\_\_ applies when settled." If an increase to the parts replacement amount is authorized, annotate a "not to exceed" limitation on the CFR along with the applicable RCC number.

4. Forward a copy of all documentation of parts replacement credit/debit specification work to the ACO within ten days after availability/contract completion.

h. Exceptions. Work Items to accomplish a defined quantity of a specific task (i.e., replace 100 square feet of hull plating, etc.) are not Reservation taskings. The contractor should have obtained all the material to complete the stated requirements and only needs direction from the SBS as to location, normally via a condition found report.

## Appendix A

### Guidelines for Utilizing Historical Reservation Requirements in Ship Repair Contracts

1. Known work which cannot be adequately assessed in advance due to operational restrictions or other limitations is routinely required to be included in repair contracts by Maintenance Teams. The goal is to specifically define and plan as much of the work as possible based on current and historical information. The use of generic work statements with time and material requirements must be developed using historical evidence and by specifying the type of work that is expected to be accomplished.

2. The following guidelines are provided for the use of specifications which include time and material reservations.

a. Time and material reservations may be used if there is a strong expectation that repairs will be accomplished based on past history and if either condition below exists:

(1) For work that is not readily accessible for inspection or is hidden by current conditions.

- (a) Diesel Engines
- (b) Boilers
- (c) Tanks and voids
- (d) Dry-docking Items
- (e) Lagging and insulation
- (f) Hazardous Waste Disposal
- (g) AIT Support Services
- (h) O2N2 Plants
- (i) Messing and Berthing Barges

b. For specific work requirements associated with items that receive routine inspections by government inspectors during an availability period.

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(1) Aviation Certification (Avcert) discrepancies

(2) Dock trials/Sea Trials

(3) Lite-Off Assessment/Lite-Off Engineering (LOA/LOE) discrepancies. The following are LOA/LOE examples of information that shall be listed in paragraph 3 (Requirements) of the work item when using time and material reservations:

(a) Pumping and disposal of fluids.

(b) Access and Egress repairs (Balanced Doors, escape trunks, safety nets, etc.).

(c) Piping System repairs.

(d) Lagging replacement.

(e) Electrical troubleshooting and repairs.

(f) Equipment troubleshooting and repairs.

(g) Gage Calibration.

(h) Intake/Uptake repairs.

(i) Hull and attached structures.

(j) Chemical cleaning of coolers/condensers/tube bundles.

(k) Vent system repairs.

### 3. Historical Documentation

a. The MT will provide the Contracts Department the usage from the last three similar availabilities to verify the historical requirement.

b. MT's shall provide historical class requirements for similar work allowing for minor variation based on the ship's specific condition. (See paragraph (3) below.)

### 4. The following process notes are germane:

a. Class averages will be generated for all reservations based on return costs and lessons learned/Maintenance Modernization Performance Review (MMPR).

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b. Work statements shall be defined as much as practical to include location and equipment to allow the contractor to anticipate trade types.

(1) Except for Boiler and LOA work items, reservations shall not be included in growth work specifications.

(2) Reservations shall be deleted via the RCC process if not used within the scope of the original work specification.

(3) It is the Maintenance Team's responsibility to justify, manage and account for all reservations.

5. A format similar to the following shall be utilized to provide historical usage to the Contracts Department:

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| Ship                   | USS<br>Neversail | (FFX<br>100) | LOA Assist   |               |                | Avail Comp         | 3/11/2008            |
|------------------------|------------------|--------------|--|---------------|----------------|--------------------|----------------------|
| WORK ITEM /<br>MOD NO. | CHIT NO.         | PARA.<br>NO. | TITLE  | HOURS<br>USED | MATL\$<br>USED | REMAINING<br>HOURS | REMAINING<br>MATL \$ |
|                        |                  |              |  |               |                | 3,920              | 15,000               |
| 980-90-002             | 1                |              | PROVIDE<br>INSULALATION/LA<br>GGING                        |               | (5,420<br>)    |                    | 9,580                |
| 980-90-002             | 2                |              | RIG FM VALVES  | (72)          | (50)           | 3,848              | 9,530                |
| 980-90-002             | 3                |              | RIG COMPRESSORS<br>/ ELBOWS                                | (144)         | (50)           | 3,704              | 9,480                |
| 980-90-002             | 4                |              | PUMP #2 WASTE<br>DRAIN TANK                                | (38)          |                | 3,666              | 9,480                |
| 980-90-002             | 5                |              | STRAIN FREE #3<br>FP INLET PIPING                          | (104)         | (150)          | 3,562              | 9,330                |
| 980-90-002             | 6                |              | PROVIDE SAFETY<br>NET FOR #2 AMR<br>ESCAPE TRUNK           |               | (1,593<br>)    | 3,562              | 7,737                |
| 980-90-002             | 7                |              | ELEC TO SUPPORT<br>A/C FLUSH                               | (8)           | (25)           | 3,554              | 7,712                |
| 980-90-002             | 8                |              | RIG IN #3 AMR<br>BALANCE DOOR                              | (24)          | (50)           | 3,530              | 7,662                |
| 980-90-002             |                  | PER PM       | RCC 154G<br>INCREASE<br>MATERIAL 30000                     |               | 30,000         | 3,530              | 37,662               |
| 980-90-002             | 9                |              | PROVIDE AND<br>INSTALL GTM<br>SOFT PATCH<br>GASKETS        |               | (6,733<br>)    | 3,530              | 30,929               |
| 980-90-002             | 10               |              | REPAIR #2 WASTE<br>HEAT COOLER                             | (16)          | (18,33<br>9)   | 3,514              | 12,590               |
| 980-90-002             | 11               |              | HAND SCRAPE &<br>WIRE BRUSH 3 &<br>4 SUCT. ELBOWS          |               | (1,928<br>)    | 3,514              | 10,662               |
| 980-90-002             | 12               |              | REPLACE SHELL &<br>PIPING<br>INSULATION IN<br>#3 SSDG ENCL | (336)         | (2,500<br>)    | 3,178              | 8,162                |
| 980-90-002             | 13               |              | #2 PUMP ROOM<br>JP-5 PPG MOD                               |               | (5,466<br>)    | 3,178              | 2,696                |
| 980-90-002             | 14               |              | CALIBRATE POT<br>WATER TLIS                                | (28)          | (50)           | 3,150              | 2,646                |
| 980-90-002             | 15               |              | INSTALL HANGER<br>SUPPORT ON #4<br>SW                      | (16)          | (50)           | 3,134              | 2,596                |
| 980-90-002             | 16               |              | TROUBLESHOOT<br>GROUNDS IN #2<br>LPAC                      | (14)          |                | 3,120              | 2,596                |
| 980-90-002             | 17               |              | WELD IN CROSS<br>BRACE & TOUCH<br>UP AREA ON<br>A/C'S      |               | (2,593<br>)    | 3,120              | 3                    |
| RCC 157                |                  |              | DELETE BALANCE   |               |                | 0                  | 0                    |

## Appendix 1

### LIST OF ACRONYMS

| <u>Acronym</u> | <u>Description</u>  |
|----------------|---|
| ABR            | Agreement for Boat Repair   |
| ACO            | Administrative Contracting Officer  |
| AIT            | Alteration Installation Team  |
| APL            | Allowance Parts List  |
| APM            | Advance Planning Manager  |
| AWR            | Automated Work Request  |
| C5I            | Command, Control, Communication, Computers,<br>Combat Systems, Intelligence |
| CA             | Corrective Action   |
| CAR            | Corrective Action Report  |
| CAQAP          | Contract Administration Quality Assurance Program                           |
| CASREP         | Casualty Report   |
| CDO            | Command Duty Officer  |
| CDRL           | Contract Data Requirements List   |
| CEH            | Cost Estimating Handbook  |
| CFE            | Contractor Furnished Equipment  |
| CFM            | Contractor Furnished Material   |
| CFR            | Condition Found Report  |
| CFR            | Codified Federal Regulations  |
| CHENG          | Chief Engineer  |
| CLASSRON       | Class Squadron  |
| CMAV           | Continuous Maintenance Availability   |
| CNO            | Chief of Naval Operations   |
| CNRMC          | Commander Navy Regional Maintenance Center                                  |
| CONUS          | Continental United States   |
| COP            | Configuration Overhaul Planning   |
| COPA           | Contracting Officer Price Analysis  |
| CPAF           | Cost Plus Award Fee   |
| CPFF           | Cost Plus Fixed Fee   |
| CPIF           | Cost Plus Incentive Fee   |
| CPARS          | Contractor Performance Assessment Reporting System                          |
| CS             | Contract Specialist   |
| CSWT           | Class Standard Work Template  |
| CTL            | Class Team Leader   |
| CWP            | Controlled Work Package   |
| DCAA           | Defense Contract Audit Agency   |
| DFS            | Departure From Specification  |
| DSR            | Design Service Request  |

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| <u>Acronym</u> | <u>Description</u>                                |
|----------------|---|
| DSRA           | Drydock Selected Restricted Availability          |
| EAC            | Estimate at Completion                            |
| EDSRA          | Extended Drydock Selected Restricted Availability |
| EMT            | Execution Maintenance Team                        |
| EPCP           | Expanded Process Control Procedure                |
| ESR            | Engineering Service Request                       |
| ESWBS          | Expanded Ship Work Breakdown Structure            |
| ETD            | Estimated Time of Delivery                        |
| FDG            | Fleet Desk Guide                                  |
| FFP            | Firm Fixed Price                                  |
| FMO            | Fleet Maintenance Officer                         |
| FMR            | Fleet Maintenance Surface (formerly IMF, SIMA)    |
| G&A            | General & Administrative                          |
| GFE            | Government Furnished Equipment                    |
| GFI            | Government Furnished Information                  |
| GFM            | Government Furnished Material                     |
| GSO            | General Specifications for Overhaul               |
| HAB            | Habitability                                      |
| HAZMAT         | Hazardous Material                                |
| HM&E           | Hull, Mechanical & Electrical                     |
| HW             | Hazardous Waste                                   |
| IAW            | Per   |
| ICMP           | Integrated Class Maintenance Plan                 |
| IDIQ           | Indefinite Delivery/Indefinite Quantity           |
| IGE            | Independent Government Estimate                   |
| ILS            | Integrated Logistic Support                       |
| INSURV         | Board of Inspection and Survey                    |
| ISEA           | In-Service Engineering Agent                      |
| JFMM           | Joint Fleet Maintenance Manual                    |
| JSN            | Job Sequence Number                               |
| KTR            | Contractor  |
| LARS           | Liaison Action Requests                           |
| LLTM           | Long Lead Time Material                           |
| LMA            | Lead Maintenance Activity                         |
| LOA            | Light Off Assessment                              |
| LOE            | Light Off Engineering                             |
| LOT            | Letter of Transmittal                             |
| MARMC          | Mid-Atlantic Regional Maintenance Center          |
| MFOM           | Maintenance Figure of Merit                       |
| MMBP           | Maintenance & Modernization Business Plan         |
| MMPR           | Maintenance Modernization Performance Review      |
| MSC            | Master Spec Catalog (found in NMD)                |

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| <u>Acronym</u> | <u>Description</u>                                       |
|----------------|--|
| MSMO           | Multi-Ship/Multi-Option                                  |
| MSRA           | Master Ship Repair Agreement                             |
| MT             | Maintenance Team   |
| NAVSEA         | Naval Sea Systems Command                                |
| NEMAIS         | Navy Enterprise Maintenance Automated Information System |
| NMD            | Navy Maintenance Database                                |
| NSA            | Naval Supervising Activity (or Authority)                |
| NSI            | NAVSEA Standard Items                                    |
| NSSA           | Norfolk Ship Support Activity                            |
| NSTM           | Naval Ships' Technical Manual                            |
| NTE            | Not-to-Exceed  |
| NWRMC          | Northwest Regional Maintenance Center                    |
| OEM            | Original Equipment Manufacturer                          |
| OQE            | Objective Quality Evidence                               |
| OSHA           | Occupational, Safety and Health Administration           |
| PB4M           | Planning Board For Maintenance                           |
| PCD            | Projected Completion Date                                |
| PCO            | Procuring Contracting Officer                            |
| PCP            | Process Control Procedure                                |
| PE             | Port Engineer  |
| PE             | Procedure Evaluation                                     |
| PE             | Product Evaluation                                       |
| PEO            | Program Executive Office                                 |
| PM             | Project Manager  |
| PR             | Product Review   |
| PSA            | Post Shakedown Availability                              |
| PTD            | Provisional Technical Documentation                      |
| PVI            | Product Verification Inspection                          |
| QA             | Quality Assurance  |
| QAS            | Quality Assurance Specialist                             |
| QDE            | Quality Data Evaluation                                  |
| RCC            | Request for Contract Change                              |
| REA            | Request for Equitable Adjustment                         |
| REF            | Reference  |
| RLARS          | Reverse Liaison Action Requests                          |
| RMC            | Regional Maintenance Center                              |
| RMMCO          | Regional Maintenance Modernization & Coordination Office |
| RTS            | Readiness To Start                                       |
| SA             | Supplemental Agreement                                   |
| SBS            | Shipbuilding Specialist                                  |

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| <u>Acronym</u> | <u>Description</u>  |
|----------------|---|
| SCD            | Ships Change Document   |
| SDR            | Ship Departure Reports  |
| SERMC          | Southeast Regional Maintenance Center                             |
| SF             | Ships Force   |
| SHIPALT        | Ship Alteration   |
| SHIPMAIN       | Ship Maintenance  |
| SMMO           | Ship's Material Maintenance Officer                               |
| SLEP           | Service Life Extension Program                                    |
| SRA            | Selected Restricted Availability                                  |
| SSRAC          | Standard Specifications for Ship Repair & Alteration<br>Committee |
| SUPSHIP        | Navy Supervisor of Shipbuilding, Conversion & Repair              |
| SWBS           | Ship Work Breakdown Structure                                     |
| SWM            |   |
| SWRMC          | Southwest Regional Maintenance Center                             |
| SWT            | Standard Work Template  |
| TA             | Technical Authority   |
| TAR            | Technical Advisory Review/Report                                  |
| TDA            | Type Desk Assistant   |
| TDO            | Type Desk Officer   |
| TOC            | Total Ownership Costs   |
| TSTR           | Total Ship Testing Requirements                                   |
| TYCOM          | Type Commander  |
| WAF            | Work Authorization Form   |
| WFO            | Waterfront Operations   |
| WPER           | Work Package Execution Review                                     |
| WPIC           | Work Package Integration Conference                               |

# SHIPBUILDING SPECIALIST (SBS)



## DESK GUIDE VOLUME II



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**SBS PROCEDURE 1****Review Automated Work Request (AWR)**

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual  
(b) Fleet Desk Guide (FDG 210), AWR Validation

1. The purpose of this procedure is to guide the SBS in review of AWRs to ensure the necessary information is clear, concise and accurate per references (a) and (b).

2. The following steps assume that the user is located at the Brokered JCN's Awaiting Assignment Screen (AQ1) in the NMD (Planning).

a. Print AWR. Printing of the AWR allows the SBS to have document on hand for reference during the future steps.

(1) Right click on WC-JCN. A dropdown menu will appear.

(2) Click PRINT.

(3) Click AWR. The AWR will appear.

(4) Click the PRINT icon on the AWR.

b. Review AWR for Accuracy.

(1) Verify Allowance Parts List (APL) is applicable to the assigned ship (Block 4).

(2) Verify serial number is filled in and matches the component based on APL (Block 13).

(3) Verify APL is the parent APL and not for a subcomponent, if units are connected (Block 4).

(4) Verify location of equipment (Block 16).

(5) Verify Ships Work Authorization Boundary/Ships Work List Item Number (SWAB/SWLIN) is correct.

(6) Verify Remarks/Description accurately describe the initial condition and request an action that is attainable (Block 35).

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(7) Verify CSMP Summary is accurate, based on block 35 remarks (Block 37).

(8) Review any documents listed, e.g. drawings, technical manuals, etc., (Block 47/48).

(9) Return to NMD (Planning).

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## **SBS PROCEDURE 2**

### **Perform Ship Check**

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual  
(b) Fleet Desk Guide FDG 411, Perform Shipcheck  
(c) FDG Website Resources

1. The purpose of this procedure is to guide the SBS in performing quality Ship Checks per references (a) and (b) in order to support efficient and effective planning and estimating of the associated work item(s).

a. Accomplish research to locate applicable Drawings, Technical Manuals, engineering notes, etc.

b. Use "As built" drawings first and where available, then use Class drawings.

(1) Verify Drawings are applicable to the ship being worked.

(2) Use latest updated Technical Manuals.

(3) Verify Technical manual is applicable by Allowance Parts List (APL)/Authorized Equipment Listing (AEL), location, and serial number.

(4) Verify any engineering notes are applicable to the actual class and hull being worked.

2. Locate first or second contact on-board ship and verify work is still required.

a. If work is still needed, proceed to sub paragraph (d) provided below.

b. If work has already been accomplished or is otherwise no longer required, have Ship's Representative sign AWR stating work is complete or no longer required.

c. Turn AWR over to Project Manager for disposition.

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(1) The intent of the Ship Check form is to gather as much information as possible, in order to aid the planner in developing a complete and accurate repair process and work item.

(2) Ship Checks will often require more than one Ship Check form to be filled out to accomplish this requirement. Ensure you take plenty of blank Ship Check forms, which are available in references (b) and (c).

(3) If this repair or a similar repair has been accomplished before, print out copies of the repair process and/or the work item associated with it. Take these with you when you Ship Check.

3. Verify location of work by space and physical location within the space.

4. Verify component serial number(s) where applicable.

5. Verify and document system, fluid, and system pressures on the applicable Ship Check form.

6. Verify location of structures and sections or areas to be repaired, if any, on the applicable Ship Check form.

7. Verify electrical cables, controllers, and breakers or fuse panels which may need repairs on the applicable Ship Check form.

8. Verify valve types and sizes on the applicable Ship Check form.

9. Verify piping size during Ship Check: validate material type from applicable drawing.

10. Determine if there are any temporary removals needed in order to accomplish the required work.

a. Determine if the system(s) affected by the temporary removal(s) is/are critical systems. If the system is critical, document information on additional Ship Check forms.

b. If the system(s) are not critical, document steps needed to remove interference, reinstall, inspect and test to recertify system. While non-critical systems are not written into the work item, this information is needed for the steps in the repair process so that an accurate estimate can be made for all of the work being accomplished.

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11. Determine if there are any environmental issues which need to be considered and covered during the repair.

a. Include estimates on how much and what type of hazardous material may be used or need to be disposed.

b. Include estimates on fluids to be removed and disposed of from the system.

12. Look for any safety issues unique to the area, or involving the work needing to be accomplished.

13. Determine if scaffolding is needed and document.

14. For doors, document all adjacent bulkhead discrepancies which might affect the repair, as well as the information needed to fill out the Ship Check form.

15. Document all lagging by location, including frame and deck numbers, and measure both the area to be repaired or replaced, and the actual location on piping, components and bulkheads.

16. Document conditions with digital photographs where appropriate for upload to Navy Maintenance Database (NMD).

17. If this work has been accomplished previously and a repair process is available, ensure a copy is on hand to mark up. This will ensure all major questions are answered during the Ship Check and allow the planner and reviewer to provide a more accurate work item.

18. If no repair process is available, fill out basic steps while on scene, using a basic repair process template and instructions, and ensure all special or unique steps are documented prior to completing the Ship Check. This will help you to minimize return visits to get additional information.

19. Upon return to the office, fill out shipcheck form in Word or similar application and file along with other documents, e.g., digital photographs, on appropriate hard drive as specified in local procedures.

20. Upload completed shipcheck form and any other pertinent files, e.g., digital photographs, in NMD. See reference (b) section 11.

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### **SBS PROCEDURE 3**

#### **Review/Develop Work Items (Firm-Fixed Price (FFP))**

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual  
(b) Fleet Desk Guide FDG 460, Work Item Review

1. The purpose of this procedure is to review and develop Work Items per references (a) and (b).
2. Pre-Requisite Steps. When assigned, the SBS shall write, using NMD, clear, precise and legible specifications and Request for Contract Changes (RCCs) per reference (a), Volume VII, Chapter 4 appendix 4-E along with the cost estimate and upon completion route to the Project Manager.
3. Accomplish initial fact finding (Ship Check) using SBS Procedure 2. Remember, without the Ship Check, no form of planning or estimating can be made accurate.
4. Verify correct drawings and technical manuals are available.
5. Verify list of all parts and materials needed to accomplish the task.
6. Verify all parts and materials are per the technical requirements.
7. Determine all unusual requirements are addressed.

#### **\* INITIAL PLANNING PHASE STEPS \***

8. Write in ALL of the steps required to complete a given repair or modernization task. Use the Standard Work Item Template as a guide.
9. Determine if the step is covered under a NAVSEA or Local Standard Item and write in the number of the Standard Item.
10. Determine the category of the Standard Item (Cat I or Cat II) and indicate in the Category column.
11. List the Phraseology locator number for calling out Cat II standard Items in the Phrase Locator column.

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12. List phrase locator number for all other steps needed to complete the assigned repair. Use when creating a new work item in NMD Planning or modifying in NMD Execution. Always use the phraseology section of Appendix 4-E when creating a new work item in NMD Planning or when modifying an existing work item in NMD Execution.

13. For Steps not found to have an appropriate phrase in 4-E, use the verb noun directive phrase structure from appendix 4-E instructions. Use existing phrases as examples.

14. List all called Cat II standard Items under the Cat I or Cat II standard Item they are called from.

15. List all steps from each standard Item requiring a check point and list the check point in the Check Point Column. Include all called Cat II Standard Items. Not accomplishing this task makes it very difficult if not impossible to accurately estimate a work item.

16. List all check points needed that are not included in the standard Items but that are needed to assure all requirements are met for re-certification of the system repaired.

17. List all required reports and incorporate into the Check Point Column.

18. Make remarks for each step indicating why it is there or what it is to be used for. This column is normally to be used by the originator. Remarks should guide the user to ask and answer the appropriate questions during ship checks and when developing the actual Work Item from this process template.

19. Develop Ship Check and Planner Questions based on step requirements. These are used in conjunction with the Ship Check form to provide additional information to the reviewer or the SBS for use in Execution of the actual work. These questions can also be sent to a ship under way to obtain answers via navy message when the ship is not available to the planner, minimizing errors in planned work items where the planner is not able to visit the ship for an actual check.

20. Assign trade or trades responsible for completing the requirements of each step or Standard Item listed.

21. Ensure Work Item(s) are written well enough to support IGE development (SBS Procedure 5 of this desk guide).

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**\* THE FOLLOWING STEPS APPLY AFTER FILLING IN AND COMPLETING THE REPAIR PROCESS TEMPLATE. IT IS ASSUMED THAT THE USER HAS LOGGED IN UNDER THE PLANNER ROLE AND IS LOCATED IN PQ (PLANNER QUEUE) \***

22. Pull up and modify MSC template in NMD Planning to meet the repair process requirements.

- a. Right click on JCN in the WORK SPECS/ESTIMATES window.
- b. Click CREATE WORK ITEM on dropdown menu. The 2-Kilo Rating Screen appears.
- c. Click the VIEW 2K button to display the AWR.
- d. Review AWR to determine quality as adequate or inadequate.
- e. Click the CLOSE icon on the AWR to return to the 2-Kilo Rating Screen.
- f. Click the ADEQUATE or INADEQUATE radio button as appropriate based on review of AWR.
- g. If inadequate, identify discrepancies by moving attribute(s) from left field box to the right field box using the arrow keys.
- h. Click OK" when complete. Completion and use of the repair process is absolutely needed and necessary for those not formally trained as planners/estimators and who have no experience in this field. It also aids the experienced planner in delivering a consistently superior product. Keeping in mind that the end goal is to provide the repair worker with a solid, error free work specification or Work Item, this method provides excellent support and training to both the Planner/Estimator and reviewers of work items which take advantage of this process. It also supports cross training of new SBSs and planners along with supporting Engineering Technicians assigned to the work item review process.

23. NMD will show Class Standard Work Template, Local Work Template and Standard Work Template.

- a. Create work item using one of these three templates.

(1) Click on desired template then click OK.

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(2) The Assign Work Item Number dialogue box appears with an auto populated work item number.

(3) Click OK.

24. The work item template appears. Double click the paragraph number to be revised. The paragraph selected will appear in the text editor at the top of the screen. Make necessary changes per reference (a) Volume VII, Chapter 4, Appendix 4-E. When finished, click QUIT.

25. Work item is now created.

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**SBS PROCEDURE 4****Review Work Items/4E Specifications/Standard Items (MSMO/FFP)**

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual  
(b) Fleet Desk Guide FDG 460, Work Item Review  
(c) Fleet Desk Guide FDG 733, Request for Contract Change

1. The purpose of this procedure is to guide the SBS through the review of work items for quality and accuracy per references (a) through (c). The SBS shall accomplish Work Item Reviews, also referred to as Bid Spec Reviews, which include work items associated with Requests for Contract Changes (RCC). The review ensures work items (specifications) are clear, precise and legible per reference (a), Volume VII, Chapter 4, Appendix 4-E. Regardless of whether the specification work items were written by a contractor or the Government, a Government specification review is required.

2. The following steps assume that the SBS has logged in to NMD to review the work item, that he has selected availability and that he has clicked the availability DETAILS button. Queues appear along the bottom edge of the screen and several tabs appear across the top, one of which is the WORK SPEC REVIEW tab. The WORK SPEC REVIEW tab contains all the work items that have been moved there for review by the Advance Planning Manager.

3. Click the WORK SPEC REVIEW tab to display work items ready for review.

a. Select a work item and right click to display menu options. Click MAINTAIN SPEC REVIEW. A split screen will appear with the Work Item in the top window and a space to enter comments in the bottom window. Review the work item to ensure that it:

(1) Contains the requirements of the AWR. (To view the AWR, right click the desired work item, and click LIST JCNS IN WORK ITEM on the dropdown menu. A pop-up box will appear listing the JCNS. Select the JCN and click PRINT 2-Kilo (2K) to display it.)

(2) Contains the requirements of any RCC's in-scope growth work or new work approved by the Type Commander.

(3) Uses standard phraseology.

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(4) Includes all applicable references.

(5) Government-Furnished Material (GFM) is correctly identified in paragraph 5 of the work item.

4. After completing the review, the SBS will enter specification work item deficiencies in the comments window. To add comments:

a. Click the WORK SPEC REVIEW STATUS dropdown arrow and select the appropriate status.

b. Click ADD COMMENT.

c. Enter the paragraph number your comment applies to in the PARAGRAPH field.

d. Enter your comment in the COMMENT BY... field. (Comments for RCCs can be entered as remarks in NMD execution.)

e. Click SAVE. The SAVE CONFIRMATION dialogue box will appear. Click YES if you are ready to save changes.

f. Click the REPLY button, enter reply by requirements in the REPLY BY field. Click SAVE and then CLOSE.

g. To review a complete record of all work spec review comments, return to the listing of work items in the WORK SPEC REVIEW tab, select the desired Work Item, and right click it. From the resultant dropdown menu click PRINT and then click WORK SPEC REVIEW from the pop-up box. A listing of all spec review comments will appear. The PM shall review the specification and estimate. The PM will send or notify Code 200 of the need to review the specification for technical accuracy. When necessary, the PM will return the specification to the initiator for correction/modification.

5. Upon completion of review, the SBS shall route the work item to the PM in NMD. To route the work item:

a. Return to the screen listing work items.

b. Click the desired work item and right click to display menu options.

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c. Click ROUTE. When the routing dialogue box appears select the position and the individual to whom the work item is to be routed, and then click OK.

6. SBS shall ensure that no copies of estimating sheets are kept in official files. They shall also be treated as business sensitive materials.

7. Disposition of Review Comments

a. When SBS is acting as a Planner, the SBS shall review NMD for work spec comments posted by others during work item/bid spec review.

b. In the Planner queues screen, click WORK SPEC REVIEW tab at the top of the screen. Right Click on work item and select MAINTAIN WORK SPEC REVIEW from the dropdown menu.

c. When the work spec opens, and comments are found in the comments box, the SBS is required to respond to the comments. Prior to responding, ensure you do the research needed to make an informed decision! If the comment or question requires an answer from the Technical or Contract Warrant Holder, make sure you have the answer before providing your response.

8. To respond to a comment perform the following steps

a. Reply to comments by entering your comments in the COMMENT BY.

b. After completing your response comments, click the WORK SPEC REVIEW STATUS field dropdown arrow and select the appropriate choice.

c. Click SAVE and then CLOSE.

9. If the work spec needs modification, the SBS is required to contact PM.

10. The PM will review modifications and send a response back to SBS.

11. The SBS will make required changes to the work spec and then route back to PM for final approval.

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**SBS PROCEDURE 5****Develop Independent Government Estimate (IGE)/(MSMO)**

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual  
(b) FDG 411, Perform Shipcheck  
(c) FDG 420, Populate Template  
(d) FDG 440, Develop Independent Government Estimate (IGE)  
(e) FDG 460, Work Item Review  
(f) SBS Desk Guide Procedure 2, Perform Ship Check

Sections: 1. Procedure to Prepare the Cost Estimate  
2. Additional Estimate Criteria for Contract Modifications

Appendix A: Standard Cost Estimate Form  
Appendix B: Estimating Check-Off List  
Appendix C: Category 1 Standard Item Hard-Core Labor Consideration

1. The purpose of this procedure is to develop a quality Class C - Independent Government Estimate (IGE) per reference (a) for Work Items in the NMD under MSMO contracts. Independent Government Estimates should be developed and saved in NMD. It is important to emphasize that the IGE be independent, and the contractor's proposal not be used in the development of the Government Estimate. The IGE is used to support the government's case in getting a fair and reasonable price for performance of the work. To that end, thorough and accurate documentation in the IGE is essential during Technical Analysis, developing Technical Advisory Reports (TAR) and Business Clearance Memoranda (BCM).

2. Prerequisites. To ensure a quality IGE is developed, the requirements of references (b) through (g) involving performance of the ship check, populating the Work Item template and reviewing the Work Item, must be/must have been completed. If they have not, consult with the PM to complete them before proceeding.

a. The PM should assign Work Items in NMD's AQ3 tab/queue to the SBS. Work Items in the AQ3 tab/queue have completed the Work Spec (Item) Review process, which ensures the Work Item is of good quality.

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b. For MSMO contracts, it is not advisable to develop an IGE while the Work Item is in the NMD Planning tab/queue because the contractor (not government) is the Planner and the Work Item's quality at this stage is unreliable depending on its state of development at any given time. For this reason the IGE assignment is to be accomplished after the government PM has received the Work Item back in AQ3 tab/queue.

c. The exception to assigning the SBS to develop an IGE from the AQ3 tab/queue is when the IGE is being developed as a result of a contract modification. In this case the guidance listed in Section 2 shall be applied while developing the IGE.

3. Responsibilities. The government estimator is responsible for preparation of the IGE. However, third party independent contractors may be used by the government in a support role to gather information, provide the data, and make recommendations concerning the estimate; however, determination of the IGE must be made by a government employee because this is an inherently governmental function. The RMC estimator is responsible for preparation of the following cost estimates for the work item:

- a. Direct labor hours.
- b. Direct labor overtime hours (if applicable).
- c. Direct material cost, including subcontracts.

4. Information sources. In preparing detailed cost estimates for work activities, the estimator shall always use the best information available. Where standards are available and applicable, they shall be used. It is essential that all applicable sources of information be examined. These sources include the following:

- a. Master Specification Catalog CSWT, SWT, and LWT.
- b. Other estimators who have longer service or experience.
- c. Engineered labor standards prepared by naval or private contractors.
- d. Material catalogs from industry vendors.
- e. Contract files for similar work packages.
- f. Personal records made from past jobs or negotiations.

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g. Other Government agencies that have performed similar work.

h. Personal observations made during job execution.

i. "Rules of Thumb".

j. Historical data that are relevant and costs that have been validated.

5. Action. Develop IGE using Section 1 (and Section 2, when applicable).

a. Use Section 1 and Appendices A through C as tools to gather information and data for all government estimates.

b. When completing the government estimate for a contract modification, use the additional criteria outlined in Section 2 while completing Section 1. The completed IGE is used to support the Technical Analyst (TA) in comparing government and contractor estimates to determine fair and reasonable price. It provides the TA with vital data and information in writing a Technical Analysis Report (TAR) and then a Business Clearance Memoranda (BCM). To write the TAR, the TA will look to the IGE for support in answering questions such as:

a. What is the estimate?

b. What is the estimate based on?

(1) Quotes, cost estimating relationship, analogous work, historical actual, etc...

c. How is the estimate derived?

(1) Mechanics of calculating the estimate (e.g., complexity factors for hours or application of rates).

(2) Why is it reasonable (or unreasonable)?

The IGE's data and information should consist of sufficient detail, accuracy and quality to support development of a TAR and follow on BCM.

## SECTION 1. PREPARE THE COST ESTIMATE.

| PROCEDURE STEPS  | SUPPORTING TOOL(S)/NOTES   |
|--|--|
| 5.1 Preparation. When the PM assigns a Work Item from the NMD AQ3 tab/queue, review the Work Item and gather related documents and information.  | 5.1 Work Item sent by PM from NMD's AQ3 tab/queue. Applicable Technical Manuals, Drawings, Ship Check Documents, Appendix A through C, etcetera. All related references listed in paragraph (2) of individual work items should be available from the MSMO Contractor Technical Library.   |
| 5.2. Develop the IGE using the NMD Work Item Government Estimate screens, gathered documents and Appendix A through C.   | 5.2 This procedure and Appendices A through C are tools to assist the estimator in efficiently gathering and consolidating data and information for entry into NMD.<br><br>NOTE: Annotate the source of data and information throughout development of the IGE to support your results. The documentation is essential during Technical Analysis, developing Technical Advisory Reports (TAR) and Business Clearance Memoranda (BCM).      |
| 5.2.1 Determine Work Item paragraph activities to be estimated. Review the Work Item's detailed listing of all activities and determine those that are to be estimated separately. Annotate Work Item Paragraph/Category Standard Items activities to be estimated on the front of Appendix A. Annotate activities separately for Sub Contractors and Manufacturing Representatives, when applicable, on the | 5.2.1 The level of detail the estimator lists on Appendix A and in NMD should reflect that level needed to support the estimating requirement. Activities for Sub Contractors and Manufacturing Representatives, when applicable, must be calculated separately (e.g., separate Paragraph line items for each) on the reverse side of Appendix A. The totals are then indicated in blocks on the front of Appendix A for calculating Total |

reverse side of Appendix A.

5.2.1.1 Use the Estimating Check-off List, Appendix B, to aid in determining the activities to be considered in the estimate.

5.2.1.2 Examine each activity in the repair sequence using Table 5-1 as an aid to determine whether or not a further breakdown is needed.

**Table 5-1**

| <b>TYPICAL REPAIR SEQUENCES</b> |                  |          |           |            |
|---------------------------------|------------------|----------|-----------|------------|
| <b>WORK<br/>ACTIVITY</b>        | <b>SEQUENCES</b> |          |           |            |
|                                 | <b>A</b>         | <b>B</b> | <b>C</b>  | <b>D</b>   |
| 1                               | REMOVE           | OPEN     | PREP AREA | RIP OUT    |
| 2                               | DISASSEMBLE      | INSPECT  | MASK      | FOUNDATION |
| 3                               | INSPECT          | REPAIR   | PAINT     | LAND EQUIP |
| 4                               | REPAIR           | CLOSE    | CLEAN     | HOOK UP    |
| 5                               | TEST             | TEST     | TOUCH-UP  | COLD CHECK |
| 6                               | REINSTALL        |          | CLOSE OUT | HOT CHECK  |
| 7                               | TEST             |          |           | TEST       |

5.2.1.3 Quantify the Labor Estimate. Once all of the activities to be estimated have been identified, assign labor-hours for each Trade and support Craft needed to accomplish each activity. Use the Master Spec Catalog CSWT, SWT and LWT, the Flat Rate Book and

Estimated Contractor costs.

5.2.1.1 Using the Appendix B check-off list will prevent inadvertent omissions of incidental support requirements for the activities (e.g., assist trades, rigging, staging, temporary lighting and ventilation).

5.2.1.2 Typical repair sequences are shown in Table 5-1. In the estimating process, the estimator describes in broad terms the sequence of activities required to accomplish the work being estimated. Sequence A, for example, shows 7 broad sequences to accomplish the work being estimated. Next, each of these activities is further broken down to the lowest level of detail necessary to facilitate the estimating process. For example, in Sequence B of Table 5-1, the "inspect" activity may require a detailed inspection of a specific set of internal components. Each of the inspections may require a unique set of activities and measurement criteria. Thus, each component inspection could be estimated as a separate activity.

5.2.1.3 Labor standards in NMD include the Master Spec Catalog CSWT, SWT and LWT, the Flat Rate Book and Uniform Engineered Methods and Standards, which can be accessed from the main NMD portal screen or by right clicking in the related screen area and selecting their links. Appendix A is provided to

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| <p>Uniform Engineered Methods and Standards in NMD and Appendix C as a guide. Use Appendix A to transcribe data/information for later entry into NMD.</p> <p>5.2.1.4 Assign labor man-hours/man-days for Sub Contractors and Manufacturing Representatives, when applicable, in separate Paragraph line items on the reverse side of Appendix A in the "Sub Contractor Estimate" section. In order to differentiate, identify Manufacturing Representatives in the "Service" column.</p> <p>5.2.1.5 Total the Trade man hours/man days for each activity in the MAN HR/DAY column on the front of Appendix A.</p> <p>5.2.1.6 Total labor man-hours/man-days for Sub Contractors and Manufacturing Representatives, when applicable, separately on the reverse side of Appendix A.</p> <p>5.2.1.7 Total all Trade man-hours/man-days line items and enter the cost in the Sub Total Block.</p> <p>5.2.1.8 Enter the Labor "Rate" (per man-</p> | <p>transcribe data/information from these standards for ease in entering IGE's with many activity items into NMD. Appendix C (Category 1 Standard Item Hard-Core Labor Considerations) is provided as a check-off list to assist the estimator in properly considering the impact of Category I Standard Items.</p> <p>5.2.1.4 All material costs and man-hour/man-day costs for Sub Contractors and Manufacturing Representatives, when applicable; are calculated separately for proper entry of their total costs on the front of Appendix A.</p> <p>5.2.1.5 The Work Item labor estimate is the sum of all labor-hours, which are normally expressed in man-days rather than man-hours (one man-day being equal to eight man-hours). Labor estimates for contract modifications are normally expressed in man-hours vice man-days.</p> <p>NOTE: When entering labor or material data into NMD the calculation will automatically populate the appropriate total field/block(s).</p> |
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hour/man-day as applicable from NMD or provided by the ACO) in the block to the right of "Labor Total." Multiply the Labor Rate by the Sub Total of all Trade labor activities and enter the results in the block to the right of the Labor Rate.

5.2.1.9 Enter the Labor "Rate" (per hour/day as applicable) for Sub Contractors and Manufacturing Representatives, when applicable, separately on the reverse side of Appendix A.

5.2.2 Estimate the Cost of Materials to support each required work activity.

5.2.2.1 Determine activities requiring materials. List the applicable Work Item paragraphs and required material descriptions on Appendix A.

5.2.2.2 Determine the quantity and material costs for the required materials and enter the information in Appendix A. General guidance is as follows:

a. When estimating material costs, the following shall be considered:

5.2.1.9 The total labor and material costs for Sub Contractors and Manufacturing Representatives, when applicable, are included in their final calculation.

5.2.2 Some sources for pricing information can be identified/accessed in NMD by right clicking in the related screen area and selecting the links. Material costs for Sub Contractors and Manufacturing Representatives, when applicable, must be calculated separately (e.g., separate paragraph line items for each) on the reverse side of Appendix A (this is because their costs are indicated in separate blocks on the front of Appendix A in determining Total Estimated Contractor costs).

5.2.2.2 Sources of Pricing Information. Navy stock prices should be used for estimating but the estimator must also consider availability of the material. The best non-Navy source of current pricing information is the manufacturer or dealer who is in the business of distributing the materials or parts needed. Where available, catalogs of

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| <p>(1) The kinds and quantity of each material required to accomplish the work.</p> <p>(2) The "lead time" for procuring the material.</p> <p>(3) Is the material commercially available?</p> <p>(4) The current or future price for the material.</p> <p>b. The estimator is not expected to be as familiar with the material pricing as a purchasing agent. The estimator shall use drawing material lists, equipment technical manuals and Allowance Parts Lists to determine material requirements.</p> <p>5.2.2.3 Total the cost for each required material line item in Appendix A.</p> <p>5.2.2.4 Sum up the total of all material line items and enter the overall total cost (also enter this total on the front of Appendix A).</p> | <p>pricing data should be ordered and maintained in a central repository for reference by all estimators who may require the pricing information.</p> <p>Contractor Furnished Material (CFM) vs. Government Furnished Material (GFM). It is general Department of Defense policy that contractors provide all material necessary for performance. That means simply that all material should be CFM except where it is in the best interest of the Government to provide material as GFM. (Note: <u>MSMO contractors can and should obtain CFM through the Navy stock system, if/when required material is available</u>). Exceptions to the CFM policy include:</p> <p>a. Items in long supply in the Navy Supply System (i.e., items stocked far in excess of expected item demand) should be provided as GFM since it would be wasteful to require contractors to buy such materials.</p> <p>b. Items with a set shelf life that will expire before normal draw down in the supply system should be issued as GFM if such usage remains within the shelf life requirements.</p> <p>c. Long Lead Time Material (LLTM) should be provided as GFM. In Government procurements, items that are not commercially available within the time period after contract award and the time the contractor</p> |
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| <p>5.2.2.5 Enter total material costs for Sub Contractors and Manufacturing Representatives, when applicable, in separate Paragraph line items on the reverse side of Appendix A.</p> <p>5.2.2.6 Sum up the total of all material costs and man-hour/man-day costs for each Sub Contractor, when applicable, Paragraph line item and enter the total on the reverse side of Appendix A.</p> <p>5.2.2.7 Sum up all Sub Contractor totals (labor and material) on the reverse side of Appendix A and enter this total on the front side of Appendix A.</p> | <p>needs the material for production is considered LLTM.</p> <p>d. Standardization material should be provided as GFM. This material is the Special Program Material and the Centrally Procured Material purchased in support of the Fleet Modernization Program.</p> <p>e. Material requiring Provisioning Technical Data should be provided as GFM. Normally, repair material does not require Provisioning Technical Data because it is already stocked in the supply system.</p> <p>f. Material items to be changed out under special turnaround or repairable programs should be provided as GFM.</p> <p>5.2.2.5 Calculate Sub Contractor and Manufacturing Representative totals. For each Paragraph line item, multiply the total man-hours/man-days (as applicable) by the labor rate for man-hours/man-days to get total labor costs. Then add total material costs to arrive at the overall total cost and enter the result in the corresponding Paragraph line item on the reverse side of Appendix A.</p> |
|--|---|

|  |   |
|--|---|
| <p>5.2.2.8 Sum up the total of all material costs and man-hour/man-day costs for all Manufacturing Representatives, when applicable; on the reverse side of Appendix A (also enter this total on the front of Appendix A).</p> <p>5.2.2.9 Sum up all Manufacturing Representative totals on the reverse side of Appendix A and enter this total on the front side of Appendix A.</p> <p>5.2.2.10 Sum up all Labor, CFM, Sub Contractor, and Manufacturer Representative costs on the front side of Appendix A and enter the result in the Total Estimated Contractor cost block.</p> | <p>5.2.2.10 Upon completion of calculation and entering Total Estimated Contractor cost, the IGE is ready to for entry of its data and information into NMD.</p>  |
| <p>5.3 Enter data and information from Appendix A into NMD. Use tutorial FDG 440-18, Enter IGE into NMD.</p>   | <p>5.3 FDG 440-18 shows how to enter the IGE into NMD. The step by step tutorial built into step 440-18 can be accessed by clicking on the step to bring up the 5W information box and selecting the tutorial (or simulation) link.</p> |
| <p>5.4 SBS routes the IGE back to PM in NMD for validation. IGE Procedure Complete.</p>  | <p>5.4 Upon returning the IGE to the AQ3 tab/queue, any pertinent notes or comments should be entered to support and assist the PM/Technical Analyst/ACO in follow on decisions and actions.</p>  |

## **SECTION 2. ADDITIONAL ESTIMATE CRITERIA FOR CONTRACT MODIFICATIONS**

1. Contractor Modifications. For contract modifications, including Master Agreement Job Order modifications and for noncompetitive procurements, estimates must include allowances for known conditions in the estimating environment. The scope of the modification estimate must include consideration of additions and deletions required by the change, the impact on completed work by the change and the current status of materials made obsolete by the change. The cost estimate must consider the means of performing the work, the completion date and other factors impacting on performance such as delay, disruption or acceleration. These cost elements must be identified, quantified and included in any cost estimate. In considering the means of performance, due consideration must be given to the contractor's normal operating procedures. The estimate should be prepared based on the methods, procedures, facilities, equipment and employees available to the contractor. In such a sole source environment, it is unfair to the contractor to negotiate changes on any basis other than those that impact on the costs of performance by the contractor. Estimates for changes must be prepared based on the way the contractor would perform the work, considering current workload as well as contractor inefficiencies and disruptions that may result from the change. The estimate must also consider the timing of the work to be done. Change work authorized early in availability is less costly than change work authorized later. For example, work in a propulsion space, authorized three weeks prior to a Light-Off Examination by the Afloat Training Group could easily be three to four times the cost of the same scope of work authorized a week or two after the start of an availability.

2. Acceleration. Acceleration should be considered in developing estimates for contract modifications that increase the scope of work. Simply defined, acceleration is a speeding up of the work in an attempt to complete performance earlier than otherwise anticipated. Acceleration consists of such items as increased manning, added shift work, overtime, rescheduling of work force, new hires, new subcontracting, etc. Acceleration, when required, must be considered in any estimate for changed work in a job order. Acceleration costs will nearly always be incurred when significant growth or new work is added to a work package that is to be completed in the original contract performance period. A contract is also "accelerated" if the original performance period is decreased without an

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accompanying decrease in the scope of work. When acceleration is required, it must be identified in the contract modification (scope of work) and estimated as any other work element is estimated.

3. Disruption. Disruption costs should also be considered in developing cost estimates for contract modifications. It is the cost of the man-hours, materials and other costs that are expended to offset inefficiencies experienced as a result of Government-caused or contractor-caused changes or other departures from the original schedule that includes the effect of changed work on unchanged work. It is also the process by which the above inefficiencies in the performance of contract work are created. Disruption, when it can be identified, must be quantified and accounted for in any contract modification estimate prepared. As with most estimating, quantifying disruption is an inexact process and there are few official guidelines to draw on for assistance. The real requirements to be kept in mind are that it must be considered in determining the scope of work and, if present, the contractor must be compensated for disruption attributable to the change. Disruption attributable to the contractor's past performance, without regard for the change, must not be considered. In addition, a straight percentage should not be applied for disruption costs, but should be evaluated on an individual work item by work item basis.

4. Delay. When a contract change affects the completion of the contract, a contractor may request additional compensation for this "delay." Delay can also be an element of the contractor's cost estimate when other Government action or inaction causes a delay to the contractor's efforts. Delay is defined as that period of time a contractor is required to perform beyond the planned delivery or completion date, due to contractually remediable Government action or inaction (e.g., changes, stop work orders, suspension or late or defective GFM). Delay must also be considered whenever any time-oriented event affects the length of or causes a suspension in scheduled contract work. As with any other cost element, if present, it must be identified, quantified and accounted for in any estimate provided. Delay attributable solely to the contractor's execution of the job order is not considered in any estimate for a contract modification. In addition, a straight percentage should not be applied for delay costs, but should be evaluated on an individual work item by work item basis.

## STANDARD COST ESTIMATE

II-5-A-1

**STANDARD COST ESTIMATE**  
NAVSEA 4710/7 (REV. 6-81)  
S/N 0116-LF-047-1035

## PART II

[illegible][illegible]

| PARA. | SERVICE | MD/MHR | S/MD/MHR | MATL     | TOTAL |
|-------|---------|--------|----------|----------|-------|
|       |         |        |          |          |       |
|       |         |        |          |          |       |
|       |         |        |          |          |       |
|       |         |        |          |          |       |
|       |         |        |          |          |       |
|       |         |        |          |          |       |
|       |         |        |          |          |       |
|       |         |        |          | TOTAL \$ |       |

**TITLE**

|          |
|----------|
| COAR NO. |
|----------|

| ITEM NO | DESCRIPTION | QTY | UNIT | PRICE | TOTAL |
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**APPENDIX B****ESTIMATING CHECK-OFF LIST**

| ESTIMATING CHECK-OFF LIST       |                            |               |   |   |   |   |   |   |   |   |    |    | SWLIN: |
|---------------------------------|----------------------------|---------------|---|---|---|---|---|---|---|---|----|----|--------|
|                                 |                            |               |   |   |   |   |   |   |   |   |    |    | ITEMS: |
| REQUIREMENTS/<br>CONSIDERATIONS |                            | ACTIVITY/ITEM |   |   |   |   |   |   |   |   |    |    |        |
|                                 |                            | 1             | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12     |
| 1                               | INTERFERENCES              |               |   |   |   |   |   |   |   |   |    |    |        |
| 2                               | ACCESSES                   |               |   |   |   |   |   |   |   |   |    |    |        |
| 3                               | GAS FREE REQUIREMENTS      |               |   |   |   |   |   |   |   |   |    |    |        |
| 4                               | COFFERDAMS/DIVING SERVICES |               |   |   |   |   |   |   |   |   |    |    |        |
| 5                               | CRANE/RIGGING SERVICES     |               |   |   |   |   |   |   |   |   |    |    |        |
| 6                               | STAGING/PROTECTIVE COVERS  |               |   |   |   |   |   |   |   |   |    |    |        |
| 7                               | INSULATION/LAGGING         |               |   |   |   |   |   |   |   |   |    |    |        |
| 8                               | TEMPORARY LIGHTING         |               |   |   |   |   |   |   |   |   |    |    |        |
| 9                               | TEMPORARY VENTILATION      |               |   |   |   |   |   |   |   |   |    |    |        |
| 10                              | SANDBLASTING               |               |   |   |   |   |   |   |   |   |    |    |        |
| 11                              | LABORERS                   |               |   |   |   |   |   |   |   |   |    |    |        |
| 12                              | OTHER ASSIST TRADES        |               |   |   |   |   |   |   |   |   |    |    |        |
| 13                              | PRELIMINARY /SHOP TEST     |               |   |   |   |   |   |   |   |   |    |    |        |
| 14                              | OPERATIONAL TEST           |               |   |   |   |   |   |   |   |   |    |    |        |
| 15                              | TRANSPORTATION             |               |   |   |   |   |   |   |   |   |    |    |        |
| 16                              | CLEANING                   |               |   |   |   |   |   |   |   |   |    |    |        |
| 17                              | CHIPPING/GRINDING          |               |   |   |   |   |   |   |   |   |    |    |        |
| 18                              | SYSTEM PURGE               |               |   |   |   |   |   |   |   |   |    |    |        |
| 19                              | SYSTEM FLUSH               |               |   |   |   |   |   |   |   |   |    |    |        |
| 20                              | CALIBRATIONS/ADJUSTMENTS   |               |   |   |   |   |   |   |   |   |    |    |        |
| 21                              | REPORTS/DATA               |               |   |   |   |   |   |   |   |   |    |    |        |
| 22                              | CERTIFICATIONS/SURVEYS     |               |   |   |   |   |   |   |   |   |    |    |        |
| 23                              | MANUFACTURING              |               |   |   |   |   |   |   |   |   |    |    |        |
| 24                              | FABRICATION/ASSEMBLY       |               |   |   |   |   |   |   |   |   |    |    |        |
| 25                              | TOUCH-UP PAINTING          |               |   |   |   |   |   |   |   |   |    |    |        |
| 26                              | WASTE/DAMAGE/REWORK        |               |   |   |   |   |   |   |   |   |    |    |        |
| 27                              | PREVAILING WEATHER         |               |   |   |   |   |   |   |   |   |    |    |        |
| 28                              | SHIP'S FORCE WORK          |               |   |   |   |   |   |   |   |   |    |    |        |
| 29                              | MATERIAL CONDITION         |               |   |   |   |   |   |   |   |   |    |    |        |
| 30                              | CATEGORY I STANDARD ITEMS  |               |   |   |   |   |   |   |   |   |    |    |        |
| 31                              | CHECKPOINTS                |               |   |   |   |   |   |   |   |   |    |    |        |
| 32                              | QUALITY ASSURANCE/NDT      |               |   |   |   |   |   |   |   |   |    |    |        |
| 33                              | MATERIAL REQUIRED          |               |   |   |   |   |   |   |   |   |    |    |        |

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APPENDIX C

CATEGORY 1 STANDARD ITEM  
HARD-CORE LABOR CONSIDERATIONS

| CATEGORY 1 STANDARD ITEM<br>HARD CORE LABOR CONSIDERATIONS |   |               |  |  |  |  |  |  |  |  |  |
|--|---|---------------|--|--|--|--|--|--|--|--|--|
| STANDARD<br>ITEM   | HARD-CORE LABOR REQUIREMENTS  | ACTIVITY/ITEM |  |  |  |  |  |  |  |  |  |
| 009-04   | INSPECTION SYSTEM<br>(ROH/SRA) (QA & NDT)                                   |               |  |  |  |  |  |  |  |  |  |
| 009-07   | FIRE PREVENTION<br>AND HOUSKEEPING  |               |  |  |  |  |  |  |  |  |  |
| 009-10   | CONTROL OF SHIPBOARDING THERMAL<br>INSULATING MATERIAL<br>(LABOR INTENSIVE) |               |  |  |  |  |  |  |  |  |  |
| 009-24   | ISOLATING, BLANKING, AND TAGGING<br>(LABOR INTENSIVE)                       |               |  |  |  |  |  |  |  |  |  |
| 009-61   | CONTROL OF SHIPBOARD USE OF<br>FLOROCARBONS<br>(LABOR INTENSIVE)            |               |  |  |  |  |  |  |  |  |  |
| 009-65   | SHIPBOARD ELECTRICAL CABLE<br>(LABOR INTENSIVE)                             |               |  |  |  |  |  |  |  |  |  |
| 009-73   | SHIPBOARD ELECTRICAL CABLE<br>(LABOR INTENSIVE)                             |               |  |  |  |  |  |  |  |  |  |
| 009-74   | CONTROL OF NON-ASBESTOS THERMAL FIBER<br>(LABOR INTENSIVE)                  |               |  |  |  |  |  |  |  |  |  |

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**SBS PROCEDURE 6****Review Contract Documents**

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual  
(b) Fleet Desk Guide FDG 310, Technical Analysis Review

1. The purpose of this procedure is to review Contract documents per references (a) and (b).
2. SBS receive contract from PM/contacting officer.
3. Contract contains both work package and physical contract requirements. Verify the following:
  - a. Type of contract (i.e., Fixed Price, Cost, Indefinite Delivery/Indefinite Quantity (IDIQ), etc).
  - b. Is the contract for the correct contractor? (Section A, Block 7).
  - c. Does the contract cover your ship (see Section B, look for your ship by date, name and hull number).
  - d. Review Section C, Part 1 requirements carefully! This tells you what the contractor is supposed to do and when.
  - e. Check for required use of Technical documents such as the General Specifications for Overhaul, Naval Ships Technical Manual (NSTMs), etc.
  - f. Many of the requirements you see written into the contract are also written into the NAVSEA Standard Items. Read each section carefully to make sure the contract does not supersede the Standard Items.
  - g. Review Section C, Part 2 for general requirements.
  - h. Review Section D for Packaging and Marking requirements.
  - i. Review Section E for Inspection and Acceptance requirements.
  - j. Review Section F for Deliveries or performance requirements.

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- k. Review Section G for Contract Administration data.
  - l. Review Section H for Special Contract requirements.
  - m. Review Part II, Section I for Contract Clauses.
  - n. Review Part III, Section J list of attachments.
  - o. Review Part VI, Sections K through M for any additional information.
4. SBS will review entire Contract for any and all content relevant to the availability being executed.

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**SBS PROCEDURE 7****Review and Maintain Significant Events Log**

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual

1. The purpose of this procedure is to guide the SBS in reviewing and maintaining their Significant Events Log per reference (a).
2. SBS on site maintain a significant events log and provide written documentation that supports Award Fee Evaluations and CPARS.
3. Make copies of paragraph 7.2.4 and Sub-paragraphs (a) through (d) of reference (a), Volume VII and insert them into your Significant Event Log.
4. Number each page of the Log. Numbering should be "1 of XXX".
5. At a minimum the First Page should contain all information concerning the Contract and or Supplemental Agreement numbers, Ship Name and Hull Number, Dates of Availability, the Name of the Prime Contractor and your name.
6. The individual's significant events notebook should be a ledger-type, bound notebook having sequentially numbered pages. Events shall be recorded in black ink as they occur. Each recorded event shall indicate the date, time and a brief but complete description of the event. No page shall be removed. Mistakes shall be deleted with only a single line through the text and initialed, permitting an unobstructed view of the mistake. This notebook and related memoranda will become a part of the "Significant Events" file and will be marked "FOR OFFICIAL USE ONLY."
7. This is one of the most significant actions that every member of the availability management team shall comply with. Significant events are personal observations of conditions or actions by or to any party to the contract that would affect the performance of the contract.
  - a. Reference (a) requires that "significant events" be recorded to assist in maintaining adequate documentation to be used to verify, qualify or refute matters relating to a

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contractor's claim or Request for Equitable Adjustment (REA). The documentation of "significant events" is required for all contracts in excess of \$5 million or for which a claim is expected. A claim can be expected against any contract associated with ship modernization and repair. All Government personnel who are responsible for observing a contractor's performance, production processes, observing "G" check points and monitoring operational tests and evaluations shall document their observations and maintain a continuous real time notebook of significant events. Notebooks shall be turned over to the ACO, via the PM, at the completion of the availability.

b. The Contracting Officer retains this documentation in the "Significant Events" file. All Government personnel involved in the performance of such contracts shall maintain this continuous real time notebook to record significant events that occur during the contract period.

8. Essential information is generally provided by the contractor while briefing RMC personnel on work status and problem areas. During scheduled progress meetings, the RMC should obtain or generate a list of Government actions or inactions that the contractor claims are delaying the work (e.g., delays in receipt of Government Furnished Material or in Government authorization to precede with new or changed work). To the extent the contractor identifies any Government action or inaction which he claims is delaying work, RMC representative shall advise the contractor to comply with the contract's notification of change requirements, advise the ACO and document the significant event.

9. When the RMC representative at the work site judges that work progress is unsatisfactory, that test schedules are improper because they do not permit sufficient time to correct deficiencies, that open-and-inspect items are not being accomplished promptly, that the contractor is manning the job improperly, or that the procurement and receipt of contractor-procured material is delayed, the RMC representative should advise the contractor and document the significant event.

10. Throughout contract performance, the RMC representative at the work site shall maintain written records of deficiencies in work progress and accomplishment. These records shall be used for such purposes as the determination of liquidated damages and evaluation of claims. The records shall also serve as the factual account for briefing higher authority if required. Written records must reflect on the deficiencies and the steps

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the RMC has taken to obtain corrective action including all actions the contractor takes. These records serve as input to significant events files. The use of the records for responsibility determinations is of particular importance. Government policy requires contracts be awarded to responsible contractors (i.e., contractors which can perform if awarded the contract). The RMC shall maintain sufficient written records of past contractor performance to permit an informed determination of responsibility or non-responsibility to ensure an adverse determination of responsibility is not overturned by higher authority or the Small Business Administration. These records shall be used to evaluate a contractor's proposal where past performance is an evaluation factor.

11. To minimize the potential for claims, Navy personnel are expected to be aware of problem areas and to keep adequate records of events, particularly significant events.

12. One of the best approaches to ensure the generation of necessary data to analyze and resolve claims is requiring all relevant data on significant events be promptly generated. A significant event is anything that occurs pertaining to a contract, other than formal contract modifications, having a material impact on cost, quality or delivery. Normally, a separate file should be established for each significant event. An individual should be assigned to ensure that a file is established and all relevant future data is generated and properly filed. A cross-reference on the location of documents that are impracticable to include in the file should be included. Significant events can be caused by either the Government or contractors and include the following:

- a. Ship delivery schedule changes or problems.
- b. Drawings, designs and specifications that is ambiguous, defective or impossible to perform.
- c. Differences in interpretation of contract provisions.
- d. Delay and disruption of contractor effort.
- e. Changes in method of sequence of work.
- f. Late or defective Government-furnished material, property or information.
- g. Rejections, rework, waivers and deviations.

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- h. Planned versus actual performance milestones.
  - i. Delays in Government actions such as processing engineering change proposals consent to subcontracts and review of technical data.
  - j. Contractor error and noncompliance with contract terms.
  - k. Any other Government or contractor actions or inactions which have the effect of requiring the contractor to perform work different from the work prescribed by the original terms of the contract.
13. Data that should be generated for each significant event should include as a minimum:
- a. The nature and pertinent circumstances of the event.
  - b. The date of the event and the identification of Government and contractor personnel involved, including the name and function of the respective individuals.
  - c. Identification of any relevant documents involved.
  - d. The substance of any oral communications related to the event.
  - e. A statement concerning the possible consequences or effects of the event described upon the contract cost, schedule or technical performance, including manner or sequence of performance. The SBS may use of a separate personal/daily log, if desired, to record other events and information that do not require documentation in the Significant Events Log. If a separate log is maintained for events and information not required in the Significant Events Log, do not use it to record the significant events specified in reference (a). If an event meets the criteria of significant, per reference (a), it must be recorded in the Significant Events Log for later turn-in to the ACO/CCO. See also, Volume I, Chapter 5, Section B, of this desk guide.

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## **SBS PROCEDURE 8**

### **Develop and Submit Daily Reports to Project Manager (One-Liner)**

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual

(b) Fleet Desk Guide FDG 710, Work Schedule Management

1. The purpose of this procedure is to develop and submit Daily Reports to Program Manager (One-Liner) per references (a) and (b).

2. Develop an Excel Spreadsheet to record status of daily activities to submit to PM on a daily basis. To format the spreadsheet use the following methods.

- a. Column (A) for Item numbers.
- b. Column (B) title of work item.
- c. Synopsis of Work Item.
- d. Entry date of comments for that week.
- e. Insert new row per day.

3. One-Liner becomes a part of the Maintenance Team Master File at the completion of the availability.

4. One-Liner's in maintenance master file is accessible to entire maintenance team.

5. The Master File is maintained by RMC contracting department for three years. After the completion of three years these files are sent to Depository located in Washington DC for two years, and after five years the files are destroyed if not in litigation.

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**SBS PROCEDURE 9****Review and Process Condition Found Reports (CFRS)**

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual  
(b) Fleet Desk Guide FDG 732, Condition Found Report  
(c) NAVSEA Standard Item (NSI)

1. The purpose of this procedure is to review and process Condition Found Reports per references (a) and (b).
2. The Contractor enters Condition Found Reports (CFRs) in the NMD program; accordingly the SBS shall monitor Navy Maintenance Database (NMD) daily for CFRs.
3. NMD maintains a CFR Summary Report with the following information: Last Name, Answered, Outstanding, Urgent, CT (Cycle Time) and Total.
4. SBS shall notify the Project Manager immediately of any CFR that cannot be answered within five Days.
5. SBS shall review the CFR for all pertinent data per reference (c) section 009-01. The SBS shall contact the contractor via the Project Manager if any of the following conditions exist:
  - a. Insufficient or incomplete information or data.
  - b. Inaccurate, false or misleading statements.
  - c. Enclosures are missing.
  - d. Request for overtime, lost time, stolen material equipment, or request for an availability change.
  - e. Insufficient number of vendors contacted (minimum of three required), when original material is unavailable and a request for substitution of material is required.
6. SBS shall review the CFR and reply to each contractor recommendation and/or finding within three (3) days of receipt. When issues raised in a condition report require a longer processing time, the contractor should be advised as to the expected response time. Ensure CFR description/recommendations are per reference (c) 009-01. When Government response involves

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an Engineering Service Request (ESR) and/or Design Service Request (DSR), identify the ESR/DSR number on the CFR ("i.e., ESR/DSR 320-11111 applies.") In summary, the government's response to the CFR must be clear, concise and address each of the contractor's findings. If the answer to a CFR is "no action required (NAR)" then the SBS shall explain why (i.e., required report, work deferred to future availability, covered in an existing paragraph, etc.).

7. SBS shall use sound judgment, trade knowledge, readily available Military Specifications, Military Standards Technical Manuals, General Specifications for Ship, Naval Ships Technical Manuals and assistance from other SBSs to resolve problem of condition noted by contractor (any requested deviation and or material substitution by the contractor shall only be done with Design concurrence).

8. SBS shall initiate a Request for Contractual Change (RCC) when correction of a problem changes the existing contract requirements. SBS shall discuss any RCC with the Project Manager prior to answering any report.

9. SBS shall review and provide any government comments and route to the Project Manager. SBS shall review the report against specification requirements and reply to each contractor recommendation. The reply should be in writing and provided in sufficient time for the Contracting Officer to take necessary action and provide a definite recommendation, if action is appropriate. CFR answers should not be simple one-liners. Each answer or response should be well thought out and properly written using the following as guidelines:

10. The SBS provides the contractor a response to the CFR. The response will specify whether no action is required or if new or growth work is required.

11. At a minimum, the SBS should always direct the contractor to continue with the Basic work item requirements. When accepting a CFR report, always let the contractor know what to do as a result of the CFR or report.

12. When rejecting a CFR report always let the contractor know what to do as a result of the CFR report.

13. The SBS may make remarks concerning only those requirements already in writing, either technically or contractually. The

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exception to this rule: if additional work is not authorized, the SBS may inform the contractor in the CFR response.

14. Direct the contractor to correct any identified non-conformances within a given report and resubmit.

15. Do not authorize the contractor to proceed with any work that is not contained within the basic contract, work item or Standard Items authorized under the contract allowing this added work creates the potential for a constructive change and is not appropriate.

16. Responses for additional work authorized should be written as follows: The "XXX A represents the actual RCC number being used for the additional or changed work requirements.

"For additional work, RCC # XXX A applies when settled."

OR

"For work not covered under this work item, RCC # XXX A applies when settled."

OR

"For deleted requirements, RCC # XXX A applies when settled."

17. Words or statements such as "Concur", "Concur with contractor", or "Concur with Contractor recommendations" should not be used when referring to recommended or requested authorizations for additional work or for changes in work item requirements because they can cause constructive changes to occur, and their use is therefore to be avoided. Address only those issues which are directly written into the contract, NAVSEA and Local Standard Items, and the Work Items (also known as 'The Basic').

18. For Technical Manuals and Drawings, if the contractor needs clarification and the requirement is clearly written into the referenced document, the SBS may direct the contractor to that location within the reference. Otherwise, the SBS must seek assistance from the Technical Warrant Holder in engineering.

19. For any and all potential changes, the SBS should always make the contractor aware of expectations concerning existing contract requirements, such as, cost, quality and scheduling

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issues. Failure to do so will always cost the government in lost time, money and quality. Remember you cannot require the contractor to do anything that is not in writing, but you must expect the contractor to deliver everything that is in writing.

20. Attach the ESR/DSR/DFS to the CFR, if applicable.

21. Create and insert a Hard Copy of the response into the OQE files.

22. Formal Engineering Service Requests, Design Service Responses, Engineering Notes and Departure from Specifications may be issued to the contractor as part of the shared information clauses contained within the contract, but must be written into the contract via RCC in order for the authorized work to be accomplished. These documents must be listed as references under paragraph 2 of the Work Item(s) to which they apply.

23. All deleted requirements must be validated and authorized by engineering and contracts. Do not delete a requirement on your own! You are not authorized!

24. All changes to requirements must be validated and authorized by engineering and contracts. You are not authorized to change a requirement on your own. Remember Engineering Responses of any type will often create the need for an RCC to be created in order to accomplish the requirements of the Response.

25. Ensure your response does not create an unauthorized commitment to the government.

26. Commitments are made only through the RCC process.

27. Commitments can only be made through the ACO/PCO and only in writing. The next series of steps assumes that the user has just logged in to NMD Execution and is located at the NMD Execution home page.

#### **SBS ENTERING REPORTS IN NMD**

28. Click CFR on the menu bar.

29. Click REVIEW AND ROUTE from the dropdown menu. The SHIPBUILDING SPECIALIST REVIEW AND ROUTING screen appears.

30. Click the SELECTED AVAILABILITY field dropdown arrow to display assigned availabilities and then click the desired availability.
31. Click the CFR ROUTING tab.
32. Highlight the CFR you wish to review and route.
33. Click VIEW CFR. (When dialogue box appears click OK).
34. When the CFR appears, review information on the GENERAL INFORMATION tab, and then click the CONTRACT SUBMITTAL tab. Review the contractor's input.
35. Click the GOVERNMENT RESPONSE tab and enter the response.
36. Click the SAVE icon in the upper left corner of the screen.
37. Click the EXIT icon (two icons to the right of the SAVE icon). The REVIEW AND ROUTING screen appears.
38. Click either ROUTE TO PORT ENGINEER or PROJ MANAGER.
39. Click SAVE.
40. Click EXIT.

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## **SBS PROCEDURE 10**

### **Review Weekly Production Schedule**

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual

(b) Fleet Desk Guide FDG 710, Work Schedule Management

1. The purpose of this procedure is to review Weekly Production Schedule per references (a) and (b).

2. Receive Production Schedule from contractor via NMD. (A Condition Found Report (CFR) will contain the production schedule).

3. Review Line one on Production Schedule to ensure performance period is within requirements of contract.

4. Review production schedule to verify each work item is captured in the production schedule as identified in the contract.

5. Review each work item to ensure sequencing of work and the requirement of each work item are entered and correct.

6. Check for potential conflicts between scheduled work items.

7. Check for potential problems in meeting Key event and milestone dates. Notify PM immediately of any potential problems with the schedule. (These issues are to be addressed at daily and weekly production meetings.)

8. Accomplish steps in paragraphs one through four each week to ensure any/all changes are reflected in the production schedule.

9. Ensure all settled Request for Contractual Changes (RCCs) are annotated in the updated production schedule.

10. Issue Test and Inspection Plan to Engineering for validation of technical requirements.

11. Receive Validation Report from Engineering Department.

12. Answer CFR as acceptable or unacceptable, based on SBS and Engineering review. If unacceptable, identify or state the reason or reasons. Be Specific.

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a. The contractor needs to know what he is doing wrong so it can be corrected, so do not make them guess.

b. While all SBSs have the responsibility to review the Complex Schedule, the SBS assigned overall responsibility for accomplishing this procedure must receive Scheduling Training prior to overseeing this procedure. This will allow the SBS to also evaluate additional factors, such as whether or not the critical path items are all aligned correctly, determine if enough float time is incorporated into the schedule to allow completion in the time allotted, and so on.

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## **SBS PROCEDURE 11**

### **Monitor Test and Inspection Plan**

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual  
(b) Fleet Desk Guide FDG 742, Test/Inspection Points  
(c) NAVSEA Standard Item (NSI)

1. The purpose of this procedure is to review and monitor Test and Inspection Plan per references (a) and (b).

2. Receive Test and Inspection Plan from contractor via Navy Maintenance Database (NMD) (Condition Found Report (CFR) attachment will contain Test and Inspection Plan).

3. Ensure all required test and inspections are annotated on the Test and Inspection Plan. This will include:

a. All tests and inspection requirements called out from the individual Work Items.

b. Associated tests and inspections called out from Category I and Category II of reference (c) and local standard items associated with each individual Work Item.

c. Additional tests and inspections from Category II callouts in the primary Standard Items associated with each individual Work Item.

d. Any additional inspections or tests that may be required by the original contract or supplemental agreement.

e. Additional tests and inspections that may be required by Category I and Category II Standard Items NOT directly associated with each Work Item.

f. Additional tests and inspections required from Category I Standard Items. Prior to the start of the Availability, individual Repair Process sheets should already be developed for each of the Work Items included in the Availability Work Package. Use of the Repair Process sheets during this process will significantly reduce review time.

4. Accomplish initial verification, annotating any deficiencies for your response to the contractor. Based on the criteria listed in paragraph 2 above.

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5. Accomplish weekly and daily monitoring of Test and Inspection plan for changes and updates, annotating any deficiencies for your response to the contractor.

a. Any new requirements from Request for Contractual Change (RCC).

b. Any removal of requirements from a Work Item or any of the associated Standard Items.

c. Any completed checkpoint, which should include the Date Accomplished and the serial number of the checkpoint sheet used for the test or inspection and the Result (SAT/UNSAT), at a minimum. If the test or inspection results in a required report, the report must be referenced on the Test and Inspection Plan (TIP) Sheet as well. The SBS shall maintain a hard copy of the APPROVED Test and Inspection Plan, and update it as they are made aware of changes. The hard copy will then be used to verify updated copies from the contractor, as they are received.

6. Verification of the updated Test and Inspection Plan shall be accomplished line by line for previously existing line items and using guidance provided within paragraphs 2, 3, and 4 of SBS Procedure 12 for any new items inserted into the Plan.

7. If new requirements are inserted into the Test and Inspection Plan, issue a copy to engineering for validation of any technical requirements.

8. After the engineering review is complete and a report is received by the SBS listing technical deficiencies or acceptance, the SBS will answer the CFR indicating that the Test and Inspection Plan is either acceptable or not acceptable. If the report is not acceptable, identify or state the reason or reasons, using notes captured in SBS Procedure 12 paragraphs 3 and 4. Be specific. The contractor needs to know what he is doing wrong so it can be corrected, so do not make them guess.

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## **SBS PROCEDURE 12**

### **Review Integrated Test Plan**

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual  
(b) Fleet Desk Guide FDG 520, Oversee Integrated Schedule

1. The purpose of this procedure is to review Integrated Test Plan per references (a) and (b).
2. Receive Integrated Test Plan from contractor via NMD CFR. The Integrated Test Plan will be provided as an attachment.
3. The assigned SBS shall coordinate with Local Regional Maintenance Test Coordinator (if billeted) for a composite review of the Integrated Test Plan.
4. The following reports shall be on hand in hard copy, for the review:
  - a. Integrated Test Plan submitted from the contractor.
  - b. The current, approved and the newly submitted Test and Inspection plans from the contractor.
  - c. The hard copy Test and Inspection Plan maintained by the SBS.
  - d. The latest approved copy of the Complex Schedule (Gantt chart format with legible dates).
  - e. An approved Copy of each AIT team test and inspection plan.
  - f. An approved copy of consolidated RMC Production Shop Test and Inspection Plan.
  - g. An approved copy of the Ship's Force work Test and Inspection Plan.

FOR THE INITIAL INTEGRATED TEST PLAN VALIDATION:

5. Using the Reports listed above, determine or verify the following:

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a. All tests and inspections are listed in the individual plans.

b. Final tests and inspections have been identified for all work being accomplished during the availability timeframe.

c. Determine when final tests and inspections must be accomplished based on milestones and key events listed in the complex schedule.

6. Using the existing Test and Inspection plan, any updated Information from the updated reports listed in Engineering Service Request (ESR)/Design Service Request (DSR), and any updated information in possession of the SBS, RMC Production Shops or Alteration Inspection Teams (AIT) update and validate the information contained in the updated Integrated Test Plan.

7. Answer the CFR as acceptable or not acceptable. If not acceptable, identify or state the reason(s). Be Specific. The Contractor needs to know what he/she is doing wrong so it can be corrected, so do not make them guess.

**FOR WEEKLY UPDATES TO THE INTEGRATED TEST PLAN**

8. Provide the same hard copy reports as listed in paragraph 3.

9. Accomplish a line by line review of the Integrated test Plan, noting all changes.

10. Verify changes against the hard copy reports.

11. Document changes on the updated Integrated test Plan.

12. Provide a report of discrepancies to the SBS.

13. Answer the CFR as acceptable or not acceptable. If not acceptable, identify or state the reason(s). Be Specific, and remember that the contractor needs to know what he/she is doing wrong so it can be corrected.

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**PROCEDURE 13****Enter, Review, and Process ESRs, DSRs, LARs and DFSS**

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual  
(b) Fleet Desk Guide FDG 730, Resolution of Technical Issues  
(c) Fleet Desk Guide FDG 743, Departure from Specifications

1. The purpose of this procedure is to guide the SBS in entering, reviewing, and processing Engineering Service Requests (ESR)/Design Service Request (DSR), Liaison Action Requests (LAR) and Departures From Specifications (DFS) per references (a) through (c).

2. When the following instances occur the SBS shall initiate the appropriate action (enter, review or process) an ESR/DSR or LAR using reference (b) and this procedure, or a DFS using reference (c) and this procedure. It should be understood that instances requiring the SBS to initiate/take actions are not limited to the following specific instances.

a. Contractor requests for deviation (ESRs, DSRs, LARs and DFSS).

b. Changes to SHIPALTs that may alter location of equipment, dimensions shown on drawings, or material.

c. Material deviations not reflected in equipment technical manuals and or drawings.

d. Data provided by contractor cannot be determined to be acceptable with information available in the Work Item references.

e. References listed in Work Item are vague.

f. To evaluate chemical analysis when needed and shall include the following:

(1) Date and serial number of the letter forwarding the lab report along with the name of the prime contractor.

(2) Type of waste being analyzed, i.e. waste oil, fuel oil, bilge water, etc.

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(3) The approximate quantity of waste from which the sample was taken.

3. Dependent upon urgency, the SBS shall initiate a phone call to the Engineering department for the required action and when possible, verbally obtain the desired technical information and follow-up with written notification.

4. SBS shall report all ESR/DSR not answered within three days to the Project Manager.

5. SBS shall initiate action to implement the answered ESR/DSR into the Work Item.

6. An ESR/DSR are a government issued document and shall not be issued to the contractor. Information from the ESR shall be extracted for answering Condition Found Reports (CFRs). ESR/DSR number shall be annotated in CFR for government reference.

**SBS PROCEDURE 14****Develop Request for Contract Change (RCC)**

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual  
(b) Fleet Desk Guide FDG 733, Request for Contract Change

1. The purpose of this procedure is to develop review Integrated Test Plan per references (a) and (b).
2. First determine if Request for Contract Change (RCC) is actually needed.
3. Is it covered by Standard Item?
4. Is it covered by the Work Item?
5. Can it wait for Next Scheduled Availability? Talk it over with your PM.
6. RCC should be clear, concise, and contractual.
7. RCC should describe "what to do" not "how to do it".
8. RCC should be limited to the requirements necessary to achieve the desired results and must NOT upgrade equipment or exceed original design.

**CREATE RCC IN Navy Maintenance Database (NMD) EXECUTION:**

The following steps assume that the SBS has logged in to NMD and is located at the NMD Execution home page.

9. Click RCC in the menu bar.
10. Click MAINTAIN RCC on the dropdown menu. The ITEM INFO screen appears.
11. Click the AVAILABILITY dropdown arrow to display assigned availabilities and click the desired availability.
12. The cursor goes into WORK ITEM NUMBER field. Enter the work item number (with dashes).
13. Click the QUERY tab at the top of the screen and then click EXECUTE from the dropdown menu.

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14. Click the CREATE RCC button located at the bottom of the screen. A popup box will appear indicating the work item has been successfully locked. Click OK. Another popup box will appear warning you that if you have clicked the RCC button in error to exit without saving. If ready to proceed, click OK. Another popup box will appear with additional instructions. Click OK.
15. In the TITLE field enter the title for growth work. Click SAVE. A popup box will appear indicating the transaction is complete. Click OK. The JCN screen will appear.
16. Click the WORK CENTER field LOV button in the ASSIGN JCN TO RCC block. Select the JSN and click OK. Click the SAVE icon and then click the underlying screen to return to the ITEM INFO tab.
17. Click the LINK CFR button. (Put a check mark on any CFRs that apply to the RCC. Click SAVE then EXIT.
18. Click the REQUIREMENTS tab.
19. Scroll down the work item and decide where you want to insert the new paragraph.
20. Click in the PARAGRAPH block. Click the INSERT RECORD icon. (GREEN+ located top right of the screen.) Type in the new paragraph number and hit the TAB Key. Type in the new requirement. Then click the SAVE icon. A popup box will appear indicating transaction complete. Click OK.
21. Click the ITEM INFO Tab. Notice that an RCC number has been assigned and the status indicated is IN PROCESS.
22. Click the ESTIMATE button located on the bottom of the screen.
23. In the ESTIMATE SUMMARY screen click the CREATE ESTIMATE button. Click the first blank CONTRACTOR field, click the LOV button to display a list of contractors, select the desired contractor, and click OK. The remaining fields on the line will populate. Click the SAVE icon.
24. Click the PARAGRAPH ESTIMATE tab.

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a. In the PARAGRAPH ESTIMATE tab use scroll bars, if necessary, to locate the paragraph you want to estimate. Select the INDEPENDENT GOVERNMENT ESTIMATE radio button.

b. In the LABOR ESTIMATE area click the CONTRACTOR LOV button, select the desired contractor, and click OK.

c. Tab over to the TRADE field and select the trade that applies using the LOV button.

d. Tab over MAN HRS field and type in required hours.

e. Continue using the tab key and making your selections until you are finished.

f. In the MATERIAL ESTIMATE area click in CONTRACTOR field.

g. Select the desired contractor and click OK.

h. Tab over to the DESCRIPTION field and type in MATERIAL or the sub contractor's name.

i. Tab over to the TYPE field and enter the type of material using the LOV button.

j. Tab over to the QTY field and type in the amount.

l. Tab over to the UNIT OF ISSUE field select the desired unit of issue. Select from the menu.

m. Continue using the tab key and the selections until you are finished.

n. Click SAVE icon. The subtotal fields will populate.

25. Click on the ESTIMATE TOTAL tab.

a. Click CALCULATE ESTIMATE button. Review estimate to verify government is within 10% of the contractor estimate. (If getting reimbursed for labor or material, place a negative sign before the estimated amount. ex. -100)

b. Click the PRINT ESTIMATE button Located on the bottom.

c. Print the estimate and close window. A popup box will appear asking if you want to save changes. Click OK. Click the EXIT icon to return to the ITEM INFO tab.

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26. Click the PROJ. MGR radio button and then click the ROUTE button. The STATUS will indicate AWAITING PM APPROVAL. Click SAVE. Failure to click SAVE here will cause the status to revert to IN PROCESS and you will not be able to create additional RCCs against the work item until it has been successfully routed to the Project Manager.

27. Click the PRINT RCC button to print RCC. Then exit window.

28. Click the SAVE icon and then click EXIT.

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**SBS PROCEDURE 15****Perform Check Points and Enter Data**

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual  
(b) Fleet Desk Guide FDG 742, Test/Inspection Points

1. The purpose of this procedure is to guide the SBS in performing Check Points and Enter Data per references (a) and (b).
2. Perform steps in paragraphs 1 through 13 if check points are already pre-populated in NMD.
3. Receive notification (normally four hours prior) from the contractor that test or inspection is ready to proceed.
4. Review work item, Test and Inspection Plan, and any technical manuals and drawings which may contain the required acceptance criteria. (Understand the process being conducted and the purpose for which it is being conducted before attending the checkpoint.)

**DURING THE CHECKPOINT:**

a. The Contractor Quality Inspector should have all documentation on hand for the checkpoint, including:

- (1) Work Item.
- (2) All previously completed checkpoint Documentation.
- (3) All technical manuals and drawings listing technical requirements concerning the checkpoint.
  - (a) Contractor Personnel conducting the test or inspection should already be set up with all tools and materials on hand.
  - (b) Do not act as the Inspector. The Contractor Quality Inspector conducts the inspection and accepts or rejects the work.
  - (c) Exceptions: for Critically Coated Surfaces and for Welding Non-Destructive Tests and Inspections the SBS shall

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act as the third party inspector and sign as accepting or rejecting the work.

(d) Exceptions. Additional areas may require certain training or certification of the SBS prior to being allowed to participate as an acceptance inspector for tests or inspections such as: Cableway, Propeller, Boiler, Diesel, and Magazine Sprinkler systems.

1. Inspection of Cableways, Critically Coated Surfaces and Weld Tests and Inspections require that the inspector be certified. If not certified, the SBS shall not conduct or sign for the inspection or test.

2. Additional tests and inspections may require that a Technical Matter Expert (TME) or Subject Matter Expert (SME) be on hand while the test or inspection is conducted. When this occurs, the SBS is still required to be on hand for the test or inspection. The SBS is still responsible for collecting all Objective Quality Evidence (OQE) for the assigned Work Items.

5. Upon completion of the inspection, the Contractor Quality Inspector will complete the checkpoint form and indicate whether the test or inspection is SAT or UNSAT. Sign and date the form prior to turning over to the SBS for signature.

6. If on hand for the test or inspection, the TME/SME will sign and indicate concur or do not concur.

7. If on hand for the test or inspection, the Ship's Force Representative will sign and indicate concur or do not concur.

8. The SBS shall always be the last one to sign the test or inspection form.

9. The SBS shall collect a copy of the completed and signed test or inspection form for inclusion in the OQE files. The OQE files shall be maintained in an auditable form in per Commander, Navy Regional Maintenance Center (CNRMC) and Local instructions.

10. The SBS shall update the hard copy of the Test and Inspection Plan with the date of completion check form serial number, and results. The next series of steps assumes that the user has just logged in to NMD Execution and is located at the NMD Execution home page.

**Upon completion of the Check Point:**

11. From NMD Execution window click QA MANAGEMENT.
12. Click MAINTAIN CHECKPOINT. The CHECK POINT LOG screen will appear.
13. Click the SELECTED AVAILABILITY dropdown arrow to display availabilities.
14. Click the desired availability. The check points for the selected availability will automatically populate.
15. Click the desired WORK ITEM NBR field. If the checkpoint is not pre-populated by NMD, follow paragraphs 15 through 30 to manually insert the check point record.
16. Enter the location of the checkpoint in the LOCATION field.
17. Enter the contractor's point of contact in the KTR POC field.
18. In the GOVERNMENT COMMENT field enter SAT or UNSAT with amplifying comments as appropriate.
19. Click the LOV button associated with the RMC REP PRESENT field. The VALID VALUES FOR RMC PRESENT pop up box appears. Click Y or N as appropriate and then click OK.
20. Click the LOV button associated with the RMC WITNESS field and select the appropriate name and then click OK.
21. Click the LOV button associated with the SF PRESENT field. The VALID SF PRESENT VALUES pop up box appears. Click Y or N as appropriate and then click OK.
22. Click the LOV button associated with the RESULTS field. The VALID VALUES FOR RESULTS pop up box appears. Select C, S, or U as appropriate and then click OK.
23. Click the LOV button associated with the VALUE ADDED field. Click Y or N as appropriate and then click OK.
24. Click the SAVE icon and then click the EXIT icon.

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**Perform steps in paragraph 23 through 30 if manually inserting check point record. (Assumes the user is in the NMD CHECKPOINT LOG).**

25. Click the SELECTED AVAILABILITY field and click the desired availability.

26. Click the desired work item in the WORK ITEM NBR field.

27. In the first blank checkpoint row, enter the appropriate paragraph number from the Work Item in the PARA #\* field using the LOV button and then Click OK.

28. Click the LOV button associated with the STD ITEM field and click the appropriate standard item and then click OK.

29. Click the LOV button associated with the STD. ITEM PAR to display a list of standard items paragraph numbers. Click the appropriate standard item paragraph on the list and then click OK.

30. Click each applicable CHECKPOINT TYPE check box.

31. Enter check point text that corresponds to the work item of standard item in the CHECK POINT TEXT field.

32. Click the SAVE icon and then click the EXIT icon.

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**SBS PROCEDURE 16****Review and Enter Work Item Progress**

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual

(b) Fleet Desk Guide FDG 710, Work Schedule Management

1. The purpose of this procedure is to review and enter work item progress within NMD per references (a) and (b).
2. The next series of steps assumes that the user has just logged in to NMD Execution and is located at the NMD Execution home page.
3. Click PROGRESS in the menu bar to display menu options.
4. Click WORK ITEM PROGRESS from the dropdown menu. The WORK ITEM PROGRESS screen appears.
5. Select Availability. Click the SELECTED AVAILABILITY dropdown arrow to display availabilities.
6. Click the desired availability. The availability work items will automatically populate the table.
7. Click the desired Work Item and enter percent complete in the COMPLETE PCT field. See notes 2 through 5.
8. Click SAVE then click EXIT.

**ADVANCED OPTION:**

9. Complete steps in paragraphs 1 through 4.
10. Select QUERY In the menu bar and then click ENTER in the resultant dropdown menu. A blank WORK ITEM PROGRESS table will appear.
11. Enter the last name of the applicable SBS in the LAST NAME field on the highlighted line of the table. This entry is case sensitive.
12. Click QUERY in the menu bar and then EXECUTE in the resultant dropdown menu. All Work Items for the designated SBS will populate the table.

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13. Click the Work Item that you wish to progress and enter the percent complete in the COMPLETE PCT field.

14. Click SAVE then Click EXIT.

a. The SBS shall progress Work Items using the Physical Progress chart provided in reference (a), Volume VII, chapter 7, Appendix E, as the basis.

b. The SBS shall indicate progress for each work item assigned, independently from the contractor. Progressing shall be accomplished on the same day as the contractor superintendent provides input for progress. This prevents confusion and better aligns the Government estimate of progress with the contractor estimate.

c. Care must be taken to be as accurate as possible, since the contractor often depends on partial payment to continue work.

**DO NOT BASE PROGRESS ON EXPENDITURE OF TIME AND MATERIAL.**

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**SBS PROCEDURE 17****Enter Product Verification Inspections**

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual

1. The purpose of this procedure is to enter Product Verification Inspections within NMD per reference (a).
2. Product Verification Inspections (PVI) should be entered in the NMD (the program of record) by the SBS making the observations. RMCs indicated that PVI is entered on a spreadsheet by the SBS and turned over to QA Department who enters the information in a separate database. Ostensibly, this is done because NMD PVI does not currently contain a detailed enough list of inspection attributes that is consistent with newer requirements for Quality Management Plans.
3. Use standard PVI sheets to conduct inspections and maintain a hard copy for the OQE Files.
4. All PVI sheets should document the number of inspections conducted in each area of interest.
5. All unsatisfactory inspections require a CAR to be generated. Normally this will be a Method "A" CAR; however, depending on the severity or frequency of the discrepancy, elevated CARs may need to be generated. Product Verification Inspection (PVI) is the element that verifies that the contractor's product conforms to contract requirements. PVI is accomplished by physical examination, verification, testing, concurrent witnessing, monitoring the repair overhaul or construction process.
6. SBS shall gather daily observations for entry into the database. The PVI database provides an attribute list to use for guidance.
7. Checkpoint observations shall be entered into NMD.
8. QA department develops the Procurement Quality Assurance (PQA) Plan using historical data from the PVI and CAR database. This plan allows the SBS to concentrate surveillance on the contractor's past weaknesses.

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9. The next series of steps assume the user is logged in to NMD and is located at the NMD Execution Home Page.

a. Click QA MANAGEMENT in the menu bar. An OBSERVATION screen appears.

10. Insert record.

a. Click the SELECTED AVAILABILITY dropdown arrow and then click the desired availability from the resultant dropdown list. Fields may be populated with data from the previous PVI entry.

11. Click RECORD on the menu bar and then click INSERT on the resultant dropdown menu. This will clear the form for new data entry.

12. Click the LOV button associated with the OBSERVATION DATE field and click the desired date in the dropdown calendar. Click OK. In addition to populating the DATE field, this entry will cause the OBSERVATION field, CODE field, PHONE field, and CELL field to auto populate based on the user's logon.

13. Click the LOV button associated with the WORK ITEM field and click the desired Work Item on the resultant list of values. Click OK.

14. Click the LOV button associated with the LOCATION field and click the desired location from the resultant list. Click OK.

15. Click the ATTRIBUTE LIST NR field LOV button, click the desired attribute number from the resultant dropdown menu, and click OK.

16. Click the OBSERVATIONS field and enter the number of observations performed.

17. Click the NUMBER OF DEFECTS field and enter the number of defects. The DEFECT RATE field will auto populate.

18. Enter observations in the comment blocks; identify specifically what the observation was. If defects are found, a Method "A" CAR shall be documented in the comment block. The SBS will write: Method "A" CAR followed with verbiage prepared per these guidelines: make the language clear, concise, and list the acts only. Do not interject any anecdotal evidence, opinion, etc. All SBSs should write them the same. Short, simple, and to the point. Always tie the nonconformity to KTR

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"Quality Management System" (QMS) since 009-04 requires them to manage every facet of their work. First sentence should list the contractual violation, including the paragraph from the applicable reference. The second sentence should list the actual event that caused the nonconformity with dates and details. The word "comply" fits better than "accomplish" because the nonconformance is a compliance issue, not an accomplishment issue. Closed: DATE after the KTR reports corrective actions to SBS.

19. If the nonconformity requires that an elevated CAR should be written, the SBS will complete Procedure 19.

20. As with the Method A CAR, the SBS will document the nonconformance in the comments block in NMD, but will annotate that it is a Method B or higher and tie the nonconformance to the CAR created in SBS Procedure 19. Remember that these are compliance issues not accomplishment issues, so document the nonconformity carefully.

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**SBS PROCEDURE 18****Write, Maintain, and Review Corrective Action Reports (CARS)**

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual  
(b) Fleet Desk Guide FDG 741, Corrective Action Request Process  
(c) NAVSEA Standard Items (NSI)  
(d) Federal Acquisition Regulation (FAR)

1. The purpose of this procedure is to write, maintain, and review Corrective Action Reports per references (a) and (b).
2. Log in to NMD Execution. At the homepage click QA MANAGEMENT in the menu bar and then click MAINTAIN CAR from the resultant dropdown menu. The CORRECTIVE ACTION REPORT (CAR) screen will appear.
3. Click the SELECTED AVAILABILITY field dropdown arrow to display availabilities. Click the desired availability. A popup box will appear asking if you want to save changes. Click OK.
4. Click the INSERT RECORD icon (Green "+" sign at the top of the screen).
5. Click the WORK ITEM NUMBER field LOV button to display menu choices. Click desired work item number and then click OK.
6. Click the CA TYPE field LOV button and click the type of CAR that applies and then click OK.
7. Click the CA AREA field LOV button to display menu choices. Click the appropriate area and then click OK.
8. Click the LOCATION field LOV button to display menu choices. Click the appropriate location and then click OK.
9. Click the ATTRIBUTE NUMBER field LOV button, select the appropriate entry from the resultant menu choices, and then click OK.
10. Click the CAR DETAILS tab.
11. In reference block enter work item number, paragraph number and references as applicable.

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12. When writing a Method B CAR, make the language clear, concise, and list the acts only. Do not interject any anecdotal evidence, opinion, etc. All SBSs should write CARs the same way, i.e., short, simple, and to the point. Always tie the nonconformity to the Contractors (KTRs) Quality Management System (QMS) as NAVSEA Standard Item 009-04 requires contractors to manage every facet of their work. The first sentence should list the contractual violation, including the paragraph from the applicable reference. The second sentence should list the actual event that caused the nonconformity with dates and details. The word "comply" fits better than "accomplish" because the nonconformance is a compliance issue, not an accomplishment issue.

13. If you want to attach a document click the SEE ATTACHED checkbox and proceed to the next steps. The additional steps for actually attaching documents will be shown at the end of this procedure.

14. Click the PRODUCTION IMPACTED checkbox if production is impacted.

15. Click the REWORK checkbox if rework is required.

16. Select the SAVE icon. A popup box will appear indicating the transaction is complete. Click OK.

17. Obtain approval of the CAR from the Project Manager before prior to the next steps. The PM has responsibility to review all documented nonconformances, to ensure accuracy and to be made aware of any nonconformance issues during the availability. However, the PM does not have authority to tell the SBS not to document a nonconformance! Both the Joint Fleet Maintenance Manual (JFMM) and the Federal Acquisition Regulation (FAR) require that ALL nonconformances be documented. Failure to document all nonconformances is a big part of the reason we continue to have major incidents. Note that whenever we have two or more non conformances within a given work item, the possibility of having an incident increases exponentially. Incidents are defined in one of three ways: 1-Personnel injury or death; 2-damage to, or destruction of, government equipment; 3-incurring of additional costs not required for completion of a work item, i.e., rework, work not properly identified, work boundaries not adhered to by the contractor, delay of work by contractor, etc. After a nonconformance has been discovered and documented, management has the option to enforce corrective action in any way they deem necessary.

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18. Click the GENERAL INFORMATION tab.
19. Click the SUBMIT CAR FOR AUTHORIZATION button.
20. At this point the CAR will be sent to the QA Department for serialization and to QA of the CAR.
21. Once the process is thru QA the SBS will then sign the CAR for release to the KTR.
22. The KTR has a maximum of XXX days. See: reference (c) section 009-04 for timeline to review and answer CAR, as invoked in Contract.
23. Upon receipt of response from KTR SBS will determine if response is per reference (c) section 009-04.
24. If CAR is unacceptable as determined by SBS, he will identify unacceptable conditions and return CAR to KTR for further processing.
25. Upon final acceptable response, the SBS will sign CAR and forward to the QA Department for close out.
26. The QA department will close out the CAR.

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## **SBS PROCEDURE 19**

### **Certify Work Items**

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual

(b) Fleet Desk Guide FDG 460, Work Item Review

1. The purpose of this procedure is to certify work items per references (a) and (b).

2. Review the following documents to ensure contractual and technical requirements have been met.

- a. Contract and any revision or Supplemental Agreements.
- b. Latest up to date Test and Inspection Plan.
- c. Work specifications and Request for Contractual Changes (RCCs).
- d. Engineering Service Request (ESR)/Design Service Request (DSR). Ensure technical requirements have been incorporated into work items. Ensure ESR/DSR program technical verifications were accomplished where required.
- e. Check points and other Objective Quality Evidence documents.
- f. Required Reports.
- g. Condition Found Reports.
- h. Significant Event Log is completed and up to date.
- i. Objective Quality Evidence collected matches Test and Inspection Plan.

3. Report all exceptions to PM.

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**SBS PROCEDURE 20****Availability Close Out**

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual

(b) Fleet Desk Guide FDG 800 (series)

1. The purpose of this procedure is to review and enter work item progress within Navy Maintenance Database (NMD) per references (a) and (b).

2. Review the following documents to ensure contractual and technical requirements have been met.

- a. Contract and any revisions or Supplemental Agreements.
- b. Latest, up to date Test and Inspection Plan.
- c. Work specifications and Request for Contractual Changes (RCCs).
- d. Engineering Service Request (ESR)/Design Service Request (DSR)/Liaison Action Requests (LARs)/Independent Liaison Requests (ILARs)/Departure from Specifications (DFSs).
- e. Conditions Found Reports (CFR).
- f. Check point reports and other Objective Quality Evidence (OQE) documents.
- g. Significant Event Log.

3. Verify work item is closed out in NMD.

- a. All checkpoints are completed or cancelled. All cancelled checkpoints must be authorized and authorization must be in writing via RCC.
- b. All CARs are answered and completed.
- c. All Product Verification Inspections are entered and completed.
- d. All Conditions Found Reports have been answered.

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e. All Requests for Contract Change are completed and settled.

f. Progressing is at 100 percent for each assigned work item.

g. All Standard Items have been reviewed to ensure checkpoints are completed or cancelled.

4. Report all exceptions to the Project Manager.

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## **SBS PROCEDURE 21**

### **Provide Lessons Learned Inputs**

Ref: (a) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual  
(b) Fleet Desk Guide FDG 760, Lessons Learned Conference

1. The purpose of this procedure is to provide Lessons Learned Inputs per references (a) and (b).
2. Lessons Learned are an important part of the repair process! As work is completed and problems arise, Lessons Learned will provide both the contractor and supervisor personnel with a method of avoiding future problems on those areas identified and documented.
3. Identify any problems which could be considered within the standard work requirement of assigned work items.
4. Determine if the difficulties are considered unique or could cause ongoing problems each time this work is accomplished.
5. Make recommendations concerning future prevention.
6. Create Significant Event Log entries for each problem area identified, listing the problem and the recommended fix. Do not list personnel or contractor names in your write up! Lesson Learned are for the processes only. Be specific and recommend fixes based on the process problem only!

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