NOTE

This file contains the Word document for notes associated with the significant changes to the JFMM. It has been designed to work with the associated PowerPoint file (JFMM Training.pptx) included on this CD-ROM. The sections of this file correspond to the PowerPoint file.

2. Front Page

COMUSFLTFORCOMINST 4790.3

Revision D

Change -

3. VOLUME I

JFMM Volume I

NEW CONSTRUCTION

4. Trials

Initial Submerged & Test Depth Trials

(Submarines Only)

Volume I, Chapter 4, Paragraph 4.4.1.d

Added "Surface Survival Personnel Equipment to the list of equipment the industrial activity must provide during Sea Trials.

Existing Wording	New Wording
Therefore, an additional four Lithium Hydroxide canisters, four Lithium Hydroxide curtains, one EAB mask, one Submarine Escape Immersion Ensemble suit (as applicable), and two oxygen candles shall be carried for each rider exceeding normal crew manning. Lithium Hydroxide canisters, EABs, Submarine Escape Immersion Ensemble suits (as applicable) and Lithium Hydroxide curtains are to be obtained from the industrial activity.	Therefore, an additional four Lithium Hydroxide canisters, four Lithium Hydroxide curtains, one EAB mask, one Submarine Escape Immersion Ensemble suit (as applicable), and two oxygen candles ~~shall~~ must be carried for each rider exceeding normal crew manning. Lithium Hydroxide canisters, EABs, Submarine Escape and Surface Survival Personnel Equipment (SESSPE) ~~Immersion Ensemble suits~~ (as applicable) and Lithium Hydroxide curtains are to be obtained from the industrial activity.

Volume I, Chapter 4, Appendix D

Added a requirement to verify the operation of each BQN-13 transmitter using the ships own SONAR.

Existing Wording	New Wording
2. The following tests and evolutions will be carried out immediately prior to or during the initial tightness dive: a. Obtain navigational fix and take sounding. Maximum depth of water is 400 feet as specified in reference (p). b. Conduct a dive to periscope depth. Obtain stop trim, if practical, at periscope depth. If sea state requires deeper submergence, proceed slowly to 150 feet for SSN 688 Class submarines (155 feet for SSN 774 Class submarines), (160 feet for SSN 21 and SSBN/SSGN 726 Class submarines) to obtain stop trim. Maximum keel depth shall be per Table 1 of Appendix F. c. Inspect the discharge of all automatic drains in each EMBT Blow quadrant for sea water leakage prior to the first dive	2. The following tests and evolutions will be carried out immediately prior to or during the initial tightness dive: a. Obtain navigational fix and take sounding. Maximum depth of water is 400 feet as specified in reference (p). b. Conduct a dive to periscope depth. Obtain stop trim, if practical, at periscope depth. If sea state requires deeper submergence, proceed slowly to 150 feet for SSN 688 Class submarines (155 feet for SSN 774 Class submarines), (160 feet for SSN 21 and SSBN~~/~~ or SSGN 726 Class submarines) to obtain stop trim. Maximum keel depth must~~shall~~ be per Table 1 of Appendix F. c. Inspect the discharge of all automatic drains in each EMBT Blow quadrant for sea water leakage prior to the first dive

	when the ballast tanks are flooded (e.g., at periscope depth).
d.	Check operation of ship control systems, including depth indication. (See Note 2).
e.	Shoot pyrotechnics from each ejector by hand and impulse methods, as applicable (see Notes 3 and 4).
f.	Communicate with escort on WQC at each depth increment or at ten minute intervals, whichever is sooner. If communications are lost, return to depth at which communications can be established before continuing (see Note 1).
g.	All hands inspect for leaks and report them to the Sea Trial coordinator.
h.	Operate all periscopes, checking optics and for leakage. Operate all masts.
i.	Test full throw of rudder and planes at slow speeds.
j.	Test operation of trim and drain systems.
k.	Check all sonar equipment on each hydrophone.
l.	l. Comply with the Command Control Systems (CS/CCS) Test Program regarding the shooting of water slugs. This event is not required by the TYCOM if not required by the CS/CCS Test Program (see Notes 3 and 4).
m.	Snorkel, test operation of stills and air compressors (see Notes 4 and 5).
n.	Operate all hull and back-up valves and equalize sea pressure on all systems designed for test depth (see Notes 4, 6 and 7).
o.	Check hovering system (where applicable) (see Note 4).
p.	Ensure air banks are charged to within 200 psi of full pressure.
q.	Line up MBT blow system for maximum blow rate.
r.	Conduct EMBT blow from 200 feet keel depth. Check bank pressure before and after surfacing. Surfacing with EMBT blow may be delayed to permit additional testing, commencing pre-transit valve

	when the ballast tanks are flooded (e.g., at periscope depth).
d.	Check operation of ship control systems, including depth indication. (See Note 2).
e.	Shoot pyrotechnics from each ejector by hand and impulse methods, as applicable (see Notes 3 and 4).
f.	Communicate with escort on WQC at each depth increment or at ten minute intervals, whichever is sooner. If communications are lost, return to depth at which communications can be established before continuing (see Note 1).
g.	All hands inspect for leaks and report them to the Sea Trial coordinator.
h.	Operate all periscopes, checking optics and for leakage. Operate all masts.
i.	Test full throw of rudder and planes at slow speeds.
j.	Test operation of trim and drain systems.
k.	Check all sonar equipment on each hydrophone.
l.	At 155 feet for SSN 774 Class submarines and at 160 feet for SSBN 826 Class submarines (if installed), verify operation of each BQN-13 transmitter using the ship's own SONAR.
~~l~~m.	Comply with the Command Control Systems (CS~~/~~ or CCS) Test Program regarding the shooting of water slugs. This event is not required by the TYCOM if not required by the CS~~/~~ or CCS Test Program (see Notes 3 and 4).
~~m~~n.	Snorkel, test operation of stills and air compressors (see Notes 4 and 5).
~~n~~o.	Operate all hull and back-up valves and equalize sea pressure on all systems designed for test depth (see Notes 4, 6 and 7).
~~o~~p.	Check hovering system (where applicable) (see Note 4).

operating cycling or transit submerged. However, first surface after initial tightness dive must be by EMBT blow from 200 feet. s. Additional requirements may be imposed at the discretion of the CO.	~~p~~q. Ensure air banks are charged to within 200 psi of full pressure. ~~q~~r. Line up MBT blow system for maximum blow rate. ~~r~~s. Conduct EMBT blow from 200 feet keel depth. Check bank pressure before and after surfacing. Surfacing with EMBT blow may be delayed to permit additional testing, commencing pre-transit valve operating cycling or transit submerged. However, first surface after initial tightness dive must be by EMBT blow from 200 feet. ~~s~~t. Additional requirements may be imposed at the discretion of the CO.

5. VOLUME II

JFMM Volume II

INTEGRATED FLEET MAINTENANCE

6. Maintenance and Modernization

Volume II, Part I, Chapter 2, Paragraph 2.10.1;

100 Hour Transition Periods

(Surface Force Ship's Only)

Expanded the paragraph discussing the critical time periods of the Surface Force Ship 100 hour transition periods.

Existing Words	New Words
2.10.1 Critical Time Period. The 100 hours at the beginning and at the end of an availability are critical times for availability execution. The ISIC, TYCOM, NSA~~/~~, LMA and ship are responsible for coordinating the 100 hour plan. Any job or event that is viewed as hindering the start of the availability shall be included in the 100 hour plan. Communication is vital to ensuring a full understanding of all work and associated requirements. First 100 Hour Plan should be discussed at the following: a. For Continuous Maintenance Availability, discuss First 100 Hour Plan at the Work Package Execution Review (WPER). b. For CNO Availability, discuss First 100 Hour Plan at the WPER	2.10.1 Critical Time Period. The 100 hours at the beginning and at the end of an availability are critical times for availability execution. The ISIC, TYCOM, NSA~~/~~, LMA and ship are responsible for coordinating the 100 hour plan. Any job or event that is viewed as hindering the start of the availability must~~shall~~ be included in the 100 hour plan. Communication is vital to ensuring a full understanding of all work and associated requirements. Details for the first and final 100 hours will~~shall~~ be ~~as follows:First 100 Hour Plan should be discussed at the following:~~ a. First 100 Hour Plan should be discussed at ~~the following~~: ~~For Continuous Maintenance Availability, discuss First 100 Hour Plan at the Work Package Execution Review (WPER).~~ (1) Work Package Execution Review (WPER) (2) Planning Board for Maintenance (PB4M) meetings within six months of a scheduled availability (3) Arrival Conference b. Final 100 Hour Plan should be discussed at ~~the following~~:~~For CNO Availability, discuss First 100 Hour Plan at the WPER.~~ (1) 50% and 75% Completion Conferences (2) Planning Board for Maintenance (PB4M) meetings conducted during Availabilities

7. CNO Availabilities

Volume II, Part I, Chapter 3, Paragraph 3.3.7;

Memorandum of Agreement

Clarified the minimum requirements to be contained within a Memorandum of Agreement.

Existing Words	New Words
3.3.6 Memorandum of Agreement. The Memorandum of Agreement (MOA) shall be executed and jointly signed by the ship's CO, the NSA, the ISIC representative (if applicable) and the FMA representative (if applicable) prior to commencing authorized work. It is an agreement between the industrial activity and Ship's Force concerning the responsibilities of each party during the availability. It deals with a number of areas in which Ship's Force generally provides support to the industrial activity and vice versa. References (c) and (d) contain training requirements and additional guidance for MOAs involving aircraft carriers and submarines. As a minimum the MOA shall include: a. Purpose. (e.g. CMAV, 2-30 Jun 2019, Norfolk, VA) b. Applicability. The AIT (if applicable) to include the Sponsor, Manager, Contractor(s) and Subcontractor(s) for alteration work. c. Responsibilities for control of plant conditions and work area isolation. d. Responsibilities for accomplishment of work. e. Responsibilities for Quality Assurance (QA). f. Responsibilities for support services/equipment. g. Responsibilities for testing requirements. h. Responsibilities for waivers, deviations, or Departure from Specifications. i. Precise delineation of the Submarine Safety (SUBSAFE), Deep Submergence Systems/, Scope of Certification (DSS/SOC) and Fly-By-Wire (FBW) work responsibility of each activity for all phases of SUBSAFE, DSS/SOC and FBW work prior to issuing Re-Entry Controls/Controlled work. j. Responsibilities for training.	3.3.~~6~~7 Memorandum of Agreement. The Memorandum of Agreement (MOA) must~~shall~~ be executed and jointly signed by the ship's CO, the NSA, the ISIC representative (if applicable) and the FMA representative (if applicable) prior to commencing authorized work. It is an agreement between the industrial activity and Ship's Force concerning the responsibilities of each party during the availability. It deals with a number of areas in which Ship's Force generally provides support to the industrial activity and vice versa. References (c) and (d) contain training requirements and additional guidance for MOAs involving aircraft carriers and submarines. As a minimum the MOA must~~shall~~ include: a. Purpose. Include: (1) Availability Type (2) Period of Performance (3) Geographic Location of Maintenance (e.g. CMAV, 2-30 Jun 2019, Norfolk, VA) b. Applicability. List all partied involved in the MOA and include: (1) Point of Contact Department or Code for each activity involved. (2) The NSA and LMA. (3) The AIT (if applicable) to include the Sponsor, Manager, Contractor(s) and Subcontractor(s) for alteration work. c. Responsibilities for control of plant conditions and work area isolation. d. Responsibilities for accomplishment of work. e. Responsibilities for Quality Assurance (QA). f. Responsibilities for support services or ~~/~~equipment. g. Responsibilities for testing requirements.

k. Miscellaneous responsibilities (as required) (i.e., Radiological Control, Hazardous Material, etc.). l. Signatures of all activities (signifying agreement with the terms and responsibilities of the MOA). k. Responsibilities for reports/notifications for Emergency Planning and Community Right-to Know Act (EPCRA) requirements (Sections 302, 304, 311, 312, and 313).	h. Responsibilities for waivers, deviations, or Departure from Specifications. i. (Submarines Only) Precise delineation of the Submarine Safety (SUBSAFE), Deep Submergence Systems~~/~~, Scope of Certification (DSS ~~/~~SOC) and Fly-By-Wire (FBW) work responsibility of each activity for all phases of SUBSAFE, DSS~~/~~, SOC and FBW work prior to issuing Re-Entry Controls or ~~/~~Controlled work. (1) Identify the requirement that all activities assigned SUBSAFE work must be authorized by the current version of reference (bf). If a new reference (bg) is issued during any stage of the availability, the LMA must validate the new reference (bf) does not impact the work or notify NAVSEA 07Q of the discrepancy. (2) Identify the outsourcing of SUBSAFE work meets the requirements of reference (bg). j. Responsibilities for training. k. Miscellaneous responsibilities (as required) (i.e., Radiological Control, Hazardous Material, etc.). l. Signatures of all activities (signifying agreement with the terms and responsibilities of the MOA). ~~k~~m. Responsibilities for reports or ~~/~~notifications for Emergency Planning and Community Right-to Know Act (EPCRA) requirements (Sections 302, 304, 311, 312, and 313).

8. CNO Availabilities

Volume II, Part I, Chapter 3, Appendix N, Section 3;

Sea Trial Requirements Less Than 6 Months (Submarines Only)

Updated the submerged submarine sea trial test and evolution requirements.

Existing Words	New Words
e. The following tests and evolutions shall be carried out submerged following the deep dive: (1) Full power run (See Notes 8, 9 and 10). (2) Emergency stop (See Notes 9 and 10). (3) Steering and diving operation at full speed (See Note 11). (4) Steep angles - operate ship through several depth changes using large up and down angles. Check operation of ship machinery (See Note 9). (5) Time raising each periscope and mast at maximum depth and speed for which they are designed. Check training feature where applicable. (6) Run and observe air conditioning plants throughout trials noting deficiencies. Operate the Lithium Bromide air conditioning plant (if installed) to demonstrate ability to carry entire maximum existing ship's air conditioning load or 100 percent capacity. (7) Additional requirements may be imposed at the discretion of the Commanding Officer.	e. The following tests and evolutions must~~shall~~ be carried out submerged following the deep dive: (1) Full power run (See Notes 8, 9 and 10). (2) Emergency stop (See Notes 9 and 10). (3) Steering and diving operation at full speed (See Notes 9 and 11). (4) Steep angles - operate ship through several depth changes using large up and down angles. Check operation of ship machinery (See Note 9). (5) Time raising each periscope and mast at maximum depth and speed for which they are designed. Check training feature where applicable. (6) Run and observe air conditioning plants throughout trials noting deficiencies. Operate the Lithium Bromide air conditioning plant (if installed) to demonstrate ability to carry entire maximum existing ship's air conditioning load or 100 percent capacity. (7) Shoot water slugs from all torpedo tubes (See Note 13). (8~~7~~) Additional requirements may be imposed at the discretion of the Commanding Officer.

Note 9

Existing Words	New Words
9. Note that the required sequence of events is initial dive, deep dive, full power run submerged, back emergency, then high speed maneuverability and steep angle tests. Initial high speed ship control tests, steep angle tests and exercises at major casualties shall be conducted in water that does not exceed one and one-half times design test depth.	**9. A. ~~Note that t~~The required sequence of events is initial dive, deep dive, full power run submerged, back emergency, then high speed maneuverability and steep angle tests.** **B. Completion of full power runs, deep dives and EMBT blow tests are prerequisites for high speed maneuverability and steep angle tests. Initial high speed ship control tests, steep angle tests and exercises at major casualties must~~shall~~ be conducted in water that does not exceed one and one-half times design test depth.**

Note 13

Existing Words	New Words
	13. Shoot water slugs at a speed and depth defined by the Commanding Officer unless otherwise specified in the Sea Trial Agenda.

9. CNO Availabilities

Volume II, Part I, Chapter 3, Appendix O, Section 3;

Sea Trial Requirements Greater Than 6 Months

(Submarines Only)

Updated the tests and evolutions to be carried out immediately prior to or during the initial tightness dive.

Existing Words	New Words
(13) If not at 150 feet for SSN 688 Class submarines (155 feet for SSN 774 Class submarines), (160 feet for SSBN/SSGN 726 Class and SSN 21 Class submarines), proceed to 150 feet for SSN 688 Class submarines (155 feet for SSN 774 Class submarines), (160 feet for SSBN/SSGN 726 Class and SSN 21 Class submarines) and obtain SAT 1/3 trim in accordance with the Ship's Operating Manual. Take readings as required to make a check of ballasting.	(13) If not at 150 feet for SSN 688 Class submarines (155 feet for SSN 774 Class submarines), (160 feet for SSBN~~/~~ and SSGN 726 Class and SSN 21 Class submarines), proceed to 150 feet for SSN 688 Class submarines (155 feet for SSN 774 Class submarines), (160 feet for SSBN~~/~~ and SSGN 726 Class and SSN 21 Class submarines) and obtain SAT 1/3 trim ~~in accordance with~~per the Ship's Operating Manual. Take readings as required to make a check of ballasting.
(14) Test all sonar equipment on each hydrophone. In addition, for SSBN~~/~~ and SSGN 726 Class submarines, test the Emergency Underwater Telephone (BQC) on each hydrophone.	(14) At 150 feet for SSN 688 Class submarines (155 feet for SSN 774 Class submarines, 160 feet for SSBN Class ~~/~~ and SSGN 726 Class submarines and SSN 21 Class submarines), verify operation of each BQN-13 Transmitter using the ship's own SONAR.
	(15) Test all sonar equipment on each hydrophone. In addition, for SSBN~~/~~ and SSGN 726 Class submarines, test the Emergency Underwater Telephone (BQC) on each hydrophone.

Updated the tests and evolutions to be carried out submerged following the deep dive.

Existing Words	New Words
h. (6) Comply with CS/CCS test program with regard to firing of water slugs and testing of torpedo tubes (See Note 2).	h. (6) Shoot water slugs from all torpedo tubes. The~~Comply with~~ CS~~/~~ and CCS test program does not always fulfill this requirement ~~with regard to firing of water slugs and testing of torpedo tubes~~ (See Note 2).

9. CNO Availabilities

Appendix O Notes

Existing Words	New Words
2. Fire water slugs from torpedo tubes at the depths and speeds required by the CS/CCS test program (or Combat Systems Assessment or Non-Propulsion Electronic System Operability, Verification and Evaluation, as applicable).	2. Fire water slugs from torpedo tubes at the depths and speeds required by the CS~~/~~ and CCS test program (or Combat Systems Assessment or Non-Propulsion Electronic System Operability, Verification and Evaluation, as applicable). If the CS~~/~~ and CCS test program does not fire water slugs, shoot water slugs at a speed and depth defined by the Commanding Officer.

Existing Words	New Words
16. Note that the required sequence of events is initial dive, deep dive, full power run submerged, back emergency, then high speed maneuverability and steep angle tests. B. Completion of full power runs, deep dives and EMBT blow tests are prerequisites for high speed maneuverability and steep angle tests. Initial high speed ship control tests, steep angle tests and exercises at major casualties shall be conducted in water that does not exceed one and one-half times design test depth.	16. A. ~~Note that t~~The required sequence of events is initial dive, deep dive, full power run submerged, back emergency, then high speed maneuverability and steep angle tests. B. Completion of full power runs, deep dives and EMBT blow tests are prerequisites for high speed maneuverability and steep angle tests. Initial high speed ship control tests, steep angle tests and exercises at major casualties must~~shall~~ be conducted in water that does not exceed one and one-half times design test depth.

10. CNO Availabilities

Sample SRDRS Support Services Message for Availabilities Greater than 6 Months (Submarines Only)

Appendix O Notes

Existing Words	New Words

APPENDIX CA
 	
SAMPLE SRDRS SUPPORT SERVICES MESSAGE FOR INDUSTRIAL ACTIVITY AVAILABILITIES GREATER THAN SIX MONTHS DURATION
 	
(SUBMARINES ONLY)
 	
FM COMSUB<LANT/PAC> <NORFOLK VA/PEARL HARBOR HI>//
TO COMSUBRON ELEVEN//
(COMSUB SQD/GRP (ISIC)//
USS (Sea Trial Unit)//
USNS <SRDRS SUPPORT SHIP>
USS (SHIP NAME)//(ESCORT)
USS <BACKUP ESCORT SHIP>
USS <MOORING SUPPORT SHIP>
INFO CNO WASHINGTON DC//
COMNAVSEASYSCOM WASHINGTON DC (as applicable)//
COM<LANT/PAC>FLT <NORFOLK VA/PEARL HARBOR HI>//
COMSUBPAC PEARL HARBOR HI//
COMSUBLANT NORFOLK VA//
COMSECOND/THIRD>FLT//
COMNAVSURF<LANT/PAC> NORFOLK VA/SAN DIEGO CA>//
COMSEALOG<LANT/PAC> <NORFOLK VA/SAN DIEGO CA>
(SUPERVISING AUTHORITY)//
CTF TWO SIX/THREE FOUR//
CTF <26.1/34.1/34.2/34.3 (as applicable)>//
/NORFOLK VAUNSEARESCOM SAN DIEGO CA//
COMSUBGRU<NINE/TEN> {For SSBN/SSGN only}
DIRSSP WASHINGTON DC// {For SSBN/SSGN only}
<MOORING SUPPORT SHIP ISIC>
<ESCORT SHIP ISIC>
BT
UNCLAS //N03120 //
MSGID/GENADMIN/COMSUB<LANT/PAC>//
	APPENDIX CA
	
	SAMPLE SRDRS SUPPORT SERVICES MESSAGE FOR INDUSTRIAL ACTIVITY AVAILABILITIES GREATER THAN SIX MONTHS DURATION
	
	(SUBMARINES ONLY)
	
	FM COMSUB<LANT/PAC> <NORFOLK VA/PEARL HARBOR HI>#
	TO COMSUBRON ELEVEN#
	(COMSUB SQD/GRP (ISIC)#
	USS (Sea Trial Unit)#
	CTF 311 (if NSRS used for sea trials rescue support)
	USNS <SRDRS SUPPORT SHIP>
	USS (SHIP NAME) #(ESCORT)
	USS <BACKUP ESCORT SHIP>
	USS <MOORING SUPPORT SHIP>
	INFO CNO WASHINGTON DC#
	COMNAVSEASYSCOM WASHINGTON DC (as applicable)#
	COM<USFLTFORCOM/PACFLT>~~LANT/PAC>FLT~~ <NORFOLK VA/PEARL HARBOR HI>#
	COMSUBPAC PEARL HARBOR HI#
	COMSUBLANT NORFOLK VA#
	COMSC NORFOLK VA
	COM<SECOND/THIRD>FLT#
	COMNAVSURF<LANT/PAC> NORFOLK VA/SAN DIEGO CA>#
	COMSC <LANT/PAC> <NORFOLK VA/SAN DIEGO CA>
	~~COMSEALOG<LANT/PAC> <NORFOLK VA/SAN DIEGO CA>~~
	(SUPERVISING AUTHORITY) #
	SWFPAC BANGOR WA (if using TPS as SRDRS support ship)
	CTF TWO SIX/THREE FOUR#
	CTF 134 (for PAC SSBN sea trial)
	CTF 33 (for PAC sea trial)
	CTF 80 (for LANT sea trial)
	CTF 84 (for LANT sea trial)
	CTF 83 (for LANT sea trial)

PMS 391/SUBJ/(SUBS) SUBMARINE SEA TRIAL SUPPORT SERVICES//
REF/A/DOC/COMUSFLTFORCOM/<DATE>//
AMPN/REF A IS COMUSFLTFORCOMINST 4790.3, JOINT FLEET MAINTENANCE MANUAL.//
RMKS/1. IAW REF A THE FOLLOWING ASSIGNMENTS APPLY FOR (STRL UNIT NAME AND HULL NO.) SEA TRIALS OCCURRING DD-DDMMMSHIP ASSIGNMENTS BELOW ARE FOR PLANNING AND COORDINATION PURPOSES AND WILL BE IN EFFECT PENDING ISIC APPROVAL.

A. SRDRS SUPPORT SHIP - USNS <NAME>
B. RESCUE PORT - <PORT FROM WHICH CONDUCTING SEA TRIALS>
C. RESCUE PORT REPRESENTATIVE - COMSUBRON <ISIC of Sea Trial Unit>
D. RESCUE AIRFIELD - <NAME OF AIRFIELD NEAR SEA TRIAL PORT>
E. MOORING SUPPORT SHIP - USS <NAME> (ASSIGNED BY NUMBERED FLEET SEPCOR)
F. GOLD DOLPHIN OBSERVER - (ASSIGNED BY ISIC)
G. ESCORT VESSEL - USS <NAME> (ASSIGNED BY NUMBERED FLEET SEPCOR)
H BACKUP ESCORT VESSEL - USS <NAME> (ASSIGNED BY NUMBERED FLEET SEPCOR FOR NEW CONSTRUCTION TRIALS)
I. TYCOM EMBARKED REP -

2. FOR COMSUBRON ELEVEN: REQUEST SRDRS BE PLACED IN MOD-ALERT STATUS TO SUPPORT SEA TRIALS FOR USS <NAME> ON DD-DDMMM. IT IS ANTICIPATED ESCORT SERVICES AND SRDRS MOD-ALERT STATUS WILL BE REQUIRED THROUGH DD-MON.

3.FOR (STRL UNIT),

USTRANSCOM J3 OPS INTEGRATION SCOTT AFB IL (for LANT sea trial)
CTF <26.1/34.1/34.2/34.3 (as applicable)>#
NAVSUP WEAPON SYSTEMS SUPPORT TRANS NORFOLK VA
CDR USTRANSCOM DDOC SCOTT AFB IL (for PAC sea trial)
COMSUB<LANT/PAC> SHIPYARD REP <PEARL HARBOR HI/PORTSMOUTH NH/PUGET SOUND WA/NORFOLK VA>
NSSC <BANGOR WA/PEARL HARBOR HI>
UNSEARESCOM SAN DIEGO CA#
COMSUBGRU<NINE/TEN> {For SSBN/SSGN only}
DIRSSP WASHINGTON DC# {For SSBN/SSGN only}
<MOORING SUPPORT SHIP ISIC>
<ESCORT SHIP ISIC>
BT
UNCLAS //~~N03120~~REL TO USA, GBR//
MSGID/GENADMIN/COMSUB<LANT/PAC>//
/
PASS TO OFFICE CODES:
CNO WASHINGTON DC/N97//
COMNAVSEASYSCOM WASHINGTON DC/00C/PMS 391/PMS 392/04X/07Q/08O//
COM<USFLTFORCOM/PACFLT><NORFOLK VA/ PEARL HARBOR HI/<office codes as applicable>//
COMSUBLANT NORFOLK VA/<office codes as applicable>//
COMSUBPAC PEARL HARBOR HI/<office codes as applicable>//
(SUPERVISING AUTHORITY)/<office codes as applicable>//
SUBJ/(SUBS) SUBMARINE SEA TRIAL SUPPORT SERVICES FOR (STRL UNIT NAME AND HULL NO.)//
REF/A/DOC/COMUSFLTFORCOM/<DATE>//
AMPN/REF A IS COMUSFLTFORCOMINST 4790.3, JOINT FLEET MAINTENANCE MANUAL.//
RMKS/1. IAW REF A THE FOLLOWING ASSIGNMENTS APPLY FOR (STRL UNIT NAME AND HULL NO.) SEA TRIALS OCCURRING DD-DDMMMYYYY SHIP ASSIGNMENTS BELOW ARE FOR PLANNING AND COORDINATION PURPOSES AND WILL BE IN EFFECT PENDING ISIC APPROVAL.

A. SRDRS SUPPORT SHIP - USNS <NAME>
B. RESCUE PORT - <AS ASSIGNED IN COMSUBRON ELEVEN OPTASK

A. INCLUDE THE FOLLOWING INFO ADDEES ON FINAL TEST DEPTH DEEP DIVE CHECK REPORT/SITREP; COMSUBLANT NORFOLK VA, COMSUBPAC PEARL HARBOR HI, COMSUBRON ELEVEN, USNS <SRDRS SUPPORT SHIP>, USS <ESCORT SHIP>, USS <BACKUP ESCORT SHIP>, USS <MOORING SUPPORT SHIP>, UNSEARESCOM SAN DIEGO CAAND NSSC PEARL HARBOR HI (as applicable).
B. ONCE ESCORT, SRDRS SERVICES ARE NO LONGER REQUIRED, RELEASE IAW
ISIC OPS DIRECTIVE.
4. DIRLAUTH ALCON FOR EVENT SCHEDULES AND SCHEDULE CHANGES//
BT

NOTE: ENSURE MESSAGES ARE IN ACCORDANCE WITH CURRENT MESSAGE FORMAT AND CURRENT PLAD IS UTILIZED.

210~~PORT FROM WHICH CONDUCTING SEA TRIALS~~>

C. RESCUE PORT REPRESENTATIVE - COMSUBRON <ISIC of Sea Trial Unit>
D. RESCUE AIRFIELD - <AS ASSIGNED IN COMSUBRON ELEVEN OPTASK 210~~NAME OF AIRFIELD NEAR SEA TRIAL PORT~~>
E. MOORING SUPPORT SHIP - USS <NAME> (ASSIGNED BY NUMBERED FLEET SEPCOR)
F. GOLD DOLPHIN OBSERVER - (ASSIGNED BY ISIC)
G. ESCORT VESSEL - USS <NAME> (ASSIGNED BY NUMBERED FLEET SEPCOR)
H BACKUP ESCORT VESSEL - USS <NAME> (ASSIGNED BY NUMBERED FLEET SEPCOR FOR NEW CONSTRUCTION TRIALS)
I. TYCOM EMBARKED REP - (ASSIGNED BY TYCOM)

2. FOR COMSUBRON ELEVEN:
REQUEST SRDRS BE PLACED IN MOD-ALERT STATUS TO SUPPORT SEA TRIALS FOR USS <NAME> ON DD-DDMMMYYYY. IT IS ANTICIPATED ESCORT SERVICES AND SRDRS MOD-ALERT STATUS WILL BE REQUIRED THROUGH DD-MMM~~ON~~YYYY.
3. FOR CTF 311: (If NSRS being used for sea trials rescue support)
REQUEST NSRS SUPPORT SEA TRIALS FOR (STRL UNIT NAME AND HULL NO.) ON DD-DDMMM YYYY. IT IS ANTICIPATED THAT NSRS SUPPORT WINDOW WILL BE DD-DDMMM YYYY. CTF 311 ACKNOWLEDGE ALCON NSRS CAN SUPPORT SEA TRIAL VIA NAVAL MESSAGE AND ADVISE OF ANY READINESS DEVIATIONS WHICH WOULD IMPACT NSRS MOBILIZATION.
4. FOR (STRL UNIT),
A. INCLUDE THE FOLLOWING INFO ADDEES ON FINAL TEST DEPTH DEEP DIVE CHECK REPORT/SITREP; COMSUBLANT NORFOLK VA, COMSUBPAC PEARL HARBOR HI, COMSC <LANT/PAC><NORFOLK VA/SAN DIEGO CA>, COM<SECOND/THIRD>FLT>, COMSUBRON ELEVEN, CTF 311 (If

	NSRS being used for sea trials rescue support), USNS <SRDRS SUPPORT SHIP>, USS <ESCORT SHIP>, USS <BACKUP ESCORT SHIP>, USS <MOORING SUPPORT SHIP>, (SUPERVISING AUTHORITY), UNSEARESCOM SAN DIEGO CA AND NSSC<BANGOR/ PEARL HARBOR HI (as applicable). B. ONCE ESCORT, SRDRS SERVICES ARE NO LONGER REQUIRED, RELEASE IAW ISIC OPS DIRECTIVE. 45. DIRLAUTH ALCON FOR EVENT SCHEDULES AND SCHEDULE CHANGES// BT **NOTE: ENSURE MESSAGES ARE FORMATTED PER~~IN ACCORDANCE WITH~~ THE CURRENT VERSION OF THE NAVAL TELECOMMUNICATIONS PROCEDURE USERS MANUAL (NTP 3) ~~MESSAGE FORMAT~~ AND THE CURRENT PLAD IS UTILIZED.**

11. Fleet Availabilities

Volume II, Part I, Chapter 4, Paragraph 4.4.13.1.e;

First 100 Hour Plan

(Submarines Only)

Clarifying the review of poorly performing K-MRCs will use the data compiled by the Performance Monitoring Team.

Existing Words	New Words
e. Time critical jobs that will start during the first 100 hours. Completion of all time critical K-MRCs as determined at the A-21 meeting with the maintenance team. Time critical K-MRCs are those that: (1) Would result in long repair times if failed. (2) Require unique plant conditions which conflict with required plant conditions for other scheduled work (e.g., seawater hull and backup valve cycling when seawater systems must be secured for maintenance or trim and drain pump performance test when trim and drain systems are to be secured). (3) K-MRCs that have a poor historical performance based on review of the RMC curve at A-21.	e. Time critical jobs that will start during the first 100 hours. Completion of all time critical K-MRCs as determined at the A-21 meeting with the maintenance team. Time critical K-MRCs are those that: (1) Would result in long repair times if failed. (2) Require unique plant conditions which conflict with required plant conditions for other scheduled work (e.g., seawater hull and backup valve cycling when seawater systems must be secured for maintenance or trim and drain pump performance test when trim and drain systems are to be secured). (3) K-MRCs that have a poor historical performance based on review of the ~~RMC curve at A-21~~data contained in the Performance Monitoring Team (PMT) database.

Volume II, Part I, Chapter 4, Appendix Q-3.e(7);

Sea Trial Requirements for IDD or PIRA Availabilities (Submarines Only)

Added a step to shoot water slugs to ensure any authorized work or repairs did not have any impact on the system.

Existing Words	New Words
(6) Run and observe air conditioning plants throughout trials noting deficiencies. Operate the Lithium Bromide air conditioning plant (if installed) to demonstrate ability to carry entire maximum existing ship's air conditioning load or 100 percent capacity. (7) Additional requirements may be imposed at the discretion of the Commanding Officer.	(6) Run and observe air conditioning plants throughout trials noting deficiencies. Operate the Lithium Bromide air conditioning plant (if installed) to demonstrate ability to carry entire maximum existing ship's air conditioning load or 100 percent capacity. (7) Shoot water slugs from all torpedo tubes (See Note 13). (8) Additional requirements may be imposed at the discretion of the Commanding Officer.

12. Surface Ship and Aircraft Carrier Work Package Preparation

Volume II, Part II, Chapter 2, Paragraph 2.6.2.4.1;

Planning and Estimating

Updated the milestones in appendices D1 and D2 to account for maintenance shipchecks.

Existing Words	New Words
2.6.2.4.1 Key Terms. Key Terms as found in Volume VII, Chapter 4, Appendix 4-E of this manual. a. Standard Items: Mandatory and non-deviational. There are two types of Standard Items: (1) Standard Items (SI) (2) Local Standard Items (LSI) b. Templates: Work Items that can be modified and used for single or multiple ship classes. There are three types of Templates: (1) Standard Work Templates (SWT) (2) Class Standard Work Templates (CSWT) (3) Local Work Templates (LWT)	2.6.2.4.1 Key Terms. Key Terms as found in Volume VII, Chapter 4, Appendix 4-E of this manual. a. Standard Items: Mandatory and non-deviational. There are two types of Standard Items: (1) Standard Items (SI) (2) Local Standard Items (LSI) b. Templates: Work Items that can be modified and used for single or multiple ship classes. There are five~~three~~ types of Templates: (1) Standard Work Templates (SWT) (2) Class Standard Work Templates (CSWT) (3) Local Work Templates (LWT) (4) Basic Work Shell Template (BWST) (5) Master Specification Work Template (MSWT)

13. Foreign Ship Repair

Volume II, Part III, Chapter 3, Paragraph 3.2.11;

Foreign Governments

Added information to request authorization for foreign ship repair.

Existing Words	New Words
3.2.11 Foreign Governments. RMCs/FMAs may interact with foreign Governments, when requested and authorized by the CNO or NAVSEA, to procure commercial repair work to: a. Recondition and otherwise repair Navy ships that are to be, or have been, transferred to foreign Governments. b. Effect emergency voyage repairs or other services for vessels of foreign Governments, when approved and authorized by CNO.	3.2.11 Foreign Governments. RMCs or ~~/~~FMAs may interact with foreign Governments, when requested and authorized by the CNO or NAVSEA, to procure commercial repair work to: a. Recondition and otherwise repair Navy ships that are to be, or have been, transferred to foreign Governments. b. Effect emergency voyage repairs or other services for vessels of foreign Governments, when approved and authorized by CNO. Request authorization using sample message of Appendix A. CNO may reply with sample C in Appendix B or other message format.

APPENDIX A

FOREIGN SHIP REPAIR REQUEST

R 102218Z APR 17 ZYB
FM COMNAVREG HAWAII PEARL HARBOR HI
TO CNO WASHINGTON DC
INFO COMPACFLT PEARL HARBOR HI
COMTHIRDFLT
JB PEARL HARBOR-HICKAM HI
NAVSUP FLT LOG CTR PEARL HARBOR HI
COMNAVREG HAWAII PEARL HARBOR HI
COMNAVSEASYSCOM WASHINGTON DC
COMNAVSURFGRU MIDPAC
NAVSHIPYD AND IMF PEARL HARBOR HI
NAVFAC HAWAII PEARL HARBOR HI
COMDESRON THREE ONE
BT
UNCLAS
MSGID/GENADMIN/MIL-STD-6040(SERIES)/B.0.01.00
/COMNAVREG HAWAII PEARL HARBOR/N03000/APR/-/-/-/-//
SUBJ/FOREIGN SHIP REPAIR REQUEST ISO EX-GARY AND EX-TAYLOR//
REF/A/MSGID:DOC/10 USC SEC 7227/-/-//
REF/B/MSGID:DOC/NAVREGS 1990/ART 0835/-//
REF/C/MSGID:DOC/NAVCOMPTMAN/035950/-//
REF/D/MSGID:DOC/OPNAVINST 4700.7L/-/YMD:20100525//
NARR/REF A IS FEDERAL STATUTE ON PROVIDING SUPPLIES AND SERVICES TO FOREIGN NAVAL VESSELS AND AIRCRAFT. REF B IS NAVY REGULATIONS. REF C IS COMPTROLLER MANUAL. REF D PROVIDES MAINTENANCE POLICY FOR NAVAL SHIPS.//
POC/CREIGHTON HO/LCDR/UNIT:COMNAVREG HAWAII/NAME:FOREIGN SHIP LNO /TEL:(808)473-2568//
GENTEXT/REMARKS/1. THE EX-GARY AND EX-TAYLOR ARE SCHEDULED TO VISIT JOINT BASE PEARL HARBOR-HICKAM DURING APR 2017.
2. IAW REFS A THRU D, REQUEST AUTHORIZATION FOR PEARL HARBOR NAVAL SHIPYARD AND IMF TO ACCOMPLISH REQUIRED REPAIRS ON A NOT-TO-INTERFERE BASIS.//
BT

NOTE: ENSURE MESSAGES ARE PER CURRENT MESSAGE FORMAT AND CURRENT PLAIN LANGUAGE ADDRESS DIRECTORY (PLAD) IS UTILIZED.

APPENDIX B
FOREIGN SHIP REPAIR REPLY

R 111245Z APR 17 ZYB
FM CNO WASHINGTON DC
TO COMNAVREG HAWAII PEARL HARBOR HI
INFO COMPACFLT PEARL HARBOR HI
COMTHIRDFLT
JB PEARL HARBOR-HICKAM HI
NAVSUP FLT LOG CTR PEARL HARBOR HI
COMNAVSEASYSCOM WASHINGTON DC
COMNAVSURFGRU MIDPAC
NAVSHIPYD AND IMF PEARL HARBOR HI
NAVFAC HAWAII PEARL HARBOR HI
COMDESRON THREE ONE
BT
UNCLAS
MSGID/GENADMIN/MIL-STD-6040(SERIES)/B.0.01.00
/CNO WASHINGTON DC/N03000/APR//
SUBJ/FOREIGN SHIP REPAIR REQUEST ISO EX-GARY AND EX-TAYLOR//
REF/A/MSGID:MSG/COMNAVREG HAWAII PEARL HARBOR HI/102218Z APR 17//
REF/B/MSGID:DOC/10 USC SEC 7227/-/-//
REF/C/MSGID:DOC/NAVREGS 1990/ART 0835/-//
REF/D/MSGID:DOC/NAVCOMPTMAN/035950/-//
REF/E/MSGID:DOC/OPNAVINST 4700.7L/-/YMD:20100525//
NARR/REF A IS COMNAVREG HAWAII PEARL HARBOR HI REQUEST FOR AUTHORIZATION TO CONDUCT REPAIRS ON A NOT-TO-INTERFERE BASIS ON EX -GARY AND EX-TAYLOR. REF B IS FEDERAL STATUTE ON PROVIDING SUPPLIES AND SERVICES TO FOREIGN NAVAL VESSELS AND AIRCRAFT. REF C IS NAVY REGULATIONS. REF D IS COMPTROLLER MANUAL. REF E PROVIDES MAINTENANCE POLICY FOR NAVAL SHIPS.//
POC/ROBERT BENNETT/-/CNO N831/-/TEL: (703) 695-5726//
GENTEXT/REMARKS/1. IRT REF A, AUTHORITY IS GRANTED TO CONDUCT REPAIRS AS REQUIRED ON THE EX-GARY AND EX-TAYLOR AT PEARL HARBOR NAVAL SHIPYARD AND IMF AT JOINT BASE BPEARL HARBOR-HICKAM DURING APR 2017.
2. REPAIRS ARE TO BE CONDUCTED ON A REIMBURSABLE NOT-TO-INTERFERE BASIS.//

BT

NOTE: ENSURE MESSAGES ARE PER CURRENT MESSAGE FORMAT AND CURRENT PLAIN LANGUAGE ADDRESS DIRECTORY (PLAD) IS UTILIZED.

VOLUME III
Deployed Maintenance

VOLUME IV
Tests and Inspections

16. ACCOUNTABILITY AND CERTIFICATION OF NUCLEAR PROPULSION PLANT TEST AND SUPPORT EQUIPMENT

Volume IV, Chapter 7, Paragraph 7.6.f;

Latest Version of a Drawing

Modified the sub-paragraph to identify the "latest" version of a drawing is to be used vice the "current" version.

Existing Words	New Words
f. Verification that the equipment is in accordance with the current revision of the controlling reference shall be accomplished by: (1) Review of the NTE Certification Record prepared in accordance with Section 7.5 of this chapter above to demonstrate that the item has been certified. (2) Compare the revision level stated on the NTE Certification Record to the current revision of the reference.	f. Verification that the equipment is ~~in accordance with~~following the ~~current~~ latest revision of the controlling reference ~~shall~~must be accomplished by: (1) Review of the NTE Certification Record prepared ~~in accordance with~~per Section 7.5 of this chapter ~~above~~ to demonstrate that the item has been certified. (2) Compare the revision level stated on the NTE Certification Record to the ~~current~~ latest revision of the reference.

Modified Appendix A to identify the "latest" version of a drawing is to be used vice the "current" version.

2. Required return date:

ATTRIBUTE	CHECK-OUT			CHECK-IN		
	SAT	UNSAT	N/A	SAT	UNSAT	N/A
Physical condition of assembly~~/~~ or item						
Calibration current						
Tamper resistant seals intact						
Level of cleanliness is as required						
Operational test. Protective feature set point _____. For hydro rigs, complete Test Rig Determination and Inspection Check List (see Chapter 9 of this volume) and provide with hydro rig.						
Equipment previously certified. Review Certification Record Card						
Equipment verified correct to ~~current~~ latest revision~~/~~ or advance change notice of referenced drawing or manual.						

17. Weight Handling Equipment

Volume IV, Chapter 13, Paragraph 13.2;

Updated Definitions

Load Bearing Members, Factor of Safety.

Existing Words	New Words
13.2.1 Definitions. b. Load Bearing Members. Those members of the lifting and handling equipment which support the load and upon failure could cause dropping, uncontrolled shifting, or movement of the load. f. SWL. See Rated Load. g. Factor of Safety. The ratio of the yield stress load on a structure to the estimated maximum load in ordinary use. Factor of Safety = Actual Yield Strength / Required Strength h. Static Load Test. A stationary overload test conducted to verify the structural and mechanical integrity of the lifting equipment. The lifting equipment holds the test load for a short period of time while the test inspector checks the equipment for signs of brake slippage or damage.	13.2.1 Definitions. b. Load Bearing Members. Those components or structural support members of the lifting and handling equipment which support the load; a failure of which could cause dropping, uncontrolled shifting or movement of the load. ~~Those members of the lifting and handling equipment which support the load and upon failure could cause dropping, uncontrolled shifting, or movement of the load.~~ f. Safe Working Load. See Rated Load. g. Factor of Safety. The ratio of the yield strength~~stress load~~ of~~n~~ a structure to the required strength (based on estimated maximum load in ordinary use). Factor of Safety = Actual Yield Strength / Required Strength h. Static Load Test. A stationary overload test conducted to verify the structural and mechanical integrity of the lifting equipment. In this test, the lifting equipment holds the test load for a short period of time while the test inspector checks the equipment for signs of brake slippage or damage.

Load Test

Updated definition of “No Load”, “Static Load” and “Dynamic Load”.

Existing Words	New Words
13.2.3 Load Test Types and Duration. For each test, the equipment shall withstand the load test for a minimum of two minutes (10 minutes for hoists, cranes and crane structures) with no permanent deformation. For hoists, trolleys and other moving machinery, lift (travel) through three cycles of all moving parts at maximum rated speed. 13.2.3.1 Static Load Test. a. Unless otherwise specified, all arrangements for handling and supporting weights (including weights of personnel), all arrangements for taking heavy strains, and all parts upon which the safety of the ship or life depend, shall be given a static load test equal to twice the rated load. In cases where the rated load is not specified, the test load shall be based on the expected duty of the auxiliary, appliance, or fitting. For hoisting arrangements, the static test load shall be suspended clear of all supports and held suspended for a sufficient period to permit inspection of welds and other fastenings, but need not be lifted or moved by a gear under test. After relieving the static test load, there shall be no evidence of permanent deformation of structure.	13.2.3 Load Test Types and Duration. For each test type, the equipment ~~shall~~must withstand the required load for the specified amount of time, ~~in accordance with~~per the applicable reference(s) listed in paragraph 13.2.8.~~For each test, the equipment shall withstand the load test for a minimum of two minutes (10 minutes for hoists, cranes and crane structures) with no permanent deformation. For hoists, trolleys and other moving machinery, lift (travel) through three cycles of all moving parts at maximum rated speed.~~ 13.2.3.1 No-Load Test. As a prerequisite to any load testing, a no-load test ~~shall~~must be performed. During the test, the equipment or system ~~shall~~must be operated through full ranges and directions of motions and in all operating modes. All safety devices and travel limits ~~shall~~must be demonstrated during the test. 13.2.3.2~~1~~ Static Load Test. a. Unless otherwise specified, all arrangements for handling and supporting weights (including weights of personnel), all arrangements for taking heavy strains, and all parts upon which the safety of the ship or life depend, ~~shall~~must be given a static load test equal to twice the rated load. In cases in which~~where~~ the rated load is not specified, the test load ~~shall~~must be based on the expected duty of the equipment or system~~auxiliary, appliance, or fitting~~. For hoisting arrangements, the static test load ~~shall~~must be suspended clear of all supports and held suspended for a sufficient period of time to allow for the~~permit~~ inspection of welds and other fastenings, but need not be lifted or moved by the system~~a gear~~ under test. After relieving the static test load, there ~~shall~~must be no evidence of permanent deformation of structure.

Existing Words	New Words

13.2.3.2 Dynamic Load Test. Weight handling arrangements shall be tested to demonstrate capacity to withstand additional loads imposed on a system when operating under unfavorable sea conditions at reduced speed. The dynamic load test shall be conducted to demonstrate handling equipment load capabilities throughout the complete operating range. As far as practicable, test loads shall be moved completely through the equipment operating range, within the limits of all operating modes.	13.2.3.3~~2~~ Dynamic Load Test. Weight handling arrangements ~~shall~~must be tested to demonstrate capacity to withstand additional loads imposed on a system when operating under unfavorable sea conditions at reduced speed. The dynamic load test ~~shall~~must be conducted to demonstrate handling equipment load capabilities throughout the complete operating range, but the load need not be lifted or moved at rated speeds. As far as practicable, test loads ~~shall~~must be moved completely through the equipment operating range, within the limits of all operating modes.

Crane Material Condition Assessments

New section added.

Existing Words	New Words
	13.2.11 Crane Material Condition Assessments. This section provides guidance in the preparation for and execution of shipboard crane assessments by qualified crane assessors per reference (g). A crane assessment is used to determine a baseline condition and establish the scope of any follow-on actions. The assessment is designed to evaluate the material condition of the crane and all safety features and ensure all repairs, maintenance actions and design changes conform to the applicable standards and specifications. 13.2.11.1 Ship's Force Assessment Responsibilities. a. Ensure that the crane's PMS is up to date. b. Provide qualified operators as necessary to safely perform all crane operations. c. Provide qualified maintainers as necessary to assist and learn from assessor. d. Ensure all members of the assessment team comply with shipboard safety requirements. e. Ensure all necessary tag-out procedures are accomplished following shipboard instructions. 13.2.11.2 Assessor Responsibilities. a. Conduct crane assessments based on assessment procedures and reference (g). b. Ensure the crane has been assessed, adjusted, repaired (where feasible) and operationally tested. c. Ensure all discrepancies and corrected items have been documented via an OPNAV 4790/2Ka in the ship's CSMP. d. Ensure before leaving the ship that the Commanding Officer, or an officer designated by the Commanding Officer, is briefed on the crane material condition, to include all completed and outstanding maintenance and repair actions. e. Issue a dedicated final report to the ship, SURFMEPP, ISEA, ISIC and TYCOM within 30 days following the assessment visit. The report must address the following: (1) All discrepancies found during the assessment, specifically calling out any "In-Service Envelope" discrepancies (refer to reference (g)). (2) Operational testing results. (3) Any recommendations to the In-Service Engineering Agent for system changes.

Inspections

Updated text for specific instructions.

Existing Words	New Words
13.2.6 Daily Inspections. Daily, before use visual inspections shall be conducted as follows: a. Ammunition handling equipment. (1) A daily, before use visual inspection shall be performed in accordance with PMS for the assigned equipment before any load handling operations. (2) A no-load operational test shall be conducted by each shift prior to handling ammunition.	13.2.6 Daily Inspections. Daily, before use visual inspections ~~shall~~must be conducted ~~as follows~~: a. For Weight Handling Equipment:~~Ammunition handling equipment.~~ (1) A daily, before use visual inspection ~~shall~~must be performed ~~in accordance with~~following PMS for the assigned equipment before any load handling operations. (2) A no-load operational test ~~shall~~must be conducted by each shift prior to handling ammunition.

Existing Words	New Words
13.2.7 Use of Nylon Straps. a. The use of knotted nylon strapping as handling equipment is prohibited. b. Rigging with nylon straps is permitted only when nylon strapping is equipped with sewn (lifting) eyes and static load tested to 200 percent of rated load. c. When available handling equipment (for example, wire rope slings) cannot be properly attached, or load surface damage may occur, 6,000-pound (rated breaking strength) nylon strapping is permitted only for loads up to 1,000 pounds. d. Webbing slings shall be inspected for abrasions and fraying of the webbing and stitching, and broken stitches. Slings shall not be used if signs of deterioration are noted.	13.2.7 Use of Nylon Straps. a. The use of knotted nylon strapping as handling equipment is prohibited. b. Rigging with nylon straps is permitted only when nylon strapping is equipped with sewn (lifting) eyes and the strapping has been static load tested to 200 percent of rated load. c. When available handling equipment (for example, wire rope slings) cannot be properly attached, or load surface damage may occur, 6,000-pound (rated breaking strength) nylon strapping is permitted only for loads up to 1,000 pounds. d. Webbing slings ~~shall~~must be inspected for abrasions and fraying of the webbing and stitching, and for broken stitches. Slings ~~shall~~must not be used if signs of deterioration are visible~~noted~~.

18. Steam Catapult Inspections

Volume IV, Chapter 17, Paragraph 17.7.1;
Routine Inspections

Modified the inspection intervals.

Existing Words	New Words
17.6.1 Routine Inspection. Routine inspections will be conducted at least once every 18 months not to exceed 24 months from its last inspection. For newly constructed ships, the 24-month period shall begin at the completion of the Board of Inspection and Survey Acceptance Trials. The normal interval between routine inspections shall be 18 months. The 18-month period begins with the first warm-up of the catapult accumulator to normal operating temperature and pressure following the previous routine inspection. To provide scheduling flexibility, inspections may be performed as early as 12 months not to exceed 24 months after the previous inspection. Inspections that exceed the 18-month interval will require a minor Departure From Specification to the TYCOM with concurrence from NSWCCD-SSES. Any catapult accumulator which exceeds the inspection interval shall be placed out of commission until inspected by a certified SGPI or a Major DFS is approved by the NAVSEA Technical Warrant Holder to operate beyond 24 months without a Routine inspection. a. The catapult accumulator inspection will be scheduled by the TYCOM. b. The catapult accumulator inspection will be performed by a certified SGPI. c. The TYCOM may utilize PSAIs, CAIs and Strength and Integrity Inspections which are documented in SCIRMIS, to satisfy the pressure vessel portion of a routine accumulator inspection. This will reduce the number of boiler openings. A Routine Inspection will not be considered completed until an SGPI has certified all items required have been accomplished. Once completed, this resets the periodicity required for the next inspection to 18 months not to exceed 24 months.	17.~~6~~7.1 Routine Inspection. Routine inspections will be conducted at least once every ~~18~~ 30 months not to exceed ~~24~~ 36 months from its last inspection. For newly constructed ships, the ~~24~~30-month period ~~shall~~must begin at the completion of the Board of Inspection and Survey Acceptance Trials. The normal interval between routine inspections ~~shall~~must be ~~18~~ 30 months. The ~~18~~30-month period begins with the first warm-up of the catapult accumulator to normal operating temperature and pressure following the previous routine inspection. To provide scheduling flexibility, inspections may be performed as early as ~~12~~ 24 months not to exceed ~~24~~ 36 months after the previous inspection. Inspections that exceed the ~~18~~30-month interval will require a minor Departure From Specification to the TYCOM with concurrence from ~~NSWCCD~~NSWCPD ~~SSES~~. Any catapult accumulator which exceeds the inspection interval ~~shall~~must be placed out of commission until inspected by a certified SGPI or a Major DFS is approved by the NAVSEA Technical Warrant Holder to operate beyond ~~24~~ 36 months without a Routine inspection. a. The catapult accumulator inspection will be scheduled by the TYCOM. b. The catapult accumulator inspection will be performed by a certified SGPI. c. The TYCOM may utilize PSAIs, CAIs and Strength and Integrity Inspections which are documented in SCIRMIS, to satisfy the pressure vessel portion of a routine accumulator inspection. This will reduce the number of boiler openings. A Routine Inspection will not be considered completed until an SGPI has certified all items required have been accomplished. Once completed, this resets the periodicity required for the next inspection to 18 months not to exceed 24 months.

	d. A Safe to Steam assessment shall be conducted as a condition of approval for both minor (beyond 30 months but within 30-36 month timeframe) and major (beyond 36 months) DFS's. The Safe to Steam assessment will be accomplished by a SGPI and documented in SCIRMIS.

Volume IV, Chapter 17, Paragraph 17.7.8.e;
Special Inspections

Added a new sub-paragraph concerning Readiness to Deploy.

Existing Words	New Words
17.7.8 Special Inspections d. When the TYCOM desires to assess the material condition, the inspection is arranged by Ship's Force in coordination with the TYCOM and performed by a NSWCCD-SSES LCEM inspector and or an SGPI.	17.7.8 Special Inspections d. When the TYCOM desires to assess the material condition, the inspection is arranged by Ship's Force in coordination with the TYCOM and performed by a NSWCCD-SSES LCEM inspector and or an SGPI. e. Readiness to deploy (RDI) will be conducted by a SGPI 2 – 4 months prior to deployment. If an RDI cannot be accomplished per the above, the cognizant SGPI will schedule and accomplish a Mid-Cycle Inspection (MDI) to occur 15-21 months after the last Routine or Strength and Integrity inspection. The RDI and MDI will include all items currently accomplished Ref (b) Chapter 5 figure 5-5. Both inspections results will be documented in SCIRMIS and reported by Naval message by the cognizant SGPI.

19. VOLUME V

JFMM Volume V

QUALITY MAINTENANCE

20. Organizational Responsibilities

Volume V, Part I; Chapter 1; paragraph 1.4.l;

Type Commander Responsibilities (Submarines Only)

Added a responsibility to the submarine Type Commanders to develop and implement the necessary instructions and procedures to meet the requirements of DSS, SOC and SUBSAFE programs.

Existing Words	New Words
For FBW SCS, develop and implement the necessary instructions and procedures to meet the requirements of reference (a) and to ensure these requirements are adhered to during the life cycle of the ship. .	(Submarines only) For FBW SCS, DSS~~,~~ ~~-~~SOC, and SUBSAFE, develop and implement the necessary instructions and procedures to meet the requirements of references (a), (b) and (c), ~~and~~ to ensure these requirements are adhered to during the life cycle of the ship.

Volume V, Part I; Chapter 1; paragraph 1.6.12.ag;

Quality Assurance Officer (Submarines Only)

Added a reminder for submarine Quality Assurance Officers to complete the Pre-Underway Checklist

Existing Words	New Words
	1.6~~5~~.12 Ship's Quality Assurance Officer. QAO is responsible to: ag. (Submarines only) Prior to submerged underway operations when submarines are in a port with an ISIC, or when a submarine is in an availability such as Continuous Maintenance Availability, Interim Drydocking, Emergent Availability or CNO Availability, the ship's QAO shall complete a QA Pre-Underway Checklist with the ISIC QAO. Appendix A of this chapter provides the minimum requirements for the QA Pre-Underway Checklist.

21. Organizational Responsibilities

Volume V, Part I; Chapter 1; paragraph 1.7.17;

RMC or FMA Nondestructive Test Division Officer

Updated the responsibilities of the RMC or FMA Nondestructive Test Division Officer.

Existing Words	New Words
1.6.17 RMC/FMA Command Examiner. The Command Nondestructive Test (NDT) Examiner shall be appointed in writing by the Commander/Commanding Officer and shall be responsible for all aspects of the Command's Nondestructive testing program. The Command NDT Examiner will perform the responsibilities of the NDT Examiner per paragraph 1.6.17 of this chapter when a single Examiner is assigned to the RMC/FMA. The following shall comprise the core responsibilities of the FMA Command NDT Examiner: a. Coordinate the efforts of other assigned NDT Examiners at the activity. b. Act as the Command's point of contact for NDT technical issues. In addition, act as the Command's point of contact with NAVSEA for NDT issues. c. Develop the Command's NDT Examiner guidelines, to include the Command's Written Practice for NDT certification when required by reference (i) utilizing the input of all participating NDT examiners. d. Ensure submittal of required reports of certification or recertification to higher authority as required by reference (h). e. Review all requests for NDT training courses and examiner certification services. Provide recommendations to the chain of command regarding eligibility of the requestor and the need for such training or certification based on current and projected NDT personnel resources.	1.7~~6~~.17 RMC~~/~~ or FMA Nondestructive Test Division Officer~~Command Examiner~~. ~~The Command Nondestructive Test (NDT) Examiner shall be appointed in writing by the Commander/Commanding Officer and shall be responsible for all aspects of the Command's Nondestructive testing program. The Command NDT Examiner will perform the responsibilities of the NDT Examiner per paragraph 1.6.17 of this chapter when a single Examiner is assigned to the RMC/FMA.~~ The following ~~shall~~must comprise the core responsibilities of the FMA ~~Command~~ NDT Division Officer~~Examiner~~: a. Coordinate the efforts of ~~other~~ assigned NDT Examiners~~ at the activity~~. ~~b. Act as the Command's point of contact for NDT technical issues. In addition, act as the Command's point of contact with NAVSEA for NDT issues.~~ ~~c. Develop the Command's NDT Examiner guidelines, to include the Command's Written Practice for NDT certification when required by reference (i) utilizing the input of all participating NDT examiners.~~ ~~d~~b. Ensure submittal of required reports of certification or recertification to higher authority as required by reference (i~~h~~). ~~e~~c. Review all requests for NDT training courses and examiner certification services. Provide recommendations to the chain of command regarding eligibility of the requestor and the need for such training or certification based on current and projected NDT personnel resources. d. Review completed NDT inspection reports for technical completeness and accuracy and sign, where indicated on the report on completion of work. e. Schedule eye examinations for NDT Inspectors.

Volume V, Part I; Chapter 1; paragraph 1.7.18;

RMC or FMA Command Examiner

Added a paragraph detailing the responsibilities of the RMC or FMA Command Examiner.

Existing Words	New Words
	1.7.18 RMC or ~~/~~FMA Command Examiner. When more than one NDT Examiner is assigned to the RMC or FMA, the Commander or Commanding Officer will designate (in writing) one of the NDT Examiners as the Command Examiner who will perform the following core responsibilities in addition to the responsibilities in paragraph 1.7.19. a. Perform the duties of the NDT Division Officer if one is not assigned. b. Act as the Command's point of contact for NDT technical issues. In addition, act as the Command's point of contact with NAVSEA for NDT issues. c. Develop the Command~~'~~'s NDT Examiner guidelines, to include the Command's Written Practice for NDT certification when required by reference (j) utilizing the input of all participating NDT examiners.

22. In-Process Control.

Volume V, Part I; Chapter 5; paragraph 5.10.2.2;

Departures from Specifications

Nonconforming conditions that not meet the criteria for a major or minor departure now require the CSMP entry to contain the On-Site Analysis Report

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Existing Words	New Words
5.10.2.2 During Operations. A DFS is required for any lack of compliance with cognizant documents or drawings. For any "as found" conditions or equipment failures that result in a non-compliance, the ship (and/or TYCOM if in port) must evaluate the condition or failure using the guidance of paragraphs 8.2.4 and 8.2.5 of Part I, Chapter 8 of this volume to determine if the nonconforming condition meets the criteria as a Major or Minor DFS. a. If the nonconforming condition does not meet the criteria as a Major or Minor DFS, no DFS is required and the nonconforming condition will be entered in the ship's Current Ship's Maintenance Project (CSMP). d. If a DFS is approved as "temporary" and requires rework to correct the discrepant condition at a later date, a new CSMP entry for correction of the discrepant condition will be initiated by the ship. The ship's QAO shall ensure this action is accomplished.	5.10.2.2 During Operations. A DFS is required for any lack of compliance with cognizant documents or drawings. For any "as found" conditions or equipment failures that result in a non-compliance, the ship (~~and/~~or TYCOM if in port) must evaluate the condition or failure using the guidance of paragraphs 8.2.4 and 8.2.5 of Part I, Chapter 8 of this volume to determine if the nonconforming condition meets the criteria as a Major or Minor DFS. a. If the nonconforming condition does not meet the criteria as a Major or Minor DFS, no DFS is required and the nonconforming condition will be entered in the ship's Current Ship's Maintenance Project (CSMP). This CSMP entry must include the On-Site Analysis Report serial number, if applicable, or other technical references documenting or tracking the non-conformance. d. If a DFS is approved as "temporary" and requires rework to correct the discrepant condition at a later date, a new CSMP entry for correction of the discrepant condition will be initiated by the ship. This CSMP entry must include the On-Site Analysis Report serial number, if applicable, or other technical references documenting or tracking the non-conformance. The ship's QAO must ensure this action is accomplished.

Volume V, Part I; Chapter 5; Appendix B;

Submarine Certification Continuity Report

Now require the Ship's Force URO completion letter and data report forms be provided to the ISIC.

Existing Words	New Words
4. The URO MRC Automated Work Requests for Ship's Force accomplished items have been signed, the data report forms have been mailed, and copies have been provided to the ISIC.	4. **A copy of Ship's Force completed URO MRC completion letters and data report forms have been provided to the ISIC.** ~~The URO MRC Automated Work Requests for Ship's Force accomplished items have been signed, the data report forms have been mailed, and copies have been provided to the ISIC.~~

23. Material Control.

Volume V, Part I; Chapter 6; paragraph 6.3.9.1;

Storage Requirements

Identified the surveillance requirements for all work center controlled material storage areas at a minimum frequency of semi-annually.

Existing Words	New Words
f. CMPOs will inspect controlled material storage areas of their work center, semi-annually as a minimum to ensure: (1) Material is in designated area. (2) Material is properly identified. (3) Material is properly marked and tagged. (4) Material is protected from damage. (5) Material is kept clean. (6) Material is segregated as required.	f. CMPOs will inspect controlled material storage areas of their work center, ~~semi-annually~~quarterly, as a minimum, to ensure: (1) Material is in designated area. (2) Material is properly identified. (3) Material is properly marked and tagged. (4) Material is protected from damage. (5) Material is kept clean. (6) Material is segregated as required. g. The QAO will, at a minimum of frequency of semi-annually, assign a surveillance of all work center controlled material storage areas.

24. Departures from Specifications.

Volume V, Part I; Chapter 8; paragraph 8.2.2;

DFS Evaluation

All submarine DFS submitted for evaluation must be adjudicated prior to operation or underway.

Existing Words	New Words
8.2.2 Types of Departures from Specification. A DFS is classified as either Major or Minor depending on its significance. Major DFS are described in paragraph 8.2.4 of this chapter. Minor DFS are described in paragraph 8.2.5 of this chapter. Care must be exercised in evaluating and determining the type of DFS. All submarine DFS must be approved prior to ship's underway for submerged operations.	8.2.2 Types of Departures from Specification. A DFS is classified as either Major or Minor depending on its significance. Major DFS are described in paragraph 8.2.4 of this chapter. Minor DFS are described in paragraph 8.2.5 of this chapter. Care must be exercised in evaluating and determining the type of DFS. All submarine DFS submitted for evaluation must be adjudicated~~approved~~ prior to operating the equipment or ship's underway ~~for submerged~~ operations except when repositioning a submarine by tug or similar craft.

Volume V, Part I; Chapter 8; paragraph 8.2.4.j(3);

DFS for Operational URO/MRC Periodicity (Submarines Only)

Clarified the requirements.

Existing Words	New Words
(3) When a URO/MRC periodicity becomes due during a maintenance availability, a DFS is not required when the TYCOM/ISIC takes positive actions to restrict submerged operations. Prior to the ship conducting submerged operations, all URO/MRC requirements must be complied with or a Major DFS must be approved.	(3) When a URO/MRC periodicity becomes due during a maintenance availability, a DFS is not required when the TYCOM or ~~/~~ISIC takes positive actions to restrict submerged operations. Prior to the ship conducting underway surfaced or conducting submerged operations (except repositioning by tug or similar craft), all operational URO/MRC must be within periodicity (URO MRC 016, 019, 022, 025, 026, and 029) and requirements must be complied with or a Major DFS must be approved.

Volume V, Part I; Chapter 8; paragraph 8.2.4.t;
Volume V, Part I; Chapter 8; paragraph 8.2.4.u;

DFS for Additive Manufacturing

Added a new paragraph dealing with Additive Manufacturing (3d printing).

Existing Words	New Words
	t. Additive manufactured components with a NAVSEA Environment, Safety and Occupational Health Risk Matrix level of severity 1 thru 6 per reference (h). **u. (Submarines only) Additive manufactured components must not be used for production of replacement components for any ship system that may affect ship safety, operation, integrity, or classified equipment which includes, but not limited to, SUBSAFE, LEVEL I, Fly-By-Wire, Scope of Certification, and other NAVSEA approved ship system components. The following information will be listed in the submarine DFS.** **(1) The risk factor derived from table 10-3 of reference (h).** **(2) The end use application of the AM part.** **(3) The compartment the AM part is located.** **(4) Weight of the AM part.** **(5) All package label data from AM polymer feedstock or filament used.**

25. Departures from Specifications.

Minor DFS (Submarines Only)

Volume V, Part I; Chapter 8; paragraph 8.2.5;

Approval to follow the QA form 12 block 19 Table.

Existing Words	New Words
8.2.5 Minor Departure from Specification. A DFS which is not a Major DFS as defined in paragraph 8.2.4 of this chapter is considered to be a Minor DFS. All permanent Minor (and Major) DFSs will be approved by NAVSEA except those identified in paragraph 8.2.5.a. of this chapter, which may be dispositioned by the TYCOM or the ISIC. Temporary Minor DFSs identified in paragraph 8.2.5.b. of this chapter may also be dispositioned by the TYCOM or the ISIC. All other temporary Minor DFSs will be approved by the TYCOM. Temporary nonconformances, except SUBSAFE, Scope of Certification, and Fly-by-Wire nonconformances, that are minor which would not benefit from an engineering analysis or risk assessment will be entered into the CSMP and are not required to be submitted as a DFS. Paragraphs 8.2.5.a. through d. below identify some deficient conditions which require a Minor DFS: a. Any condition which could be considered a Major DFS except for the fact that specific and definite (TYCOM or NAVSEA) guidance is available based on documented action for another identical (same component, same application, and same class ship) request in which no restriction was imposed. An example would be a previous DFS which was approved as a precedent setting DFS. b. Any condition which is associated with exemptions/alternatives to non-nuclear retest requirements in Section 7.4 of Part I, Chapter 7, of this volume on testing, except where noted. Examples are: **NOTE: IF A MAINTENANCE CERTIFICATION RECORD/RE-ENTRY CONTROL IS CLOSED BY TRANSFERRING AT SEA TESTING TO A DFS (E.G., CONTROLLED DIVE TO TEST DEPTH FOR RETEST OF A**	8.2.5 Minor Departure from Specification. A DFS which is not a Major DFS as defined in paragraph 8.2.4 of this chapter is considered to be a Minor DFS. All permanent Minor (and Major) DFSs will be approved by NAVSEA except those identified in paragraph 8.2.5.a. of this chapter, which may be dispositioned by the TYCOM or the ISIC. Temporary Minor DFSs identified in paragraph 8.2.5.b. of this chapter may also be dispositioned by the TYCOM or the ISIC. All other temporary Minor DFSs will be approved by the TYCOM. For submarines, TYCOM approval will follow the QA form 12 block 19 table. Temporary nonconformances, except SUBSAFE, Scope of Certification, and Fly-by-Wire nonconformances, that are minor which would not benefit from an engineering analysis or risk assessment will be entered into the CSMP and are not required to be submitted as a DFS. Paragraphs 8.2.5.a. through ~~d~~f. ~~below~~ identify some deficient conditions which require a Minor DFS: a. Any condition which could be considered a Major DFS except for the fact that specific and definite (TYCOM or NAVSEA) guidance is available based on documented action for another identical (same component, same application, and same class ship) request in which no restriction was imposed. An example would be a previous DFS which was approved as a precedent setting DFS. b. Any condition which is associated with exemptions or ~~/~~alternatives to non-nuclear retest requirements in Section 7.4 of Part I, Chapter 7, of this volume on testing, except where noted. Examples are: **NOTE: IF A MAINTENANCE CERTIFICATION RECORD/RE-ENTRY CONTROL IS CLOSED BY TRANSFERRING AT SEA TESTING TO A DFS (E.G., CONTROLLED DIVE TO TEST DEPTH FOR RETEST OF A PERISCOPE HULL GLAND, CONTROLLED DIVE FOR**

PERISCOPE HULL GLAND, CONTROLLED DIVE FOR RETEST OF A SEA CONNECTED SYSTEM (E.G., MAIN SEAWATER, AUXILIARY SEAWATER) IN LIEU OF JOINT TIGHTNESS TEST TO "J" PRESSURE OF TEST PRESSURE DRAWING (TPD)), THE SHIP WILL BE RESTRICTED IN DEPTH AS REQUIRED IN PART I, CHAPTER 5, PARAGRAPH 5.6.5 OF THIS VOLUME.	**RETEST OF A SEA CONNECTED SYSTEM (E.G., MAIN SEAWATER, AUXILIARY SEAWATER) IN LIEU OF JOINT TIGHTNESS TEST TO "J" PRESSURE OF TEST PRESSURE DRAWING (TPD)), THE SHIP WILL BE RESTRICTED IN DEPTH AS REQUIRED IN PART I, CHAPTER 5, PARAGRAPH 5.6.5 OF THIS VOLUME.**
(1) (Submarines only) DFS for controlled dive following re-installation of a periscope.	(1) (Submarines only) DFS for controlled dive following re-installation of a periscope.
(2) (Submarines only) DFS for controlled dive following work on a hatch exposed to sea pressure.	(2) (Submarines only) DFS for controlled dive following work on a hatch exposed to sea pressure.
(3) (Submarines only) DFS for controlled dive following work on an Electrical/Electronic Hull Fitting.	(3) (Submarines only) DFS for controlled dive following work on an Electrical or ~~/~~Electronic Hull Fitting.
	(4) (Submarines only) DFS for installation of TYWRAPS in lieu of cable banding following waterborne cable replacement by divers.
	(5) (Submarine only) DFS for controlled dive following for work lacking Mechanical Joint Tightness Testing of Torpedo Tube Flood and or Drain Electrodes.
	(6) (Submarine only) DFS for conducting at sea operational testing such as Main Sea Water Fast Speed operations, shooting water slugs from 3" Launcher, Trim and or Drain Pump operations to measure Heat during operations.
	(7) (Submarine only) DFS for deferral of System Operability Verification Testing.
c. Associated with a temporary repair to a system or component not involving ship or personnel safety or not involving integrity or operability of equipment essential to ship's mission.	c. **Any condition that requires at sea operations to certify planned maintenance or repairs excluding structural watertight integrity testing except as previously discussed.**
d. For a material deficiency discovered during a maintenance action that will not be corrected prior to the ship's underway, and is not categorized as a Major DFS in accordance with paragraph 8.2.4 of this Chapter.	~~c~~d. Associated with a temporary repair to a system or component not involving ship or personnel safety or not involving integrity or operability of equipment essential to ship's mission.
(1) The submarine is not currently in a Depot Level Availability.	~~d~~e. For a material deficiency discovered during a maintenance action that will not be corrected prior to the ship's underway,
(2) Temporary repairs are performed in accordance with the requirements of the class specific hull treatment repair and maintenance manual.	
(3) The CSMP item is scheduled to be cleared no later than the next scheduled Depot Level Availability.	

	and is not categorized as a Major DFS ~~in accordance with~~per paragraph 8.2.4 of this Chapter. ~~(1) The submarine is not currently in a Depot Level Availability.~~ ~~(2) Temporary repairs are performed in accordance with the requirements of the class specific hull treatment repair and maintenance manual.~~ ~~(3) The CSMP item is scheduled to be cleared no later than the next scheduled Depot Level Availability.~~ f. Additive manufactured components with a NAVSEA Environment, Safety and Occupational Health Risk Matrix severity level of severity 7 or "N/A" per ref (h). g. (Submarines only) Additive manufactured components must not **be used for production of replacement components for any ship system that may affect ship safety, operation, integrity, or classified equipment which includes, but not limited to, SUBSAFE, LEVEL I, Fly-By-Wire, Scope of Certification, and other NAVSEA approved ship system components**. The following information will be listed in the submarine DFS. (1) The risk factor derived from table 10-3 of reference (h). (2) The end use application of the AM part. (3) The compartment the AM part is located. (4) Weight of the AM part. (5) All package label data from AM polymer feedstock or filament used.

Volume V, Part I; Chapter 8; paragraph 8.2.5;

CSMP Entry for Approved DFS (Submarines Only)

CSMP entry must include the On-Site Analysis Report.

Existing Words	New Words
c. The ship is responsible for all approved DFS relating to its systems/components until cleared or canceled. When a DFS is approved as a temporary repair requiring rework to correct the discrepancy, a CSMP entry for correction of the discrepant condition will be initiated by the ship or ISIC. The ship's Quality Assurance Officer (QAO) will ensure that this action is done. Verify an active Job Control Number (JCN) exists for all active temporary DFSs at the completion of all scheduled Fleet maintenance activity availabilities, major or minor, Chief of Naval Operations availabilities or at least quarterly and maintain an auditable record of the verification until superseded.	c. The ship is responsible for all approved DFS relating to its systems or ~~/~~components until cleared or canceled. When a DFS is approved as a temporary repair requiring rework to correct the discrepancy, a CSMP entry for correction of the discrepant condition will be initiated by the ship or ISIC. This CSMP entry must include the On-Site Analysis Report serial number, if applicable, or other technical references documenting or tracking the nonconformance. The ship's Quality Assurance Officer (QAO) will ensure that this action is done. Verify an active Job Control Number (JCN) exists for all active temporary DFSs at the completion of all scheduled Fleet maintenance activity availabilities, major or minor, Chief of Naval Operations availabilities or at least quarterly and maintain an auditable record of the verification until superseded. **f. Additive manufactured components with a NAVSEA Environment, Safety and Occupational Health Risk Matrix severity level of severity 7 or "N/A" per ref (h).** **g. (Submarines only) Additive manufactured components must not be used for production of replacement components for any ship system that may affect ship safety, operation, integrity, or classified equipment which includes, but not limited to, SUBSAFE, LEVEL I, Fly-By-Wire, Scope of Certification, and other NAVSEA approved ship system components. The following information will be listed in the submarine DFS.** **(1) The risk factor derived from table 10-3 of reference (h).** **(2) The end use application of the AM part.** **(3) The compartment the AM part is located.** **(4) Weight of the AM part.** **(5) All package label data from AM polymer feedstock or filament used.**

Volume V, Part I; Chapter 8; paragraph 8.3.1.g(2).;

Temporary DFS Expiring While Underway (Submarines Only)

DFS must be submitted sufficiently early enough for evaluation prior to the expiration date.

Existing Words	New Words
(2) (Submarines only) DFS serial numbers will be issued from the Ship's Force hand written log and entered into the ship's eDFS standalone program (and delivered to ISIC in either electronic or hard copy format). DFS serial numbers for work performed by NAVSEA managed activities, to include Public and Private shipyards and/or activities directed by TYCOM, shall use 1000 series DFS numbers auto initiated by the eDFS software.	(2) (Submarines only) DFS serial numbers for ~~will be issued from the~~ Ship's Force initiated departures will be maintained either in a handwritten or electronic log~~hand written log and entered into the ship's eDFS standalone program (and delivered to ISIC in either electronic or hard copy format)~~. For DFS serial numbers for work performed by NAVSEA managed activities, to include Public and Private shipyards ~~and/~~or activities directed by TYCOM, ~~shall~~must use 1000 series DFS numbers auto initiated by the eDFS software. For temporary departures expiring during an underway, as discussed in paragraph 8.3.9 of this chapter, the extension request ~~must~~**will** be made sufficiently in advance to allow the evaluation process to be completed before the expiration date (Temporary Approved Until Date) and prior to the underway in which the DFS expires.

26. Departures from Specifications.

Volume V, Part I; Chapter 8; paragraph 8.3.9;

Extending a Temporary DFS

Expanded the paragraph to ensure a DFS does not expire while underway.

Existing Words	New Words
a. Nonconformances are expected to expire. It is acceptable for nonconformances to expire while the ship or Deep Submergence System (DSS)/SOC asset is in a scheduled availability.NonconformanceNonconformanceb. (Submarines/DSS/SOC assets only) nonconformanceExpired nonconformances must be adjudicated prior to at sea operation and/or prior to manned use for DSS/SOC systems/assets.	a. Nonconformances are expected to expire. It is acceptable for nonconformances to expire while the ship or Deep Submergence System (DSS)~~/~~ or Scope of Certification (SOC) asset is in a scheduled availability except as listed ~~below~~here:~~.~~ (1) Nonconformances ~~shall~~must not be permitted to expire for equipment or systems that are in operation or will be operated during the availability. (2) Nonconformances associated with UROs ~~shall~~must be approved and or extended prior to submarine underway operations unless the submarine is repositioned by tug or similar craft. b. (Submarines,~~and/~~ DSS and ~~/~~SOC assets only) ~~Shall~~Must not get underway with expired nonconformances unless the submarine, ~~and or~~DSS~~/~~ or SOC asset~~s~~ is repositioned by tug or similar craft.~~Expired~~ nonconformance~~s must be adjudicated prior to at sea operation and/or prior to manned use for DSS/SOC systems/assets.~~

Volume V, Part I; Chapter 8; paragraph 8.3.10;

Electronic Nonconformance Administration

DFS clearance now requires a brief description and status.

Existing Words	New Words
c. Changes to an existing electronic nonconformance is normally accomplished by submittal of an "UPDATE" to the QA form 12. (1) To enter changes, the initiator of the change will enter the current calendar date and the word "UPDATE": in the user's comment block followed by the relevant information and ending the comments with the user Name, Rank (if applicable) and Title. Do not write over any existing comments, Names or dates in the comment block. (2) Changes or Updates shall be disseminated via an e-mail alert. (3) Deletion of QA form 12s will not be supported. Clear or cancel QA form 12s with a QA form 12A.	c. Changes to an existing electronic nonconformance is normally accomplished by submittal of an "UPDATE" to the QA form 12. ~~(1) To enter changes, the initiator of the change will enter the current calendar date and the word "UPDATE": in the user's comment block followed by the relevant information and ending the comments with the user Name, Rank (if applicable) and Title. Do not write over any existing comments, Names or dates in the comment block.~~ (1~~2~~) Changes must~~or Updates shall~~ be disseminated via an e-mail alert. (2~~3~~) Deletion of QA form 12s will not be supported. Clear or cancel QA form 12s with a QA form 12A. d. The DFS CLEARANCE STATUS entry block must contain a brief description and status of the nonconformance (e.g., REPAIR GREASE DISTRIBUTION VALVE).

27. Audits, Surveillance, Evaluations and Records.

Volume V, Part I; Chapter 9; paragraph 9.3.1.c;

Ship's Force Audits

Added a new sub-paragraph on the surveillance of all work center controlled material storage areas.

Existing Words	New Words
c. Administer an aggressive QA surveillance program to ensure compliance with all QA requirements and to support work process improvements. The surveillance program must include the following elements: (1) Surveillance of in-process work of all types. (2) Surveillance of shipboard calibration facilities.	c. Administer an aggressive QA surveillance program to ensure compliance with all QA requirements and to support work process improvements. The surveillance program must include the following elements: (1) Surveillance of in-process work of all types. (2) Surveillance of shipboard calibration facilities. (3) Surveillance of all work center controlled material storage areas at a minimum frequency of semi-annually. This surveillance must be conducted by a qualified CMPO, QAI, QAS, or QAO.

Volume V, Part I; Chapter 9; paragraph 9.3.3.a;

ISIC Assessments, Audits and Surveillance

Expanded the sub-paragraph on ISIC QA Program assessments.

Existing Words	New Words
9.3.3 Immediate Superiors in Command Assessments, Audits, and Surveillance. a. QA Program Assessment. (1) ISICs shall schedule and conduct a QA Program assessment in conjunction with the Fleet Readiness Training Plan (or as determined by each Type Commander (TYCOM)) of all assigned ships. This assessment will review the following areas: (a) Vertical audit of CWPs. (b) Material control. (c) DFS. (d) Audits and surveillances (to include QA-14 Binder). (e) Welder qualification and training.	9.3.3 Immediate Superiors in Command Assessments, Audits, and Surveillance. a. QA Program Assessment. (1) ISICs ~~shall~~must schedule and conduct a QA Program assessment in conjunction with the Fleet Readiness Training Plan (or as determined by each Type Commander (TYCOM)) of all assigned ships. This assessment will review these ~~following~~ areas: (a) Vertical audit of CWPs, to include Level I, Submarine Flight Critical Components per reference (d) and nuclear work (i.e., CWPs), as applicable. (b) Material identification and

(f) QA records and record retention. (g) (Submarines only) SUBSAFE/REC, SOC and FBW program. (h) (Submarines only) URO MRC Program.	control, including procurement, receipt inspection, marking, storage, issuing and in-process use. (c) Qualification and training of QA personnel. (d) Metal fabrication, including welding, brazing, NDT qualification and processes. (e) DFS. (f) Cleanliness program. (g~~d~~) Audit~~s~~ and surveillance~~s~~ programs (to include QA-14 Binder). ~~(e) Welder qualification and training.~~ (h~~f~~) QA records and record retention. (i) Effectiveness of corrective actions for previous audit findings. (j~~g~~) (Submarines only) SUBSAFE~~/~~, ~~REC,~~ SOC and FBW program compliance, to include REC exceptions. (k~~h~~) (Submarines only) URO MRC Program.

28. Quality Assurance Records.

Volume V, Part I; Chapter 10; paragraph 10.6.1.10;

REC/MCR Record Exceptions for O.Q.E. Records

Modified the retention requirements for QA Form 34's to streamline the process.

Existing Words	New Words
10.6.1.10 Re-Entry Control/Maintenance Certification Record Exception Objective Quality Evidence and Other Controlled Assembly Records. Retain a file of the most recent QA form 34 generated for each component or system assembled as a controlled assembly and performed as a REC/MCR exception per Part I, Chapter 5, paragraph 5.6.7, Note 3, Part I, Chapter 2, paragraph 2.2.5, Note 2 and Part III, Chapter 5, paragraph 5.8.6.1.b of this volume. Retain a file of the most recent QA form 34 record generated per Part I, Chapter 7, paragraph 7.4.1.c of this volume for non-controlled systems or components until the system or component testing is completed satisfactory.	10.6.1.10 Re-Entry Control/Maintenance Certification Record Exception Objective Quality Evidence and Other Controlled Assembly Records. (a) Retain a file of the most recent QA form 34 generated for each component or system assembled as a controlled assembly and performed as a REC~~/MCR~~ exception per Part I, Chapter 5, paragraph 5.6.7, Note 3~~, Part I, Chapter 2, paragraph 2.2.5, Note 2~~ and Part III, Chapter 5, paragraph 5.8.6.1.b of this volume. (b) Retain a file of the most recent QA form 34 generated for each component or system assembled as a controlled assembly and performed as a MRC exception per Part I, Chapter 2, paragraph 2.2.5 Note 2 and Part I, Chapter 2, paragraph 2.3.7.7.1 of this volume. (c) Retain a file of the most recent QA form 34 record generated per Part I, Chapter 7, paragraph 7.4.1.c of this volume for non-controlled systems or components until the system or component testing is completed satisfactory (e.g. completion of a controlled deep dive).

29. QA Forms.

Volume V, Part I; Chapter 11; QA Form 2;

MIC Numbers or Serial Numbers

Modified the instructions to account for times when a number is not present.

Existing Words	New Words
For fasteners enter either the MIC number (when MIC number is marked on the fastener) or any existing material marking, color code, heat/lot number, and manufacturer's symbol (for nuts containing a self-locking insert, the color of the insert is the manufacturer's symbol). For rotatable items enter the appropriate rotatable pool serial number (e.g., rp-148a, tin-292-11893, etc.). For Flight Critical Components, enter the component serial number.	~~For fasteners e~~Enter ~~either~~ the MIC etched on the material. Where there is no visible MIC number, enter ~~number (when MIC number is marked on the fastener) or any~~ existing material marking, such as color code for fasteners, heat or ~~/~~lot number, and manufacturer's symbol (for nuts containing a self-locking insert, the color of the insert is the manufacturer's symbol). If none, enter "NONE." For rotatable items, enter the appropriate rotatable pool serial number (e.g., rp-148a, tin-292-11893, etc.). For Flight Critical Components, enter the component serial number. For periscopes, enter the registry number. For mast, enter the MIC etched on the outer housing.

VOLUME VI

MAINTENANCE PROGRAMS

31. 2M & Fiber Optics

Complete rewrite of the chapter text. Review in its entirety.

Volume VI, Chapter 8

The entire chapter was rewritten to include Fiber Optics test and repair.

Review the chapter in its entirety.

32. Degausing

Complete rewrite of the chapter text. Review in its entirety.

Volume VI, Chapter 12

The entire chapter was rewritten to comply with OPNAVINST S8959.2.

Review the chapter in its entirety.

33. Inflatable Life Rafts

Complete Chapter Rewrite

Volume VI, Chapter 18;

The entire chapter was rewritten to reflect current practice.

Review the chapter in its entirety.

34. Maintenance and Material Management

Major rewrite of the chapter text. Review in its entirety.

The rewrite provides RMB approved updates covering the Maintenance Data System, and the contents of the Work Center and Master files.

Complete Chapter Rewrite

Volume VI, Chapter 19; paragraph 19.6.18;

Added a new paragraph to comply with the 3M Requirements Maintenance Board.

Existing Words	New Words
	19.6.18 Feedback Response Implementation. Units will implement responses to Feedback Reports based on the category and content as determined by the unit's 3-M Coordinator. a. Urgent FBR – within 24 hours of receipt of FBR response. b. Routine FBR: (1) Technical – The response deals with content such as a revision to technical specifications, tolerances, test equipment, materials, acceptance criteria or the sequence of procedural steps. These changes need to be implemented within 2 weeks of receipt of the FBR response or prior to the next scheduled accomplishment date should that date fall within the two-week window. (2) Administrative – The response deals with issues that do not affect the technical content or procedural steps. Administrative changes might be added steps to provide a better degree of clarity, formatting revisions to tables or figures that do not change technical content, or updating of Notes, Warnings or Cautions that do not impact the performance of the MRC. These changes do not need to be implemented prior to receipt of the next FR. If the next FR does not reflect the revised documentation, implementation is required before the next scheduled accomplishment date of the MRC.

Non-Accomplished Categories

Volume VI, Chapter 19; paragraph 19.11.6;

Added a new paragraph to comply with the 3M Requirements Maintenance Board.

Existing Words	New Words
	19.11.6 Non-Accomplished Categories. The WCS or LCPO will add a brief description for each check note or alert for non-accomplished categories using subparagraphs 19.11.6.a through 19.11.6.g. a. System/Equipment Failure – System or Equipment is not operational or in a reduced operational status thus preventing maintenance from being accomplished. CSMP JSN required in additional text description. b. Inadequate Maintenance Procedures - MRC procedure or steps cannot be accomplished to a point where the maintenance can be considered accomplished. FBR number required in additional text description. c. Ship/Unit Operational Requirements - Operations prevent the maintenance from being accomplished. Requires additional text description. d. System/Equipment Operational Requirements - Required operation of system or equipment prevents maintenance from being accomplished. Requires additional text description. e. Lack of HAZMAT - Correct HAZMAT not available at the time maintenance was to be performed. CSMP JSN required in additional text description. f. Missing/Incorrect TPMTE – Correct or calibrated TPMTE was not available at the time maintenance was to be performed. CSMP JSN required in additional text description. g. Other - Requires additional text description.

Non-Accomplished Categories

Volume VI, Chapter 19; paragraph 19.11.6;

Added a new paragraph to comply with the 3M Requirements Maintenance Board.

Existing Words	New Words
	19.11.7 Weekly Status Report. The weekly PMS Monitoring status reports will be retained (electronically if desired) by the 3MC for 6 months (12 months for NECC). Surface Force Ships only require 13-weeks of reports to be maintained by 3MC. These reports from the 3MC to the 3-M System Manager will contain, as a minimum, the following information: a. Completed Spot-Check and Monitored MRC results. b. Completed Work Center Audits and results. c. The number of FBRs over seven days old that have not been reviewed by the Chain of Command. d. Abatement and corrective actions completed as a result of a monitoring program finding. e. Inactive Equipment Maintenance Summary. f. Overdue (past periodicity) MRCs and plan of corrective action.

Non-Accomplished Categories

Volume VI, Chapter 19; paragraph 19.11.6;

Added a new paragraph to comply with the 3M Requirements Maintenance Board.

Existing Words	New Words
The ability of the activity to perform critical self-assessment is instrumental to the success of all ship/shore based programs, including PMS. To ensure the command's PMS Self-Assessment Program adequately addresses all aspects of PMS, the following program elements will be utilized: a. PMS Spot Check. The spot check checklist contained in each specific TYCOM Appendix (A1 – A5) is the tool that supervisory personnel utilize to determine the accomplishment status of an MRC that has been previously reported as accomplished. Deficiencies noted from the conduct of the spot check and the final grade will be provided to the	19.134.2 Self-Assessments. The ability of an activity to perform critical self-assessments is instrumental to the success of the command's PMS program. The PMS Self-Assessment Program needs to address all aspects of PMS. TYCOM Self-Assessment policies are as follows: a. Aircraft Carriers. Each ship must perform a quarterly Self-Assessment utilizing the shipboard 3-M Training Team (3MTT) and onboard 3-M Organization per Appendix A-1. The completed report will be retained by the 3-M Officer for 12 months. The 3-M Manager via the 3-M Officer will ensure that personnel performing the audits have adequate 3-M knowledge to ensure a thorough review. The Commanding Officer will receive a formal briefing of the findings of the Self-Assessment and intended corrective actions. The results must be forwarded to TYCOM per TRAMAN. b. Submarine Force. Normally, each activity must perform a complete 3-M Self-Assessment at the mid-point of the 3-M Inspection cycle and retain results until the next 3-M Inspection. The 3-M

Work Center's chain of command for abatement and the Work Center Supervisor will record the spot check grade into SKED to generate the Spot Check Accomplishment Rating (SCAR) for the quarterly PMS Performance Report. (1) Avoid spot-checks of MRCs of insufficient complexity to permit validation of accomplishment. Selected MRCs should provide the auditor with evidence of accomplishment to be used in his/her determination of satisfactory performance (e.g. tag-outs, QA packages, parts required, off-hull reporting, test equipment, safety equipment, etc.). (2) Spot-checks and monitored maintenance must involve all elements of the chain of command. The following spot check matrix is the minimum for:	checklists contained in Appendix A-2 will be utilized and retained until the next formal 3-M Inspection. Utilization of TYCOM, ISIC and 3-M Representative personnel to assist the command is encouraged and should be requested. As the Self-Assessment senior member, the 3-M Manager will ensure that personnel performing the audits have adequate knowledge of 3-M practices and procedures to ensure a thorough review. The Commanding Officer will receive a formal briefing of the findings of the Self-Assessment and intended corrective actions. c. Surface Force. Each activity must perform a full command Self-Assessment as exit criteria for each phase of the unit's OFRP. The Departmental 3MA will assist in the Self-Assessment. 3MCs will ensure a quarterly 3-M Health Status report is forwarded to the ISIC with POAM for discrepancies identified. TORIS/TFOM will reflect 100 percent when ISIC has the Health status report and will be entered into the TORIS/TFOM system by the 20th day of the first month of the new quarter. The results of the command Self-Assessment will be documented in electronic enclosures and sent to the ISIC and retained by the 3MC for a period not less than one year. ISICs will track the results of the Self-Assessments and quarterly Health Status reports and perform regular validation to ensure commands are conducting a thorough Self-Assessment. The 3-M Inspection checklists contained in Appendix A-3 will be utilized and retained within the PMS Self-Assessment Program. Utilization of the TYCOM, ATG and 3-M Inspection Team members to assist the command is encouraged and should be requested. As the Self-Assessment senior member, the 3-M Manager will ensure that personnel performing the audits have adequate knowledge of 3-M practices and procedures to ensure a thorough review. The Commanding Officer will receive a formal briefing of the findings of the Self-Assessment and intended corrective actions. d NECC. 3-M Self-Assessments will be conducted at least once during the command's O-FRP, or once every 24 months where commands do not operate under an O-FRP. 3-M Self-Assessments will not be completed within two calendar months of a 3MA nor within four calendar months of a 3MI. Additional 3-M Self-

	Assessments may be conducted at the Commanding Officer's discretion, but are neither required nor reported to the TYCOM Maintenance Officer. 3-M Self-Assessment events are not limited to a set duration, but will have a set completion date when originally directed by the Commanding Officer. Commands must conduct a 3-M Self-Assessment within the first 90 days of deployment to a Remain in Place Table of Allowance (RIP/TOA) site. NECC 3-M Inspection checklists are contained in Appendix A-4. e. CNIF. Each command and subordinate command(s) must conduct a rigorous quarterly 3-M Self-Assessment. The 3-M checklists contained in Appendix A-5 will be utilized and retained for 12 months. In addition, MAR and SCAR percentages will be reported to CNIF no later than the 25th day of January, April, July and October. The Commanding Officer will receive a formal briefing of the findings of the Self-Assessment and intended corrective actions. f. CNIC. – TBD

35. Maintenance and Material Management

Self-Assessment Elements

Volume VI, Chapter 19; paragraph 19.13.3;

Added a new paragraph to comply with the 3M Requirements Maintenance Board.

Existing Words	New Words
	19.13.3 Self-Assessment Elements. The major program elements of a Self-Assessment include an evaluation of the PMS Performance Rate (PPR) and CSMP Validity, monitoring MRC performance (Monitored MRC), and conducting PMS Spot-Checks, Work Center Audits, and Deficiency Abatement. 3MCs will retain Monitored PMS, Spot Checks and Work Center Audits from the last completed quarter in either hard copy or digital format for review supporting the self-assessment. a. PMS Performance Rate. The PMS Performance Rate (PPR) is made up of the Maintenance Accomplishment Rate (MAR) multiplied by the Spot-Check Accomplishment Rating divided by 100. PPR=MAR X SCAR ~~/~~÷ 100 The MAR is comprised of the Periodic Accomplishment Rate (PAR) and Situational Accomplishment Rate (SAR) scores automatically generated from SKED. Surface Force PPR PPR = ((ACF AVG * MAR) * 20%) + (((ACF AVG + MAR) ~~/~~÷ 2) * 80%) b. CSMP Validity. The CSMP Validity factor is evaluated utilizing the check sheets provided via section IV (MDS) of the TYCOM's 3-M Inspection Appendix. c. Monitored MRC. Supervisory personnel must periodically monitor the performance of PMS to provide feedback and training to maintenance personnel and to enforce command maintenance standards. Personnel charged with monitoring must be SMEs for the system, equipment or component for which the MRC applies. LCPOs, LPOs or personnel with similar system knowledge are appropriate. Monitored checks can be used like OJT to teach the "right way" to conduct maintenance. These monitored MRCs will be documented as a monitored evolution and findings will be provided to the Work Center's Chain of Command for inclusion into training and deficiency abatement. The value of monitor maintenance cannot be overstated and commands are encouraged to establish a robust monitored maintenance program. d. PMS Spot Check. PMS Spot Checks are utilized to validate that previously scheduled and accomplished MRCs were actually performed and the degree to which they were performed. The checklist contained in each TYCOM specific Appendix, (A-1 – A-5) Section II, is the tool supervisory personnel utilize to determine the accomplishment status of a completed MRC. Deficiencies noted and the final grade will be provided to the Work Center's Chain of Command for abatement. The Work Center Supervisor will record the Spot Check grade into SKED to generate the Spot Check

Accomplishment Rating (SCAR) for the quarterly PMS Performance Report. Spot Checks will involve all elements of the Chain of Command to include the CO, Chief of the Boat, Command Master Chief, XO, 3MC, Department CPOs, DHs, DIVOs, Divisional CPOs, and first class petty officers. By following the checklist, the inspector can determine if the sailor is competent, the maintenance was accomplished, required TPMTE was available and used, and safety precautions were followed. The focus should be less on admin and more on the gear.

(1) Avoid Spot-Checks of MRCs with insufficient complexity. Performing a Spot-Check on a 3 or 5 step MRC does not provide the Chain of Command an accurate picture of the health of the command's maintenance program. Selected MRCs should be of sufficient content to provide the auditor with evidence of satisfactory performance (e.g. tag-outs, QA packages, parts required, off-hull reporting, test equipment, safety equipment, etc.).

(2) Spot-Checks evaluated as "below standards" will require immediate training and re-performance as determined by the 3-M Manager. Any –re-accomplishment of the MRC must be monitored by the LCPO to ensure noted deficiencies are not repeated.

(3) SURFOR Specific Spot Check Guidance. Each unit is required to have an aggressive spot check program involving all levels of the chain of command from the LPO to the CO. Individual MRs will be spot checked periodically to determine the effectiveness of PMS accomplishment and to ensure the maintenance was completely and correctly performed. All CPO and above will conduct historical or maintenance validation spot checks. All First Class Petty Officer (FCPO) will conduct Monitored maintenance spot checks. Work Centers will only perform one Khaki and one FCPO spot check weekly, except ER09. During the 3-M certification and recertification, PV, 3-M training events, historical spot checks, and maintenance validation spot checks will be assessed. Five percent of the total command spot checks will be maintenance validations during 3-M certification, 3-M recertification, and 3-M training events.

(4) SUBFOR's minimum number of Spot Checks or Monitored evolutions conducted per quarter will be based on Tables 19-9 and 19-10. Spot Checks and Monitored maintenance shall involve all elements of the chain of command to include the CO, Chief of the Boat, XO, 3MC, department chief petty officers, DHs, DIVOs, divisional chief petty officers, and first class petty officers. WCS Spot Checks/Monitors (E-5 & above) may be used to meet these requirements only when no LCPO/DIVO is available.

(5) Tables 19-3 through 19-8 represent the minimum number of Spot Checks per TYCOM. SUBFOR's tables reflect both Spot Checks and Monitored Checks.

(6) CNIF command 3MCs can request modification of the Spot Check matrix if it is believed that due to the size of the command and location of their Work Centers, they are unable to accomplish that requirement. Requests must be submitted in writing to CNIF 3-M staff (via Echelon IV 3MC if applicable) and include their proposed

	Spot Check matrix for review. If approved by CNIF, the command 3MC will retain a copy of the request approval. (7) NECC Command 3MCs can request modification of the Spot Check matrix due to the amount of PMS completed by a Work Center. Requests must be submitted in writing to their Echelon IV with copy to NECC N43. The request must include the reason and their proposed Spot Check matrix. If approved, the command 3MC will retain a copy of the request approval.

Work Center Audits

Volume VI, Chapter 19; paragraph 19.13.4;

Added a new paragraph identifying the need for audits.

Existing Words	New Words
	19.13.4 Work Center Audits. Each Work Center must receive an audit once per quarter by a supervisory individual, (E7) or above. For NECC, the individual will be E6 or above and must be qualified at 3-M 304. Deficiencies noted from this audit will be reported to the Work Center's Chain of Command for abatement. The 3MC will report recurring deficiencies to the Executive Officer for further investigation and corrective action.

Deficiency Abatements

Volume VI, Chapter 19; paragraph 19.13.5;

Added a new paragraph concerning deficiency abatements.

Existing Words	New Words
	19.13.5 Deficiency Abatement. The status of discovered deficiencies will be kept current within the monitoring program. Recurring deficiencies must be reported to the 3-M Manager for further investigation and corrective action. Deficiencies that have been reported as corrected will be subject to follow up monitoring to ensure corrective action was effective and results of the follow up monitoring will be reported to the 3-M Manager. The ship's 3-M Abatement Program will include the previous quarter's audits (4 quarters for NECC), Spot-Checks, Monitored evolutions and CSMP validity audits noting trends and corrective actions.

36. Submarine Message Reporting Submarine Force Only

Commanding Officer Responsibilities

Volume VI, Chapter 40; paragraph 40.5.3;

Volume VI, Chapter 40; Appendix A;

Volume VI, Chapter 40; Appendix C;

Added a requirement to include the ship's Job Sequence Number to all Technical Assistance Requests.

Existing Words	New Words
40.5.3 Ship's Commanding Officer. a. (SUBS) messages initiated by the ship shall be tracked by the ship until closeout. b. Responses to technical assistance (SUBS) messages shall be answered as soon as the troubleshooting efforts have results. If requested troubleshooting efforts are not accomplished due to ship's operations or lack of test equipment, generate a (SUBS) message containing efforts taken, results, effect on ship and any further assistance needed. c. When requesting onboard technical assistance, Chapter 2 of this volume, Fleet Technical Assistance, shall be used as guidance. d. Issue a (SUBS) message to identify the installation and removal of TEMPALTs and SHIPALTs.	40.5.3 Ship's Commanding Officer. a. (SUBS) messages initiated by the ship ~~shall~~must be tracked by the ship until closeout. b. All technical assistance (SUBS) requests must include the Ship's job sequence number (JSN). c~~b~~. Responses to technical assistance (SUBS) messages ~~shall~~must be answered as soon as the troubleshooting efforts have results. If requested troubleshooting efforts are not accomplished due to ship's operations or lack of test equipment, generate a (SUBS) message containing efforts taken, results, effect on ship and any further assistance needed. d~~c~~. When requesting onboard technical assistance, Chapter 2 of this volume, Fleet Technical Assistance, ~~shall~~must be used as guidance. e~~d~~. Issue a (SUBS) message to identify the installation and removal of TEMPALTs and SHIPALTs.

37. Maintenance and Project Tean
Submarine Force Only

Government Availability Planning Manager

Volume VI, Chapter 41; paragraph 41.3.16;

Existing Words	New Words
.	41.3.16 Government Availability Planning Manager (GAPM). (Surface Force Ships only) a. Accountable: **(1)** Coordinates with PM, Planning Floor, Contracts, Engineering, and Quality Assurance Departments to oversee, monitor and develop executable depot level Work Packages. **(2)** Monitors performance of the Planning Floor. b. Responsibilities: **(1)** Provides coordination and oversight of planning, estimating, and work specification development. **(2)** Ensures depot level Work Package development adheres to current business rules; maintenance, modernization and contracting strategies; incorporates lessons learned; and meets planning milestones to support on-time contract solicitation. **(3)** Monitors and coordinates advance planning of maintenance and modernization activities to ensure availability planning milestones are met. **(4)** Reviews authorized Work Notifications and advises the Maintenance Team of deficiencies. **(5)** Coordinates the development of grouping strategy for authorized work. (6) Coordinates ship checks per Volume II, Part I, Chapter 2 of this manual. **(7)** Reviews Work Specifications to ensure completeness and conformance with authorized work. **(8)** Reviews Work Specifications and depot level Work Package development processes to ensure compliance with regulations, directives, instructions, and policies. **(9)** Ensures Work Specifications are developed using NAVSEA Standard Items and Master Specification Catalog templates per Volume II, Part II, Chapter 2 of this manual. **(10)** Continuous liaison with customers, Project Team, and Ship's Force Representatives. **(11)** Coordinates with PM to submit depot level Work Packages to the procurement activity for solicitation. **(12)** Monitors and supports contract award. **(13)** Participates in advance planning meetings to include but not limited to: C+21, Life Cycle Planning Conference, mid-cycle reviews, IPTD events and scoping conferences.

	(14) Reviews and provides recommendations concerning availability planning milestones. **(15)** Monitors availability planning milestones and verifies documentation within NMD. **(16)** Monitors, assigns and reviews adjudication of Planning Contractor Furnished Report (CFR). **(17)** Monitors technical adjudication and incorporation of Engineering Service Requests. **(18)** Monitors identification and ordering of GFM (LLTM, Push, Kitted) for maintenance and modernization. **(19)** Assists in availability risk assessment. **(20)** Assists with the planning of new work. **(21)** Incorporates Lessons Learned with feedback to the Planning Floors and Maintenance Teams related to depot level Work Specifications and planning processes. (22) Assists Contracting Officer's Representative by serving as a Technical Point of Contact (TPOC).

38. Volume VII

VOLUME VII

CONTRACTED SHIP MAINTENANCE

39. Contract Specification Development

Research, Data Gathering and Analysis

Volume VII, Chapter 4; paragraph 4.4.3;

Modified the paragraph to point out the advantages of researching past availabilities for lessons learned.

Existing Words	New Words
4.4.3 Research, Data Gathering and Analysis. Part of the first step frequently involves research and data gathering. In some instances, it may be necessary to essentially reverse the order of performance. The specification writer can best make that determination based on all attendant facts and circumstances. The specification writer should avoid believing that everything one needs to know to write a proper specification is readily available. a. In general, the best place to start in research and analysis is to determine if the Government has previously accomplished the same or similar work. This can be accomplished by coordinating with appropriate project and contracting officers and by checking with other activity planners. The Master Specification Catalog Maintenance Office maintains the database of master specifications for D-Level maintenance and another maintenance Automated Information System contains data for I-Level maintenance. Once previous work items are identified, a copy of the specification(s) should be obtained along with information regarding problems that may have arisen pertaining to the specification. Where sufficient information does not exist, the specification writer should not be hesitant to contact other agencies for information. For example, DoD may provide useful information pertaining to aerial photography. The Army Corps of Engineers or the Environmental Protection Agency may provide information on such subjects as disposal of hazardous waste.	4.4.3 Research, Data Gathering and Analysis. Part of the first step frequently involves research and data gathering. ~~In some instances, it may be necessary to essentially reverse the order of performance. The specification writer can best make that determination based on all attendant facts and circumstances.~~ The specification writer should avoid believing that everything one needs to know to write a proper specification is readily available. a. After reviewing the requirements of a brokered Work Notification (WN) the best place to start the research needed to support Work Item (WI) development is the Master Specification Catalog (MSC). MSC Templates are maintained by the Master Specification Catalog Maintenance Office, which ensures current technical (NAVSEA Standard Items) and contractual (Appendix 4E) standards are incorporated along with availability lessons learned. ~~In general, the best place to start in research and analysis is to determine if the Government has previously accomplished the same or similar work. This can be accomplished by coordinating with appropriate project and contracting officers and by checking with other activity planners. The Master Specification Catalog Maintenance Office maintains the database of master specifications for D-Level maintenance and another maintenance Automated Information System contains data for I-Level maintenance. Once previous work items are identified, a copy of the specification(s) should be obtained along with information regarding problems that may have arisen pertaining to the specification. Where sufficient information does not exist, the specification writer should not be hesitant to contact other agencies for information. For example, DoD may provide useful information pertaining to aerial photography. The Army Corps of Engineers or the Environmental Protection Agency may provide information on such subjects as disposal of hazardous waste.~~ b. If a MSC Template does not exist for the Expanded Ship Work Breakdown Structure (ESWBS) being addressed by a tasked WN, previously executed WIs for the same or similar work may be reviewed as a starting point. Investigate changes to the WI, by reviewing associated Request for Contract Change (RCC) and Contractor Furnished Reports (CFRs).

	c. Where sufficient information does not exist, the specification writer should not be hesitant to contact other agencies for information (e.g. Army Corps of Engineers, Environmental Protection Agency)

Planning Review

Volume VII, Chapter 4; paragraph 4.7.c;

Modified the sub-paragraph to align with NAVSEA02 Standard Component Contract Clause HQ C-2-0051.

Existing Words	New Words
4.7.c. All necessary drawings and instructions are referenced.	4.7.c. All necessary drawings and instructions are referenced. All Zero-tier references ~~shall~~must be listed in paragraph two and called out in paragraph three, these are mandatory for use by the contractor. First-tier references that are cited within Work Item zero-tier references are mandatory for use by the contractor. All lower-tier references ~~shall~~must be used for guidance only. If those lower-tier references are needed for Work Item accomplishment, they ~~shall~~must be listed in paragraph two and called out in paragraph three of the Work Item. Only references required to accomplish the requirements of the Work Item should be listed.

40. Cost Estimating

Funds Administrators and Funds Managers

Volume VII, Chapter 6; paragraph 6.5.3;

Modified the paragraph to clarify the difference between a Fund Administrator and a Fund Manager.

Existing Words	New Words
6.5.3 Fund Administrators/Funds Managers. Individuals who are delegated authority in writing by the CO to authorize, commit, obligate and expend specific funds related to a specified authority and responsibility are agents of the Comptroller. These individuals provide technical input to financial management and can be held accountable and personally liable for over-commitment, over-obligation or over-expenditure of the funds administered. a. Any individual who is duly authorized by the CO as a Funds Administrator will familiarize themselves with the policies directives that are outlined in paragraph 6.3 of this chapter. In particular: (1) Clearly understand the statutory responsibilities inherent in the administration of funds, including the provisions of the Administrative Control of Funds addressed in reference (h) and (i), Appendix A. (2) Be informed of principles concerning the administration of the appropriations as contained in reference (i), Chapter 2. (3) Understand the administration of allotments and operating budgets as contained in reference (i), Chapter 3, reference (j) and the principles and procedures concerning the use of various requests for work and services contained in reference (k). b. Funds Administrators will manage the funds, in whole or in part, as specified by the Comptroller and that have been allocated to individual projects in accordance with the delegated authority for the CO. c. Duly authorized individuals are required to request additional funds from the grantor of funds. Likewise, the individual will advise	6.5.3 Funds Administrators~~/~~ and Funds Managers. a. Funds Administrators~~Individuals who~~ are delegated authority in writing by the CO to authorize, commit, obligate and expend specific funds related to a specified authority, as ~~and responsibility are~~ agents of the Comptroller Department. These individuals provide technical input to financial management and can be held accountable and personally liable for over-commitment, over-obligation or over-expenditure of the funds administered. ~~a.~~ Any individual who is duly authorized by the CO as a Funds Administrator will familiarize themselves with the policies directives that are outlined in paragraph 6.3 of this chapter. In particular: (1) Clearly understand the statutory responsibilities inherent in the administration of funds, including the provisions of the Administrative Control of Funds addressed in reference (h) and (i), Appendix A. (2) Be informed of principles concerning the administration of the appropriations as contained in reference (i), Chapter 2. (3) Understand the administration of allotments and operating budgets as contained in reference (i), Chapter 3, reference (j) and the principles and procedures concerning the use of various requests for work and services contained in reference (k). b. Funds Administrators are designated in writing by the CO to~~will~~ manage the funds, in whole or in part, as specified by the Comptroller and that have been allocated to individual project. ~~s in accordance with the delegated authority for the CO.~~

the grantor of funds when funds in excess of requirements are available for recapture.	~~c.~~ ~~Duly~~ A~~a~~uthorized Funds Managers~~individuals~~ are required to request additional funds from the grantor of funds when needed. Likewise, Funds Managers~~the individual~~ will advise the grantor of funds when funds in excess of requirements are available for recapture.

41. Contract Administration Quality Assurance Program

Audits

Volume VII, Chapter 11; paragraph 11.5.3;

Added three new paragraphs defining Process, Vertical and Horizontal audits.

Existing Words	New Words
	11.5.3 Process Quality Audit. PQA is the CAQAP element used for verifying the contractor's product or process complies with contractual requirements. The term PQA may be used for either a vertical or horizontal quality audit.

Existing Words	New Words
	11.5.3.1 Vertical Quality Audit. Audit conducted on a particular product (e.g., a top to bottom audit of a fire pump overhaul). This audit is normally conducted by QA Specialist and may be assigned on the QMP or conducted on an as needed basis as a result of contractor performance issues.

Existing Words	New Words
	11.5.3.2 Horizontal Quality Audit. A horizontal audit conducted on a process (e.g., an audit conducted on blanking and tagging across the entire availability or ~~/~~contract). This audit is normally conducted by QA Specialist and may be assigned on the QMP or conducted on an as needed basis as a result of contractor performance issues.