# SOUTHWEST REGIONAL MAINTENANCE CENTER
# HULL MECHANICAL & ELECTRICAL SUPPORT SERVICES

## STATEMENT OF WORK

**BUSINESS SENSITIVE**

## 1.0 SCOPE

### 1.1 BACKGROUND

Southwest Regional Maintenance Center (SWRMC), as a Naval Sea Systems Command (NAVSEA) Regional Maintenance Center (RMC), has primary mission responsibilities to provide direct support to Type Commanders and their U.S. Navy fleet assets. SWRMC provides waterfront Fleet Technical Assistance (FTA), assessments, techniques, and training associated with the operation, installation, maintenance, repair, and readiness of shipboard equipment and systems. Using Information Technology (IT) and leveraging specialized experiences of the Command's personnel and contracting resources, SWRMC has implemented various programs to increase the reliability and maintainability of shipboard Hull, Mechanical, and Electrical (HM&E) systems. This process involves dedicated field technical support, enhanced availability planning, emergent systematic technical and repair assistance, automated maintenance techniques, and documentation and procedures in accordance with defined Navy maintenance philosophies and systematic program management oversight.

The Engineering Department's primary services include FTA, Assessment Events, and Contract Management Oversight (CMO) onboard U.S. Navy vessels whenever necessary during support of all functional areas of support. These functional area services are often referred to as SWRMC Engineering Department's Pillars of Support.

Fleet Technical Assistance (FTA) provides emergent technical guidance and training in response to ship's force requests for help with system and equipment troubleshooting to include fault isolation, root cause analysis, failed-part identification, logistical support, and systems restoration assistance. FTA is accomplished with ship's force via distance support or onsite. The personnel responding shall impart the maximum amount of technical support onboard maintenance training to ship's force personnel either on deck or in-classroom. The purpose of this training is to improve the Fleet's self-sufficiency and improve ship's force self-assessment capability.

FTA is defined by Joint Fleet Maintenance Manual (JFMM) Volume 6 Chapter 2 (ref. 2.4) as: training help for surface ships, aircraft carriers, submarines, and craft requests when they are unable to resolve equipment or software deficiencies using their own ship's resources or other means available within their Strike Group. Requests for these engineering services fall into the following categories: Type Availability Two (TA2) or Type Availability Three (TA3).

Type Availability Two (TA2) repairs for Intermediate Maintenance Activity (IMA) accomplishment which should be brokered to the IMA Production Department (C900) in accordance with their brokering rules. C200 can provide over the shoulder guidance to the IMA or to Ship's Force for shipboard capable repairs for training purposes. Type Availability Three (TA3) repairs for TYCOM Support Units and other types of TA3 support are identified in the JFMM Volume 6 Chapter 5 (ref. 2.4). Not all TA3 work is the responsibility of C200. There are also certain types of technical assistance that are not the responsibility of the Regional Maintenance Centers (RMC). JFMM Volume 6 Chapter 2 (ref. 2.4) identifies the exclusion areas the RMC is not responsible for.

An Assessment is an evaluation of the performance of equipment, systems, programs, or functions to a recognized standard. Material Readiness Assessments are defined by JFMM Volume 6 Chapter 42 (ref. 2.4) as: Assessment, Inspection and Certifications. Surface Assessments must be Common Assessment Procedures (CAP) obtained from Surface Maintenance Engineering, Planning Program (SURFMEPP).

The purpose of this maintenance training IAW JFMM Vol 6 Ch. 42 (ref. 2.4) is to improve Fleet self-sufficiency and ability of Ship's Force to improve self-assessment capabilities, via on deck or in-classroom training during the execution of Assessments. During Assessments, the support contractor documents the equipment as-found condition IAW assigned Integrated Class Maintenance Plan (ICMP), CAP, or Assessment Tasks. The support contractor also provides a report to the Branch Head and/or assigned Assessment Director upon completion of the Assessment.

Support during availabilities to include the planning, execution, and certification of work. This will include SWRMC Chief Engineer (CHENG) support to adjudicate Departures from Specification (DFSs) as defined in JFMM Volume 5 Part 1 Chapter 8 (ref. 2.4), utilizing the Electronic Departure from Specifications (EDFS) process, DFS SOP-200-008-21 (ref 2.38), and answering Engineering Services Requests (ESRs) using the ESR program SOP-200-029-12 (ref. 2.40).

SWRMC Engineering Department is broken into multiple Divisions, with each Division containing multiple Branches. The Engineering Department Divisions relevant to this contract are: Operations Management Division, Assessments Division, Engineering Support Division, Auxiliary Systems Division, Main Propulsion Division, and Submarine Division. The majority of the work is performed on Naval Bases in San Diego County, onboard ships and submarines homeported and visiting the Southwest region, and infrequently at locations around the world. The SWRMC Engineering Department Branches currently perform approximately 30,000 FTAs, assessments, and CMO jobs per year, with the possibility of that number to increase in future years as SWRMC Engineering Department is required to continue to support emerging requirements pending real world conflicts.

Each SWRMC Engineering Division is further divided into multiple Branches (see Table 1 – SWRMC Engineering Department Areas of Support for related areas of support), in which specific types of services are provided for U.S. Navy fleet assets. These Branches include: Operations Management Division – Engineering Administration Support, Technical Library, Distance Support Operations Center; Assessments Division – Assessments; Engineering Support Division –DDG/CG/DDG-1000 Class Project Support Engineer (PSE), LPD/LSD/LHA/LHD/LCS/CVN/FFG Class PSE, Integrated Test Engineer; Naval Architecture Division -
Naval Architecture Structures/Coating, Tanks/Voids/PCMS, Auxiliary Systems Division – Fire Fighting, Auxiliaries & Pollution Abatement, AC&R/Air Systems, Elevator Systems, Hydraulics; Main Propulsion & Electrical Division – Gas Turbine & Engine Controls, Electrical, Steam/Main Propulsion, Diesels; Submarine Division – Submarine Weapons, Submarine Fire Controls, Submarine Acoustics, Submarine Electronics.

| **OPERATIONS MANAGEMENT DIVISION** (Paragraph 3.3 ) | **ASSESSMENTS & ENGINEERING SUPPORT DIVISIONS** (Paragraph 3.4) | **NAVAL ARCHITECTURE DIVISION** (Paragraph 3.5 ) | **AUXILARY SYSTEMS DIVISION (C250)** (Paragraph 3.6) | **MAIN PROPULSION & ELECTRICAL DIVISION (C260)** (Paragraph 3.7 ) | **COMBAT SYSTEMS DIVISION (C270/C290)** (Paragraph 3.8 ) |
|---|---|---|---|---|---|
| C 205A Engineering Operation Office (3.3.1) | Assessments (C211) (3.4.1) | Naval Architecture, Docking (C241A) (3.5.1) | Fire Fighting, Auxiliaries & Pollution Abatement (C251) (3.6.1) | Gas Turbine & Engine Controls (C261) (3.7.1) | Submarines Weapons and Combat Controls, Submarine Acoustics, Submarine Communication Network, Navigation, Radars and Integrates Circuits, Submarine Towed Systems and Hull Mechanical & Electronical Support (HM&E) (C271 – C275) (3.8.1) |
| Materials Labe Certification 2M, METCAL/SYSCAL (C205B) (3.3.2) | DDG/CG/CVN/ARCO/LPD/LSD/LHA/LCS/DDG-1000 Class Project Support Engineer (PSE) Branches (3.4.2) | Coatings, Corrosion Control, & Passive Countermeasure System (C241B) (3.5.2) | AC&R/Air Systems (C252) (3.6.2) | Electrical (C262) (3.7.2) | Submarine TSRP Support (3.8.2) |
| Technical Library Management Branch (C205) (3.3.3) | Integrated Test Engineer Branch (C225) (3.4.3) | Ship Structures (C242A & B) (3.5.3) | Elevator Systems (C253) (3.6.3) | Main Propulsion (C263) (3.7.3) | Submarine ADP TSRA Support (3.8.3) |
| Distance Support Operations Center (DSOC) (C205D) (3.3.4) | | | Hydraulics and Piping (C254) (3.6.4) | Diesels (3.7.4) | Submarine Fleet Technical Support (FTS) (3.8.4) |
| | | | | Electrical Controls (C265) (3.7.5) | Submarine PDMA Support (3.8.5) |
| | | | | Steam & Propulsion Support Systems (C266) (3.7.6) | Waterfront Coordinator Support (3.8.6) |

**Table 1 – SWRMC Engineering Department Areas of Support**

## 1.2 MISSION AND VISION

**1.2.1** SWRMC Mission: We develop people to provide innovative solutions that keep our Fleet safe and combat ready.

**1.2.2** SWRMC Vision: *To be the Navy's premier provider of ship maintenance, repair and modernization for the Fleet.*

## 1.3 PURPOSE AND OBJECTIVE

**1.3.1** Provide forward-thinking, innovative, well-integrated, coordinated, and timely support that upholds SWRMC's mission and vision. The contractor shall provide a full range of technical services, maintenance, repair, and assessment execution and coordination expertise as support services throughout the SWRMC Engineering Department. The contractor support team shall align itself to support the Government requirements holders (i.e. SWRMC Engineering Department's Divisions and Branches) with the most cost-effective mix and number of contractor support personnel, utilizing an adaptable, flexible structure that is best suited to accomplishing both planned and emergent work in support of the U.S. Navy Pacific Fleet. The contractor support team shall be led by a progressive management team using continual process improvement to assist the Government requirements holders and Contracting Officer Representative (COR) with timely feedback and notification affecting contract execution as it relates to performance, schedule, cost, and regulatory compliance.

## 1.4 PLACE/TIME OF PERFORMANCE

**1.4.1** The place of performance for the majority of support under this contract shall be within the greater San Diego metropolitan area (50-mile radius) at SWRMC facilities and shipboard pier-side on Naval Base San Diego (NBSD), Naval Air Station North Island (NASNI), and Naval Base Point Loma (NBPL). Frequent support shall be required shipboard, underway in the southern California operating area. Some support shall require access to San Diego private contractor shipyards (including Master Ship Repair [MSR] facilities – NASSCO, BAE, Austal and Continental Marine San Diego Shipyard (CMSD)). It is also anticipated that the contractor may be required to travel to other CONUS and OCONUS ports and locations globally to support ship maintenance, repair, and assessments, when authorized. The Contractor personnel shall be able to support emergent (less than one week notice) and routine OCONUS travel requests (e.g. personnel have passport, complete country required training). Contractor personnel supporting activities and performance functions outside the United States shall register to the Synchronized Pre-Deployment & Operations Tracker (SPOT) application. The Contractor shall work assigned working hours based on planned Fleet events. Normal workdays at SWRMC are Monday through Friday, except U.S. Federal Holidays. The Contractor shall work eight (8) hours per day, 40 hours per week, with specific 8-hour weekday periods conforming to those of the requirement holders (typically 0700 to 1530). However, schedule shift and premium time may be required for extended weekday hours and weekend work, for which the Contractor shall be available to support. All premium hours and unusual shift work will be reviewed and approved by the SWRMC COR prior to hours being worked. Elective alternative schedules, work locations and shifts shall not be permitted without prior written concurrence from both Engineering Department management personnel and the COR. The contractor shall observe the established eleven (11) Federal holidays, unless overtime is required on those days.

## 1.5 SECURITY

**1.5.1** The work to be performed under this contract may at times require access to classified shipboard spaces and technical documentation, and the handling of, and generation of classified material. Therefore, Secret clearance eligibility is required. The contractor shall appoint a Security Officer who shall:

**1.5.1.1** Be responsible for all security aspects of the work performed under this contract; and

**1.5.1.2** Ensure compliance with all DoD and U.S. Navy regulations regarding security; and

**1.5.1.3** Ensure compliance with all written instructions provided by the cognizant Government security officers.

**1.5.2** Contract Security Classification Specification, DD Form 254, will be prepared by the Government and issued with the solicitation, with a final DD Form 254 prepared and issued with the awarded contract after approval by the SWRMC Security Office.

**1.5.3** The contractor shall submit visit requests and clearance information in accordance with DoDM 5220.32 Volume 1 National Industrial Security Program utilizing the instructions at https://www.navsea.navy.mil/Home/RMC/SWRMC/Visitors/ via the SWRMC Security Office.

**1.5.4** The contractor shall ensure all support contractor personnel are able to access Navy installations with a Common Access Card (CAC) within sixty (60) calendar days of contract award or date of hire. Any exceptions shall require written concurrence by both Engineering Department management personnel and the COR.

**1.5.5** Contractor employees must accomplish all training requirements as mandated by DOD, Navy, and SWRMC within the timeframe promulgated at the time of the training requirement. These requirements must be accomplished by all contractor employees, whether or not they possess a CAC or have access to NMCI/Navy computer-based training modules. The contractor must comply with changes and updates to training requirements by keeping support personnel in compliance with the most current instructions. Current training requirements include the following (subject to change):

Initial Orientation (Required once contractor checks in to SWRMC, One-Time Requirement)
DON Records Management (DOR-RM-010-1.2) (Yearly Requirement)
DOD Cyber Awareness Challenge (DOD-IAA-V16.0) (Yearly Requirement)
DON Annual Privacy Training (DOD-PRIV-1.0)
SWRMC Annual Security Refresher (Yearly Requirement)
NCIS Counter-Intelligence Awareness Briefing (Yearly Requirement)
Operation Security (Yearly Requirement)
DoD Mandatory Controlled Unclassified Information (CUI) (Yearly Requirement)
DON Derivative Classification (If SIPR is Required, Yearly Requirement)

**1.5.6** The contractor shall comply with the security directives used regarding the protection of Controlled Unclassified Information (CUI), DoDI 5200.48. The contractor may receive unclassified informational materials from the Government that are marked as CUI. This information is not authorized for release to the general public. Pertinent information is to be released only to contractor personnel who have a need to know for the purpose of contract execution or as directed by associated document markings or distribution statements. The contractor must take proper safeguards to ensure that any such material received will be properly protected from unauthorized or inadvertent disclosure. Decontrolling and releasing CUI records will be executed by the originator of the information, the original classification authority (OCA) if identified in a security classification guide, or designated offices for decontrolling CUI pursuant to the procedures for the review and release of information under the Freedom of Information Act (FOIA) in accordance with the November 19, 2018 Information Security Oversight Office (ISOO) Notice.

**1.5.7 OPERATIONS SECURITY**

**1.5.7.1** "Critical Information (CI) is an adversary's target of choice. Seemingly harmless UNCLASSIFIED data combined with other conversations, presentations, e-mails or documents could reveal classified information. Personnel will employ proper Operations Security (OPSEC) and protect Critical Information." DO NOT DISCUSS CRITICAL INFORMATION WITH PERSONS WHO DO NOT HAVE AN OFFICIAL "NEED TO KNOW"

**1.5.7.2** All contractor personnel assigned to this contract must adhere to and comply with applicable Operations Security (OPSEC) measures in accordance with DoD Manual 5205.02 DoD Operations Security (OPSEC) Program Manual. The Contractor shall protect critical information associated with this contract to prevent unauthorized disclosure. For a full list of SWRMC's Critical Information, see SWRMC Critical Information List, SWRMCNOTE 5510 of December 4, 2024.

**1.6 CACS, NMCI/IT SYSTEMS ACCESS/CONTRACTOR CHECK-IN/CHECK OUT**

**1.6.1** The Government will provide CACs, Navy/Marine Corps Intranet (NMCI) computer network, and information technology (IT) system/database access for support contractor personnel/positions requiring for the performance of duties under this contract. Contractor program management and FSO are responsible for notifying the Government COR and the Trusted Agent (TA) when a support contractor who has been issued a CAC leaves the company or transfers to another program/project. In the case of an employee no longer working for the company, the company shall ensure the CAC is turned in to the TA within two (2) working days of the employee's departure as part of the support contractor check-out process. The contractor shall ensure all support contractor personnel are checked-in and checked-out of the SWRMC Command by completing the Contractor Check-In/Check-Out Form provided by the COR. The contractor shall retain a copy and provide the completed original to the COR within one (1) week of support contractor check-in or check-out completion.

**1.6.2** The Contractor shall have the capability to interface and access, the Navy Marine Corps Intranet (NMCI), both via Nonsecure Internet Protocol Router Network (NIPRNet) and Secret Internet Protocol Router Network (SIPRNet), and Navy-operated web-based programs such as WINDCHILL, Model Based Product Support (MBPS),Technical Information Support (ATIS), Advanced Industrial Maintenance System (AMS), SWRMC Web Portal, Navy Maintenance Database (NMD), electronic Liaison Action Report (eLAR)(https://eforms.nslc.navy.mil/), Electronic Hazard Assessment Report (eHAR) (http://eforms.cslc.navy.mil/), Fleet Technical Support (FTS), Advanced Industrial Management for Regional Maintenance Centers (AIM4RMC), ASSIST (not an acronym; the official source for specifications and standards used by the Department of Defense), Configuration Data Managers Database – Open Architecture (CDMD-OA), Department of Defense Electronic Mall (DOD EMALL), Electronic Departure From Specification (EDFS) Program, Engineering Plan Files, Engineering Service Request Management (ESR), Enterprise Safety Applications Management System (ESAMS), Federal Logistics Data (FEDLOG), Federal Logistics Information System Web Search (WEBFLIS), General Services Administration (GSA) Advantage, IHS Haystack Gold Logistics Management System, iNAVSEA, iNavy, Industry Standards (ASTM, ISO, ANSI, or as called out in contractual Standard Items, Technical Manuals, or otherwise), Material Release Order (MRO) Tracker, Military Engineering Data Asset Locator System (MEDALS), Naval Logistics Technical Data (NAVLOGTD) Repository, Naval Sea Logistics Center (NSLC), audio and video enhanced technical assistance systems and SIPRNet email and online chat. Access to other systems, similar in function, may be deemed necessary as they evolve/become available (https://www.navsea.navy.mil/Home/Warfare-Centers/NSWC-Carderock/Resources/Technical-Information-Systems/Navy-XML-SGML-Repository/DTDs-Schemas/AMSEC-LLC-MPP/).

**1.6.3** The contractor and support contractors shall have email capability and the necessary connectivity to ensure constant communication ability with SWRMC. The contractor shall ensure that the corporate email application used is fully compatible with Microsoft Outlook (which is used by SWRMC personnel), in order to communicate and coordinate meetings and schedules. The contractor and support contractors shall have phone capability and the necessary connectivity to ensure constant communication ability with SWRMC. This includes the making of and receiving phone calls while outside of the office including while overseas supporting the SWRMC mission and the ability to transmit data to include photographs using methods approved by SWRMC IT department.

**1.6.4** Equipment such as laptops, will be stored in SWRMC buildings when not in use. Laptops may be required during travel and will be brought with employees for use if needed.

**1.7 MANDATORY TRAINING AND CERTIFICATIONS/LICENSES**

**1.7.1** The contractor shall accomplish/verify accomplishment and track all training requirements as mandated by DoD, DoN, and SWRMC by the due dates provided by SWRMC. Many of these mandatory training requirements are required to be accomplished by all support contractor personnel, whether or not they possess a CAC and have access to the NMCI network/Navy computer-based training modules. The contractor shall comply with changes and updates to training requirements when provided. The contractor shall accomplish/verify accomplishment of SWRMC Technical Authority Training (currently required every two years) for all support contractor personnel, coordinating training and testing with SWRMC Engineering Department. The contractor shall track completion of all mandatory and required training for all support contractor personnel. The contractor shall track and ensure all support contractor personnel possess current, valid certifications, qualifications, and licenses as required by the specific area of support identified in section 3.

**1.7.2** The contractor shall ensure all electrical workers and those in high risk trades (i.e. electricians and electrical workers, interior communications technicians, electronics technicians, etc.), as well as all personnel performing work onboard Naval vessels, obtain and maintain valid cardiopulmonary resuscitation (CPR) certification, in accordance with 29 CFR 1910, Occupational Safety and Health Standards for General Industry and 29 CFR 1915, Occupational Safety and Health Standards for Shipyard Employment (References 2.21 and 2.25).

**1.7.3** Support contractor personnel shall maintain current training, qualifications, and certification per DOD, NAVSEA, and equipment manufacturer's technical requirements, when required by specific area of support. The COR will provide updated training requirements in a timeframe which allows for the contractor to accomplish the requirements as they become available.

**1.7.4** Support contractor personnel shall be able to perform the listed duties for similar and future versions of the makes/models/sizes of shipboard equipment specified herein. The contractor shall obtain training and qualifications/certifications to work on new versions and current versions of equipment, when required. Support contractor personnel shall obtain required training and utilize new and future versions of computer applications that are required to perform listed duties.

**1.7.5** Prior to operating Government vehicles, support contractor personnel shall possess a valid driver's license and complete the following training courses: AAA Driver Improvement Course or Driving for Life Training, and Low Speed Vehicle Training. Documentation of course completion shall be provided to the Government, when requested. Support contractor personnel shall be able to operate Government-owned vehicles and equipment, to include vans and large trucks, and electric and gas "golf" carts.

**1.7.6** Contractor support personnel shall obtain any required training and follow all rules and regulations when required to utilize government purchased equipment to execute duties associated with execution of the requirements of this contract.
The contractor shall notify the COR and Government requirements holder immediately for any personnel who lose required certifications or qualifications.

**1.8 MANDATORY NUCLEAR AND SAFETY TRAINING**

**1.8.1** During the performance of this contract, all support contractor personnel that perform non-nuclear work on nuclear powered vessels must receive training in the areas delineated below prior to commencing work.

**1.8.2** For work exclusive of the propulsion plant and exclusive of nuclear spaces and systems aboard nuclear powered vessels as defined in NAVSEAINST C9210.4 (ref. 2.7), U.S. citizenship is required, as well as training in the following areas:

**1.8.2.1** Security requirements

**1.8.2.2** Mercury exclusion

**1.8.2.3** General ship safety and drill requirements

**1.8.2.4** Basic radiation awareness, control areas, and signs

**1.8.3** For work that may be near or bordering secondary containment boundaries or bordering spaces and systems defined in NAVSEAINST C9210.4 (ref. 2.7) training is required on secondary containment boundaries.

**1.8.4** Refresher training is required at least annually. Training records for support contractor personnel shall be maintained and made available to SWRMC upon request. Liaison with the cognizant ship's department (e.g., Reactor Department, Engineering Department, Repair Department) is required to determine if any additional specific training is required prior to start of work. Any additional training shall be completed prior to commencing work.

## 1.9 CYBER SECURITY

**1.9.1** Department of the Navy Information Technology (DON IT) is the collective term that encompasses all DON IT assets including, but not limited to: Information Systems (IS); applications; Operational Technology (OT); Platform IT (PIT); Industrial Control Systems (ICS); Supervisory Control and Data Acquisition (SCADA); Hull, Mechanical, and Electrical (HM&E) systems; Research, Development, Test, and Evaluation (RDT&E) Labs; IT products; IT services, Cloud Services; and any other IT asset. DON IT users include every Sailor, Marine, civilian, contract support personnel, or foreign national with approved access to DON IT. DON IT users must observe all policies and procedures governing the secure operation and authorized use of DON IT. DON IT resources are provided for official use and authorized purposes per DON CIO Acceptable Use Policy and Navy User Agreement Standard Mandatory Notice and Consent Provision.

### 1.9.2 CYBERSECURITY TRAINING

DON IT users must complete all required cybersecurity training prior to obtaining network access and yearly thereafter.

### 1.9.3 CYBERSPACE WORKFORCE (CWF)

The NAVSEA Cyberspace Workforce (CWF) consists of DON IT users – Military, Civilian, or Contract Support Personnel – who deliver cyber capabilities. All CWF personnel are required to obtain and maintain baseline and/or core certifications. Some higher education degrees might satisfy the CWF certification requirements.

**1.9.3.1** As per DoD 8570.01-M, Contractor personnel supporting IA functions in Chapters 3, 4, 10, and 11 shall obtain the appropriate DoD-approved IA baseline certification prior to being engaged. Contractors have up to 6 months to obtain the rest of the qualifications for their position outlined in AP3.T1. The contracting officer will ensure that contractor personnel are appropriately certified. Additional training on local or system procedures may be provided by the DoD organization receiving services (ref.2.54).

**1.9.4 Southwest Regional Maintenance Center (SWRMC)** may add DON, Service, and local cybersecurity policies, procedures, and training requirements. The contractor is responsible for maintaining contractor employee/user cybersecurity training compliance.

## 1.10 GOVERNMENT FURNISHED PROPERTY

There is a significant amount of Government Furnished Property (GFP) as Government Furnished Equipment (GFE) and Government Furnished Material (GFM) under this contract. The majority of this is diagnostic, test, alignment and analysis equipment in addition to tools and storage. The contractor shall be responsible for organizing, cleaning, keeping an accurate inventory of, and securing this GFP when utilizing it. The contractor shall ensure the use of this equipment/tools is in accordance with Job Hazard Analyses (JHAs) and per the manufacturers' designed use. Support contractor personnel shall maintain cleanliness of all equipment utilized, and shall immediately notify the cognizant Government requirements holder of any problems, issues, or malfunctions of Government equipment.

## 2.0 APPLICABLE GENERAL REFERENCES/DOCUMENTS AND ENCLOSURES

Various U.S. Navy, military and industrial technical documents, to include specifications, standards, handbooks, and technical manuals will be required to perform the duties described within this Statement of Work (SOW). The contractor shall ensure that the latest available versions of all documents are being utilized by verifying against the appropriate database, including ASSIST, MBPS and SSRAC websites. The ASSIST database can be accessed at https://assist.dla.mil/online/start/ , MBPS can be accessed at https://snap.navair.navy.mil/ , and the NAVSEA Standard Items can be accessed at https://www.navsea.navy.mil/Home/RMC/CNRMC/Our-Programs/SSRAC/ . Additionally, when required, the contractor shall coordinate with the COR or requirements holder in order to gain access to required documentation via the SWRMC Technical Library or other available resources. When technical documents are required from an original equipment manufacturer (OEM), the contractor shall coordinate with the COR or requirements holder, in order to gain access to the specific documents, and shall ensure that all proprietary rights are observed. The contractor shall maintain an accurate accounting of all regulations, specifications, and relevant documentation utilized in the performance of work under this contract. The responsibility to obtain and maintain the most current versions of the references specified within this SOW are solely those of the contractor.

The contractor shall comply with all applicable federal, state, and local laws, regulations, ordinances, and codes, in their entirety. Any reference to a specific portion of a federal, state, or local law, regulation, ordinance, or code shall not be construed to mean relief is provided from any other sections of the law, regulation, ordinance, or code.

**2.1** FEDERAL ACQUISITION REGULATION (FAR)

**2.2** DEFENSE FEDERAL ACQUISITION REGULATION SUPPLEMENT (DFARS)

**2.3** SWRMCINST 4200.5, POLICY ON PREVENTION OF UNAUTHORIZED COMMITMENTS

**2.4** COMUSFLTFORCOMINST 4790.3, JOINT FLEET MAINTENANCE MANUAL (JFMM)

**2.5** OPNAVINST 4790.4, SHIP'S MAINTENANCE AND MATERIAL MANAGEMENT (3-M) MANUAL

**2.6** NAVSEAINST 4790.8, SHIP'S MAINTENANCE AND MATERIAL MANAGEMENT (3-M) MANUAL

**2.7** NAVSEAINST C9210.4, CHANGES, REPAIR AND MAINTENANCE TO NUCLEAR POWERED SHIPS

**2.8** NAVSEAINST 5511.32, SAFEGUARDING OF NAVAL NUCLEAR PROPULSION INFORMATION (NNPI)

**2.9** NAVSEA STANDARD ITEMS 009-74

**2.10** SWRMCINST 5400.1, EXERCISE OF DELEGATED NAVSEA TECHNICAL AUTHORITY FOR THE SWRMC

**2.11** NAVEDTRA 43523-B, PERSONNEL QUALIFICATION STANDARD FOR QUALITY MAINTENANCE PROGRAM

**2.12** SWRMCINST 4790.9, COMMAND TAILORED PERSONNEL QUALIFICATIONS STANDARD FOR QUALITY MAINTENANCE PROGRAM (NAVEDTRA 43523-C)

**2.13** S0400-AD-URM-010/TUM, TAG-OUT USER MANUAL (TUM)

**2.14** OPNAVINST 3120.32, STANDARD ORGANIZATION AND REGULATIONS OF THE U.S. NAVY

**2.15** OPNAVINST 3500.39, OPERATIONAL RISK MANAGEMENT

**2.16** PUBLIC LAW 91-596, OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)

**2.17** DODD 4715.1E; ENVIRONMENTAL, SAFETY, AND OCCUPATIONAL HEALTH (ESOH)

**2.18** SWRMCINST 5100.8, SWRMC SAFETY AND OCCUPATIONAL HEALTH PROGRAM

**2.19** OSHA COOPERATIVE STATE PROGRAM (CSP) 03-01-003, POLICIES AND PROCEDURE MANUAL

**2.20** 29 CFR 1904, RECORDING AND REPORTING OCCUPATIONAL INJURIES AND ILLNESSES

**2.21** 29 CFR 1910, OCCUPATIONAL SAFETY AND HEALTH STANDARDS FOR GENERAL INDUSTRY

**2.22** 29 CFR 1910.38, EMERGENCY ACTION PLAN

**2.23** 29 CFR 1910.1200(E), HAZZARD COMMUNICATION PROGRA

**2.24** 29 CFR 1910.140 SUBPART D AND I, (OPNAVINSTR5100.23) FALL PROTECTION PROGRAM

**2.25** 29 CFR 1915, OCCUPATIONAL SAFETY AND HEALTH STANDARDS FOR SHIPYARD EMPLOYMENT

**2.26** 29 CFR 1915, SUBPART B, CONFINED AND ENCLOSED SPACES

**2.27** 29 CFR 1915.89, CONTROL OF HAZARDOUS ENERGY (LOTO)

**2.28** 29 CFR 1915.502, FIRE SAFETY PLAN

**2.29** 29 CFR 1910.132(D)(1)), HAZARD ANALYSIS

**2.30** CALIFORNIA TITLE 8, SECTION 3203(CAL-OSHA), INJURY ILLNESS PREVENTION PROGRAM

**2.31** CALIFORNIA TITLE 22, THE CALIFORNIA HEALTH AND SAFETY CODE

**2.32** OPNAVINST 5100.12, NAVY TRAFFIC SAFETY PROGRAM

**2.33** OPNAVINST 5090.1, ENVIRONMENTAL AND NATURAL RESOURCES PROGRAM MANUAL

**2.34** 42 USC 6901 ET SEQ., RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)

**2.35** 40 CFR 63, SUBPART
II NATIONAL EMISSION STANDARDS FOR SHIPBUILDING AND SHIP REPAIR

**2.36** 40 CFR 61 SUBPART M, NATIONAL EMISSION STANDARD FOR ASBESTOS

**2.37** SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT (APCD) RULES 361.141 – 361.150

**2.38** SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT (APCD) RULE 50, VISIBLE EMISSIONS

**2.39** SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT (APCD) RULE 67.6.1, COLD SOLVENT CLEANING AND STRIPPING OPERATIONS

**2.40** SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT (APCD) RULE 67.17, STORAGE OF MATERIALS CONTAINING VOLATILE ORGANIC COMPOUNDS (VOCS)

**2.41** SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT (APCD) RULE 67.18, MARINE COATING OPERATIONS

**2.42** SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT (APCD) RULE 67.21, ADHESIVE MATERIAL APPLICATION OPERATIONS

**2.43** SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT (APCD) RULE 66.1, MISCELLANEOUS SURFACE

**2.44** COATING OPERATIONS AND OTHER PROCESSES EMITTING VOLATILE ORGANIC COMPOUNDS COMMANDER NAVY REGION SOUTHWEST (CNRSW) STORM WATER BEST MANAGEMENT PRACTICES MANUAL

**2.45** SWRMCINST 5090.2C, OIL AND HAZARDOUS SUBSTANCE CONTINGENCY PLAN

**2.46** SWRMCINST 11240.3B, POLICY AND PROCEDURES FOR MANAGEMENT, MONITORING, AND UTILIZATION OF VEHICLES OF VEHICLES/SLOW MOVING VEHICLES/MATERIAL HANDLING EQUIPMENT (MHE)/BICYCLES

**2.47** SOP-200-008-21 DFS PROCESS

**2.48** SOP-200-012-6 TAVR PROCESS GUIDE

**2.49** SOP-200-029-12 ESR

**2.50** CNRMCINST 4700.5 GUIDANCE AND POLICY FOR SURFACE SHIP CRITICAL SYSTEMS AND OTHER WORK REQUIRING PROCESS CONTROL PROCEDURES (PCP) OR GOVERNMENT APPROVED TECHNICAL PROCEDURES

**2.51** CINCLANTFLTINST 4700.10 POLICIES AND PROCEDURES FOR FLEET TECHNICAL SUPPORT

**2.52** SWRMCINST 4713.1 AVAILABILITY AND CRITICAL SYSTEMS WORK CERTICICATION

**2.53** 8570.01-M, INFORMATION ASSURANCE WORKFORCE IMPROVEMENT PROGRAM

**2.54** JQR-27001-2025 JOB QULIFICATION REQUIREMENT

**2.55** 10-HOUR OSHA MARTIME INDUSTRY SAFETY AND HEALTH COURSE

**ENCLOSURE (1) –** SWRMC ENGINEERING SERVICES STATEMENT OF WORK (SOW) - LIST OF ACRONYMS AND ABBREVIATIONS

## 3.0 REQUIREMENTS

### 3.1 GENERAL REQUIREMENTS

**3.1.1** The contractor shall execute the scope of work in a manner that provides professional, high quality, timely and well-integrated support services while incorporating an optimal mix of skilled, qualified subject matter experts. Execute the work accurately, effectively, efficiently, and responsibly. Be professional in all communications and dealings, including with all internal and external customers. Support contractor personnel shall possess and practice good communications and customer relation skills to effectively interact with military and civilian customers. Support contractor personnel shall be skilled in communicating clearly and effectively, orally and in writing with people of various backgrounds and educational levels, and be capable of handling multiple tasks simultaneously.

**3.1.2** The contractor shall comply with and ensure that all support contractor personnel comply with Policy on Prevention of Unauthorized Commitments (ref 2.3), to prevent unauthorized commitments (UACs).

**3.1.3** The contractor shall support alternate working schedules, and overtime (OT) labor outside of normal working hours as defined in Paragraph 1.4, when required. All alternate working schedules and OT labor shall be concurred with by both Engineering Department management personnel and the COR prior to being worked. OT labor must be authorized in advance by the Branch Head in C200 via email or text with the COR. Then the COR is responsible for monitoring and controlling debits.

**3.1.4** The contractor shall verify that all reimbursable work (work for external commands outside of SWRMC) is on contract before work commences and charged to the correct line of accounting (LOA), to avoid commitment of potential UACs.

**3.1.5** The contractor shall comply with all NBSD and SWRMC instructions, policies, and rules.

**3.1.6** Support contractor personnel shall have excellent working knowledge of personal computers and automated data entry systems, with skills functioning in the Microsoft Windows and SharePoint environment and ability to prepare word processing, spreadsheet, and presentations utilizing Microsoft Word, Excel, PowerPoint, and Outlook.

**3.1.7** The Government will provide tools and equipment for the accomplishment of work (See GFP List, Attachment J-6). The contractor shall ensure all stored Government property utilized as part of executing work under this contract is kept secure and protected from environmental elements.

**3.1.8** The contractor shall provide and ensure protection from theft and environmental elements, for all Government-owned property, including the provided GFP.

**3.1.9** Support contractor personnel shall maintain tools, parts and equipment, including Test, Measurement, and Diagnostic Equipment (TMDE), according to Navy requirements, in a clean and orderly fashion at all times. Use these items as designed in the execution of work tasks. All tools, parts, and materials shall be within good working order and calibration.

**3.1.10** Support contractor personnel shall participate in ongoing Process Improvement events and projects to include: Rapid Improvement Events (RIEs), Just Do Its (JDIs), Improvement and Coaching Kata, Illuminate Think Shops, High Velocity Learning (HVL), 5S events as required, Command and Department Strategic Initiatives as well as support for Departmental process improvement data gathering and surveys when deemed appropriate for support contractor personnel by the Government. Additionally, support contractor personnel shall comply with and provide support for audits and inspections.

**3.1.11** Support contractor personnel shall ensure that Work Authorization Forms (WAFs) have been routed, and verify that affected systems are tagged out by ship's force prior to working on shipboard systems, equipment, and components in accordance with Reference 2.13, performing the tag-out process as the Repair Activity (RA), when required.

**3.1.12** Some tasks require support contractor personnel to work from ladders, scaffolding and platforms, and where system equipment is difficult to reach, requiring the need to stand, stoop, bend, kneel, climb, and work in tiring and uncomfortable positions. Some tasks require work in inclement weather and/or with high noise levels, and with exposure to oil, grease, dirt, and vibration. Some tasks require lifting 50 pounds and assisting with lifting more than 50 pounds (two people required), depending on specific area of support and equipment being worked on.

**3.1.13 Program Management:** The minimum requirements for program management of the contract are the following:

**3.1.13.1** For contractor program management personnel, the senior/main Program Manager (PM) shall obtain and maintain Project Management Professional (PMP) certification, and additional PM(s) under this contract shall obtain and maintain PMP or Certified Associate in Project Management (CAPM) certification (with PMP being the preferred certification). The contractor shall provide proof of certification to the Contracting Officer Representative within **ninety (90) calendar days** of contract award or of personnel replacement.

**3.1.13.2** The contractor shall transition and ramp up beginning immediately to have a minimum of **ninety percent (90%)** (on a per-branch basis) of the previously existing support contractor levels in place and fully functioning within **sixty (60) days** of contract award, and all support contractor positions that are in addition to those previously filled under the preceding contract filled within one hundred and twenty (120) calendar days of contract award. Backfilled support contractor positions shall be filled as quickly as possible (while ensuring qualified support is provided), within **forty-five (45) calendar days** of position vacancy start date. The contractor team shall align itself to support the Government workforce with an efficient use of personnel/labor-hours utilizing an effective mix of experience and technical expertise to provide an adaptable, flexible structure that is suited to accomplishing both planned and emergent work. Emphasis shall be placed on a team structure that maximizes productivity, efficiency, and accountability within the labor-hour estimates provided by the Government (see contract Section B).

**3.1.13.3** The contractor shall regularly discuss optimum manning recommendations and task distribution with Engineering Department management personnel and the COR. The contractor program management team and COR shall meet weekly to discuss support contractor personnel employment actions, contract action items and concerns, and other important contract-related items. The contractor shall provide an agenda of topics and issues to be discussed (see CDRLs). Contractor program management shall meet regularly (not less frequently than biweekly - every other week) with the Engineering Division Heads. Additionally, the contractor program management team

shall provide a quarterly presentation of key contract metrics and statuses to the COR, Engineering Division Heads, and Department Head (see CDRLs).

**3.1.13.4** The contractor shall be responsible for supervising, managing, and overseeing the activities of all of the support contractor personnel, as well as subcontractor efforts used in performance of this contract. Contractor program management responsibilities shall include all activities necessary to ensure the accomplishment of timely and effective support performed in accordance with the requirements contained in this SOW, to include ensuring appropriate company policies and procedures are in place to maintain a professional, competent and productive workforce. The contractor shall provide and enforce the following company policies applicable to all support contractor personnel: timekeeping policy, break and lunch policy, cell phone and Internet usage policy, and dress code policy.

**3.1.13.5** The contractor shall be responsible for all aspects of daily supervision of support contractor personnel, with SWRMC Engineering Department (as the Government requirements holder) setting work priorities. The contractor shall ensure that senior support contractor personnel onsite are knowledgeable and available to provide guidance to junior support contractor personnel. The contractor shall submit their planned management strategy and structure to meet this requirement as part of their proposal. The proposed management strategy and structure of the contractor awarded the contract may be invoked as a requirement of the contract.

**3.1.13.6** Contractor program management shall be readily accessible during SWRMC weekday business hours (specified in Paragraph 1.4), as well as after hours during times when support is actively being provided (e.g. overtime support), to ensure all requirements, including emergent and urgent, are met, and that support contractor personnel issues are addressed promptly. Contractor program management shall return telephone calls as soon as possible, but within a maximum of four (4) business hours; and email correspondence promptly, within one (1) business day.

**3.1.13.7** The contractor shall notify the COR and Government requirements holder, as soon as feasible, for any issues affecting contract performance that cannot be immediately resolved.

**3.1.14 Technical Support:** Technical support requirements and tasks for the contract are the following:

**3.1.14.1** Support contractor personnel shall be able to interpret, select, adopt, and apply engineering guidelines, principles, and practices to solve technical problems.

**3.1.14.2** Support contractor personnel shall provide assistance, training and technical subject matter expertise related to ship maintenance and repairs ships' force military personnel during FTA, assessments, and CMO events.

**3.1.14.3** Support contractor personnel shall provide assistance, training and technical subject matter expertise related to I-level ship maintenance and repairs to SWRMC civilian and military personnel.

**3.1.14.4** Support contractor personnel shall be able to perform normal visual, functional, and operational checks using the applicable equipment Maintenance Requirement Card (MRC).

**3.1.15 Departures From Specification Adjudication:** Support contractor personnel shall generate responses for departure from specification requests per (ref. 2.46) (SWRMC DFS SOP).

**3.1.16 Contract Management Oversight:** Support contractor personnel will complete task required in support of planning, execution, and certification of work per JFMM, Critical Work Instruction, Work Certification Instruction (refs 2.4, 2.49, and 2.50)

**3.1.16.1** Support contractor personnel shall utilize the Engineering Service Request program per ref 2.48 (SWRMC ESR SOP) when providing responses to inquiries from maintenance teams.

**3.1.16.2** Support contractor personnel shall generate responses for DFS requests per ref 2.46 (SWRMC DFS SOP) in support of work not being completed in accordance with specifications during ship availabilities.

**3.1.17 Fleet Technical Assistance:** Support contractor shall complete FTA per JFMM Volume 6 Chapter 2 (ref 2.4) for ship identified places mentioned in Section 1.4.1, providing technical guidance and system troubleshooting in support of ship's force conducting system adjustments and minor repairs.

**3.1.17.1 Assessments:** Support contractor personnel shall be able to conduct assessments, identifying deficiencies on shipboard equipment and systems in association with the Integrated Class Maintenance Plans (ICMP), Total Ship Readiness Assessments (TSRA), Type Commander (TYCOM) material inspections (TMI), and Board of Inspection and Survey (INSURV) assessments per JFMM Vol. 6 Ch. 42 (ref. 2.4).

**3.1.17.2** Support contractor personnel shall be able to support shipboard assessment/assistance/maintenance events (Total Ship Readiness Assessments (TSRAs) and Maintenance Assist Teams (MATs)), when required per reference JFMM Vol. 6 Ch. 42 (ref. 2.4). Assist in the inspection and functional checkout/demonstration of major shipboard systems and equipment, with responsibility for determining the material condition, state of operability, and identification of deficiencies. Augment Engineering Department personnel to conduct assessments and perform maintenance to include assisting and training ship's force personnel. All on-site support contractor personnel shall be capable and available to get underway with the ship in the performance of these duties when required.

**3.1.17.3** Support contractor personnel shall be able to provide debriefs and completed Material Assessment Findings (MAF) reports to the cognizant Assessment Director (AD) upon completion of Total Ship Readiness Assessment (TSRA) tasks.

**3.1.17.4** Support contractor personnel shall be able to provide debriefs and completed required deficiency data and reports to cognizant INSURV officer for INSURV inspections.

**3.1.18 JOB QUALIFICATION REQUIREMENTS (JQRS)**

**3.1.18.1** The JQR Program Consists of phased training utilizing a standard format that has specific on the job training/experiences, formal training, self-study and boarding requirements by system areas.

**3.1.18.2** Contractor personnel shall complete the applicable JQR for any system areas to which they are assigned by their branch. The Contractor shall report each employee's JQR status quarterly to the Branch Head or as requested.

**3.1.18.3** The contractor will maintain and report on a monthly basis the support contractor progress on JQRs.

**3.1.18.4** Upon completion of JQR requirements, the contractor will coordinate with C200 leadership to schedule required interviews with C200 leadership qualification board.

**3.2 SAFETY AND ENVIRONMENTAL REQUIREMENTS**

The contractor shall comply with SWRMC Environmental, Safety and Health (ESH) (ref 2.16 - 2.50). These requirements shall be incorporated into the Contractor's Safety and Health Program. The contractor shall support SWRMC Environmental Safety and Health (ESH) program in accordance with the Occupational Safety and Health Act (OSHA), local, state and federal environmental protection requirements, and SWRMC ESH instructions, SOP's and any other applicable guidance's.

**3.2.1 OCCUPATIONAL NEAR-MISHAP/INJURY/ILLNESS REPORTING AND DART RATE**

The contractor shall verbally report all near-mishaps, incidents, injuries, and illnesses of support personnel related to the performance of this contract to SWRMC ESH Department Management, Engineering Department Head and the COR immediately upon becoming aware of such an incident. An initial incident report utilizing the NAVSEA Standard Item 009-74 (ref. 2.9) form shall be provided to these same parties within eight (8) working hours of the incident. A final incident report of the same format, complete with root-cause analysis, shall be provided promptly after incident investigation has been completed.

**3.2.1.1** The contractor shall provide an OSHA 300A report initially and annually thereafter to the SWRMC ESH Department and the COR. The report shall include Total Case Incident Rate (TCIR); and Days Away, Restricted,

and Transfer (DART) rate data, along with hours worked for SWRMC during the annual period. The contractor shall provide their Calendar Year (CY) quarterly TCIR and Lost Time (LT) TCIR to SWRMC EHS office via the SWRMC COR representative.

**3.2.3 MISHAP PREVENTION AND ACCIDENT/INCIDENT INVESTIGATION**
The contractor shall participate in SWRMC mishap prevention programs and processes as they relate to support contractor personnel under this contract. The contractor shall support accident, incident, near-miss, and/or property damage critiques and investigations related to the performance of this contract, or when the contractor is witness to any accident, incident, near-miss, and/or property damage that SWRMC is critiquing and/or investigating. This includes interviews, support contractor personnel statements, photographs, and any other processes involved/included in the critique and/or investigation.

**3.2.4 OCCUPATIONAL INJURY/ILLNESS DOCUMENTATION**
The contractor shall maintain all records, documentation and reporting requirements associated with injuries and illnesses of contractor personnel related to the performance of this contract, as required by 29 CFR 1904 (ref. 2.20).

**3.2.4.1 Environmental Safety and Health Instruction**
The Contractor shall provide Contractor ESH instructions and/or written programs to SWRMC Contracting Officer Representative (COR) Department that includes but not limited to, upon request;

3.2.4.1.1 Control of Hazardous Energy (LOTO) (29CFR 1915.89)

3.2.4.1.2 Hazard Communication Program (29CFR 1910.1200(e))

3.2.4.1.3 Emergency Action Plan (29CFR 1910.38)

3.2.4.1.4 Injury Illness Prevention Program (Title 8, CCR section 3203) (CAL-OSHA)

3.2.4.1.5 Fall Protection program (29CFR 1910.140 subpart D and I) (OPNAVINSTR 5100.23)

3.2.4.1.6 Hazard Analysis (29CFR 1910.132(d)(1))

3.2.4.1.7 Confined and Enclosed spaces (29CFR 1915, subpart B)

3.2.4.1.8 Fire Safety Plan (29CFR 1915.502)

**3.2.5 JOB HAZARD ANALYSES, ERGONOMIC STUDY, AND INDUSTRIAL HYGIENE ANALYSIS**
The contractor shall conduct Job Hazard Analyses (JHAs) and monitoring for support personnel, to ensure sufficient protection protocols are being utilized for work tasks performed throughout the Engineering Department. This analysis/monitoring includes developing JHAs (or alternatively, the adoption, provided in writing, of specific or all SWRMC-approved JHAs). The contractor shall maintain a JHA tracking system, and shall verify all support personnel are trained on JHAs prior to any related job/task being accomplished. If any differences are noted between the contractor's and SWRMC's analyses/JHAs/instructions, the contractor shall contact the COR to request a joint review.

**3.2.6 EHS SUPPORT**
The contractor shall provide assistance to the SWRMC EHS program. The contractor shall participate in any EHS events, participate in self-inspections, conduct command EHS participation surveys, and promote employee involvement at SWRMC. The contractor shall participate in researching and developing opportunities to increase employee participation and awareness to support the EHS program. The contractor shall participate in EHS meetings within the department they are supporting and command EHS meetings to invigorate and sustain EHS within the SWRMC Command.

**3.2.7 TRAINING AND ESH PROGRAM MANAGEMENT**
The contractor shall ensure all contractor employees are trained to implement controls to mitigate the hazards

expected or potentially exposed too in performance of this contract. This training shall include applicable SWRMC instructions, operations and protocols.

**3.2.7.1 Fall Protection**; if contractor employees are working or expected to work in areas that are exposed to a fall hazard, the contractor shall have a fall protection program that conforms to the applicable regulatory requirements, to include a qualified fall protection competent person to analyze and develop a fall protection plan.

**3.2.7.2 Confined Space**; if contractor employees are working onboard vessels or any SWRMC buildings that their duties/task could include confined space entrance, the contractor shall ensure contractor employees' have general awareness confined space training. If contractor employees' will enter any confine space onboard a vessel, the contractor shall possess and maintain (to include current calibration) the equipment necessary to perform atmosphere testing and ensure their Competent Person (CP) (formerly known as SYCP) certifications are current in accordance with NAVSEA Standard Items 009-07. Contractor employees will not enter any shore side confined space without the necessary equipment, training and program as required by the applicable regulatory requirements. At no time shall contractor employees' utilize a confine space certification certified by SWRMC or a Marine Chemist Certification obtained by SWRMC or any other DOD command.

**3.2.7.3 Personal Protection Equipment (PPE)and Personal Flotation Devices (PFD)**; the contractor shall furnish all required PPE and PFD to contractor employees. Contractor employees' shall not acquire or utilize any SWRMC PPE, including but not limited to hard hats, safety glasses, respiratory protection, fall protection equipment, personal flotation devices or electrical protection gear. The contractor shall train all contractor employees' on proper usage and hazard capabilities associated with each PPE issued.

**3.2.7.4 Hazardous Material**; the contractor shall properly train their employees that use and/or are exposed to hazardous materials. The training shall include SWRMC Authorized User List (AUL) Safety Data Sheets (SDS) IAW SWRMC Instruction 5100.8 (series) and 29CFR1910.1200(E) Hazzard Communication Program.

**3.2.7.5 Training-** Within ninety (90) days of hire, each support contractor providing direct industrial support under this contract shall obtain and maintain training/qualifications in OSHA Maritime Safety Course (10-hour)(ref.2.55).

**3.2.8 REGULATORY COMPLIANCE**

The contractor shall comply with all applicable federal, state, and local laws, regulations, ordinances, and codes in their entirety. Any reference to a specific portion of a federal, state, or local law, regulation, ordinance, or code specified herein shall not be construed to mean that relief is provided from any other sections of the law, regulation, ordinance, or code.

**3.2.8.1** The contractor shall be responsible for cleanup of any spills and/or mitigation of hazards associated with the work being performed under this contract, in accordance with all applicable laws and regulations, to include Reference 2.44.

**3.2.8.2** The contractor shall be responsible for the cleanliness of the work area. All waste created by the contractor as a result of removals, modifications, and installations, as specified herein, shall be removed from the ship as required and at the end of each shift.

**3.2.8.3** The contractor shall consider all insulation material, flooring, and mastic to be asbestos containing material (ACM) unless it can be established by laboratory analysis or visual inspection of marking (red adhesive, red dyed cloth, stenciling, or affixed metal tag on lagging) that the material does not contain asbestos. This includes all reusable covers.

**3.2.8.4** The contractor shall take a representative sample of pipe lagging from each area requiring removal for submission to a laboratory holding a current National Voluntary Laboratory Accreditation Program (NVLAP) accreditation for testing. The contractor shall specify to the laboratory that it requires test results in no later than five (5) calendar days.

**3.2.8.5** The analysis of any waste requiring the services of a test laboratory (e.g., liquids, spent lagging, lagging pads, and insulation material) shall be performed by a laboratory certified by NVLAP, competent and equipped to conduct the specific type of analysis to be performed.

**3.2.8.6** All waste generated that is deemed non-hazardous after laboratory testing shall be removed from the pier daily and shall not be allowed to accumulate. Waste generated deemed hazardous shall be removed from the pier no later than the last day of the assigned performance period, not to exceed 90 days. All waste shall be properly and legally disposed of in accordance with all applicable federal, state, and local laws, regulations, ordinances and codes, including the requirements of Reference 2.44.

**3.2.8.7** All HAZWASTE and excluded recyclable materials shall be managed and disposed of per the applicable sections of References 2.31 and 2.34. Any process or machinery operated by the contractor shall comply with the visible emissions standard of Reference 2.37.

**3.3 OPERATIONS MANAGEMENT DIVISION**

**3.3.1 ENGINEERING OPERATIONS OFFICE(C205A)**
Responsible for providing program support and assistance throughout the Engineering Department to include; administrative, clerical support, record keeping, financial management, contract oversight, audit and inspection readiness, logistics, and human resources services. Also responsible for the Work Brokering of TA3 Fleet Technical Assistance requests, the administrative assignment of Engineering Services Requests and Departure from Specification Requests.

**3.3.1.2 PROCESS IMPORVEMENTS, METRICS, AND STRATEGIC PLANNING SUPPORT- The contractor must:**

**3.3.1.2.1** Develop metrics, format data, and interpret results for process improvement.

**3.3.1.2.2** Generate reports and department correspondence.

**3.3.1.2.3** Facilitate team events in support of strategic planning and process improvement.

**3.3.1.2.4** Provide support in accomplishment of Commander Navy Regional Maintenance Center (CNRMC) requirements.

**3.3.1.3 CHIEF ENGINEER SUPPOR**T- The contractor must:

**3.3.1.3.1** Assist the CHENG and the engineering management team with administrative tasks for ESRs, technical repair documents and actions required for the engineering department.

**3.3.1.3.2** Manage existing processes, develop new processes, and recommend improvements on a continuous basis for the CHENG, department head and division heads.

**3.3.1.3.3** Provide support of CNRMC requirements.

**3.3.1.3.4** Provide support of ESRs and PCPs.

**3.3.1.3.5** Coordinate Government requirements for DFS with D-Level and fleet DFSs requests.
**3.3.1.3.6** Review all DFSs, upon receipt of the request from the fleet TYCOM using the SWRMC ENG SOP and the Joint Fleet Maintenance Manual (JFMM) requirements.

**3.3.1.3.7** Interface with the TYCOM, Ship's Force, and Maintenance Team representatives when reviewing DFSs.

**3.3.1.3.8** Process all fleet (TYCOM/Ship) and SWRMC D-Level DFSs that require action from the SWRMC CHENG (the NAVSEA LTA). Processing includes reviewing and routing incoming DFSs to the appropriate technical code for assignment, by Branch Head.

**3.3.1.3.9** Monitor and track DFS responses to scheduled dates to assure timely responses to support ship operational requirements and/or key event needs for ship maintenance availabilities.

**3.3.1.3.10** Communicate on behalf of the CHENG to the Naval Sea Systems Command (NAVSEA) for DFSs needing responses to support ship operational requirements and/or key event needs for availability.

**3.3.1.3.11** Process evaluated DFSs prior to submitting to CHENG, Deputy CHENG or designated delegates for review.

**3.3.1.3.12** Provide status updates, reports, and metrics to the engineering department management of all DFSs.

**3.3.1.3.13** Capable of conducting training covering Departure-from-specification (JFFM) requirements, while understanding and conducting training on SWRMCs Engineering DFS SOP (ref 2.38) upholding SWRMC CHENG's Technical Authority policy.

**3.3.1.3.14** Contractor must attend Technical Authority Training within 90 days of onboarding and **every 2 years** thereafter, take and pass the mandatory test.

**3.3.1.3.15** Complete technical analysis of very large data sets in support of Availability Work Certification.

**3.3.1.3.16** Evaluate depot level ship repair NAVSEA Standard Item contractor deliverables utilizing analytical tools on a periodic basis (normally weekly).

**3.3.1.3.17** Evaluate risk and provide recommendations regarding incomplete work for CNO availabilities.

**3.3.1.3.18** Serve as lead integrator of locally developed analytical tools with NAVSEA programs.

**3.3.1.3.19** Developed proposed SSRAC changes to improve NSIs.

**3.3.1.4 TECHNICAL COMPLIANCE & AUDITS SUPPORT** - The contractor must:

**3.3.1.4.1** Conduct annual validation of IA controls to reflect accurate status of IA control testing and document to ensure all processes are being met, per CINCLANTFLTINST 4700.10 Policies and Procedures for Fleet Technical Support (ref. 2.52)

**3.3.2 Materials Labe Certification 2M, METCAL/SYSCAL (C205B)**
Responsible for the support of Field Calibration Activity (FCA)/ Standard Generic Calibration Procedures SGCP), Micro-miniature (2M) Laboratory certification programs, Joint Oil Analysis Program, Material Analysis Laboratory, Audit/monitoring and Certification other activities identified by NAVSEA and equipment for DON/DOD and Coast Guard facilities.

**3.3.2.1** Field Calibration Activity (FCA) / Standard General Calibration Procedures (SGCP) – The contractor must:

**3.3.2.1.2** Perform audits for JNACT and Oxygen Clean Programs at local and other Systems Commands (SYSCOMS) wherever they are conducted per International and National standards, NAVSEA, Fleet, and local directives and instructions. Ensure compliance with CINCPACFLTINST 4341.1 Fleet Technical Assistance Program paragraph 8.10 and COMFLTFORCOMINST 4790.3 Joint Fleet Maintenance Manual (JFMM), maintain certified instructor status and provide Divers Life Support Systems support for the Oxygen Clean Program.

**3.3.2.1.3** Provide calibration readiness reports and updates to the JNACT website.

**3.3.2.1.4** Prepare reports/letters for certification of sites inspected/audited (and for non-certification with corrections) that include a Certificate of Compliance and a Scope of Competency that had been verified during the onsite Audit. Conduct audits for Commercial Service Providers and Service Providers.

**3.3.2.1.5** Accomplish Oxygen Clean Inspections and Certification for Oxygen Clean Facilities to the requirements of COMNAVAIRPACTINST 4700.1 Naval Air Force Ship Material Manual
Maintain ISO 9000 Lead Auditor and Oxygen Clean Technician certifications, to include completing Navy Oxygen Clean Technical School within 1 year after reporting onboard.

**3.3.2.1.6** Evaluate Oxygen Clean Technicians proficiency and knowledge by administering written and practical examinations.

**3.3.2.1.7** Provide on-site assistance to fleet personnel in analyzing and resolving calibration issues.

**3.3.2.1.8** Conduct Calibration Capability Evaluations and Reviews.

**3.2.2.1.9** Coordinate requests for funding, schedule man-power and equipment required to investigate METCAL program discrepancies, and evaluate new metrology program requirements.

**3.2.2.1.10** Coordinate and schedule off-ship calibration or repair services for ships within their geographic area of responsibility.

**3.3.2.1.11** Maintain close liaison with the RMC/RCC shipboard calibration coordinators and the ISIC to prevent or resolve calibration scheduling and readiness problems.

**3.3.2.1.12** Ensure REGIONAL LOAN POOLS (RLPs) are established at the RMC to alleviate shipboard maintenance support shortfalls caused by a lack of shipboard GPETE due to calibration or repair requirements.

**3.3.2.1.13** Ensure RLPs include a wide variety of calibrated, Ready for Issue items stocked in sufficient quantity to ensure continuous availability.

**3.3.2.1.14** Only check out Pool items intended as short-term substitutes for unavailable shipboard items. Pool items may be checked out for ten working days; however, the RMC METCAL Coordinator may authorize an extension of the ten-day limit on a case basis.

**3.3.2.2 METCAL – Field Calibration Activity Support** – The contractor must:

**3.3.2.2.1** Provide on-site training to shipboard personnel in Pressure, Temperature, and Torque Calibration and the proper operation, care, and maintenance of Shipboard Gage Calibration Program test equipment. Update course material as calibration equipment and techniques change.

**3.3.2.2.2** Maintain knowledge and process repository for the Shipboard Gage Calibration Program, including extensive calibration standards, methods and techniques utilized in the calibration of Navy METCAL Program Test and Measurement Systems in addition to calibration laboratory requirements including procedures, equipment, facility requirements, environment, organization, management and documentation.

**3.3.2.2.3** Coordinate and conduct on site FCA certification inspections at Fleet and Shore activities.

**3.3.2.2.4** Maintain a Certification schedule for each FCA visit and provide Certification letters and Certificates to the customer and others required, and maintain a database of results of each visit.

**3.3.2.2.5** Track and manage the Shipboard Gauge Calibration Program Standards Loan Pool. Check out and sign in calibration standards from ships to support calibration and shipboard inspections.

**3.3.2.2.6** Track loan pool equipment, calibration periodicity and operational condition.

**3.3.2.2.7** Provide classroom training to shipboard personnel for Shipboard Gauge Calibration Program test equipment, including but not limited to “Difference Training” required by NAVSEA, with extensive knowledge of calibration standards, methods and techniques utilized in the calibration of Navy METCAL Program Test and Measurement Systems to support training.

**3.3.2.2.8** Update course material as calibration equipment and techniques change.

**3.3.2.3 Certification: NAVSEA IQP for SME conducting METCAL training.**

**3.3.2.4 OIL LAB – The contractor must:**

**3.2.2.4.1** Maintain Lab Operator Training, Certification per the Joint Oil Analysis Program Manual NAVAIR 17-15-50.1.

**3.2.2.4.2** Perform sample processing for special aeronautical, routine aeronautical, special non-aeronautical and routine non-aeronautical.

**3.2.2.4.3** Analyzes samples, evaluate results, input into a database and transmit recommendations to the customers.

**3.2.2.4.4** Provide immediate feedback once an adverse code has been determined.

**3.2.2.4.5** Provide monthly analysis to the JOAP Certification and Correlation Programs.

**3.2.2.4.6** Perform complete spectrometer standardization and daily standardization checks then submit results to correlation team by the 21sst of each month.

**3.2.2.4.7** Analyze oil in accordance with the NOAP and the JOAP requirements using Oil Analysis standards, methods, and techniques including Material Identification.

**3.2.2.4.8** Perform the following oil analysis tests: Particle, Viscosity, Spectrum analysis, water content and total acid.

**3.2.2.4.9** Perform oil analysis tests, including on lube oil and hydraulic oils used in aircraft and shipboard systems, then document results and provide reports to customers and others as required.

**3.2.2.4.10** Utilize proper methods for Material Identification, the Safety Data Sheet (SDS) system, handling of hazardous material, and update/document information as necessary.

**3.2.2.4.11** Successfully complete the Navy JOAP School within 1 year after reporting onboard.

**3.3.2.5 OIL LAB CERTIFATION:**

**3.3.2.5.1** CIN/CSE ID: A-491-0017 Defense Joint Oil Analysis Program Training (Physical Properties Testing)

**3.3.2.6 OIL LAB REFERENCES:**

**3.3.2.6.1** Joint Oil Analysis Program Manual NAVAIR 17-15-50.1

**3.3.2.7 Material Lab – The contractor must:**

**3.3.2.7.1** Be capable of providing services to include identification, characterization, testing, and evaluation of various materials and substances such as metallic alloys, etc.
**3.3.2.7.2** Provide material engineering guidance on projects and processes pertaining to materials and metallurgical processes.

**3.3.2.7.3** Be knowledgeable of lab test equipment and maintain laboratory equipment to ensure equipment contracts, servicing and calibration scheduling. This includes specialized certifications as required.

**3.3.2.7.4** Utilize the equipment to identify unknown material, issue a report to the customer and maintain a filing system for records.

**3.3.2.7.5** Be knowledgeable of and capable of performing Sensitization of 5000 series Aluminum testing per ASTM G67 requirements.

**3.3.2.7.6** Submit data results from ASTM G67 tests to approving authority semi-annually to maintain lab certification.

**3.3.2.7.7** Perform Non-Destructive testing on 5XXX series Aluminum utilizing a Degree of Sensitization Probe.

**3.3.2.7.8** Perform Spectro Analysis on Metals via Xray equipment, Florescence Spectrometer and Optical Emission Spectrometer for unknown material identification and material verification.

**3.3.2.7.9** Perform hardness test of various metals utilizing Brinell Hardness tester and Rockwell Hardness Tester.

**3.3.2.7.10** Coordinate with ships force to perform Silicon Aluminum Bronze testing on union nuts for high-pressure systems to include High Pressure Air, SCBA, Halon, Hydraulics, Steering, RAST, CPP and Anchor Handling, generate report and maintain a filing system for records.

**3.3.2.8 Material Lab Certifications:**

**3.3.2.8.1** Command Generic Martial Identity Examiner

**3.3.2.8.2** ARL QUANT'X EDXRF Qualification

**3.3.2.8.3** Generic Material Identity Test Inspector qualification

**3.3.2.8.4** Degree of Sensitization Probe Operator (Issued by ELECTRAWATCH)

**3.3.2.8.5** Analytical X-Ray Qualification

**3.3.2.9 Material Lab References**

**3.3.2.9.1** SWRMCINST 4790.9D Quality Maintenance Program Personnel Qualification Standards (NAVETRA 43525-B)

**3.3.2.9.2** B. SWRMCINST 5100.7E Radiation Safety Program

**3.3.2.9.3** C. ThermoFisher Scientific ARL QUANT'X EDXRD Training Course

**3.3.2.9.4** D. ASTM G67-18- determining the susceptibility to intergranular Corrosion of 5XXX Series Aluminum Alloys by Mass Loss After Exposure to Nitric Acid (NAMLT Test).

**3.3.2.9.5** PMS 407/031-Memorandum of Understanding (MOU) Between Commander Navy Regional Maintenance Center and Major program Manager, Surface Ship Modernization.

**3.3.2.9.6** 0001-DCM-07072014 revision H - Degree of Sensitization Probe Manual

**3.3.2.9.7** PSE 5216 Memorandum Of Agreement (MOA)Between Southwest Regional Maintenance Center (SWRMC) Code 205B Metals Laboratory and Codes 221/222 Project Support Engineer (PSE), Code 243 Firefighting, Code 252 Air Systems and Code 254 Hydraulics.

**3.3.2.9.8** Brinell Hardness Tester Manual

**3.3.2.9.9** Rockwell Hardness Tester Manual

**3.3.2.10 Microminiature (2M) and MTR certification lab** – The contractor must:

**3.3.2.10.1** Perform inspections and certifications for 2M/MTR programs at local and other Systems Commands (SYSCOMS) wherever they are located per 2M/MTR Certification Manual, NAVSEA, Fleet, and other local instructions.

**3.3.2.10.2** Ensure compliance with NAVSEA TE000-AA-MAN-010/2M and COMFLTFORCOMINST 4790.3 Joint Fleet Maintenance Manual (JFMM).

**3.3.2.10.3** Provide readiness reports and updates to the 2M/MTR SharePoint website.

**3.3.2.10.4** Prepare reports/letters for certification of sites inspected that include a Certificate of Compliance and a Scope of Competency that had been verified during the on-site inspection.

**3.3.2.10.5** Maintains 2M/MTR recertifier and 2M/MTR inspector certifications, to include completing Navy 2M/MTR recertification course prior to reporting onboard.

**3.3.2.10.6** Provide on-site assistance to fleet personnel in analyzing and resolving 2M/MTR issues.

**3.3.2.10.7** Evaluate 2M/MTR technicians' proficiency and knowledge by administering written and practical examinations.

**3.3.2.10.8** Coordinate requests for funding, schedule man-power and equipment required to investigate 2M/MTR program discrepancies, and evaluate new 2M/MTR program requirements.

**3.3.2.11 Microminiature 2M/MTR Inspector**– The contractor must:

**3.3.2.11.1** Must have hold current Microminiature and MTR certifications.

**3.3.2.11.2** Must complete Navy training course A-100-0058 (2M/MTR technician Recertifier Course)and every 18 months complete Navy training course A-100-0144 (2M/MTR Technician Recertifier Requalification Course).

**3.3.2.11.3** Complete the 2M/MTR Inspector JQR (Appendix G) under the instruction of a currently certified 2M/MTR Fleet Coordinator or 2M/MTR Inspector.

**3.3.2.12 Microminiature 2M/MTR Fleet Coordinator**– The contractor must:

**3.3.2.12.1** Have Appointment of 2M/MTR Fleet Coordinators shall be coordinated with, and authorized by the NAVSEA 2M/MTR Program Manager.

**3.3.2.12.2** Have completed a previous tour as a 2M/MTR Inspector and/or 2M Instructor

**3.3.2.12.3** Hold current Microminiature and MTR certifications.

**3.3.2.12.4** Complete Navy training course A-100-0058 (2M/MTR technician Recertifier Course) and every 18 months complete Navy training course A-100-0144 (2M/MTR Technician Recertifier Requalification Course).

**3.3.2.12.5** Complete the 2M/MTR Inspector JQR (Appendix G) under the instruction of a currently certified 2M/MTR Fleet Coordinator or 2M/MTR Inspector.

**3.3.2.12.6** Satisfactorily perform 2M and MTR Technician recertifications, 2M/MTR Site certifications and 2M MTR Personnel and Site reporting procedures under the observation of both the 2M and MTR Certification Agents.

**3.3.2.12.7** Demonstrate proficiency by completing a 2M/MTR Repair Site or 2M/MTR Inspector Site certification under the observation of the 2M and MTR Certification Agents on an annual basis. This is our annual lab certification.

**3.3.2.13 Microminiature (2M) and MTR** certification lab references:

**3.3.2.13.1** NAVSEA TE000-AA-MAN-010/2M CERTIFICATION MANUAL FOR MINIATURE/MICROMINIATURE (2M) MODULE TEST AND REPAIR (MTR) PROGRAM ORGANIZATIONAL/INTERMEDIATE/DEPOT LEVEL COMFLTFORCOMINST 4790.3 Volume 6 Chapter 8, Joint Fleet Maintenance Manual (JFMM)

**3.3.2.13.2** NAVSEA SE004-AK-TRS-010/2M, STANDARD MAINTENANCE PRACTICES MINIATURE/MICROMINIATURE (2M) ELECTRONIC ASSEMBLY REPAIR ORGANIZATIONAL/INTERMEDIATE/DEPOT LEVEL

**3.3.2.13.3** NAVSEA INSTRUCTION 4790.17B, MINIATURE/MICROMINIATURE MODULE TEST AND REPAIR (2M/MTR) PROGRAM

**3.3.3 TECHNICAL LIBRARY MANAGEMENT BRANCH (C205)**

**3.3.3.1** Responsible for providing Technical Library functions to SWRMC. This branch is also responsible for providing and obtaining technical data maintenance research capabilities for purposes of researching, obtaining, producing, digitizing, staging and distributing accurate technical information for use by SWRMC and other designated customers. Plan Files is an extension of the technical library, they provide technical documentation and technical services for the Engineering Department, MSR/ABR/MSMO contract holders and all appropriate external government activities during the planning, procurement and administration of ship repair and modernization projects accomplished in the private sector.

The section researches, orders, receives, reproduces, scans, plots, stages and distributes technical drawings and documentation. Conducts research and liaisons with planning yards with regard to drawings and documents in various programs (e.g. Ship Drawing Indexes, JEDMICS/BIW). Provides the latest revision of all required technical documentation and ensures it is available when needed and integrated into all appropriate programs and systems to support all engineering and planning functions within the organization.

**3.3.3.2** The contractor must:

**3.3.3.2.1** Provide support to customers requesting drawings and technical documentation

**3.3.3.2.2** Obtain and maintain access to all applicable electronic databases associated with Technical Documentation including manuals, drawings and plan files

**3.3.3.3 TECHNICAL LIBRARY REFERENCES:**

3.3.3.1 SWRMC SOP 205C-082-4

**3.3.4 DISTANCE SUPPORT OPERATIONS CENTER (DSOC) (C205D)**

Responsible for oversight of the Distance Support Operation Center (DSOC) function and RERO. DSOC is staffed 24/7/365 to track CASREP's and urgent requests for technical assistance.

**3.3.4.1** The contractor must:

**3.3.4.2** Provide telephone, email and electronic support to customers requesting technical assistance by routing requests to applicable source of support providers 24/7.

**3.3.4.3** Track ship location and maintain accurate homeport list to supply to customers.

**3.3.4.4** Provide format review of and release Naval messages from SWRMC designated personnel to required recipients.

**3.3.4.5** Receive and organize incoming naval messages for SWRMC and make available to intended customers.

**3.3.4.6** Track and provide information on CASREPs, provide command distro with CASREP Tippers.

**3.3.4.7** Manage Engineering Department personnel muster during emergencies and training events, provide muster status to the command.

**3.3.4.8** Receive emergency notifications via call and email and distribute alerts to C200 personnel when required.

**3.3.4.9** Under GS supervision, maintain an open secret space IAW all instructions and requirements.

**3.3.4.10** Manage requests and scheduling of Regional Maintenance Operations Center (RMOC).

**3.3.4.11** Responsible for initial support and response to large scale events requiring stand up of command Casualty Assistance Team (CAT) and RMOC until CAT and Battle Watch Floor (BWF) take over large scale event duties.

**3.4 ASSESSMENTS AND ENGINEERING SUPPORT DIVISIONS**

**3.4.1 ASSESSMENTS (C211)**

**3.4.1.1 Additional Applicable Area of Support References:**

**3.4.1.1.1** CORPORATE INSTRUCTIONS (HIGH LEVEL GOVERNING SPECS)Joint Fleet Maintenance Manual (JFMM)

**3.4.1.1.2** COMFLTFORCOMINST 4790.3 Review Volume II, Part 1, CH 3 (Chief of Naval Operations Scheduled Maintenance Availabilities)

**3.4.1.1.3** Joint Fleet Maintenance Manual (JFMM) COMFLTFORCOMINST 4790.3 Review Volume VI, CH 41 (Maintenance Team)

**3.4.1.1.4** Joint Fleet Maintenance Manual (JFMM) COMFLTFORCOMINST 4790.3 Review Volume VI, CH 42 (Material Readiness Assessment)

**3.4.1.1.5** Joint Fleet Maintenance Manual (JFMM) COMFLTFORCOMINST 4790.3 Review Volume VI, CH 5 (Deficiency Documentation and Reporting)

**3.4.1.1.6** OPNAVINST 5100.23 (Navy Occupational Safety and Health (NAVOSH) Program Manual)

**3.4.1.1.7** OPNAVINST 5090.1 (Series) (Environmental and Natural Resources Program Manual)

**3.4.1.1.8** NAVSEA S0400-AD-URM-010/TUM (Tag-Out Users Manual)

**3.4.1.1.9** COMNAVSURFPAC/COMNAVSURFLANTINST 3502.3 (Series) (Surface Force Readiness Manual (SFRM))

**3.4.1.1.10** OPNAVINST 4790.4 (Series) (3M Maintenance Manual)

**3.4.1.1.11** CNRMC INSTRUCTION 4700.12 (Series) Certification of Work Conducted During Maintenance Availabilities

**3.4.1.1.12** CNRMC INSTRUCTION 4790.4 (Series) (Integrated Project Team Development (IPTD))

**3.4.1.1.13** COMNAVAIRFOR 9093.1 (Series) Aircraft Carrier Command, Control, Communications, Computers and Combat Systems Readiness Assessment (C5RA) Policy

**3.4.1.1.14** COMNAVSURFLANT 4700.1/COMNAVSURFPACINST 4700.1/CNRMCINST 4700.7 (Series) (Total Ship Readiness Assessment)

**3.4.1.1.15** CNRMC 4700.4 (Series) Assessment Director (AD) Role Based Desk Guide (RBDG)

**3.4.1.1.16** NAVSEAINST 5400.95 (Series)(Waterfront Engineering and Technical Authority Policy)

**3.4.1.1.17** OPNAVINST 9200.3 (Series) Operating Sequencing Systems

**3.4.1.1.18** CNRMC Job Certification Requirement

**3.4.1.2 Assessments:**

**3.4.1.3** Code 211 is responsible for support of overall operational objectives of the surface ship Total Ship Readiness Assessment (TSRA) events, aircraft carrier Combat Systems, Command, Control, Communications and Computers Readiness Assessments (C5RA) events, Board of Inspection and Survey (INSURV) Trials and Material Inspections (MI), Integrated Class Maintenance Plan (ICMP) assessments and other CNAP/CNSP directed inspection and assessment events aboard U.S. Naval ships and vessels.

**3.4.1.4** Support contractor personnel must complete and maintain all requirements of CNRMCINST 12410.1 Work Force Development Program.

**3.4.1.5** Support contractor personnel will attend the Availability Work Package (AWP) turnover at A-360 with SURFMEPP and TYCOM managers to ensure visibility of assessments and work with maintenance team and technical codes to allocate resources and schedule mandatory assessments IAW CNRMC 4700.4 (Series) Assessment Director (AD) Role Based Desk Guide (RBDG).

**3.4.1.6** The support contractor will also attend the A-240, A-145, A-30 and C+21 Integrated Project Team Development planning sessions to report on status of assessment events and assignment/completion of mandatory assessments CNRMC 4700.4 (Series) Assessment Director (AD) Role Based Desk Guide (RBDG).

**3.4.1.7** Support contractor personnel will update the Project Team on progress in meeting established milestones and deadlines for completion of assessments and ensures all team members are aware of and participate in planning for achievement of team goals and objectives.

**3.4.1.8 IAW CNRMC INSTRUCTION 4700.12 (Series) Certification of Work Conducted During Maintenance Availabilities, support contractor will:**

**3.4.1.8.1** At no later than 60 days prior to beginning of maintenance availability, provide a list of mandatory assessment tasks, the assigned subject matter expert (SME) and a schedule of tasks to the Integrated Test Engineer (ITE) for integration into the maintenance schedule. Provide all schedule changes to the ITE.

**3.4.1.8.2** Beginning at A-15, provide weekly assessment accomplishment status reports to the ship's Project Manager (PM) and Integrated Test Engineer (ITE). Notify the Project Team (PT) of any mandatory assessment tasks that are at risk for not getting accomplished during the maintenance avail.

**3.4.1.8.3** Certify that all assessments are completed for each respective Key event during the maintenance availability and that any on-going assessments do not impact Key Event readiness. Report exceptions to the ITE and PSE.

**3.4.1.9 IAW COMNAVSURFLANT 4700.1/COMNAVSURFPACINST 4700.1/CNRMCINST 4700.7 (Series) (Total Ship Readiness Assessment), support contractor will:**

**3.4.1.9.1** Prepare and provide to CNSP N43 and CNSP N6 proposed assessment event agenda 75 days prior to the event.

**3.4.1.9.2** Conduct a Pre-Visit Brief with ship's force and maintenance team four to five weeks prior to the scheduled assessment event.

**3.4.1.9.3** Prior to beginning of assessment event, develop assessment packages to be used by each Subject Matter Expert (SME) to include: Go-Assess 2Ks (GA2Ks), Ship Configuration and Logistics Support Information System (SCLSIS) data, existing CSMP shore file items, assessment procedures and blank material assessment forms.

**3.4.1.9.4** Draft and submit for review and release a Prerequisites and Expectations message at least five weeks prior to the beginning of the assessment event.

**3.4.1.9.5** Daily, Review quality and content of completed material assessment form submissions to ensure SMEs are providing sufficient detail to support Port Engineer review and first pass work item screening.

**3.4.1.9.6** Daily, during the assessment event, forward to CNSP N43 3M Coordinator all repair 2Ks.

**3.4.1.9.7** For all assessment events, conduct a formal out-brief with ship's Commanding Officer, Executive Officer, Chief Engineer and applicable Department Heads within five days of the completion of the assessment event.

**3.4.1.9.8** Complete and distribute to ship Commanding Officer a final completion report within 10 business days of the end of the assessment event.

**3.4.1.9.9** Draft and submit for review and release a Completion message within 10 days of the end of the assessment event.

**3.4.1.9.10** Upon completion of the event, collect required metrics and forward to CNSP N43, CNSP N6 and CNRMC.

**3.4.1.10 TSRA Visit Support Team**

**3.4.1.10.1** References:

**3.4.1.10.2** (a.) COMNAVSURFLANT 4700.1/COMNAVSURFPACINST 4700.1/CNRMCINST 4700.7 (Series) (Total Ship Readiness Assessment)

**3.4.1.10.3** (b.) Local SWRMC Data Entry SOP

**3.4.1.11 IAW Ref. (b.),** support contractor will build, operate and maintain the Discrepancy Documentation Tool (DDT) database and Report Writer, or their equivalents.

**3.4.1.12 IAW Ref (a.),** support contractor will assist the AD in processing the data received by SME Assessors, inputting the data into the DDT database and generating the reports necessary and required by the event AD.

**3.4.1.13** IAW Ref. (a.) and (b.), Prior to the TSRA event, the support contractor will:

**3.4.1.13.1** Designate a Visit Support Team Lead (TL) for the event.

**3.4.1.13.2** Upload CSMP files received from Assessment Director.

**3.4.1.13.3** Input Ships force work centers and personnel.

**3.4.1.13.4** Update SME Assessors to associated equipment as assigned in FTS.

**3.4.1.13.5** Update JSN sequencer in DDT IAW last used JSN for the previous event.

**3.4.1.13.6** Print TSRA Event books for inspectors.

**3.4.1.14** IAW Ref. (a.) and (b.), during the TSRA event, the support contractor will:

**3.4.1.14.1** Assign Primary and Secondary POCs for MAF's (2Kilo's) in the DDT database.

**3.4.1.14.2** Assign JCN to MAF's (2Kilo's) in the DDT database.

**3.4.1.14.3** Validate MAF's (2Kilos) requiring parts and update Parts Administration in DDT database.

**3.4.1.14.4** Complete end of day reports for the AD's and generate DDT backup.

**3.4.1.15 IAW Ref. (b.),** at the end of the TSRA event, the support contractor will assist the AD in generating the final report for dissemination.

**3.4.1.16 IAW Ref. (a.) and Ref. (b.),** outside of TSRA events, the support contractor will provide data entry support and logistical support for standalone ICMP tasks.

**3.4.1.17 Board of Inspection and Survey Technical Inspector Support:**

**3.4.1.17.1** References:

**3.4.1.17.1** (a.) CNRMC-INSURVINST 5040.1 – Technical Inspector (TI) Support Program

**3.4.1.17.2** The support contractor shall provide technical support to the Board of Inspection and Survey (INSURV) Material Inspections and Trial Events via SWRMC Assessments and INSURV Support Division for surface and submarine Navy assets. Ship underway dates are subject to change due to unforeseen circumstances. A reassessment of support of assigned Technical Inspectors (TI) may need to be considered based upon TI availability. Overtime may be required when providing support while the asset is underway. All overtime must be approved by the Contracting Officer and authorized by Contracting Officer's Representative.

**3.4.1.18 The support contractor will:**

**3.4.1.18.1** The contractor shall perform technical inspections in the areas of material, communications, navigation systems, electromagnetic interference (EMI)/intermodulation interference (IMI)/antenna, sonar systems, damage control systems, air conditioning and refrigeration (AC&R), and food service equipment, as well as providing subject matter expertise in PRISMS software, including:

**3.4.1.18.2** Perform normal visual, functional, and operational checks using the applicable equipment Maintenance Requirement Card (MRC).

**3.4.1.18.3** Identify equipment problems as soon as possible and report them to the cognizant INSURV Officer.

**3.4.1.18.4** Report equipment and/or component performance that is within MRC standards but is marginal. Ship's Force will be required to operate all equipment. Do not operate or work on the specified equipment.

**3.4.1.18.5** Provide a daily verbal debrief to the cognizant INSURV Officer. All technical information pertinent to the equipment shall be provided as requested by the cognizant INSURV Officer.

**3.4.1.18.6** Provide a copy of the final report for hull surveys, INSURV events and infrared surveys to the cognizant INSURV Officer at the conclusion of the visit.

**3.4.1.19 Required training, license, and certification (include ref. 3.1.16):**

**3.4.1.19.1** The contractor is responsible for the development and training of all support contractor employees (ref 2.51).

**3.4.1.19.2** The contractor will assign each employee a schedule for completion of the AD Job Certification Requirement (JCR). The support contractor must complete the CNRMC Job Certification Requirement (JCR) within two (2) years of assignment.

**3.4.1.19.3** The contractor is responsible for the development of training plans for support contractors. Upon approval by the C211 Branch Head and the COR, the contractor shall provide the necessary training to support contract employees to meet the JCR requirements.

**3.4.1.19.4** The contractor will maintain and report on a monthly basis the support contractor progress on JCR.

**3.4.1.19.5** Upon completion of all JCR requirements, the contractor will coordinate with C211 Branch Head to schedule the final interview with C200 leadership qualification board.

**3.4.2 DDG/CG/CVN/ARCO/LPD/LSD/LHA/LCS/DDG-1000 CLASS PROJECT SUPPORT ENGINEER (PSE) BRANCHES**

**3.4.2.1** Code 221 and 222 are responsible for support of planning, execution and closeout of various ship availabilities. General tasking and requirements specified in sections 3.1 and 3.2 apply in addition to the following specific requirements for this code. Per Ref. 3.4.2.2.1 and in support of Code 221/222, the contractor must:

**3.4.2.1.1** Provide project teams project engineering services in support of Chief of Naval Operations Availabilities (CNO), Emergent Availabilities (EM), Continuous Maintenance Availabilities (CMAV) and Window of Opportunities (WOO) per Ref. 3.4.2.2.1

**3.4.2.1.2** AVAILABILITY PLANNING SUPPORT- The contractor must provide support as the engineering representative in the planning process, including:

**3.4.2.1.2.1** Review the Third Party Planning (TPP) work specifications ensuring it matches the work notification and supports the desired scope of work aboard the ship. Provide comments into Naval Maintenance Database (NMD).

**3.4.2.1.2.2** Verify associated references are updated and applicable.

**3.4.2.1.2.3** Verify required (V), (I), and (G) point observations are correct.

**3.4.2.1.2.4** Verify inspection criteria for “acceptance” or “rejection” are listed in the work specification. Ensure final acceptance testing, documentation and reporting are addressed and appropriate to the level of work performed.

**3.4.2.1.2.5** Attend all pre-availability planning meetings – assuming a leading role in addressing technical issues and coordinating resolution of technical authority issues during the development of work specifications. Provide technical recommendations to the advance-planning manager.

**3.4.2.1.2.6** Work with Project Team/QAS to ensure accuracy of the QMP in accordance with ref. 3.4.2.2.7. Apply lessons learned from previous availabilities to assist with the assignments of technical PVIs.
**3.4.2.1.2.7** Ensure critical system work item specifications, as defined by ref 3.4.2.2.8, are reviewed by the appropriate technical code via the ESR process. Provide technical comments provided by the technical code to the maintenance team for incorporation.

**3.4.2.1.2.8** Ensure all work specifications involving critical systems and processes identified in CNRMCINST 4700.5D have a required Process Control Procedure (PCP). Provide a consolidated list of expected PCPs.

**3.4.2.1.2.9** Coordinating with the Port Engineer, verify that all DFSs set to expire during the availability are captured in a work specification for permanent repair. Coordinate with the Port Engineer and the ship to have the ship submit an extension request for expiring DFSs not being addressed during the availability.

**3.4.2.1.3 PROJECT ENGINEERING SUPPORT** for execution of Contracted Maintenance Availabilities—The contractor must provide support as the primary NSA point of contact for technical matters per Ref. 3.4.2.2.1, including:
**3.4.2.1.3.1** Serve as the SWRMC Engineering Department’s primary liaison between the Maintenance Team or Project Team and Engineering Department during Contracted Maintenance Availabilities. Will be required to be physically embedded with the project team during the specific maintenance availability.

**3.4.2.1.3.2** Attend all daily and weekly production meetings to be abreast of technical issues that arise and advise the Project Team in all technical matters concerning the repair and modernization of shipboard systems and equipment.

**3.4.2.1.3.3** Attend all SWRMC meetings to provide status updates and technical concerns and/or issues related to one's availability.

**3.4.2.1.3.4** Review all LMA submitted Conditions Found Reports (CFR), Requests for Contract Changes (RCC), and Reserved Task Requests (RTR) to ensure technical compliance with applicable specifications (NAVSEA drawings, technical manuals, MIL-STDs, etc).

**3.4.2.1.3.5** Initiate Engineering Service Requests (ESR) to document technical non-compliances per Ref. 3.4.2.2.1 and verify the proper technical authority adjudicates them per Ref. 3.4.2.2.1 and per Ref. 3.4.2.2.2

**3.4.2.1.3.6** Track and Answer ESRs to resolve questions, technical issues, and deviations originating during the maintenance availability. Ensure all technical responses are provided to the Project Team per Ref. 3.4.2.2.2.
**3.4.2.1.3.7** Schedule, coordinate and perform ship checks and/or meetings with Project Team and technical codes to resolve technical issues, questions, and deviations.

**3.4.2.1.3.8** Initiate Corrective Action Requests (CAR) when there is a failure by the LMA/Project Team to conform to contractual specifications or NAVSEA technical requirements accordance with ref 3.4.2.2.4.

**3.4.2.1.3.9** Ensure all deviations and waiver requests from contractual specifications and NAVSEA technical requirements are documented with an ESR, adjudicated by the appropriate technical authority, and a Departure from Specifications (DFS) is created in accordance with the ref 3.4.2.2.3.

**3.4.2.1.3.10** Develop weekly availability status report on engineering items of concern for SWRMC leadership and brief the report to upper management during weekly CNO availability briefs.

**3.4.2.1.3.11** Initiate Liaison Action Request (LAR) and forward to appropriate planning yard representative to document changes or questions to Naval Sea Systems Command (NAVSEA) installation drawings in accordance with ref 3.4.2.2.5.

**3.4.2.1.3.12** Serve as the Maintenance Team or Project Team contact for coordinating Fleet Tech Assists (FTA) associated with CASREPs or routine assistance. Ensure Tech Assist Visit Report (TAVR) documenting results of the FTA is provided to the ship and the MT.

**3.4.2.1.3.13** Conduct Surveillances in accordance with ref.3.4.2.2.4 and 3.4.2.2.7.

**3.4.2.1.3.14** The contractor must have the ability to travel CONUS and OCONUS to perform extended PSE duties.

**3.4.2.1.4 KEY EVENT CERTIFICATION SUPPORT** – The contractor must provide support to the availability work certification process for the following key events:

**3.4.2.1.4.1** Support for work certification process in accordance with ref 3.4.2.2.6 including:

**3.4.2.1.4.2** Physically walking the dry dock entirely and applicable spaces aboard ship and ensure 100% of dry dock related work is complete and technically correct in accordance with Ref. 3.4.2.2.1.
Attend assigned ship's undocking evolution as the engineering's representative and coordinate with applicable technical codes and engineering leadership for any technical issues that arise.

**3.4.2.1.4.3** Attend assigned ship's undocking evolution as the engineering's representative and coordinate with applicable technical codes and engineering leadership for any technical issues that arise.
**3.4.2.1.4.4** Assist the Integrated Test Engineer to review the Event Readiness List and develop a technical risk assessment of all outstanding work tied to the key event being certified.

**3.4.2.1.4.5** Verify all ESRs with potential impact to the key event are resolved by reviewing the ship's ESR database. Brief the status at the key event certification meetings.

**3.4.2.1.4.6** Verify all DFSs with potential impact to the key event are adjudicated per ref 3.4.2.2.3 by the appropriate technical authority (LTA, NAVSEA) per ref 3.4.2.2.19. Brief the status at the key event certification meetings.

**3.4.2.1.4.7** Verify all work associated with Process Control Procedures (PCP), and Approved Technical Procedures (ATP) satisfies the requirements per ref 3.4.2.2.8 to meet the key event. Brief the status at the key event certification meetings.

**3.4.2.1.4.8** Verify open fleet tech assists (FTA) and assessments do not impact the key event. Provide plan for FTAs and assessments that may impact the key event. Brief the status at the key event certification meetings.

**3.4.2.1.4.9** Verify all A-branded tasks applicable to the key event are completed or deferred per ref 3.4.2.2.12, 3.4.2.2.13, 3.2.2.2, and 3.2.2.20. Brief the status at the key event certification meetings.

**3.4.2.1.4.10** Attend all key event pre-certification and certification meetings and provide status updates on key event certification.

**3.4.2.1.4.11** Support all critical system incremental work certification processes for work conducted outside availabilities that utilize availability work certification process in accordance with ref 3.4.2.2.6.
**3.4.2.1.4.12** Required Training, License, and Certification:

**3.4.2.1.4.13** The contractor is responsible for the development and training of all support contractor employees including training requirements IAW the Navy Occupational Safety and Health (NAVOSH) program per ref 3.4.2.2.14, Tag-Out Users' Manual per ref 3.4.2.2.16, and 3M Maintenance Manual per ref 3.4.2.2.17.

**3.4.2.1.4.14** The contractor will assign each employee a schedule for completion of the PSE Job Certification Requirement (JCR), ref 3.4.2.2.9. The support contractor must complete the CNRMC Job Certification Requirement (JCR) within two (2) years of assignment.

**3.4.2.1.4.15** The contractor is responsible for the development of training plans for support contractors. Upon approval by the C221/C222 Branch Head and the COR, the contractor shall provide the necessary training to support contract employees to meet the JCR requirements.

**3.4.2.1.4.16** The contractor will maintain and report on a monthly basis the support contractor progress on JCR.

**3.4.2.1.4.17** Upon completion of all JCR requirements, the contractor will coordinate with C221/C222 Branch Head to schedule the final interview with C200 leadership qualification board.

**3.4.2.2 References:**

**3.4.2.2.1** PSE Role Based Desk Guide, February 2013

**3.4.2.2.2** ESR SOP 200-029-12

**3.4.2.2.3** DFS SOP 200-008-21

**3.4.2.2.4** SWRMC M-4855.1, Contract Administration Quality Assurance Program

**3.4.2.2.5** LAR SOP 200-052-0

**3.4.2.2.6** SWRMCINST 4713.1C, Availability Work Certification Instruction

**3.4.2.2.7** CNRMCINST 4700.9D, Availability Quality Management Plan(QMP) Standard Operating Procedure (SOP)

**3.4.2.2.8** CNRMCINST 4700.5D, Guidance and Policy for Surface Ship Critical Systems and Other Work Requiring PCPs

**3.4.2.2.9** CNRMC Job Certification Requirement of July 2024

**3.4.2.2.10** NAVSEAINST 4790.28, Risk Management for US Naval Ship Maintenance Availabilities

**3.4.2.2.11** COMNAVSURFPACINST 3504.1/COMNAVSURFLANTINST 3504.1, Redlines Implementing Instructions

**3.4.2.2.12** Joint Fleet Maintenance Manual (JFMM) COMFLTFORCOMINST 4790.3 Volume II, Part 1, CH 3 (Chief of Naval Operations Scheduled Maintenance Availabilities)

**3.4.2.2.13** Joint Fleet Maintenance Manual (JFMM) COMFLTFORCOMINST 4790.3 Review Volume VI, CH 41 (Maintenance Team)

**3.4.2.2.14** OPNAVINST 5100.23 (Navy Occupational Safety and Health (NAVOSH) Program Manual)

**3.4.2.2.15** OPNAVINST 5090.1 (Series) (Environmental and Natural Resources Program Manual)

**3.4.2.2.16** NAVSEA S0400-AD-URM-010/TUM (Tag-Out Users' Manual)

**3.4.2.2.17** OPNAVINST 4790.4 (Series) (3M Maintenance Manual)

**3.4.2.2.18** CNRMC INSTRUCTION 4790.4 (Series) (Integrated Project Team Development (IPTD))

**3.4.2.2.19** NAVSEAINST 5400.95 (Series)(Waterfront Engineering and Technical Authority Policy)

**3.4.2.2.20** SOP-200-095-0, A Branded Task Deferral Process

**3.4.2.3 ACRONYMS AND DEFINITIONS**

BAWP: Base Availability Work Package
CAM: Capabilities Manual
CHENG: Chief Engineer
CMAV: Continuous Maintenance Availabilities
CNO: Chief of Naval Operations
CWP: Control Work Package
EM: Emergent Availabilities
ESR: Engineering Service Request
ERL: Engineering Readiness List
FTA: Fleet Technical Assistance
FWP: Formal Work Package
IPTD: Integrated Project Team Development
ITE: Integrated Test Engineer
JCR: Job Certification Requirement
LMA: Lead Maintenance Activity
MMPR: Maintenance and Modernization Program Review
MP: Maintenance Procedure
MT: Maintenance Team
NSA: Naval Supervising Activity
NMD: Navy Maintenance Database
OQE: Objective Quality Evidence
PCD: Project Completion Date

PCP: Process Control Procedure
PM: Project Manager
PVI: Product Verification Inspection
QAS: Quality Assurance Specialist
MP: Quality Maintenance Plan
SME: Subject Matter Expert
TAAS: Tech Assist, Assessments, & Scheduling
TIP: Test Inspection Plan
TMDE: Test, Measurement, & Diagnostic Equipment
TME: Technical Matter Expert
WOO: Window of Opportunities

### 3.4.3 INTEGRATED TEST ENGINEER BRANCH (C225)

**3.4.3.1** SCOPE: Code 225 is responsible for the maintenance and management of a comprehensive Integrated Total Ship Test Plan (ITSTP) IAW NAVSEA Standard Item 009-067 for surface ship industrial availabilities where SWRMC is the Naval Supervising Activity (NSA). This branch is responsible for the review, identification and development of integrated testing as part of the CNO availability pre-planning process and the integration and facilitation of integrated testing of various ships' systems and equipment during the conduct and completion of CNO availabilities in support of the end of availability certification process. This branch also coordinates the SWRMC RMC Availability Work Completion Certification Documentation Process. General tasking and requirements specified in section 3.1 apply in addition to the following specific requirements for this code

**3.4.3.1.1 TEST ENGINEERING SUPPORT**—The contractor must provide support-processing NSA testing matters, including:

**3.4.3.1.1.1** Provide project teams test engineering support during CNO availabilities, EMs, CMAVs, and WOOs.

**3.4.3.1.1.2** The contractor must have the ability to travel CONUS and OCONUS to perform extended ITE duties.

**3.4.3.1.1.3** Evaluate and ensure information regarding test plans, test schedules and other test related documentation from the NSA project manager or other NSA representative is accurate and delivered to the LMA for integration into the ITP and ITS.

**3.4.3.1.1.4** Review schedule and testing information from all executing activities that may include Ship's Force, SWRMC I-Level Ship Superintendents, and AIT. Document and report deficiencies to the PT. Provide schedules to the LMA for inclusion into the ITS.

**3.4.3.1.1.5** Track the submission of all required information provided by the LMA per ref 3.4.3.1.4.1.

**3.4.3.1.1.6** The ITE will chair the weekly TSTTG meeting. Provide the PT with a weekly agenda to ensure all testing and scheduling areas are addressed per ref 3.4.3.1.4.1.

**3.4.3.1.1.7** Verify that test plans are functionally linked to the integrated production schedule per ref 3.4.3.1.4.2 and that changes in ITS and ITP are accurately reflected in one other. If test plans are not fully integrated report directly to the PM and C225 Branch Head

**3.4.3.1.1.8** Review and evaluate work specifications as requested by the NSA project manager based on technical risk and the quality management plan for the assigned availability.

**3.4.3.1.1.9** Review non-standard test procedures per ref 3.4.3.1.4.3 that are called out in a work specification. Report to the ITE supervisor all uncertain procedures.

**3.4.3.1.1.10** Verify that individual work to test relationships are accurately captured in the ITP.

**3.4.3.1.1.11** Coordinate with the NSA Project Manager to ensure the Integrated Test Plan, Integrated Production Schedule, and Availability Work Package correspond.

**3.4.3.1.1.12** Verify that the LMA's ITP includes all testing from all maintenance activities. Report inconsistencies to the PT during the weekly TSTTG meeting.

**3.4.3.1.1.13** Upon receipt evaluate the TSNs provided by each non-LMA maintenance activity prior to submission to the LMA.

**3.4.3.1.1.14** Review testing information with the LMA and verify accuracy of the overall TSN developed by the LMA prior to start of Avail and monthly thereafter.

**3.4.3.1.1.15** Verify the test schedule is updated as required by ref 3.4.3.1.4.1 or as schedules change.

**3.4.3.1.1.16** Ensure that test procedure deficiencies are forwarded to the appropriate Government representatives for correction.
**3.4.3.1.1.17** Knowledge of ship's equipment restoration requirements and inter-relationships to evaluate the LMA's submission of the ITSTP and conduct of the TSTTG per 3.4.3.1.4.1.

**3.4.3.1.1.18** Execute duties as defined per 3.4.3.1.4.7.

**3.4.3.1.2 KEY EVENT CERTIFICATION-**

**3.4.3.1.2.1** The Contractor must prepare, schedule and lead key event and availability complete certification briefs to the SWRMC CHENG for assigned ships per ref 3.4.3.1.4.4.

**3.4.3.1.2.2** Notify the PM of the requirement to conduct pre-certification briefs within two weeks of scheduled dates and the formal certification brief per ref 3.4.3.1.4.5.

**3.4.3.1.2.3** Prepare all required products including certification PowerPoint, CHENG certification memos, and other supporting documents per ref 3.4.3.1.4.5.

**3.4.3.1.2.4** Work with the assigned PSE on the key event technical risk assessment.

**3.4.3.1.2.5** Formally schedule all certification briefs in Outlook calendar.

**3.4.3.1.3 REQUIRED TRAINING, LICENSE, AND CERTIFICATION:**

**3.4.3.1.3.1** Contractor is responsible for the development and training of all contractor employees.

**3.4.3.1.3.2** The contractor will assign each employee a schedule for completion of the ITE Job Certification Requirement (JCR). The contactor employee must complete the CNRMC Job Certification Requirement (JCR), ref 3.4.3.1.4.6, within 2 years of assignment.

**3.4.3.1.3.3** The contractor is responsible for the development of training plans for contract employees. Upon approval by the C225 Branch Head, the contractor shall provide the necessary training to contract employees to meet the JCR requirements.

**3.4.3.1.3.4** Contractor will maintain and report on a monthly basis contract employee progress on JCR.

**3.4.3.1.3.5** Upon completion of all JCR requirements the contractor will coordinate with C225 Branch Head to schedule the final interview with C200 leadership qualification board.

**3.4.3.1.4 CODE SPECIFIC REFERENCES:**

**3.4.3.1.4.1** NSI 009-67, Integrated Total Ship Testing; manage

**3.4.3.1.4.2** NSI 009-60, Schedule and Associated Reports for CNO Availability; provide and manage

**3.4.3.1.4.3** CNRMCINST 4720.1, Work Item Specification Review and Bid Specification Review

**3.4.3.1.4.4** COMUSFLTFORCOMINST 4790.3 Volume VI, Chapter 41 (Maintenance and Project Team)

**3.4.3.1.4.5** SWRMCINST 4713.1C, Availability Work Certification Instruction

**3.4.3.1.4.6** CNRMC Job Certification Requirement of June 2019

**3.4.3.1.4.7** SOP-225-047-3, ITE Process Guide

## 3.5 NAVAL ARCHITECTURE DIVISION

### 3.5.1 NAVAL ARCHITECTURE, DOCKING (C241A)

**3.5.1.1 SCOPE**: Code 241A contractor personnel must complete the tasks identified for technical engineering support in Naval Architecture, Dry-Docking, Hull-Outfitting. General tasking and requirements specified in section 3.1 and 3.2 apply in addition to the following specific requirements for this code.

**3.5.1.1.1 NAVAL ARCHITECTURE AND DOCKING SUPPORT** —The contractor must:

**3.5.1.1.2** Review cofferdam designs and operations. Assist the NAVSEA dry dock certification program at SWRMC IAW MIL-STD-1625, including, but not limited to:

**3.5.1.1.3** Review information submitted by area contractors.

**3.5.1.1.4** Determine accuracy and completeness of data submitted.

**3.5.1.1.5** Write certification correspondence, to be approved and signed by the Government.

**3.5.1.1.6** Track certification status.

**3.5.1.1.7** Inspect and evaluate the material condition of contractors dry-docking facilities.

**3.5.1.1.8** Track receipt of docking reports prepared by area contractors, review data for accuracy, and distribute to all cognizant activities.

**3.5.1.1.9** Assist the docking inspector in support of dry-docking evolutions which requires the contractor to:

**3.5.1.1.9.1** Inspect and approve docking block buildups.

**3.5.1.1.9.2** Review and recommend for approval or disapproval any dry-dock and stability calculations submitted by contractors.

**3.5.1.1.9.3** Serve as the Government's on-site technical representative during docking and undocking evolutions of naval ships.

**3.5.1.1.9.4** Provide expertise on dry-dock certification, ship/dry-dock stability, and structural issues with responsibility for providing guidance, instructions, training and technical advice for all aspects of the above technical areas.

**3.5.1.1.10** Perform complex engineering calculations for design development and to calculate strength, vibration behavior, and safety of modifications and/or repairs to the ship.

**3.5.1.1.11** Prepare layout and detail drawings and sketches for varied and complex design projects using computer aided drafting software.

**3.5.1.1.12** Assist in reviewing production contractor Work Items, access cut plans, design calculations, and other structural engineering related documents for accuracy and technical acceptability.

**3.5.1.1.13** Review lifting plans and safety nets for design and testing.

**3.5.1.1.14** Develop and review weight test memos.

**3.5.1.1.2 REQUIRED TRAINING, LICENSE, AND CERTIFICATION:** Contractor personnel assigned to execute tasks in section 3.5.1 must complete the following training:

**3.5.1.1.2.1** NAVAL ARCHITECTURE AND DOCKING

**3.5.1.1.2.1.1** Fall Protection Hands-On and Practical Demonstrations Training

**3.5.1.1.2.1.2** Mechanical, Civil, Structural, or Marine (naval architecture, ocean) degreed engineer from an ABET accredited university.

**3.5.1.1.2.1.3** Attend and obtain a passing grade from Dry Dock Training offered through **www.drydocktraining.com** within one-hundred eighty (180) calendar days of providing direct support.

**3.5.1.1.3 CODE SPECIFIC REFERENCES:**

**3.5.1.1.3.1** NAVSEA STANDARD ITEMS (009-001, 004, 009,011, 012, 069, 077,084, 100, 101, 103, 122)

**3.5.1.1.3.2** MIL-STD-1689 Fabrication, Welding, and Inspection of Ships Structure

**3.5.1.1.3.3** MIL-STD-22d Welded Joint Design

**3.5.1.1.3.4** 0901-LP-015-2510 Wire and Fiber Rope and Rigging

**3.5.1.1.3.5** MIL-STD-1625D Safety Certification Program for Drydocking Facilities and Shipbuilding Ways for U.S. Navy Ships

**3.5.1.1.3.6** T9074-AX-GIB-010/100: MATERIAL SELECTION REQUIREMENTS

**3.5.1.1.3.7** S0600-AA-PRO-200: Underwater Ship Husbandry Manual Chapter 20 Painting And Fairing Compounds

**3.5.1.1.3.8** S0600-AA-PRO-160 Chapter 16 Underwater Ship Husbandry Manuals

**3.5.1.1.3.9** S9086-CH-STM-010 NSTM CHAPTER 074 VOLUME 1 WELDING AND ALLIED PROCESSES

**3.5.1.1.3.10** S9086-CH-STM-020 NSTM CHAPTER 074 VOLUME 3-GAS FREE ENGINEERING)

**3.5.1.1.3.11** S9086-CJ-STM-010 NSTM CHAPTER 075 FASTENERS

**3.5.1.1.3.12** S9086-DA-STN-010 NSTM CHAPTER 100 HULL STRUCTURES

**3.5.1.1.3.13** S9086-TK-STM-010 NSTM CHAPTER 571 UNDERWAY REPLENISHMENT

**3.5.1.1.3.14** S9086-TV-STM-010 NSTM CHAPTER 581 ANCHORING

**3.5.1.1.3.15** S9086-TW-STM-010 NSTM CHAPTER 582 MOORING AND TOWING

**3.5.1.1.3.16** S9086-TX-STM-010 NSTM CHAPTER 583 Vol 1 – Boats & Small Craft

**3.5.1.1.3.17** S9086-TX-STM-020 NSTM CHAPTER 583 Vol 2 – Handling & Stowing, Boats & Small Craft

**3.5.1.1.3.18** S9086-TY-STM-010 NSTM CHAPTER 584 LANDING CRAFT AND AMPHIBIOUS ASSAULT VEHICLE HANDLING STOWAGE AND SUPPORT SYSTEMS

**3.5.1.1.3.19** S9086-UF-STM-010 NSTM CHAPTER 600 VOLUME 1 STRUCTURAL CLOSURES

**3.5.1.1.3.20** S9086-UF-STM-020 NSTM CHAPTER 600 VOLUME 2 NONSTRUCTURAL CLOSURES

**3.5.1.1.3.21** S9086-UF-STM-030 NSTM CHAPTER 600 VOLUME 3 HULL OUTFITTING EQUIPMENT

**3.5.1.1.3.22** S9086-UU-STM-010 NSTM CHAPTER 613 WIRE AND FIBER ROPE AND RIGGING

**3.5.1.1.3.23** S9086-7G-STM-010 NSTM CHAPTER 997 DOCKING INSTRUCTIONS AND ROUTINE WORK IN DRY DOCK

**3.5.1.1.3.24** T9070-BK-DPC-010_582-1_CALCULATIONS FOR MOORING SYSTEMS

**3.5.1.1.3.25** T9070-AF-DPC-010 - DPC-079 US Navy SS Stability and Reserve Buoyancy

**3.5.1.1.3.26** ASME BTH-1-2017. Design of Below-the-Hook Lifting Devices

**3.5.1.1.4 TOOLS AND CONSUMABLES**

**3.5.1.1.4.1** Fall Protection Harness

**3.5.1.1.4.2** Flashlight

**3.5.1.1.4.3** Measuring Tape

**3.5.1.1.4.4** Tank suits

**3.5.1.1.4.5** Pit gages

**3.5.1.1.4.6** Wire brushes

**3.5.2 COATINGS, CORROSION CONTROL, & PASSIVE COUNTERMEASURE SYSTEM (C241B)**

**3.5.2.1 SCOPE:** Code 241B is responsible for support of recurring assessments of coating systems on ship's structure, and Passive Countermeasure System (PCMS) assessments. General tasking and requirements specified in section 3.1 and 3.2 apply in addition to the following specific requirements for this code.

**3.5.2.2 COATINGS, PRESERVATION** —The contractor must provide engineering technical support for the following tasks:

**3.5.2.2.1** Support solving complex technical problems concerning ship coating systems.

**3.5.2.2.2** Conduct engineering investigations and analyses of coating system failures.

**3.5.2.2.3** Recommend corrective repair actions using root cause analysis.

**3.5.2.2.4** Review contractor submitted proposals and objective quality evidence of coating application issues.

**3.5.2.2.5** Provide support for support listed under Corrosion Control

**3.5.2.3 CORROSION CONTROL** – The contractor must provide engineering technical support for the following tasks:

**3.5.2.3.1** G1N5/G1N6 inspections

**3.5.2.3.2** RAST Track Trough inspections (T4U3)

**3.5.2.3.3** CVN Corrosion/Structural inspections

**3.5.2.3.4** Contractors shall verify confined spaces (e.g. tanks, voids, and trunks) are gas free and tagged out for entry prior to entering the space for assessment. Conduct their own gas free and maintain their own gas free certifications through the performance period

**3.5.2.3.5** Document all discrepancies by photographing with government authorized and company furnished equipment in accordance with command/ship photographic and security requirements. Upload photographs into CCIMS using the CCIMS upload utility.

**3.5.2.3.6** Enter assessment results in CADET and internal SWRMC Department tracking spreadsheets/matrices.

**3.5.2.3.7** Document and evaluate coating discrepancies IAW CCAMM and structural discrepancies IAW NSTM Chapter 100.

**3.5.2.3.8** Provide certified personnel to perform Basic UT Thickness Measurements IAW NSTM 100, 100-2.5.7. Utilize GFE UT equipment on hull structural elements, per UT inspection procedures IAW NSTM 100.

**3.5.2.4 PCMS (Passive Countermeasure System)** – The contractor must provide engineering technical support for the following tasks:

**3.5.2.4. 3.1** Provide repair oversight and installation guidance of PCMS components/systems per maintenance requirements.

**3.5.2.4.2** Assess PCMS components/systems in accordance with 18M-R, S-1, A-1 and A-2 MRC PCMS inspections.

**3.5.2.4.3** Conduct training and hands on demonstration on PCMS components/systems to ship's force.
**3.5.2.4.4** Attend Level 2 PCMS certification Conferences (1 conferences per year) to maintain Level 2 certification.

**3.5.2.4.5** Provide repair oversight and installation guidance of Motion Measurement System (MMS) and Permanent Motion Measurement System (PMMS) per NAVSEA/Ship's requests.

**3.5.2.6 REQUIRED TRAINING, LICENSES AND CERTIFICATIONS:** Contractor personnel assigned to execute tasks on above tasks must complete the following training or certifications within on-hundred eighty (180) calendar days of providing direct support:

**3.5.2.6.1** S-CAT - Shipboard Corrosion Assessment Training by AMPP
**3.5.2.6.2** Level 1 Corrosion Surveyor Certification per CCAMM, Section 2, 2.2.1 and NSTM 100, 100-2.5

**3.5.2.6.3** SYCP - Ship Yard Competent Person Training

**3.5.2.6.4** AMPP Coatings Inspector Program (CIP) / CIP Level 1 Certification

**3.5.2.6.5** AMPP Coatings Inspector Program (CIP) / CIP Level 2 Certification

**3.5.2.6.7** NACE Cathodic Protection (CP1) Training

**3.5.2.6.8** NBPI Coating Training

**3.5.2.6.9** AMPP Thermal Spray Inspection Specialty

**3.5.2.6.10** Basic UT Measurement Certification per NSTM 100, 100-2.5

**3.5.2.6.11** Fall Protection Hands-On and Practical Demonstrations Training

**3.5.2.6.12** PCMS Level 1 Maintainer and Level 2 Supervisor Certification per NAVSEA RMC CERT 05P1-17

**3.5.2.7 CODE SPECIFIC REFERENCES:** In order to complete the scope of work, contractor personnel must be able to, access and understand the content of the following references:

**3.5.2.7.1** NAVSEA STANDARD ITEMS (009-001, 004, 009, 026, 032, 078, 124)

**3.5.2.7.2** S9086-VD-STM-020 NSTM Chapter 631, Preservation of Ships in Service – General

**3.5.2.7.3** S9086-VG-STM-010 NSTM Chapter 634, Deck Coverings, General Vol 1

**3.5.2.7.4** S0600-AA-PRO-200: Underwater Ship Husbandry Manual Chapter 20 Painting and Fairing Compounds

**3.5.2.7.5** Underwater Ship Husbandry Manuals S0600-AA-PRO-160 Chapter 16

**3.5.2.7.6** T9074-AA-GIB-010 Thermal Spray Non-skid

**3.5.2.7.7** Corrosion Control: G1N5, G1N6, T4U3 MRC cards

**3.5.2.7.8** T9630-AB-MMD-010 Corrosion Control Assessment Maintenance Manual (CCAMM)

**3.5.2.7.9** S9086-DA-STM-010 Hull Structures (NSTM 100)

**3.5.2.7.10** MIL-STD-1689A (SH) FABRICATION, WELDING, AND INSPECTION OF SHIPS STRUCTURE

**3.5.2.7.11** RIM 05T1-99 Rev D PASSIVE COUNTERMEASURES SYSTEM (PCMS) REPAIR/INSTALLATION METHODS

**3.5.2.7.12** NAVSEA SE400-DA-MMO-010 Rev 6 PASSIVE COUNTERMEASURES SYSTEM; OPERATION AND ORGANIZATIONAL LEVEL MAINTENANCE

**3.5.2.7.13** ACD 05T1-13 PASSIVE COUNTERMEASURES SYSTEM (PCMS) ACCESS, MATERIAL CONTROL AND DISPOSAL MANUAL

**3.5.2.7.14** PCMS MRC INSPECTIONS 18M-R, S-1, A-1 and A-2

**3.5.2.7.2 TOOLS AND CONSUMABLES**

**3.5.2.7.2.1** Contractor personnel providing coatings and preservation support shall obtain the following tools:

**3.5.2.7.2.2** Dew Point meter

**3.5.2.7.2.3** Tire tread style pit gage (digital)

**3.5.2.7.2.4** Mechanic's scale

**3.5.2.7.2.5** Slag hammer

**3.5.2.7.2.6** Gas free meters

**3.5.2.7.2.7** Gas free meters calibration kits

**3.5.2.7.2.8** Contractor personnel providing PCMS support shall obtain the following tools:

**3.5.2.7.2.9** Cleaning compound, solvent

**3.5.2.7.2.10** Solvent Bottle, applicator

**3.5.2.7.2.11** Large and small inspection mirrors (polished stainless)

**3.5.2.7.2.12** Hand roller, tile

**3.5.2.7.2.13** Sealer dispenser, tile

**3.5.2.7.2.14** Binoculars

**3.5.2.7.2.15** Equipment carry case

**3.5.2.7.2.16** Caulking gun

**3.5.2.7.2.3** Contractor personnel shall obtain the following tools as required:

**3.5.2.7.2.3.1** Tool bag (hands free)

**3.5.2.7.2.3.2** Digital/Laser range finder (up to 100 ft)White and black markers or paint pens

**3.5.2.7.2.3.3** Marking chalk

**3.5.2.7.2.3.4** Utility knife and blades

**3.5.2.7.2.3.5** Scraping tools

**3.5.2.7.2.3.6** Putty knife

**3.5.2.7.2.3.7** Wire brushers

**3.5.2.7.2.3.8** Flashlights

**3.5.2.7.2.3.9** Headlamps

**3.5.2.7.2.3.10** Notepad and writing utensils

**3.5.2.7.2.3.11** Cameras (NMCI compatible)

**3.5.2.7.2.3.12** Safety harness

**3.5.2.7.2.3.13** Cleaning rags and wipes

**3.5.2.7.2.3.14** Disposable gloves

**3.5.2.7.2.3.15** Carpenter square

**3.5.2.7.2.3.16** Measuring tape 25ft

**3.5.3 B SHIP STRUCTURES (C242A & B)**

**3.5.3.1 SCOPE:** Code 242A & B are responsible for support of recurring assessments, Contract Management oversight and risk evaluation ship's structure. General tasking and requirements specified in section 3.1 and 3.2 apply in addition to the following specific requirements for this code.

**3.5.3.2** SHIP STRUCTURE'S SUPPORT—The contractor must provide engineering technical support for the following:

**3.5.3.2.1** Perform complex engineering calculations for design development and to calculate strength, vibration behavior, and safety of modifications and/or repairs to the ship.

**3.5.3.2.2** Prepare layout and detail drawings and sketches for varied and complex design projects using computer aided drafting software.

**3.5.3.2.3** Assist reviewing production contractor Work Items, access cut plans, design calculations, and other structural engineering related documents for accuracy and technical acceptability.

**3.5.3.2.4** Contractor shall verify confined spaces (e.g. tanks, voids, and trunks) are gas free and tagged out for entry prior to entering the space for assessment. Conduct their own gas free and maintain their own gas free certifications through the performance period.

**3.5.3.2.5** Document all discrepancies by photographing with government authorized and company furnished equipment in accordance with command/ship photographic and security requirements. Upload photographs into CCIMS using the CCIMS upload utility.

**3.5.3.2.6** Enter assessment results in CADET and internal SWRMC Department tracking spreadsheets/matrices.

**3.5.3.2.7** Document and evaluate discrepancies IAW CCAMM and structural discrepancies IAW NSTM Chapter 100.
**3.5.3.2.8** Provide certified personnel to perform Structural Calculation and analysis in accordance with NSTM 100, 100-2.5.6.2 & 100-2.5.6.3, and reference 3.5.1.8.26.

**3.5.3.2.9** Provide Fleet Technical assistance (FTA) to Ship's force with guidance for installation of cold bonded adhesive patches per reference 3.5.1.8.9.

**3.5.3.2.10** Provide temporary repair recommendations for degraded structure and ship boundaries.

**3.5.3.2.11** G1E8 Intake/Uptake inspections

**3.5.3.2.12** CG Superstructures inspections

**3.5.3.2.13** CG FWD and AFT VLS Topside inspections

**3.5.3.2.14** DDG Bow Structures inspections (A5A1)

**3.5.3.2.15** DDG Stanchion inspections

**3.5.3.2.16** DDG Flight Deck Crack inspections

**3.5.3.2.17** CVN Corrosion/Structural inspections

**3.5.3.2.18** LCS-2V Structural Inspection Plan inspections

**3.5.3.3 REQUIRED TRAINING, LICENSES AND CERTIFICATIONS:** Contractor personnel assigned to execute tasks on above tasks must complete the following training or certifications within on-hundred eighty (180) calendar days of providing direct support:

**3.5.3.3.1** S-CAT - Shipboard Corrosion Assessment Training by NACE

**3.5.3.3.2** AMPP Coatings Inspector Program (CIP) / CIP Level 1 Certification

**3.5.3.3.3** NBPI Coating Training

**3.5.3.3.4** SWRMC Code 240: Basic UT Measurement Certification per NSTM 100, 100-2.5

**3.5.3.3.5** Level 1 Corrosion Certification per CCAMM, Section 2, 2.2.1 and NSTM 100, 100-2.5

**3.5.3.3.6** Level 2 Structural Certification per SWRMC Code 242A & B Personnel Qualification Standard (PQS)

**3.5.3.3.7** SYCP - Ship Yard Competent Person Training

**3.5.3.3.8** Fall Protection Hands-On and Practical Demonstrations Training

**3.5.3.3.9** NSWCCD Surface Ship Structural Calculation & Ship Structure Design Training

**3.5.3.3.10** NSWCCD Surface Ship Design course

**3.5.3.3.11** SWRMC Welder Workmanship Training

**3.5.3.3.12** Composite Patch Repair Installation

**3.5.3.4 CODE SPECIFIC REFERENCES:** In order to complete the scope of work, contractor personnel must be able to, access and understand the content of the following references:

**3.5.3.4.1** NAVSEA STANDARD ITEMS (009-001, 004, 005, 009, 011, 012, 025, 032, 0118, 122)

**3.5.3.4.2** G1N5, G1N6, G1E8 MRC cards

**3.5.3.4.3** T9630-AB-MMD-010 Corrosion Control Assessment Maintenance Manual (CCAMM)

**3.5.3.4.4** S9086-CH-STM-010 NSTM CHAPTER 074 VOLUME 1 WELDING AND ALLIED PROCESSES

**3.5.3.4.5** S9086-CH-STM-020 NSTM CHAPTER 074 VOLUME 3-GAS FREE ENGINEERING)

**3.5.3.4.6** S9086-CJ-STM-010 NSTM CHAPTER 075 FASTENERS

**3.5.3.4.7** S9086-CM-STM-010 NSTM CHAPTER 078 VOLUME 1 – SEALS

**3.5.3.4.8** S9086-CM-STM-020 NSTM CHAPTER 078 VOLUME 2 - GASKETS AND PACKING

**3.5.3.4.9** S9086-DA-STN-010 NSTM CHAPTER 100 HULL STRUCTURES

**3.5.3.4.10** S9086-H4-STM-010 NSTM CHAPTER 259 MARINE GAS TURBINE COMBUSTION AIR INTAKE AND UPTAKE SYSTEMS

**3.5.3.4.11** S9086-UF-STM-010 NSTM CHAPTER 600 VOLUME 1 STRUCTURAL CLOSURES

**3.5.3.4.12** S9086-UF-STM-020 NSTM CHAPTER 600 VOLUME 2 NONSTRUCTURAL CLOSURES

**3.5.3.4.13** S9086-UF-STM-030 NSTM CHAPTER 600 VOLUME 3 HULL OUTFITTING EQUIPMENT

**3.5.3.4.14** S9086-UU-STM-010 NSTM CHAPTER 613 WIRE AND FIBER ROPE AND RIGGING

**3.5.3.4.15** T9074-AS-GIB-010/271 REQUIREMENTS FOR NONDESTRUCTIVE TESTING METHODS

**3.5.3.4.16** MIL-STD-1689A (SH) FABRICATION, WELDING, AND INSPECTION OF SHIPS STRUCTURE

**3.5.3.4.17** MIL-STD-22D Weld Joint Design

**3.5.3.4.18** S9074-AQ-GIB-010 [248] Requirements for Welding and Brazing Procedure and Performance Qualification

**3.5.3.4.19** S9074-AR-GIB-010-278 (REQUIREMENTS FOR FABRICATION WELDING of Machinery, Piping & Pressure Vessels)

**3.5.3.4.20** S9074-A1-GIB-010_1628 FILLET WELD AND PARTIAL PENETRATION GROOVE TEE WELD SIZE, STRENGTH, AND EFFICIENCY

**3.5.3.4.21** MIL-STD-22698 – Steel Plate, Shapes and Bars, Weldable Ordinary Strength and Higher Strength: Structural

**3.5.3.4.22** S9CG0-BP-SRM-010/CG-47CL CG Class weld manual

**3.5.3.4.23** S9LCS-BF-SRM-010/LCS-2 CL, LCS-2 Class weld Manual

**3.5.3.4.24** S9LCS-BG-SRM-010/LCS-1 CL, LCS-1 Class weld manual

**3.5.3.4.25** T9100-AE-MAN-010 ANALYSIS AND ASSESSMENT OF DAMAGED U.S. NAVY SURFACE SHIP STRUCTURES

**3.5.3.4.26** T9070-AN-DPC-060_LONGITUDINAL STRENGTH CALCULATION

**3.5.3.4.27** T9070-AJ-DPC-120_3010_SHOCK DESIGN CRITERIA FOR SURFACE SHIPS

**3.5.3.4.28** MIL-STD-2035, Nondestructive Testing Acceptance Criteria

**3.5.3.5 TOOLS AND CONSUMABLES**

**3.5.3.5.1** Contractor personnel shall obtain the following tools as required:
**3.5.3.5.1.1** Tire tread style pit gage (digital)

**3.5.3.5.1.2** Undercut style pit gage

**3.5.3.5.1.3** Mechanic's scale

**3.5.3.5.1.4** Slag hammer

**3.5.3.5.1.5** Gas free meters

**3.5.3.5.1.6** Gas free meters calibration kits

**3.5.3.5.1.7** Tool bag (hands free)

**3.5.3.5.1.8** Minimum 12 foot measuring tape (laser)

**3.5.3.5.1.9** White and black markers or paint pens

**3.5.3.5.1.10** Marking chalk

**3.5.3.5.1.11** Utility knife and blades

**3.5.3.5.1.12** Scraping tools

**3.5.3.5.1.13** Putty knife

**3.5.3.5.1.14** Wire brushers

**3.5.3.5.1.15** Flashlights

**3.5.3.5.1.16** Headlamps

**3.5.3.5.1.17** Notepad and writing utensils

**3.5.3.5.1.18** Cameras (NMCI compatible)

**3.5.3.5.1.19** Safety harness

**3.5.3.5.1.20** Cleaning rags and wipes

**3.5.3.5.1.21** Disposable gloves

**3.5.3.5.1.22** Carpenter square

**3.5.3.5.1.23** Measuring tape 25ft

**3.5.3.6 ACRONYMS AND DEFINITIONS**

**3.5.3.6.1** CCAMM: Corrosion Control Assessment and Maintenance Manual
**3.5.3.6.2** CCIMS: Corrosion Control Information Management System
**3.5.3.6.3** CADET: Corrosion Assessment Data Entry System
**3.5.3.6.4** CPR: Cardio-pulmonary Resuscitation
**3.5.3.6.5** DFS: Departure From Specification
**3.5.3.6.6** G1N5: Tanks & Voids Periodic Assessment Requirement
**3.5.3.6.7** G1N6: Other Structure Periodic Assessment Requirement
**3.5.3.6.8** G1E8: Uptake/Intake Periodic Assessment Requirement
**3.5.3.6.9** MRC: Maintenance Requirement Card
**3.5.3.6.10** MT: Maintenance Team
**3.5.3.6.11** NACE: National Association of Corrosion Engineer
**3.5.3.6.12** NBPI: NAVSEA Basic Paint Inspector
**3.5.3.6.13** NDT: Non-Destructive Testing
**3.5.3.6.14** NMD: Navy Maintenance Database

**3.5.3.6.15** PCMS: Passive Countermeasure System
**3.5.3.6.16** S-CAT: Shipboard Corrosion Assessment Training
**3.5.3.6.17** SYCP: Shipyard Competent Person
**3.5.3.6.18** SURFMEPP: Surface Maintenance Engineering Planning Program
**3.5.3.6.19** T4U3: Rast Track Trough Periodic Assessment Requirement
**3.5.3.6.20** TAAS-Info: Tech Assist, Assessments, & Scheduling Information
**3.5.3.6.21** UT: Ultrasonic Testing

**3.6 AUXILARY SYSTEMS DIVISION (C250)**

**3.6.1 FIRE FIGHTING, AUXILIARIES & POLLUTION ABATEMENT (C251)**

**3.6.1.1** Code 251 contractor personnel shall be responsible for tasking and requirements identified in support of shipboard Fire Protection, Damage Control, Pollution Abatement, and Fresh Water systems. General tasking and requirements specified in section 3.1 and 3.2 apply.

**3.6.1.2 CODE 251 FIRE FIGHTING, AUXILIARIES & POLLUTION ABATEMENT**— The contractor must provide engineering technical support for the following systems, subsystems and equipment:

**3.6.1.2.1** Aqueous Film-Forming Foam (AFFF)

**3.6.1.2.2** CO2, Halon and Heptafluoropropane (HFP) systems

**3.6.1.2.3** Aqueous Potassium Carbonate (APC)

**3.6.1.2.4** Countermeasure Washdown (CMWD)

**3.6.1.2.5** Motor Gasoline (MOGAS)

**3.6.1.2.6** Fire, Main Drainage and Flushing Pumps and valves

**3.6.1.2.7** Temporary Fire-Main Protection System

**3.6.1.2.8** Pumps and valves

**3.6.1.2.9** Flame and Smoke ejection system

**3.6.1.2.10** Water Mist, Saltwater Sprinklers

**3.6.1.2.11** Fire-main system piping

**3.6.1.2.12** Review Shipboard Temporary Fire Protection Plan by accomplishing friction and elevation loss calculations to determine the location of the most hydraulically remote station.

**3.6.1.2.13** Oil Pollution Abatement (OPA)

**3.6.1.2.14** Oil Waste Separators (OWS)

**3.6.1.2.15** Oil Content Monitors (OCM)

**3.6.1.2.16** Reverse Osmosis (RO) Distilling Plant

**3.6.1.2.17** Sewage Collection, Holding and Transfer (CHT)

**3.6.1.2.18** Sewage Vacuum Collection, Holding and Transfer (VCHT)

**3.6.1.2.19** Evaporative Toilet System (e.g. GATX).

**3.6.1.2.20** Potable Water System

**3.6.1.2.21** Electric Cooling Water (ECW)

**3.6.1.2.22** Shredders

**3.6.1.2.23** Plastic Waste Processor (PWP)

**3.6.1.2.24** Metal/Glass Shredder (MGS)

**3.6.1.2.25** Large and Small Waste Pulpers

**3.6.1.3 ELECTRICAL SUPPORT**: The contractor must provide support of electrical components and equipment, electrical/electronic control, detection, alarm sensing, indicating, and monitoring systems and equipment associated with 3.5.3.2 and 3.5.3.3.

**3.6.1.4 REQUIRED TRAINING, LICENSES, AND CERTIFICATIONS**: Contractor personnel assigned to execute tasks on the following equipment must complete the following training or certifications:

**3.6.1.4.1** Oil Pollution Abatement (OPA) Inspector Certification

**3.6.1.4.1.1** Obtain Certification IAW NAVSEA INSTRUCTION 9593.2B by Environmental Systems and Materials Engineering (ESME) Technical Warrant Holder (TWH) for execution of certification inspections.

**3.6.1.4.2** Obtain training provided by In Service Engineering Agents (ISEA) in support of modifications or upgrades to equipment and systems listed under 3.5.3.2, 3.5.3.3 and 3.5.3.4.

**3.6.1.5 CODE SPECIFIC REFERENCES**: In order to complete the scope per section 3.1, contractor personnel must be able to access and understand the content of the following references (at a minimum) in addition to the references in section 2.0:

**3.6.1.5.1** S9086-CH-STM-010 NSTM Chapter 074 - Volume 1 Welding and Allied Processes

**3.6.1.5.2** S9086-CH-STM-020 NSTM Chapter 074 - Volume 2 Non-Destructive Testing of Metals - Qualification and Certification Requirements for Naval Personnel (Non-Nuclear)

**3.6.1.5.3** S9086-CH-STM-030 NSTM Chapter 074 Volume 3 - Gas Free Engineering

**3.6.1.5.4** S9086-CN-STM-020 NSTM Chapter 079 Volume 2 Practical Damage Control

**3.6.1.5.5** S9086-RH-STM-010 NSTM Chapter 503 Pumps

**3.6.1.5.6** S9086-RK-STM-010 NSTM Chapter 505 Piping Systems

**3.6.1.5.7** S9086-SC-STM-030/CH-531, Naval Ships' Technical Manual Chapter 531, Volume 3 Desalination – Reverse Osmosis Desalination Plants

**3.6.1.5.8** S9086-SD-STM-010/CH-532, Naval Ships' Technical Manual Chapter 532 Liquid Cooling Systems for Electronic Equipment

**3.6.1.5.9** S9086-SE-STM-010/CH-533, Naval Ships' Technical Manual Chapter 533 Potable Water Systems

**3.6.1.5.10** S9086-S3-STM-010 NSTM Chapter 555 Surface Ship Fire Fighting

**3.6.1.5.11** S9086-T8-STM-010 NSTM Chapter 593 Pollution Control

**3.6.1.5.12** S9086-UF-STM-010 NSTM Chapter 600 Volume 1 Structural Closures

**3.6.1.5.13** S9086-UF-STM-020 NSTM Chapter 600 Volume 2 Non Structural Closures

**3.6.1.5.14** S0570-AC-CCM-010/8010 Industrial Ship Safety Manual for Fire Prevention

**3.6.1.5.15** S9593-CE-MMA-010, Collection Holding Transfer (CHT), DDG CLASS:

**3.6.1.5.16** S6226-RZ-MMC-010, EDDY PUMP MDL NF-4000:

**3.6.1.5.17** S9593-C5-MMM-010, SHREDDER

**3.6.1.5.18** S9593-BM-MMA-010, PWP (MOD-1)

**3.6.1.5.19** S9593-C4-MMM-010 Compressed Melt Unit (CMU) Legacy MIL

**3.6.1.5.20** S9593-C7-MMM-010 CMU Legacy

**3.6.1.5.21** S9593-C2-MMM-010 Large Pulper

**3.6.1.5.22** S9593-C3-MMM-010 Small Pulper

**3.6.1.5.23** S9593-DC-MMM-010 Incinerator (CVN-73)

**3.6.1.5.24** S9593-BM-MMA-010 Plastic Processor, Mod 1 15.4.10.3.17

**3.6.1.5.25** S9593-C5-MMM-010 Shredder, Solid Waste

**3.6.1.5.26** S9593-DP-MMM-010 Mod 1 Shredder, Solid Waste

**3.6.1.5.27** SW279-BX-AEG-010 AEGIS DDG 51 CLASS, ECW

**3.6.1.5.28** SW279-BY-AEG-010 AEGIS CG 47 CLASS, ECW

**3.6.1.5.29** S9593-AY-MMM-010, OILY WASTE SYSTEM, 10 GPM OWS

**3.6.1.5.30** S9593-CD-MMO-010, MONITOR, OIL CONTENT

**3.6.1.5.31** NAVSEAINST 9593.2B, Inspection And Certification Process For OPA Systems On U.S. Navy Ship

**3.6.1.5.32** OPNAV M-5090.1D Environmental Readiness Program Manual

**3.6.1.5.33** S9086-T8-STM-010/CH-593R4 NSTM Chapter 593 Pollution Control

**3.6.1.5.34** S9531-CN-MMA-010, Reverse Osmosis Demineralizer Model 10500RODM

**3.6.1.6 ACRONYMS AND DEFINITIONS**

**3.6.1.6.1** Aqueous Film-Forming Foam (AFFF)
**3.6.1.6.2** Heptafluoropropane (HFP)
**3.6.1.6.3** Aqueous Potassium Carbonate (APC)
**3.6.1.6.4** Countermeasure Washdown (CMWD)
**3.6.1.6.5** Motor Gasoline (MOGAS)
**3.6.1.6.6** Oil Pollution Abatement (OPA)

**3.6.1.6.7** Oil Waste Separators (OWS)
**3.6.1.6.8** Oil Content Monitors (OCM)
**3.6.1.6.9** Reverse Osmosis (RO)
**3.6.1.6.10** Sewage Collection, Holding and Transfer (CHT)
**3.6.1.6.11** Sewage Vacuum Collection, Holding and Transfer (VCHT)
**3.6.1.6.12** Electric Cooling Water (ECW)
**3.6.1.6.13** Plastic Waste Processor (PWP)
**3.6.1.6.14** Metal/Glass Shredder (MGS)
**3.6.1.6.15** Compressed Melt Unit (CMU)

**3.6.2 AC&R/AIR SYSTEMS (C252)**

**3.6.2.1** Code 252 contractor personnel shall be responsible for completing the tasking and requirements identified in support of shipboard air conditioning, refrigeration, pressurized air systems, Nitrogen and Oxygen Systems. General tasking and requirements specified in section 3.1and 3.2 apply.

**3.6.2.2 AIR/HP/MP/LP Systems:** These systems include compressor, PLC, piping and electrical controls associated with compressors including:

**3.6.2.2.1** Dresser-Rand/Rix/Meggit/Bauer/Sauer HP ACs,

**3.6.2.2.2** Rix/Sauer MP ACs,

**3.6.2.2.3** Dresser-Rand/Rix/NASH LP ACs.

**3.6.2.2.4** Rix LPAP

**3.6.2.2.5** Breathing Apparatus Air Compressor

**3.6.2.2.6** Electronic Dry Air and Dehydrators. These systems include:

**3.6.2.2.7** Dry air panels,

**3.6.2.2.8** Pressure regulator valves,

**3.6.2.2.9** Low air control air panels,

**3.6.2.2.10** Dew points,

**3.6.2.2.11** Interstage Membrane Dehydrator (IMD).

**3.6.2.2.12** Pressure Air Systems. These systems include:

**3.6.2.2.13** HP/MP/LP air valves,

**3.6.2.2.14** HP/LP air reducing manifolds,

**3.6.2.2.15** Air flow measurement and calculations.

**3.6.2.2.16** Deballast Air Compressors
**3.6.2.2.17** O2/N2 Production Plants

**3.6.2.3** A/C Plants. These systems include:

**3.6.2.3.1** Reciprocating A/C plant R-12, R-22 and R-134a,

**3.6.2.3.2** Centrifugal A/C plants R-114, R-236fa and R-134a,

**3.6.2.3.3** Rotary A/C plants,

**3.6.2.3.4** Fan coil unit (FCU) plants,

**3.6.2.3.5** A/C compressors,

**3.6.2.3.6** Condensers,

**3.6.2.3.7** Evaporators,

**3.6.2.3.8** Thermal expansion valves (TXV),

**3.6.2.3.9** A/C plant capacity control systems,

**3.6.2.3.10** Chilled water systems,

**3.6.2.3.11** Chlorinators.

**3.6.2.4** Refrigeration Plants. These systems include:

**3.6.2.4.1** Reciprocating R-12, R 22, and R-134a refrigeration plants,

**3.6.2.4.2** Refrigeration compressors,

**3.6.2.4.3** Condensers,

**3.6.2.4.4** Evaporators,

**3.6.2.4.5** Refrigeration plants capacity control systems,

**3.6.2.4.6** Freeze and chill boxes.

**3.6.2.4.7** Modular Refrigerant Units

**3.6.2.4.8** Ventilation Systems. These systems include:

**3.6.2.4.9** Ventilation fans,

**3.6.2.4.10** Re-heaters,

**3.6.2.4.11** Pre-heaters,

**3.6.2.4.12** Cooling coils,

**3.6.2.4.13** Thermostats,

**3.6.2.4.14** Chill water pumps,

**3.6.2.4.15** Air flow measurements,

**3.6.2.4.16** Heating and cooling load calculations.

**3.6.2.4.17** Supply and exhaust fans,

**3.6.2.4.18** Toxic gas vent dampers,

**3.6.2.4.19** CPS balancing dampers,

**3.6.2.4.20** lPS pressure control valves.

**3.6.2.5** The contractor must provide engineering technical support in accordance with section 3.1 on electronic control systems, electrical wiring, and electric components of the systems described in 3.5.4.2, 3.5.4.3, and 3.5.4.4.

**3.6.2.6 REQUIRED TRAINING, LICENSES AND CERTIFICATIONS:** Contractor personnel assigned to execute tasks on the following equipment must complete the following training or certifications:

**3.6.2.6.1** EPA regulations (40 CFR Part 82, Subpart F) under Section 608 of the Clean Air Act require that technicians who maintain, service, repair, or dispose of equipment that could release ozone depleting refrigerants into the atmosphere must be certified.

**3.6.2.6.2** Technicians working on refrigerant type HFC 134A must have type II or universal certification

**3.6.2.7 CODE SPECIFIC REFERENCES**:

**3.6.2.7.1** S550-BZ-MMA-010 High Pressure Air Compressor 5R5

**3.6.2.7.2** 1S6220-CL-MMO-010 High Pressure Air Compressor 20NL7

**3.6.2.7.3** S6220-ER-MMC-010 Medium Pressure Air Compressor Sauer

**3.6.2.7.4** S6220-EU-MMA-010 Low Pressure Air Compressor STAR 200

**3.6.2.7.5** S6220-ET-MMA-010 Low Pressure Air Plant, Rix MARC-350

**3.6.2.7.6** SS600-AR-MMA-010 Breathing Apparatus Air Compressor

**3.6.2.7.7** S6220-CA-MMO-010 Low Pressure Air Compressor NAXI

**3.6.2.7.8** S6220-ES-MMC-010 Breathing Air Compressor

**3.6.2.7.9** 0959-LP-008-8020 Deballast/Ballast Air Compressor

**3.6.2.7.10** S6230-A1-MMC-010 Electronic Dry Air Panel

**3.6.2.7.11** S9514-C7-MMA-010 Membrane Dehydrator

**3.6.2.7.12** S6434-AF-MMO-010 HP/LP Reducing Manifold

**3.6.2.7.13** NSTM Chapter 551 Compressed Air Plants and Systems

**3.6.2.7.14** S9514-CA-MMA-010 A/C 200 Tons for CG47 Class

**3.6.2.7.15** S9516-AH-MMA-010 Refrigeration Systems

**3.6.2.7.16** S9516-CB-MMA-010 (Galley Chill and Freeze Room MRU)

**3.6.2.7.17** S9516-CC-MMA-010 (Ship Stores Chill and Freeze Room MRU)

**3.6.2.7.18** S9169-A1-MMA-010 Toxic Gas Damper for DDG Class

**3.6.2.7.19** S9550-C9-MMA-010 Toxic Gas Damper for CG Class

**3.6.2.7.20** SS200-AF-MMM-010 Collecting Protection System for DDG Class

**3.6.2.7.21** S6230-BQ-MMO-010 Collecting Protection System

**3.6.2.7.22** S9086-RQ-STM-010 Chapter 510 HVAC Systems

**3.6.2.7.23** CHAPTER 470 Collecting Protection System

**3.6.2.7.24** S9086-RW-STM-010 Chapter 516 for Refrigeration System

**3.6.2.8 ACRONYMS AND DEFINITIONS**

**3.6.2.8.1** AC: Air Compressor
**3.6.2.8.2** A/C: Air Conditioner
**3.6.2.8.3** CPS: Collecting Protection System
**3.6.2.8.4** HP: High Pressure
**3.6.2.8.5** HVAC: Heating Ventilation Air Conditioning
**3.6.2.8.6** LP: Low Pressure
**3.6.2.8.7** LPAP: Low Pressure Air Plant
**3.6.2.8.8** MP: Medium Pressure
**3.6.2.8.9** PLC: Programmable Logic Controller
**3.6.2.8.10** Environmental Protection Act

**3.6.3 ELEVATOR SYSTEMS (C253)**

**3.6.3.1** Code 253 contractor personnel must complete the tasks identified**,** maintaining safe operational conditions around machinery at all times, providing technical support and test and inspection for mechanical and electrical troubleshooting and assessments for all surface ships and aircraft carriers.

**3.6.3.2** Contractor personnel are responsible for completing the tasking and requirements per section 3.1and 3.2 for the Elevator Branch for all mechanical and related electrical systems, electrical/electronic controls, detection, alarm sensing, indicating, and monitoring systems to include Hydraulic Power, Pneumatic, Electrical, Mechanical, Hoisting and Control Sub-systems for the following systems and equipment:

**3.6.3.2.1** Cargo Weapons Elevators

**3.6.3.2.2** Hydraulic Power Units

**3.6.3.2.3** Ammunition Hoists

**3.6.3.2.4** Ammunition Elevators

**3.6.3.2.5** Aircraft Elevators

**3.6.3.2.6** Safety Stanchion system

**3.6.3.2.7** Hydraulic Power Unit

**3.6.3.2.8** Cargo Elevators

**3.6.3.2.9** Lift Platforms

**3.6.3.2.10** Ship Service and Food Service Dumbwaiters

**3.6.3.2.11** Conveyor Systems

**3.6.3.2.12** Doors (Electrical, Pneumatic, Mechanical and Computer controlled)

**3.6.3.2.13** Aircraft Elevators

**3.6.3.2.14** Helicopter

**3.6.3.2.15** Divisional

**3.6.3.2.16** Elevators6

**3.6.3.3** Contractor personnel assigned to Code 253 must accomplish the following tasks for specific equipment identified in 3.5.5.2 above.

**3.6.3.3.1** Complete assessment or Technical Assist, and provide repair recommendations to the branch head in a Report or TAVR format as required for review and issuance on the equipment.

**3.6.3.3.2** Conduct ship visits to provide technical guidance for repairs, troubleshooting or testing as requested for urgent or routine requests.

**3.6.3.3.3** Conduct ship visits to assess the material condition of the equipment/ systems.

**3.6.3.3.4** Review the adequacy of the onboard ILS, PMS, PQS and validate the current equipment configuration.

**3.6.3.3.5** Conduct on-the-job training for Ships Force Maintenance personnel. The training must include adjustments, repairs, troubleshooting techniques and equipment/personnel safety.

**3.6.3.3.6** Conduct operator training after repairs are complete and equipment is safe to operate.

**3.6.3.3.7** Communicate with and conduct a debrief of cognizant Ships Force personnel reporting conditions found, repairs completed and/or required and training conducted with current operational condition. Any unresolved conditions must be briefed to the ship's Commanding Officer and Chief Engineer with corrections required.

**3.6.3.3.8** Submit a Ship Visit Report to include the assessment of the material condition and operational status, following the standard report format used by the Branch.

**3.6.3.3.9** Assist in the completion of elevator certification testing of equipment and System Operability Tests (SOT Level III) weight testing with government Certified Elevator Inspector.

**3.6.3.3.10** Assist with the research and technical resolution of DFSs.

**3.6.3.3.11** Conduct research and provide technical resolution of ESR requests.
**3.6.3.3.12** Updates ESRs as required.

**3.6.3.3.13** Maintains job updates in Fleet Technical Support (TAAS) as required.

**3.6.3.4 REQUIRED TRAINING, LICENSES AND CERTIFICATIONS**: Contractor personnel assigned to execute tasks on the following equipment must complete the following training or certifications:

**3.6.3.4.1** Rigging Gear Inspector Level I: Obtain training and maintain certification within one-hundred eighty (180) calendar days of providing direct support.

**3.6.3.4.1.1** 9428 Old Pacific Highway, Woodland, WA 9874. Training POC Valarie Hayes (360) 225-1100

**3.6.3.4.2** Industrial Hydraulics (HYX_ILT_IH) systems troubleshooting:

**3.6.3.4.2.1** Attend a hydraulic systems troubleshooting course within one-hundred eighty (180) calendar days of providing direct support.

**3.6.3.4.3** Eaton Hydraulics LLC, 14900 Technology Drive, Eden Pairie, MN 55344.

**3.6.3.4.4** 1785 Indian Wood Circle, Maumee, Ohio 43537. (800) 413-8809

**3.6.3.5** Programmable Logic Control (PLC) troubleshooting:

**3.6.3.5.1** Attend training at the diagrammatic level within one-hundred eighty (180) calendar days of providing direct support. Troubleshooting at the programming level is not required or authorized on board Navy ships.

**3.6.3.6 CODE SPECIFIC AND GENERAL REFERENCES**: In order to complete the scope of work, contractor personnel must be able to, access and understand the content of the following references (at a minimum):

**3.6.3.6.1** S9086-KC-STM-010 ELECTRICAL PLANT – GENERAL NSTM CH 300

**3.6.3.6.2** 0640-LP-105-6373 AMMUNITION AND EXPLOSIVES SAFETY FLOAT

**3.6.3.6.3** S9300-A5-GYD-010 ELECTRICAL INFORMATION GUIDE

**3.6.3.6.4** S9086-UU-STM-010 NSTM CH 613 WIRE ROPE AND RIGGING

**3.6.3.6.5** S9086-TL-STM-010 NSTM CH 572 SHIPBOARD STORES AND PROVISION HANDLING

**3.6.3.6.6** S9086-ZN-STM-010 NSTM CH 772 CARGO WEAPONS ELEVATORS

**3.6.3.6.7** S9086-XG-STM-010 NSTM CH 700 SHIPBOARD AMMUNITION HANDLING AND STORAGE

**3.6.3.6.8** S9086-T3-STM-010 NSTM CH 588 AIRCRAFT ELEVATORS AND DECK EDGE ELEVATOR & HANGAR DIVISION DOORS

**3.6.3.6.9** PREVENTIVE MAINTENANCE SYSTEM (PMS)

**3.6.3.6.10** MILITARY STANDARD SPECIFICATIONS (MIL-STD)

**3.6.3.6.11** DEPARTMENT OF DEFENSE STANDARD SPECIFICATIONS (DOD-STD)

**3.6.3.6.12** SHIP CLASS ADVISORIES (CLADS)

**3.6.3.6.13** IN SERVICE ENGINEERING AGENT (ISEA) ADVISORIES

**3.6.3.6.14** S9086-CJ-STM-010 NSTM 075 FASTENERS

**3.6.3.6.15** S9086-CM-STM-010 NSTM 078 SEALS, GASKETS AND PACKING

**3.6.3.6.16** S9086-H7-STM-010 NSTM 262 LUBRICATING OILS, GREASES, SPECIALTY LUBRICANTS, AND LUBRICATION SYSTEMS

**3.6.3.6.17** S9086-RK-STM-010 NSTM 505 PIPING SYSTEMS

**3.6.3.6.18** S9086-RH-STM-010 NSTM 503 PUMPS

**3.6.3.7 AMMUNITION HANDLING AND ELEVATOR SPECIFIC REFERENCES:**

**3.6.3.7.1** S9086-XG-STM-010 SHIPBOARD AMMUNITION HANDLING AND STOWAGE

**3.6.3.7.2** S9086-ZN-STM-010 CARGO AND WEAPONS ELEVATORS

**3.6.3.7.3** S9086-TL-STM-010 SHIPBOARD STORES AND PROVISION HANDLING

**3.6.3.7.4** SG818-KT-MMA-010 LSD CLASS 8K/12K CARGO ELEVATORS

**3.6.3.7.5** SG420-AP-MMA-010 PERIODIC TESTING ARRANGEMENTS FOR ORDNANCE HANDLING EQUIPMENT

**3.6.3.7.6** SW323-AJ-MMA-010 5/54 CALIBER AMMUNITION STRIKEDOWN EQUIPMENT

**3.6.3.7.7** SG420-CJ-MMA-010 CIWS AMMUNITION AND DLS CARTRIDGES HANDLING EQUIPMENT (DDG 51 CL)

**3.6.3.7.8** SG818-BQ-MMM-010 FORWARD AND AFT AMMUNITION ELEVATORS (CG47 CL)

**3.6.3.7.9** SG818-A7-MMA-010 MAINTENANCE MANUAL ALL LEVELS FOR CARGO ELEVATOR

**3.6.3.7.10** SG818-MV-MMC-010 CARGO WEAPONS ELEVATOR (LPD17 CL)

**3.6.3.7.11** S9772-AB-MMC-010 AMMO LIFT PLATFORM (LPD17 CL)

**3.6.3.7.12** SG818-L3-MMA-A20 LHD 8 CARGO WEAPONS ELEVATOR

**3.6.3.7.13** SG818-L3-MMA-A10 LHD 8 CARGO WEAPONS ELEVATOR

**3.6.3.7.14** SG818-J7-MMA-010 CARGO ELEVATOR SYSTEM VOL1 MAINTENANCE MANUAL FOR LHD1

**3.6.3.7.15** SG818-LN-MMA-010 CARGO ELEVATOR (LHD 2 AND 4)

**3.6.3.7.16** SG818-MF-MMA-010 CARGO ELEVATOR (LHD 2)

**3.6.3.7.17** SG818-MF-MMA-010 CARGO ELEVATOR (LHD 2)

**3.6.3.7.18** SG818-NS-MMA-010 CARGO WEAPONS ELEVATOR SYSTEM (LHD 6)

**3.6.3.7.19** SG818-MN-MMO-020 AIRCRAFT ELEVATORS (CVN 76)

**3.6.3.7.20** SG818-MR-MMM-020 AIRCRAFT ELEVATORS (CVN 68)

**3.6.3.7.21** SG818-NM-MMO-020 AIRCRAFT ELEVATORS (CVN 77)

**3.6.3.7.22** SG818-J8-MMA-010 DECK EDGE AIRCRAFT ELEVATORS LHD MODEL 20554

**3.6.3.7.23** SG818-J8-MMA-020 DECK EDGE AIRCRAFT ELEVATORS LHD MODEL 20554

**3.6.3.7.24** S6436-AK-MMC-010 FILTER BUGGY MODELS HFB-2K-1/3, HFB-2K-1, AND HFB-2K-1.5 (LPD17 CL)

**3.6.3.7.25** SG812-BQ-MMC-010 AIRBORNE MISSION ZONE (AMZ) OVERHEAD BRIDGE CRANE, (LCS CL)

**3.6.3.7.26** SG800-A2-MMC-010/34712 LCS PLATFORM LIFT

**3.6.3.7.27** SG818-MS-MMA-010 TO 60 LOWER STAGE WEAPONS ELEVATOR (CVN 68)

**3.6.3.7.28** SG818-MT-MMA-010 TO 040 UPPER STAGE WEAPONS ELEVATOR (CVN 68)

**3.6.3.7.29** SG818-MR-MMM-010 TO 020 AIRCRAFT ELEVATORS (CVN 68)

**3.6.3.7.30** SG818-MH-MMA-010 TO 060 LOWER STAGE WEAPONS ELEVATOR (CVN 70)

**3.6.3.7.31** SG818-ML-MMA-010 TO 060 UPPER STAGE WEAPONS ELEVATOR (CVN 70)

**3.6.3.7.32** SG818-MK-MMM-010 TO 020 AIRCRAFT ELEVATORS (CVN 70)

**3.6.3.7.33** SG818-BX-MMA-B10 TO B60 LOWER STAGE WEAPONS ELEVATOR (CVN 71)

**3.6.3.7.34** SG818-JD-MMA-B10 TO B60 UPPER STAGE WEAPONS ELEVATOR (CVN 71)

**3.6.3.7.35** SG818-JZ-MMA-010 TO 020 AIRCRAFT ELEVATORS (CVN 71)

**3.6.3.7.36** SG818-NK-MMA-010 TO 060 LOWER STAGE WEAPONS ELEVATOR (CVN 74)

**3.6.3.7.37** SG818-LJ-MMA-010 TO B30 UPPER STAGE WEAPONS ELEVATOR (CVN 74)

**3.6.3.7.38** SG818-NL-MMA-010 TO 020 AIRCRAFT ELEVATORS (CVN 74)

**3.6.3.7.39** SG818-MQ-MMO-010 TO 060 LOWER STAGE WEAPONS ELEVATOR (CVN 76)

**3.6.3.7.40** SG818-MP-MMO-010 TO B30 UPPER STAGE WEAPONS ELEVATOR (CVN 76)

**3.6.3.7.41** SG818-MN-MMO-010 TO 020 AIRCRAFT ELEVATORS (CVN 76)

**3.6.3.8 DUMBWAITER AND CONVEYOR SPECIFIC REFERENCES:**

**3.6.3.8.1** SG818-J5-MMA-010 TWO-STOP ELECTRIC DUMBWAITER

**3.6.3.8.2** SG818-MU-MMC-010 DUMBWAITER (LPD17 CL)

**3.6.3.8.3** SG818-A8-MMA-010 DUMBWAITER (LSD 41 CL)

**3.6.3.8.4** SG818-MU-MMC-010 DUMBWAITER 270 KG SHIP SERVICE MODEL AV6000 AND 375 KG FOOD SERVICE MODEL AV7000 (LPD 17 CL)

**3.6.3.8.5** SG816-B2-MMA-010 100 LB VERTICAL PACKAGE CONVEYOR (CG 47 CL)

**3.6.3.8.6** SG816-B2-MMA-010 100 LB VERTICAL PACKAGE CONVEYOR

**3.6.3.8.7** SG816-BW-MMA-010 VERTICAL PACKAGE CONVEYOR (LHD 1 CL)

**3.6.3.8.8** SG816-AJ-MMM-A10 VERTICAL PACKAGE CONVEYOR 100-POUND 6- LEVEL CAPACITY (LSD 41 CL)

**3.6.3.8.9** S9086-TL-STM-010 SHIPBOARD STORES AND PROVISION HANDLING

**3.6.3.8.10** SG816-CQ-MMM-010 VERTICAL PACKAGE CONVEYOR (CVN 68)

**3.6.3.8.11** SG816-C1-MMM-010 VERTICAL PACKAGE CONVEYOR (CVN 70)

**3.6.3.8.12** SG816-CT-MMM-010 VERTICAL PACKAGE CONVEYOR (CVN 71)

**3.6.3.8.13** SG816-CS-MMM-010 VERTICAL PACKAGE CONVEYOR (CVN 74)

**3.6.3.8.14** SG816-CR-MMM-010 VERTICAL PACKAGE CONVEYOR (CVN 76)

**3.6.3.9 AIRCRAFT AND HELO HANGAR DOOR SPECIFIC REFERENCES:**

**3.6.3.9.1** SG818-JZ-MMA-010 TO 020 AIRCRAFT ELEVATORS DOORS (CVN 68)

**3.6.3.9.2** SG9588-AP-MMA-010 AIRCRAFT ELEVATOR DOORS (CVN 70)

**3.6.3.9.3** SG9588-AP-MMA-010 AIRCRAFT ELEVATOR DOORS (CVN 71)

**3.6.3.9.4** SG9588-AH-MM1-010 AIRCRAFT ELEVATOR DOORS (CVN 74)

**3.6.3.9.5** SG9588-MZ-MMO-010 AIRCRAFT ELEVATOR DOORS (CVN 76)

**3.6.3.9.6** SG818-J8-MMA-010 DECK EDGE AIRCRAFT ELEVATORS (LHD)

**3.6.3.9.7** S9584-AK-MMA-010 ALUMINUM HANGAR DOOR (CG47 CL)

**3.6.3.9.8** S9169-B1-MMA-010 HELICOPTER HANGAR DOORS (DDG CL)

**3.6.3.9.9** S9588-AN-MMC-010HELICOPTER HANGAR DOOR (LPD CL)

**3.6.3.9.10** SG818-AL-MMA-010 FORWARD AND AFT HANGAR BAY DIVISIONAL DOOR (CVN 68)

**3.6.3.9.11** SG818-AL-MMA-010 FORWARD AND AFT HANGAR BAY DIVISIONAL DOOR (CVN 70)

**3.6.3.9.12** SG818-AL-MMA-010 FORWARD AND AFT HANGAR BAY DIVISIONAL DOOR (CVN 71)

**3.6.3.9.13** SG818-AL-MMA-010 FORWARD AND AFT HANGAR BAY DIVISIONAL DOOR (CVN 74)

**3.6.3.9.14** SG818-AL-MMA-010 FORWARD AND AFT HANGAR BAY DIVISIONAL DOOR (CVN 76)

**3.6.3.9.15** S9588-AD-MMA-010 AIRCRAFT HANGAR ACCESS DOOR (LHA CLASS)

**3.6.3.9.16** SG818-NL-MMA-010/020 CVN DOORS

**3.6.3.9.17** SG818-AH-MM1-010 CVN DOORS

**3.6.3.10 ACRONYMS AND DEFINITIONS:**

**3.6.3.10.1** ACE: AIRCRAFT ELEVATOR
**3.6.3.10.2** CWE: CARGO WEAPONS ELEVATOR
**3.6.3.10.3** VPC: VERTICAL PACKAGE CONVEYOR
**3.6.3.10.4** PLC: PROGRAMMABLE LOGIC CONTROLLER
**3.6.3.10.5** DE: DECK EDGE
**3.6.3.10.6** AC: AIRCRAFT
**3.6.3.10.7** NSTM: NAVAL SHIP'S TECHNICAL MANUAL
**3.6.3.10.8** GSO: GENERAL SPECIFICATIONS FOR OVERHAUL
**3.6.3.10.9** JFMM: JOINT FLEET MAINTENANCE MANUAL
**3.6.3.10.10** DFS: DEPARTURE FORM SPECIFICATIONS
**3.6.3.10.11** ESR: ENGINEERING SERVICE REQUEST

**3.6.4 HYDRAULICS AND PIPING (C254)**

**3.6.4.1** Code 254 contractor personnel is responsible for support of technical guidance, test and inspection, and system troubleshooting in support of ship's force conducting system adjustments and minor repairs on hydraulics, controls, and deck machinery technical services in connection with FTA and assessments on all naval ship classes and applicable support ships, such as Military Sealift Command vessels. General tasking and requirements specified in section 3.1 and 3.2 apply in addition to the following specific requirements for this code including subsystems and electronic controls in support thereof:

**3.6.4.1.1 Boat davits, including:**

**3.6.4.1.1.1**Welin Lambie Davits

**3.6.4.1.1.2**Vest Davits

**3.6.4.1.1.3** Constant Tension Davits

**3.6.4.1.1.4** All-electric Davits

**3.6.4.1.1.5** Hydraulic Davits

**3.6.4.1.2 Cranes, including:**

**3.6.4.1.2.1** Knuckle Boom Cranes

**3.6.4.1.2.2** Well Deck Cranes

**3.6.4.1.2.3** Gantry Cranes

**3.6.4.1.2.4** Topside Rotating Cranes

**3.6.4.1.2.5** Bridge Cranes

**3.6.4.1.2.6** Articulated and Folding Cranes

**3.6.4.1.2.7** Winches, including:

**3.6.4.1.2.8** Winches associated with various cranes

**3.6.4.1.2.9** Winches used to operate between deck ramps

**3.6.4.1.2.10** LCAC Recovery Winches

**3.6.4.1.3 Capstans, including:**

**3.6.4.1.3.1** Mooring Capstans

**3.6.4.1.3.2** Towing Capstans

**3.6.4.1.3.3** Anchor Windlasses, including

**3.6.4.1.3.4** Electric Anchor Windlasses

**3.6.4.1.3.5** Hydraulic Anchor Windlasses

**3.6.4.1.4 Ramps, including:**

**3.6.4.1.4.1** Vehicle ramps

**3.6.4.1.4.2** Boat ramps

**3.6.4.1.5 Sliding Padeyes, including:**

**3.6.4.1.5.1** Stationary

**3.6.4.1.5.2** Retractable

**3.6.4.1.5.3** Steering systems.

**3.6.4.1.5.4** Fin stabilizers, including LCS Ride Control Systems.

**3.6.4.1.6 CPP Hydraulics, including;**

**3.6.4.1.6.1** Oil Distribution Box

**3.6.4.1.6.2** System Hydraulics

**3.6.4.1.6.3** Cable Reels

**3.6.4.1.6.4** Ballast/deballast Hydraulic Power Units

**3.6.4.1.6.5** PLC Controls

**3.6.4.1.6.6** Electric/electronic control, detection, alarm sensing, indicating, and monitoring systems and equipment

**3.6.4.1.6.7** Miscellaneous Auxiliary Equipment

**3.6.4.1.7** PIPING SYSTEMS—The contractor must provide engineering technical support in accordance with section 3.3 for pipe flushing and design. These systems include:

**3.6.4.1.7.1** Hydraulic Systems

**3.6.4.1.7.2** Lube Oil Systems

**3.6.4.1.7.3** Fuel Oil Systems

**3.6.4.1.7.4** Fresh Water Systems

**3.6.4.1.7.5** Air Systems (LP/HP/DRY)

**3.6.4.1.7.6** Sea Water Systems

**3.6.4.1.7.9** Fire Fighting System (Water Mist, Magazine Sprinkling)

**3.6.4.1.7.8** Plumbing System (CHT, Deck Drain)

**3.6.4.1.7.9** Diesel Exhaust (Bellows)
**3.6.4.1.7.10** Secondary Drainage (Oily waste)

**3.6.4.2 REQUIRED TRAINING, LICENSES, AND CERTIFICATIONS**: Contractor personnel assigned to execute tasks on the following equipment must complete the following training or certifications:

**3.6.4.2.1 Piping Group:**

**3.6.4.2.1.1** Attend Welding for Non Welders training from Hobart Industries located in Troy, OH within one-hundred eighty (180) calendar days of providing direct support.

**3.6.4.2.2 Hydraulics Group:**
**3.6.4.2.2.1** Attend Industrial Hydraulics and Electromechanical courses hosted by Eaton Corporation at Maumee, OH within one-hundred eighty (180) calendar days of providing direct support.

**3.6.4.2.3** Attend Wire Rope and Rigging training course from Crane Tech LLC at Brandon, FL within one-hundred eighty (180) calendar days of providing direct support.

**3.6.4.2.4 All Employees:**

**3.6.4.2.4.1** Attend Valves, Actuators and Controls basics hosted by Valve Manufacturers Association (VMA) at Houston, TX within one year of providing direct support.

**3.6.4.3 CODE SPECIFIC REFERENCES**:

**3.6.4.3.1** MIL-STD-22 Welding Joint Design

**3.6.4.3.2** MIL-STD-419 Cleaning, Protecting, Testing Piping, Tubing, and Fittings for Hydraulic Power Transmission Equipment

**3.6.4.3.3** MIL-STD-777 Schedule of Piping, Valves, Fittings, and Associated Piping Components for Naval Surface Ships

**3.6.4.3.4** MIL-F-1183 Fittings, Pipe, Cast Bronze, Silver-Brazing; Bend, Pipe, Return.

**3.6.4.3.5** MIL-STD-1330 Precision Cleaning and Testing of Shipboard Oxygen, Helium, Helium-Oxygen, Nitrogen, and Hydrogen Systems

**3.6.4.3.6** MIL-STD-1622 Standard Practice for Cleaning of Shipboard Compressed Air Systems

**3.6.4.3.7** MIL-STD-2035 Nondestructive Testing Acceptance Criteria

**3.6.4.3.8** MIL-PRF-20042 Flanges, Pipe, Bronze (Silver Brazing)

**3.6.4.3.9** NSTM 075 Threaded Fasteners

**3.6.4.3.10** NSTM 078 Gaskets and Packing

**3.6.4.3.11** NSTM 262 Lubricating Oils, Greases, Specialty Lubricants, and Lubrication Systems

**3.6.4.3.12** NSTM 504 Pressure, Temperature, and Other Mechanical and Electromechanical Measuring Instruments

**3.6.4.3.13** NSTM 505 Piping Systems

**3.6.4.3.14** NSTM 532 Liquid Cooling Systems for Electronic Equipment

**3.6.4.3.15** NSTM 533 Potable Water Systems

**3.6.4.3.16** NSTM 541 Ship Fuel and Fuel Systems

**3.6.4.3.17** NSTM 542 Gasoline and JP-5 Fuel Systems

**3.6.4.3.18** NSTM 555 Surface Ship Firefighting

**3.6.4.3.19** NSTM 593 Pollution Control

**3.6.4.3.20** NSTM 556 Hydraulic Equipment (Power Transmission and Control)

**3.6.4.3.21** NSTM 562 Surface Ship Steering System

**3.6.4.3.22** NSTM 573 Booms

**3.6.4.3.23** NSTM 581 Anchoring

**3.6.4.3.24** NSTM 582 Mooring and Towing

**3.6.4.3.25** NSTM 589 Cranes

**3.6.4.3.26** NSTM 613 Wire Rope and Rigging

**3.6.4.3.27** S6430-AE-TED-010 Piping Devices, Flexible Hose Assemblies

**3.6.4.3.28** S9074-AR-GIB-010A/278 Requirements for Fabrication Welding and Inspection, and Casting Inspection and Repair for Machinery, Piping, and Pressure Vessels

**3.6.4.3.29** 0900-LP-001-7000 Fabrication and Inspection on Brazed Piping Systems
**3.6.4.3.30** PLC Operation/Maintenance LSD-41 Class

**3.6.4.4 TOOLS AND CONSUMABLES**

**3.6.4.4.1** 28-Piece Electricians Tool Kit (Klein Tools, Part Number 80028)

**3.6.4.5 ACRONYMS AND DEFINITIONS:**

**3.6.4.5.1** ASCU: Aft Steering Control Unit

**3.6.4.5.2** AWR: Automatic Work Request

**3.6.4.5.3** CHENG: Chief Engineer

**3.6.4.5.4** CPP: Controllable Pitch Propeller

**3.6.4.5.5** DFS: Departure From Specification

**3.6.4.5.6** ESR: Engineering Service Request

**3.6.4.5.7** HOPM: Hydraulic Oil Power Module

**3.6.4.5.8** HPU: Hydraulic Power Unit

**3.6.4.5.9** JFMM: Joint Fleet Maintenance Manual

**3.6.4.5.10** LTA: Local Technical Authority

**3.6.4.5.11** MRC: Maintenance Requirement Card

**3.7 MAIN PROPULSION & ELECTRICAL DIVISION (C260)**

**3.7.1 Gas Turbine & Engine Controls (C261)** Code 261 contractor personnel must complete the tasks identified below.

**3.7.1.1** Contractor personnel are responsible for completing the tasking and requirements per section 3.1 and 3.2 for Gas Turbine Mechanical and Gas Turbine Control Systems which includes the following systems, subsystems and equipment:

**3.7.1.1.1** Mechanical Components and Engine Controllers for Gas Turbine Propulsion and Gas Turbine Generator Engines and their support systems:

**3.7.1.1.1.1** LM2500 and LM2500+

**3.7.1.1.1.2** 501-K17 and 501-K34

**3.7.1.1.1.3** MT5 and MT30

**3.7.1.1.1.4** 250-KS4

**3.7.1.1.1.5** TF40B

**3.7.1.1.1.6** ETF40B

**3.7.1.1.1.7** T62

**3.7.1.1.1.8** Solar T1000S and Solar T1302S

**3.7.1.1.2** Control and Monitoring System for Gas Turbine Propulsion for DDG 51, CG 47, LHD 8, LHA 6, LCS 1 & LS 2 Class Ships which includes the following control system elements:

**3.7.1.1.2.1** Propulsion Auxiliary Control Console (PACC)

**3.7.1.1.2.2** Signal Conditioner Enclosure (SCE)

**3.7.1.1.2.3** Central Information System Equipment (CISE)

**3.7.1.1.2.4** Propulsion Local Control Console (PLCC)

**3.7.1.1.2.5** Shaft Control Unit (SCU)

**3.7.1.1.2.6** Free Standing Electronic Enclosure (FSEE)

**3.7.1.1.2.7** Interim Integrated Electronic Control (IIEC)

**3.7.1.1.2.8** Universal Engine Control (UEC)

**3.7.1.1.2.9** Universal Engine Control (UEC) Plus

**3.7.1.1.2.10** Main Engine Control Unit (MECU)

**3.7.1.1.2.11** Data Acquisition Unit (DAU)

**3.7.1.1.2.12** Full Authority Digital Control (FADC)

**3.7.1.1.2.13** Fuel Control Console (FCC)

**3.7.1.1.2.14** Fuel Control System (FCS)

**3.7.1.1.2.15** Damage Control Console (DCC)

**3.7.1.1.2.16** Damage Control System (DCS)

**3.7.1.1.2.17** Ship Control Console (SCC)

**3.7.1.1.2.18** Bridge Control Unit (BCU)

**3.7.1.1.2.19** Shaft Torsion Meter

**3.7.1.1.2.20** Engineering Officer of the Watch (EOOW)

**3.7.1.1.2.21** Digital Fuel Control

**3.7.1.1.2.22** Blow-in-Door (BID) Controllers

**3.7.1.1.2.23** Universal Control Console (UCC), supporting operating systems & software

**3.7.1.1.3** Control and Monitoring System for Gas Turbine Generators for DDG 51 and CG 47 Class Ships which in7ludes the following control system elements:

**3.7.1.1.3.1** Electric Plant Control Console (EPCC)

**3.7.1.1.3.2** Full Authority Digital Controller (FADC)

**3.7.1.1.3.3** Local Control Operating Panel (LOCOP)

**3.7.1.1.3.4** Fuel Metering Valve (FMV)

**3.7.1.1.3.5** Redundant Independent Mechanical Start System (RIMSS)

**3.7.1.1.3.6** Trainer In Work Station (TIWS)

**3.7.1.2** Complete Marine Gas Turbine Inspections per references 3.6.1.5.5, 3.6.1.5.60, and 3.6.1.5.61 (General Gas Turbine Bulletin Nr. 11, NSTM 234 and OPNAV) for Gas Turbine Systems on the DDG 1000, DDG 51, CG 47, LHD 8, LHA 6, LCS 1, LCS 2 and MCM Class ships.

**3.7.1.3** Complete vibration analysis and assessments on shipboard equipment and structure for all classes of ships by using complex custom and off the-shelf computer systems in both the office environment and onboard ship including underway periods.

**3.7.1.3.1** Plan, coordinate, and perform Vibration Condition Assessment (VCA) visits on US Navy ships and craft per reference 2.4 (JFMM – VOL 2 CH 42)

**3.7.1.3.2** Utilize and maintain DLI vibration data recorders to acquire the vibration data.
Provide subject matter expert advice and technical recommendations on the vibration response of shipboard systems and equipment.

**3.7.1.3.3** Analyze vibration data, which includes evaluating frequency domain spectrums and correlating the data to equipment characteristics. Provide operational / repair recommendations based on vibration signatures.
**3.7.1.3.4** Provide a TAVR per reference 2.4 with operational/repair recommendations based on vibration analysis completed.

**3.7.1.3.5** Complete engineering analysis of complex problems on gas turbine and control systems and provide repair recommendations when there is a lack of clear guidance or criteria in references 3.6.1.5.1 – 3.6.1.5.60.

**3.7.1.4 REQUIRED TRAINING, LICENSES AND CERTIFICATIONS:** Contractor personnel assigned to execute the following tasks must complete the following training or certifications:

**3.7.1.4.1** For tasking 3.6.1.2, personnel must have a current 4136 NEC per reference 3.6.1.5.5.

**3.7.1.4.2** For tasking 3.6.1.3, personnel must have Vibration Institute Training Level 1 Certification per reference 3.6.1.5.3 and must obtain a Vibration Institute Training Level 2 Certification per 3.6.1.5.4 within 12 months of starting work.

**3.7.1.5 CODE SPECIFIC REFERENCES:** In order to complete the scope of work, contractor personnel must be able to, access and understand the content of the following references (at a minimum):

**3.7.1.5.1** MIL-STD-167 Mechanical Vibrations of Shipboard Equipment

**3.7.1.5.2** DLI Vibration Training Curriculum

**3.7.1.5.3** Vibration Institute Training Level 1 Curriculum/Certification

**3.7.1.5.4** Vibration Institute Training Level 2 Curriculum/Certification

**3.7.1.5.5** General Gas Turbine Bulletin Nr. 11 Rev 7

**3.7.1.5.6** S9234-AD-MMO-010 PROPULSION GAS TURBINE MODULE, LM2500; DESCRIPTION & OPERATION

**3.7.1.5.7** S9234-AD-MMO-020 PROPULSION GAS TURBINE MODULE, LM2500; INSTALLATION & SCHEDULED MAINTENANCE

**3.7.1.5.8** S9234-AD-MMO-030 PROPULSION GAS TURBINE MODULE, LM2500, VOLUME 2 PART 1, TROUBLESHOOTING; DESCRIPTION AND OPERATION

**3.7.1.5.9** S9234-AD-MMO-040 PROPULSION GAS TURBINE MODULE, LM2500; REFERENCE DIAGRAMS

**3.7.1.5.10** S9234-AD-MMO-050 PROPULSION GAS TURBINE MODULE, LM2500, VOLUME 2, PART 3; CORRECTIVE MAINTENANCE

**3.7.1.5.11** NAVSEA S9234-AD-MMO-060 LM2500 PROPULSION GAS TURBINE MODULE, VOLUME 2 PART 4; CORRECTIVE MAINTENANCE

**3.7.1.5.12** NAVSEA S9234-AD-MMO-070 PROPULSION GAS TURBINE MODULE, LM2500, ILLUSTRATED PARTS BREAKDOWN, GAS TURBINE ASSEMBLY

**3.7.1.5.13** NAVSEA S9234-AD-MMO-080 PROPULSION GAS TURBINE MODULE, LM2500; ILLUSTRATED PARTS BREAKDOWN, LUBE OIL STORAGE AND CONDITIONING ASSEMBLY

**3.7.1.5.14** NAVSEA S9234-AD-MMO-090 PROPULSION GAS TURBINE MODULE, LM2500, VOLUME 3, PART 3; ILLUSTRATED PARTS BREAKDOWN, CONTROLS AND ACCESSORIES

**3.7.1.5.15** NAVSEA S9234-AD-MMO-100 LM2500 PROPULSION GAS TURBINE, ILLUSTRATED PARTS BREAKDOWN, FREE STANDING ELECTRONIC ENCLOSURE ASSEMBLY; VOLUME 3

**3.7.1.5.16** S9234-BF-MMI-010 SPECIAL SHIPBOARD MAINTENANCE LM2500 GAS TURBINES

**3.7.1.5.17** S9234-BF-MMI-020 SPECIAL SHIPBOARD MAINTENANCE; LM2500 GAS TURBINES, GAS GENERATOR, POWER TURBINE, HIGH SPEED COUPLING SHAFT REMOVAL AND REPLACEMENT

**3.7.1.5.18** S9311-C6-MMO-A10 AG9140 SHIP SERVICE GAS TURBINE GENERATOR (SSGTG) WITH FADC LOCOP CONTROLS; DESCRIPTION, OPERATION, AND SCHEDULED MAINTENANCE

**3.7.1.5.19** S9311-C6-MMO-A20 SHIP SERVICE GAS TURBINE GENERATOR (SSGTG), MODEL AG9140 WITH FADC LOCOP CONTROLS; VOLUME 2, TROUBLESHOOTING MANUAL

**3.7.1.5.20** S9311-C6-MMO-A30 SHIP SERVICE GAS TURBINE GENERATOR (SSGTG), MODEL AG9140 WITH FADC LOCOP CONTROLS; VOLUME 3, CORRECTIVE MAINTENANCE MANUAL

**3.7.1.5.21** S9311-C6-MMO-A40 SHIP SERVICE GAS TURBINE GENERATOR (SSGTG), MODEL AG9140 WITH FADC LOCOP CONTROLS; VOLUME 4, ILLUSTRATED PARTS BREAKDOWN

**3.7.1.5.22** S9311-C6-MMO-A50 SHIP SERVICE GAS TURBINE GENERATOR (SSGTG), MODEL AG9140 WITH FADC LOCOP CONTROLS; VOLUME 5, INSTALLATION

**3.7.1.5.23** S9311-C6-MMO-A60 SHIP SERVICE GAS TURBINE GENERATOR (SSGTG), MODEL AG9140 WITH FADC LOCOP CONTROLS; VOLUME 6, INTERMEDIATE MAINTENANCE MANUAL

**3.7.1.5.24** S9234-B3-MMO-A10 GAS TURBINE GENERATOR SET, MODEL 139, W/FADC LOCOP CONTROLS, VOLUME 1; DESCRIPTION, OPERATION AND INSTALLATION

**3.7.1.5.25** S9234-B3-MMO-A20 GAS TURBINE GENERATOR, MODEL 139 W/FADC LOCOP CONTROLS, VOLUME 2 PART 1, TROUBLE ISOLATION MANUAL

**3.7.1.5.26** S9234-B3-MMO-A30 GAS TURBINE GENERATOR SET, MODEL 139, VOLUME 2, PART 2, TROUBLE ISOLATON

**3.7.1.5.27** S9234-B3-MMO-A40 GAS TURBINE GENERATOR SET, MODEL 139, WITH FADC LOCOP CONTROLS; VOLUME 3; ILLUSTRATED PARTS BREAKDOWN

**3.7.1.5.28** S9234-B3-MMO-A50 GAS TURBINE GENERATOR, MODEL 139, WITH FADC LOCOP CONTROLS, VOLUME 4, TROUBLESHOOTING GUIDE

**3.7.1.5.29** S9311-CQ-MMA-B10 AG9130 SHIP SERVICE GAS TURBINE GENERATOR (SSGTG) WITH FADC LOCOP CONTROLS; SCD 4904 INSTALLED; DESCRIPTION, OPERATION AND SCHEDULED MAINTENANCE

**3.7.1.5.30** S9311-CQ-MMA-B20 AG9130 SHIP SERVICE GAS TURBINE GENERATOR (SSGTG) WITH FADC LOCOP CONTROLS; SCD 4904 INSTALLED; TROUBLESHOOTING

**3.7.1.5.31** S9311-CQ-MMA-B30 AG9130 SHIP SERVICE GAS TURBINE GENERATOR (SSGTG) WITH FADC LOCOP CONTROLS; SCD 4904 INSTALLED; CORRECTIVE MAINTENANCE

**3.7.1.5.32** S9311-CQ-MMA-B40 AG9130 SHIP SERVICE GAS TURBINE GENERATOR (SSGTG) WITH FADC LOCOP CONTROLS; SCD 4904 INSTALLED

**3.7.1.5.33** S9311-CQ-MMA-B50 AG9130 SHIP SERVICE GAS TURBINE GENERATOR (SSGTG) WITH FADC LOCOP CONTROLS; SCD 49404 INSTALLED: INSTALLATION

**3.7.1.5.34** S9311-CQ-MMA-B60 AG9130 SHIP SERVICE GAS TURBINE GENERATOR (SSGTG) WITH FADC LOCOP CONTROLS; SCD 4904 INSTALLED

**3.7.1.5.35** S9234-DZ-MMC-010 GAS TURBINE ENGINE, ROLLS-ROYCE, MODEL MT- 30; VOLUME 1, INSTALLATION, OPERATION AND MAINTENANCE MANUAL

**3.7.1.5.36** S9234-DZ-MMC-020 GAS TURBINE ENGINE, ROLLS-ROYCE MODEL MT- 30; VOLUME 2, OPERATION

**3.7.1.5.37** S9234-DZ-MMC-030 GAS TURBINE ENGINE, ROLLS-ROYCE MODEL MT- 30; VOLUME 3, MAINTENANCE

**3.7.1.5.38** S9234-DZ-MMC-040 GAS TURBINE ENGINE, ROLLS-ROYCE MODEL MT- 30; VOLUME 4, TROUBLESHOOTING

**3.7.1.5.39** S9234-DZ-MMC-050 GAS TURBINE ENGINE, ROLLS-ROYCE MODEL MT- 30; VOLUME 5, PARTS BREAKDOWN

**3.7.1.5.40** S9234-DZ-MMC-060 GAS TURBINE ENGINE, ROLLS-ROYCE MODEL MT- 30; VOLUME 6, VENDOR DATA

**3.7.1.5.41** S9086-KC-STM-010 NAVAL SHIPS' TECHNICAL MANUAL, CHAPTER 300, ELECTRIC PLANT-GENERAL

**3.7.1.5.42** SE640-AF-MMO-011 RECORDER-REPRODUCER SET, SIGNAL DATA AN/USH-26(V); OPERATION AND MAINTENANCE, W/CHGS A-Q

**3.7.1.5.43** SE640-AF-MMO-021 RECORDER-REPRODUCER SET, SIGNAL DATA AN/USH-26(V); VOLUME 2, SCHEMATIC LOGIC DIAGRAMS; W/CHGS A THRU H

**3.7.1.5.44** SE640-AF-MMO-031 RECORDER-REPRODUCER SET, SIGNAL DATA AN/USH-26(V); VOLUME 3, DIAGNOSTIC PROGRAM OPERATOR'S MANUAL W/CHGS A - G, REVISION 1

**3.7.1.5.45** SE640-AF-MMO-041 RECORDER-REPRODUCER SET, SIGNAL DATA AN/USH-26(V); VOLUME 4, PROGRAMMER'S REFERENCE GUIDE W/CHGS A THRU H; REVISION 1

**3.7.1.5.46** SE640-AF-MMO-051 RECORDER-REPRODUCER SET, SIGNAL DATA AN/USH-26(V); VOLUME 5, INSTALLATION GUIDE AND PROCEDURES; W/CHGS A THRU M

**3.7.1.5.47** SE600-AD-MMO-010 DATA PROCESSING GROUP OL-335(V)/U; ORGANIZATIONAL LEVEL MAINTENANCE

**3.7.1.5.48** SE182-AV-MMM-010 DATA MULTIPLEX SYSTEM AN/USQ-82(V) PN 10001- 113, MODEL DMS; FOMM SUPPORT VOLUME

**3.7.1.5.49** S9202-B4-IEM-010 DDG-51 CLASS MACHINERY CONTROL SYSTEM; INTERACTIVE ELECTRONIC TECHNICAL MANUAL

**3.7.1.5.50** S6263-B7-MMA-010 UNIVERSAL ENGINE CONTROLLER (UEC); OPERATIONS AND MAINTENANCE

**3.7.1.5.51** S6263-B7-MMA-020 UNIVERSAL ENGINE CONTROLLER (UEC); EQUIPMENT LEVEL; OPERATION AND MAINTENANCE VOLUME 2 W/CHG A

**3.7.1.5.52** S9311-DK-MMA-010 SHIP SERVICE GAS TURBINE GENERATOR (SSGTG) PART NO. AG9140RF; VOLUME 1, DESCRIPTION, OPERATION, AND SCHEDULED MAINTENANCE

**3.7.1.5.53** S9311-DK-MMA-020 SHIP SERVICE GAS TURBINE GENERATOR (SSGTG) PART NO. AG9140RF; VOLUME 2, TROUBLESHOOTING

**3.7.1.5.54** S9311-DK-MMA-030 SHIP SERVICE GAS TURBINE GENERATOR (SSGTG), PART AG9140RF; VOLUME 3; DESCRIPTION, OPERATION, AND SCHEDULED MAINTENANCE

**3.7.1.5.55** S9311-DK-MMA-040 SHIP SERVICE GAS TURBINE GENERATOR (SSGTG), PART NUMBER AG9140RF; VOLUME 4, ILLUSTRATED PARTS BREAKDOWN

**3.7.1.5.56** S9DDG-BT-OFD-A10 DDG-51 CLASS DAMAGE CONTROL, ONE FUNCTION DIAGRAMS MANUAL (DDG-83 AND FOLLOWING SHIPS)

**3.7.1.5.57** S9202-B4-IEM-010 DDG-51 CLASS MACHINERY CONTROL SYSTEM; INTERACTIVE ELECTRONIC TECHNICAL MANUAL

**3.7.1.5.58** GENERAL GAS TURBINE BULLETIN (GGTB) NO. 0, REVISION 46, MASTER TECHNICAL DIRECTIVE (ZERO) INDEX

**3.7.1.5.59** S9234-B3-MMI-010 GAS TURBINE GENERATOR SET, MODEL 139; SPECIAL SHIPBOARD MAINTENANCE MANUAL

**3.7.1.5.60** S9086-HC-STM-OOO- NSTM Chapter 234

**3.7.1.5.61** OPNAVINST 9220.3 , Propulsion and Auxiliary Plant Inspection and Inspector Certification Program

**3.7.2 ELECTRICAL (C262)**

**3.7.2.1** Code 262 contractor personnel must complete the tasks identified in 3.6.2.2 through 3.6.2.4.

**3.7.2.2** Contractor personnel are responsible for completing the tasking and requirements per section 3.1 for Electrical which includes the following systems, subsystems and equipment:

**3.7.2.2.1** New and existing electrical cables

**3.7.2.2.2** Power and lighting circuits and distribution

**3.7.2.2.2.1** 4160 VAC

**3.7.2.2.2.2** 1000 VAC

**3.7.2.2.2.3** 450 VAC

**3.7.2.2.2.4** 115 VAC

**3.7.2.2.3** Marine Electrical Systems.

**3.7.2.2.4** Automatic Bus Transfer (ABTs) switches

**3.7.2.2.5** Transformers

**3.7.2.2.6** Ship Service Diesel Generator (SSDG) and Main Propulsion Diesel Engine (MPDE) Controls

**3.7.2.2.7** Gas turbine, steam turbine, and diesel generator sets including exciters

**3.7.2.2.8** Electric/digital/hydraulic governor control systems

**3.7.2.2.9** Synchronizer controls and the systems that support the operation of the system

**3.7.2.2.10** 400 HZ Converters and associated equipment

**3.7.2.2.11** Degaussing systems and associated equipment/cables

**3.7.2.2.12** Switch gear including instrumentation, controls, circuit breakers, reverse power relays, load shedding devices, Generator Protection Module (GPM) and No Break Power Supply (NBPS)

**3.7.2.2.13** Miscellaneous systems such as Lube Oil Purifier Heaters, Vent fog precipitators, and Helicopter Electrical Servicing Station/Aircraft Electrical Servicing Station (HESS/AESS)

**3.7.2.2.14** Cathodic Protection, Impressed Current Cathodic Protection (ICCP)

**3.7.2.2.15** Motor generator sets including voltage and frequency regulators and monitors

**3.7.2.2.16** All associated system controllers (for ex. Gun Control) that require electrical monitoring (utilizing power analyzers) or troubleshooting outside of systems/equipment identified in 3.6.2.1-3.6.2.18

**3.7.2.3 Accomplish Infrared (IR)** surveys per references 3.6.2.6.30 (IR guidebook) and MIP 3000 to identify over heating condition of wirings and connections within switchboards, motor controllers and other electrical equipment. Surveys will include electrical equipment on all naval ship classes including:

**3.7.2.3.1** Components, associated circuit boards and high tension circuit breakers in the engineering spaces, combat systems spaces and other electrical equipment and systems throughout the ship

**3.7.2.3.2** Propulsion plant equipment,

**3.7.2.3.3** Power generation,

**3.7.2.3.4** Auxiliary electrical systems power,

**3.7.2.3.5** Lighting circuits,

**3.7.2.3.6** Marine electrical systems,

**3.7.2.3.7** Electrical components,

**3.7.2.3.8** Fixtures,

**3.7.2.3.9** Electrical control equipment.

**3.7.2.4** Support cableway inspection oversight and drawing review and identify deficiencies of shipboard electrical cable hazards and corresponding level of priority and provide repair recommendations.

**3.7.2.5** REQUIRED TRAINING, LICENSES AND CERTIFICATIONS: Contractor personnel assigned to execute the following tasks must complete the following training or certifications:

**3.7.2.5.1** For tasking 3.6.2.3, the contractor must complete the following:

**3.7.2.5.1.1** IR Survey Level 1 Technician: Thirty percent (30%) of all support contractor personnel supporting this area shall have this certification within sixty (60) days of providing direct support.

**3.7.2.5.1.1.1** IR certification Level I, II, and III is available from http://www.thesnellgroup.com/infrared-training/. Any alternate training program substituted for the recommended training must be approved by Government representative prior to attending.

**3.7.2.5.1.2** IR Survey Level 2 Technician: One support contractor out of the thirty percent (30%) Level 1 certified IR survey contractor personnel supporting this area shall have this certification within six (6) months of providing direct support.

**3.7.2.5.1.2.1** IR certification Level I, II, and III is available from http://www.thesnellgroup.com/infrared-training/. Any alternate training program substituted for the recommended training must be approved by Government representative prior to attending.

**3.7.2.5.1.3** IR Survey Level 1 and 2 Technician: All support contractor personnel Level 1 or Level 2 certified, shall be recertified every five (5) years of providing direct support.

**3.7.2.5.1.4** IR Survey Level 1 and 2 Technician: All of support contractor personnel Level 1 or Level 2 certified, shall attend Marine Electric Propulsion / High Voltage Electrical Safety training by MEBA within sixty (60) days of providing direct support.

**3.7.2.5.1.4.1** Marine Electric Propulsion/High Voltage Electrical Safely training to support 4160 VAC IR surveys is provided by MEBA and is available from http://MEBAschool.org

**3.7.2.5.1.5** All personnel assigned to this tasking are Level I IR Certified and/or Marine Electric Propulsion / High Voltage Electrical Safety certified and can use infrared cameras to collect quality data.

**3.7.2.5.1.6** Personnel must utilize safety gear rated for high voltage to support IR surveys of 4160 VAC switchboards and Load Centers.

**3.7.2.6 CODE SPECIFIC REFERENCES:** To complete the scope per section 3.1, contractor personnel must be able to access and understand the content of the following references (at a minimum):

**3.7.2.6.1** Navy Electrical and Electronics Training Series (NEETS)
**3.7.2.6.2** NAVEDTRA 14344 Electrician's Mate Rating Manual

**3.7.2.6.3** NAVSEA Standard Items 009-16 Electronic Equipment; repair

**3.7.2.6.4** NAVSEA Standard Items 009-17 Rotating Electrical Equipment; repair

**3.7.2.6.5** NAVSEA Standard Items 009-33 Rotating Electrical; rewind

**3.7.2.6.6** NAVSEA Standard Items 009-36 Controller; repair

**3.7.2.6.7** NAVSEA Standard Items 009-22

**3.7.2.6.8** NAVSEA Standard Items 009-73 Shipboard Electrical/Electronic Cable Procedure; accomplish

**3.7.2.6.9** NAVSEA Standard Items 009-75 Circuit Breaker; repair

**3.7.2.6.10** NAVSEA Standard Items, 009-113 Rotating Electrical Equipment with a Sealed Insulation System (SIS); rewind

**3.7.2.6.11** NAVEDTRA 43701 Engineering Apprentice PQS

**3.7.2.6.12** S9475-AF-OMI-010 Degaussing

**3.7.2.6.13** NAVAIR 51-50ABA-1 Visual Landing Aids

**3.7.2.6.14** S9086-KC-STM-010/CH-300 NSTM CH 300 Electric Plant General

**3.7.2.6.15** S9086-K9-STM-010/CH-330 NSTM CH 330 Lighting

**3.7.2.6.16** S9086-K9-STM-010/CH-313 Portable Storage and Dry Batteries

**3.7.2.6.17** S9086-KE-STM-010/CH-302 Electric Motors and Controllers

**3.7.2.6.18** S9086-Q5-STM-010/CH-491 Electrical Measuring and Test Instruments

**3.7.2.6.19** S9086-KN-STM-010/CH-310 Electric Power Generators and Conversion Equip

**3.7.2.6.20** S9086-KY-STM-010/CH-320 Electrical Power Distribution Systems

**3.7.2.6.21** S9086-VF-STM-010/CH-633 Cathodic Protection

**3.7.2.6.22** S9086-QN-STM-010/CH-475 NSTM CH 475, Magnetic Silencing

**3.7.2.6.23** NAVSEAINST 9304.1 Shipboard Electrical Cable and Cableway Inspection and Reporting Procedures

**3.7.2.6.24** S9264-A7-MMA-010 Electric, Circulation Type, Lube Oil Heater and Controller

**3.7.2.6.25** SE565-AK-MMC-010 Multi-Function Monitor (MFM)

**3.7.2.6.26** MIL-STD-2003 Electric Plant Installation Standard Methods for Surface ships and Submarines

**3.7.2.6.27** S9311-DY-MMA-010 Operation and Maintenance Manual 4160V, 60 HZ General and Distribution Switchboards

**3.7.2.6.28** S9086-KC-STM-010 NSTM Chapter 300, Electric Plant General

**3.7.2.6.29** S9311-DY-MMA-010 Operation and Maintenance Manual 4160V, 60 HZ General and Distribution Switchboards

**3.7.2.6.30** SW210-AP-GYD-010 Thermal/Infrared Imaging Inspection Guide Book

**3.7.2.6.31** NSTM 504 (S9086-RJ-STM-010) PRESSURE, TEMPERATURE AND OTHER MECHANICAL AND ELECTROMECHANICAL MEASURING INSTRUMENTS

**3.7.3 MAIN PROPULSION (C263)**

**3.7.3.1** Code 263 contractor personnel assigned must complete and accomplish the tasks identified foe specific equipment.

**3.7.3.2** Contractor personnel are responsible for completing the tasking and requirements per 3.1 and 3.2 for propulsion main reduction gear (MRG) and shafts which includes the following systems, subsystems and equipment:

**3.7.3.2.1** Main Reduction Gears (MRG)

**3.7.3.2.2** Attached lube oil and CPP pumps

**3.7.3.2.3** Propulsion shafting

**3.7.3.2.4** Stern tube seals

**3.7.3.2.5** Stern tube and line shaft bearings

**3.7.3.2.6** Bulkhead seals and associated systems

**3.7.3.2.7** Propeller blades

**3.7.3.3 Shafting:**

**3.7.3.3.1** Complete Propulsion Shafting Strain Gage Analysis per NSTM 243 (reference 3.6.3.5.9) and provide repair recommendations to the branch head in a report or TAVR format for review and concurrence.

**3.7.3.3.2** Propeller blades:

**3.7.3.3.2.1** Complete a propeller blade inspection and provide repair recommendations per NSTM 245 (reference 3.6.3.5.1) to the branch head in a report or TAVR format for review and concurrence.

**3.7.3.4 REQUIRED TRAINING, LICENSES AND CERTIFICATIONS:** Contractor personnel assigned to execute tasks on the following equipment must complete the following training or certifications:

**3.7.3.4.1 Shafting:**

**3.7.3.4.1.1** Obtain and maintain Propulsion Shafting Strain Gage Analysis by receiving specialized training from NSWCPD per NSTM 243 (reference 3.6.3.5.9) within one-hundred eighty (180) calendar days of providing direct support.

**3.7.3.4.2 Propeller blades:**

**3.7.3.4.2.1** Attend NAVSEA PROPELLER VISUAL INSPECTION TRAINING COURSES hosted by Norfolk Naval Shipyard and obtain a passing grade within one-hundred eighty (180) calendar days of providing direct support.

**3.7.3.4.2.2** Attend NAVSEA PROPELLER CERTIFICATION COURSE hosted by Norfolk Naval Shipyard and obtain a passing grade within one year of providing direct support.

**3.7.3.4.3 MRG:**

**3.7.3.4.4** Attend GEAR 101 TRAINING hosted by Philadelphia Timken Gears and Services, Inc. within one-hundred eighty (180) calendar days of providing direct support.

**3.7.3.5 CODE SPECIFIC REFERENCES**: In order to complete the scope per section 3.1, contractor personnel must be able to, access and understand the content of the following references (at a minimum):

**3.7.3.5.1** Preventive Maintenance System (PMS)

**3.7.3.5.2** Military Standard Specifications (MIL-STD)

**3.7.3.5.3** Department of Defense Standard Specifications (DOD-STD)

**3.7.3.5.4** Ship Class Advisories (CLADS)

**3.7.3.5.5** In Service Engineering Agent (ISEA) Advisories

**3.7.3.5.6** S9086-CJ-STM-010 NSTM 075 Fasteners

**3.7.3.5.7** S9086-CM-STM-010 NSTM 078 Seals, Gaskets and Packing

**3.7.3.5.8** S9086-HK-STM-010 NSTM 241 Propulsion Reduction Gears, Couplings, Clutches, and Associated Components

**3.7.3.5.9** S9086-HM-STM-010 NSTM 243 Propulsion Shafting

**3.7.3.5.10** S9086-HN-STM-010 NSTM 244 Propulsion Bearings and Seals

**3.7.3.5.11** S9086-HP-STM-010 NSTM 245 Propellers

**3.7.3.5.12** S9086-H7-STM-010 NSTM 262 Lubricating Oils, Greases, Specialty Lubricants, and Lubrication Systems

**3.7.3.5.13** S9243-AW-TRS-012/0203-086-501A Technical Repair Standard for Surface Ship's Main Propulsion Shafting, Examination, Test and Repair Action

**3.7.3.5.14** NAVSEA INSTRUCTION 9245.1A Ship Propellers and Propulsion Shafts

**3.7.3.5.15** NSI 009-057 Reduction Gear Security Requirements

**3.7.3.5.16** NAVEDTRA 14325 Basic Military Requirements Manual

**3.7.3.5.17** NAVEDTRA 43701 Engineering Apprentice PQS

**3.7.3.5.18** NAVEDTRA 43103-A Engineering Fundamentals

**3.7.3.5.19** NAVEDTRA 43119-J DAMAGE CONTROL PQS

**3.7.3.5.20** NAVEDTRA 43119-4F Damage Control Watches PQS

**3.7.4 DIESELS (C264)**

**3.7.4.1** Code 264 contractor personnel must complete the tasks identified.

**3.7.4.2** Contractor personnel are responsible for completing the tasking and requirements per section 3.1 and 3.2 (with the exception of TSRA) for Diesel Engines which includes the following systems, subsystems and equipment:

**3.7.4.2.1** Main Propulsion Diesel Engines

**3.7.4.2.1.1** Diesel Engine Couplings

**3.7.4.1.2** Clutches

**3.7.4.1.3** Lubricating Oil Systems and associated components

**3.7.4.1.4** Combustion Air systems and associated components

**3.7.4.2** Power Generation Diesel Engines (Ship's Service and Emergency Diesel Engines for power generation)

**3.7.4.2.1** Lubricating Oil Systems and associated components

**3.7.4.2.2** Combustion Air systems and associated components

**3.7.4.3** Perform Diesel Engine Routine Inspections, Ready-to-Start Inspections, Post-Repair Inspections and Formal Periodic Assessments (FPAs) in accordance with references 2.4, 3.7.4.5.1, and 3.7.4.5.2 (JFMM volume four (4), chapter four (4)), OPNAV Instruction 9220.3, and the U.S. Navy Diesel Engine Inspector Handbook S9233- CJ-HBK-010Plan) for all ships, submarines and aircraft carriers within SWRMC's AOR.

**3.7.4.4 REQUIRED TRAINING, LICENSES AND CERTIFICATIONS:** Contractor personnel assigned to execute tasks on the following equipment must complete the following training or certifications:

**3.7.4.4.1** Diesel Engine Inspections:

**3.7.4.4.1.1** Support contractor personnel must obtain prerequisites for DEI Course training within two (2) calendar years of providing direct support and successfully pass the course per reference 3.6.4.5.2 (DEI HDBK); and maintain certification per reference 3.6.4.5.2 (DEI HDBK)

**3.7.4.5 CODE SPECIFIC REFERENCES:** In order to complete the scope per section 3.1, contractor personnel must be able to, access and understand the content of the following references (at a minimum):

**3.7.4.5.1** OPNAVINST 9920.3 Propulsion and Auxiliary Plant Inspection/inspector Cert Program

**3.7.4.5.2** S9233-CJ-HBK-010F Diesel Engine Inspector Handbook

**3.7.4.5.3** NAVSEA LETTER SER 05Z2/100, 21 Jul 2011 Diesel Engine Subject Matter Expert (SME) Technical Requirements

**3.7.4.5.4** U.S. Navy Diesel Inspection and Inspector Training and Certification Program

**3.7.5 ELECTRICAL CONTROLS (C265)**

**3.8.5.1** Code 265 contractor personnel must complete the tasks identified in 3.6.5.2 through 3.6.5.4.

**3.7.5.2** Contractor personnel are responsible for completing the tasking and requirements per section 3.1 for Electrical Control Systems which includes the following systems, subsystems and equipment:

**3.7.5.2.1** New and existing electrical cables

**3.7.5.2.2** Power and lighting circuits and distribution

**3.7.5.2.2.1** 4160 VAC

**3.7.5.2.2.2** 000VDC

**3.7.5.2.2.2** 450VAC

**3.7.5.2.2.3** 115 VAC

**3.7.5.2.3** Marine electrical systems

**3.7.5.2.4** Transformers

**3.7.5.2.5** Ship Service Diesel Generator (SSDG) and Main Propulsion Diesel Engine (MPDE) Controls

**3.7.5.2.6** Gas turbine, steam turbine, and diesel generator sets including exciters

**3.7.5.2.7** Electric/digital/hydraulic governor control systems

**3.7.5.2.8** Synchronizer controls and the systems that support the operation of the system

**3.7.5.2.9** Electric/electronic control, detection, alarm sensing, indicating, and monitoring systems and equipment

**3.7.5.2.10** Propulsion generators, motors, Auxiliary Propulsion Motors (APM), Hybrid Electric Drive System (HEDS), and associated controls

**3.7.5.2.11** Battery chargers, power supplies, line voltage regulators, Uninterrupted Power Supply (UPS), and batteries

**3.7.5.2.12** Auxiliary motors and controls including automatic speed control, and associated controllers

**3.7.5.2.13** Switch gear including instrumentation, controls, circuit breakers, reverse power relays, load shedding devices, Multi-Function Monitoring (MFM), Generator Protection Module (GPM) and No Break Power Supply (NBPS)

**3.7.5.2.14** Machinery Control Systems on DDG 1000, LPD 17 and LSD 47 Class Ships

**3.7.5.2.15** Ballast/deballast control systems on LPD 17, LSD 47, LHD 1 and LHD 8 Class Ships

**3.7.5.2.16** All associated system controllers (for ex. Gun Control) that require electrical monitoring (utilizing power analyzers) or troubleshooting outside of systems/equipment identified in 3.6.2.1-3.6.2.18

**3.7.5.3 REQUIRED TRAINING, LICENSES AND CERTIFICATIONS:** Contractor personnel assigned to execute the following tasks must complete the following training or certifications:

**3.7.5.3.1** For tasking 3.6.5.2.2, the contractor must complete the following:

**3.7.5.3.1.1** Marine Electric Propulsion / High Voltage Electrical Safety training to support 4160 VAC IR surveys is provided by MEBA and is available from http://www.MEBAschool.org.

**3.7.5.4 CODE SPECIFIC REFERENCES:** In order to complete the scope per section 3.1, contractor personnel must be able to, access and understand the content of the following references (at a minimum):

**3.7.5.4.1** Navy Electrical and Electronics Training Series (NEETS)

**3.7.5.4.2** NAVEDTRA 14112 Gas Turbine Systems Technician (Electrical)

**3.7.5.4.3** NAVSEA Standard Items 009-16 Electronic Equipment; repair

**3.7.5.4.4** NAVSEA Standard Items 009-17 Rotating Electrical Equipment; repair

**3.7.5.4.5** NAVSEA Standard Items 009-33 Rotating Electrical; rewind

**3.7.5.4.6** NAVSEA Standard Items 009-36 Controller; repair

**3.7.5.4.7** NAVSEA Standard Items 009-22

**3.7.5.4.8** NAVSEA Standard Items 009-73 Shipboard Electrical/Electronic Cable Procedure; accomplish

**3.7.5.4.9** NAVSEA Standard Items 009-75 Circuit Breaker; repair

**3.7.5.4.10** NAVSEA Standard Items, 009-113 Rotating Electrical Equipment with a Sealed Insulation System (SIS); rewind

**3.7.5.4.11** NAVEDTRA 43701 Engineering Apprentice PQS

**3.7.5.4.12** S9086-KC-STM-010/CH-300 NSTM CH 300 Electric Plant General

**3.7.5.4.13** S9086-KR-STM-010/CH-313 Portable Storage and Dry Batteries

**3.7.5.4.14** S9086-KE-STM-010/CH-302 Electric Motors And Controllers

**3.7.5.4.15** S9086-Q5-STM-010/CH-491 Electrical Measuring and Test Instruments

**3.7.5.4.16** S9086-KN-STM-010/CH-310 Electric Power Generators And Conversion Equip

**3.7.5.4.17** S9086-KY-STM-010/CH-320 Electrical Power Distribution Systems

**3.7.5.4.18** SE565-AK-MMC-010 MULTI-FUNCTION MONITOR (MFM)

**3.7.5.4.19** MIL-STD-2003 Electric Plant Installation Standard Methods for Surface ships and Submarines

**3.7.5.4.20** S9311-DY-MMA-010 Operation and Maintenance Manual 4160V, 60 HZ General and Distribution Switchboards

**3.7.5.4.21** S9086-KC-STM-010 NSTM Chapter 300, Electric Plant General

**3.7.5.4.22** S9311-DY-MMA-010 Operation and Maintenance Manual 4160V, 60 HZ General and Distribution Switchboards

**3.7.5.4.23** S9086-RJ-STM-010 NSTM 504 PRESSURE, TEMPERATURE AND OTHER MECHANICAL AND ELECTROMECHANICAL MEASURING INSTRUMENTS

**3.7.6 STEAM & PROPULSION SUPPORT SYSTEMS (C266)**

**3.7.6.1** Code 266 contractor personnel must complete the tasks identified.

**3.7.6.2** Contractor personnel are responsible for completing the tasking and requirements per 3.1 and 3.2 for steam systems, associated lube oil and fuel oil systems, and related electrical systems which includes the following systems, subsystems and equipment:

**3.7.6.2.1** Electrical components and equipment, electrical/electronic control, detection, alarm sensing, indicating, and monitoring systems and equipment associated with 3.6.6.2.2 - 3.6.6.2.7.

**3.7.6.2.2** Main and Auxiliary Steam

**3.7.6.2.3** Feed and Condensate

**3.7.6.2.4** Condensers

**3.7.6.2.5** Valves

**3.7.6.2.6** Distilling Plant

**3.7.6.2.7** Main Machinery Space Support Systems Propulsion Support Systems

**3.7.6.2.8** Fuel and Lube Oil Purifiers

**3.7.6.2.9** Fuel Oil Systems

**3.7.6.2.10** Main Propulsion Lube Oil Systems and Associated Support

**3.7.6.2.11** Valves

**3.7.6.2.12** Sea Water Systems

**3.7.6.2.13** JP-5 Fuel Systems

**3.7.6.2.14** Force Draft Blowers

**3.7.6.2.15** Ship Service Turbo Generator (SSTG)

**3.7.6.3 CODE SPECIFIC REFERENCES:** To complete the scope per section 3.1, contractor personnel must be able to access and understand the content of the following references (at a minimum):

**3.7.6.3.1** Preventive Maintenance System (PMS)

**3.7.6.3.2** Military Standard Specifications (MIL-STD)

**3.7.6.3.3** Department of Defense Standard Specifications (DOD-STD)

**3.7.6.3.4** Ship Class Advisories (CLADS)

**3.7.6.3.5** In Service Engineering Agent (ISEA) Advisories

**3.7.6.3.6** S9086-CJ-STM-010 NSTM 075 Fasteners

**3.7.6.3.7** S9086-CM-STM-010 NSTM 078 Seals, Gaskets and Packing

**3.7.6.3.8** S9086-HN-STM-010 NSTM 244 Propulsion Bearings and Seals

**3.7.6.3.9** S9086-H7-STM-010 NSTM 262 Lubricating Oils, Greases, Specialty Lubricants, and Lubrication Systems

**3.7.6.3.10** S9086-RK-STM-010 NSTM 505 Piping Systems

**3.7.6.3.11** S9086-RH-STM-010 NSTM 503 Pumps

**3.7.6.3.12** S9541-AN-MMA-010 Lube Oil Purifier

**3.7.6.3.13** S9262-AQ-MMA-0101 Filter/Separator Lube Oil AAE MODEL 741141

**3.7.6.3.14** S9260-AC-MMA-010 Fuel Oil Purifier

**3.7.6.3.15** S9086-G9-STM-010NSTM 231 Propulsion and SSTG Steam Turbines

**3.7.6.3.16** S9086-SN-STM-010 NSTM 541 Ship Fuel and Fuel Systems

**3.7.6.3.17** S9086-KC-STM-010/CH-300 NSTM CH 300 Electric Plant General

**3.7.6.3.18** S9086-KE-STM-010 NSTM CH 302, Electric Motors And Controllers

**3.7.6.3.19** S9086-KN-STM-010/CH-310 NSTM CH 310, Elec Power Generators And Conversion Equip

**3.7.6.3.20** S9086-KY-STM-010/CH-320 NSTM CH 320 Electrical Power Dist Systems

**3.7.6.3.21** S9086-QN-STM-010/CH-475 NSTM CH 375, Magnetic Silencing

**3.7.6.3.22** NAVEDTRA 14325 Basic Military Requirements Manual

**3.7.6.3.23** NAVEDTRA 43701 Engineering Apprentice PQS

**3.7.6.3.24** NAVEDTRA 43103-A Engineering Fundamentals

**3.7.6.3.25** NAVEDTRA 43119-J DAMAGE CONTROL PQS

**3.7.6.3.26** NAVEDTRA 43119-4F Damage Control Watches PQS

**3.8 COMBAT SYSTEMS DIVISION (C270/C290)**
**(** https://wiki.navsea.navy.mil/spaces/SWRMC200/pages/44733814/Code+200+Divisions**)**

**3.8.1 Submarines Weapons and Combat Controls, Submarine Acoustics, Submarine Communication Network, Navigation, Radars and Integrates Circuits, Submarine Towed Systems and Hull Mechanical & Electronical Support (HM&E) (C271 – C275)**

**3.8.1.1 SCOPE:** Code 271 - 275 contractor personnel must complete many tasks identified.

**3.8.1.1.1**Support Submarine FTS and Assessment program requirements as described in the JFMM (ref.2.4), and COMSUBLANT/COMSUBPAC Instruction 9010.5D.

**3.8.1.1.1.1** Coordinate with other internal and external stakeholders including SUBPAC, SUBRON, and TYCOM to provide feedback to their RMC client for the following submarine systems:

**3.8.1.1.1.1.1** Ship's Service Diesel Generator (SSDG)

**3.8.1.1.1.1.2** Induction and Exhaust Valves

**3.8.1.1.1.1.3** SSMG Support Equipment

**3.8.1.1.1.1.4** NR. 1 500KW Ships Service Motor Generator

**3.8.1.1.1.1.5** NR. 2 500 KW Ships Service Motor Generator

**3.8.1.1.1.1.6** NR. 1 Refrigeration Plant

**3.8.1.1.1.1.7** NR. 2 Refrigeration Plant

**3.8.1.1.1.1.8** Refrigeration System

**3.8.1.1.1.1.9** Sanitary Pump

**3.8.1.1.1.1.10** NR. 1 High Pressure Air Compressor (HPAC)

**3.8.1.1.1.1.11** NR. 2 High Pressure Air Compressor (HPAC)

**3.8.1.1.1.1.12** High Pressure Air Dehydrator (HPAD)

**3.8.1.1.1.1.13** Main Ballast Tank (MBT) Vent Operators

**3.8.1.1.1.1.14** Rudder Mechanical

**3.8.1.1.1.1.15** Rudder Electrical

**3.8.1.1.1.1.16** Stern Planes Mechanical

**3.8.1.1.1.1.17** Stern Planes Electrical

**3.8.1.1.1.1.18** Bow Planes Mechanical

**3.8.1.1.1.1.19** Bow Planes Electrical

**3.8.1.1.1.1.20** Steering and Diving Hydraulic Power Plant

**3.8.1.1.1.1.21** Low Pressure Air Compressor (LPAC)

**3.8.1.1.1.1.22** Low pressure Air Dehydrator (LPAD)

**3.8.1.1.1.1.23** NR. 1 CO2 Scrubber

**3.8.1.1.1.1.24** NR. 2 CO2 Scrubber

**3.8.1.1.1.1.25** NR. 1 COH2 Burner

**3.8.1.1.1.1.26** NR. 2 COH2 Burner

**3.8.1.1.1.1.27** Automated Electrolytic Oxygen Generator

**3.8.1.1.1.1.28** External Hydraulic Power Plant

**3.8.1.1.1.1.29** Trash Disposal Unit

**3.8.1.1.1.1.30** Trim Pump / Priming Pump Controller / Motors

**3.8.1.1.1.1.31** Drain Pump / Priming Pump Controller / Motors

**3.8.2 SUBMARINE TSRP SUPPORT**

**3.8.2.1** The contractor shall prepare and deliver products in accordance with requirements stated in the Submarine TSRA test plan approved by SUBPAC prior to each event.

**3.8.2.2** Prepare and deliver products in accordance with the requirements stated in the Submarine TSRA during each event for systems listed in 3.7.1.1.1.

**3.8.3 SUBMARINE ADP TSRA SUPPORT**

**3.8.3.1** The contractor shall support FAST and DDT usage and provide computer data entry, software updates, and analyst support.

**3.8.3.2** Be able to perform with, understand, and utilize visit team assessment software, including but not limited to data files, configuration data inputs, formats, and operational codes, and the necessary computer hardware used to provide administrative support for a RMC assessment team visit for all systems and all ship classes.

**3.8.3.3** Produce all information required to interface with configuration and NAVSEALOGCEN and DLA.

**3.8.4 SUBMARINE FLEET TECHINICAL SUPPORT (FTS)**

**3.8.4.1** Support Fleet Technical Support program data entry and management.

**3.8.4.2** Provide administrative support for a RMC assessment team visit for all systems and all submarine classes by supporting execution of the visit team assessment software, including but not limited to data files, configuration data inputs, formats, operational codes, etc., and the necessary hardware.

**3.8.4.3** Validate the data entry process for all aspects of assessment software for all systems and all submarine classes.

**3.8.4.4** Validate the source of the data elements for all reports produced by assessment software for all submarine classes.

**3.8.4.5** Produce all information required to interface with configuration and NAVSEALOGCEN and DLA.

**3.8.5 SUBMARINE PDMA SUPPORT**

**3.8.5.1** Continuous Operational and Maintenance Assessment Support.

**3.8.5.2** The contractor shall review and assess TAVRs, CASREPs, 2-Kilos, parts usage, Fleet Technical Support (FTA) maintenance data and provide waterfront input and technical support in identification, analysis, determination of root cause, resolution of NPES towed systems OOC, failures, and/or trends, and formulation of recommendations and actionable data in support of Fleet, COMSUBLANT/COMSUBPAC, Squadron, Ships Force, etc.

**3.8.5.3** Investigate and perform maintenance investigations/assessments, generate reports/point papers/briefs including recommendations for problem resolution and/or product improvements in support of TMA and other Fleet/TYCOM activities/meetings.

**3.8.5.4** Provide engineering, technical, and logistics support for TYCOM Force Sonar Technician acoustic system working group meetings, Senior Sonar Technician conference, etc., including preparation and development of briefs, presentations, on-site preparation and participation, and follow-up activities including tracking and accomplishment of action items.

**3.8.5.5** Provide onboard support for qualitative data collection and capture of indirect empirical evidence used to analyze reliability and maintainability of NPES and in some cases HM&E systems/equipment over submarine POM and deployment cycles. This includes, but is not limited to, the performance of PDMA visits and reports as part of the TSRP.

**3.8.5.6** Provide management and coordination support for TSRP process improvement initiatives, activities, semi-annual TSRA conferences, and meetings, etc., including preparation and development of briefs, presentations, on-site and/or onboard preparation and participation, and follow-up activities including tracking and accomplishment of action items.

**3.8.6 Waterfront Coordinator Support (C270)**

**3.8.6.1** The contractor shall provide Code 270 waterfront coordination support for Combat, Control and Acoustic (CC&A) and Hydraulic, Mechanical and Electrical (HM&E) Systems:

**3.8.6.2** Review incoming message traffic, emails requesting Fleet Technical Assistance (FTA) for CC&A and HM&E Systems.

**3.8.6.3** Review Validation Screening and Brokering (VSB) and Tech Assist Assessment & Scheduling Information (FTA-Info) for Job Control Numbers (JCN) assign to Code 270. In addition, reconcile JCNs within databases to make sure connective between the databases.

**3.8.6.4** Coordinate and status FTA Jobs between SWRMC Code 270 and Commander Submarine Squadron -11's (CSS-11) Material Officer, Maintenance Officer, EMO, Weapons Officer, Work Brokers, Portsmouth Naval Shipyard (PNS) Detachment San Diego and Project Team Personnel.

**3.8.6.5** Provide expert advice in the anticipation, identification and resolution of problems that may occur during the maintenance, repair and alteration installation phases, as well as during the grooming and complex system level testing.

**3.8.6.6** Attend CSS-11 meetings to provide status.

**3.8.6.7** Attend CSS-11 availability planning maintenance meetings to identify assigned JCNs to Code 270 and to de-conflict issues.

**3.8.6.8** Verbally brief Code 270 Branch Head with recommendations, schedule and information shared during daily CSS-11 planning meetings for tasking of Code 270 personal.

**3.8.6.9** Provide FTA Status Reports to Code 270 and CSS-11 personnel

**3.8.6.10** Review all TAVRS upon completion of tasking.

**3.8.6.11** Interface and assist Code 270 personnel in de-conflicting issues related to accomplishment of assigned tasking. Provide update status as required related to the tasking to de-conflict issues.

**3.8.7 CODE SPECIFIC REFERENCES:** To complete the scope per section 3.1, contractor personnel must be able to, access and understand the content of the following references (at a minimum):

**3.8.7.1** COMNAVSUBPAC/COMNAVSUBLANT 9010.5D (SUBMARINE TSRP)

**3.8.7.2** CNRMCINST 4700.7 (TSRA)

**3.8.7.3** CNRMCLTR 220-4700 (TSRA EXECUTION IMPROVEMENTS 28 OCT 14)

**3.8.7.4** NAVSUP P-485 NAVAL SUPPLY PROCEDURES

**3.8.7.5** NAVSUP PUBLICATION 409 - NAVSUP PUBLICATION 409

**3.8.7.6** NAVSEA TECH SPEC 9090-700 (SERIES) SHIP CONFIGURATION AND LOGISTIC SUPPORT

**4.0 ADDITIONAL REQUIREMENTS**

**4.1** The Contractor management shall meet with the COR bi-weekly in order to discuss important and unresolved issues as well as manning adjustments for optimum task performance.

**4.2** The Contractor shall maintain all records for Government training requirements and specific PQS/JQR see section 1.7 and 1.8

**4.3** The Contractor shall have an electronic mail (e-mail) capability and have the necessary connectivity to communicate with SWRMC. Microsoft (MS) Outlook mail is required in order to communicate and coordinate meetings and schedules.

**4.4** The Contractor shall be able to acquire and maintain security clearances for all employees within a reasonable time of onboarding, but no longer than 6 months. Contractor shall submit security clearance paperwork within fourteen (14) calendar days of onboarding see section 1.5.

**4.5** The Contractor shall acquire a Defense Biometric Identification System (DBIDS) access card for Naval Base San Diego (NBSD) within twenty-one (21) calendar days of onboarding, and for Naval Base Point Loma (NBPL) and Naval Air Station, North Island (NASNI), as required.

**4.6** The Contractor shall ensure personnel are cleared and have valid Passports for all travel requirements prior to being assigned travel.

**4.7** The Contractor shall process all paper work for required travel requirements CONUS and OCONUS. OCONUS travel requires SPOT application for all Contractor personnel, ref 1.4.

**4.8** The Contractor personnel shall have a valid driver's license and/or forklift driver's license as required by in section 1.7.

**4.9** The Contractor shall be aware that only appointed Contracting Officers and/or their designees, such as Ordering Officers or Government Credit Cardholders are authorized to make financial commitments on behalf of the government.

**4.10** Non-Personal Services: The Government shall neither supervise the Contractor employees nor control the method by which the Contractor performs the required tasks. Under no circumstances shall the Government assign tasks to or prepare work schedules for individual contractor employees. It shall be the responsibility of the Contractor to manage its employees and to guard against any actions that are of the nature of personal services or give the perception of personal services. If the Contractor believes that any actions constitute or are perceived to constitute personal services, the Contractor must notify the Procuring Contracting Officer (PCO) immediately.

**4.11** Business Relations: The Contractor shall successfully integrate and coordinate all activities needed to execute the requirement. The Contractor shall manage the timeliness, completeness, and quality of problem identification. The Contractor shall provide corrective action plans, proposal submittals, timely identification of issues and effective management of subcontractors. The Contractor shall seek to ensure customer satisfaction and professional and ethical behavior of all the Contractor personnel.

**4.12** Contract Management: The Contractor shall establish clear organizational lines of authority and responsibility to ensure effective management of the resources assigned to the requirement. The Contractor shall maintain continuity of communication between SWRMC and the Contractor's corporate offices and contract management team.

**4.13** Contract Administration: The Contractor shall establish processes and assign appropriate resources to effectively administer the requirement. The Contractor shall respond to Government requests for contractual actions in a timely fashion. The Contractor shall have a single primary point of contact between the Government and Contractor personnel assigned to the Contract. The Contractor shall assign work effort and maintain proper and accurate time keeping records of personnel assigned to work on the requirement.

**4.14** Personnel Administration/Training: The Contractor shall maintain the currency of their employees by providing initial and refresher training as required to meet the Statement of Work (SOW) requirements. The Contractor shall make necessary travel arrangements for employees.

**4.14.1** The Contractor shall accomplish all general DOD/DON training requirements, as stipulated in this SOW.

**4.14.2** The Contractor PM shall track and provide results of completion for all Contractor's training to the COR see section 1.7

**4.15** Subcontract Management: The Contractor shall be responsible for any subcontract management necessary to integrate work performed on this requirement and shall be responsible and accountable for subcontractor performance on this requirement. The Contractor shall manage work distribution to ensure there are no Organizational Conflict of Interest (OCI) considerations. The Contractor may add subcontractors to their team after notification to the Procuring Contracting Officer (PCO) and Contracting Officer Representative (COR) and approval has been granted.

**4.16** Contractor Personnel, Disciplines, and Specialties The Contractor shall accomplish the assigned work by employing and utilizing qualified personnel with appropriate combinations of education, training and experience to meet the requirements of the Contract. The Contractor shall match personnel skills to the work or task with a minimum of under/over employment of resources. The Contractor shall ensure the labor rates and man-hours utilized in the performance of the Contract will be the minimum necessary to accomplish the task.
**4.16.1** The Contractor shall provide the necessary resources and infrastructure to manage, perform and administer the Contract.

**4.17** Location and Hours of Work: Support services shall be predominantly in the greater San Diego metropolitan area, unless travel CONUS is required to meet SWRMC’s Mission (ref 1.4).

**4.17.1** Accomplishment of the effort contained in this SOW may require travel OCONUS to meet SWRMC's Mission (ref 1.4).

**4.18** Travel/Temporary Duty (TDY): Travel to other Government facilities or other contractor facilities will be required. All travel requirements (including plans, itinerary and dates) shall be pre-approved by the Government Contracting Officer or Contracting Officer's Representative (subject to local policy procedure is on a strictly cost-reimbursable basis).

**4.19** Security Information Assurance (IA) and Personnel Security Requirements: The Contractor personnel assigned to perform work under this Contract will access to NMCI, AIM4RMC MSE, and other Government computer systems and programs (generally, a Government-issued CAC and SAAR form are required access Government computers/websites/programs). Additionally, the Contractor shall obtain and maintain active Classified Security Clearances (Secret) for the entire period of performance for all support contractors providing support under this Contract.

**4.20** Visitor Group Security Agreement: The Contractor shall sign a Contractor Visitor Group Security Agreement to protect classified information involved performance under this Contract. The Agreement will outline responsibilities in the following areas: Contractor security supervision; standard practice procedures access, accountability, storage, and transmission of classified material; marking requirements; security education; personnel security clearances; reports; 1 checks; security guidance; emergency protection; protection of government resources; DD Forms 254; periodic security reviews.

**4.21** The Contractor shall keep the Government fully informed of the transition status throughout the transition period. Throughout the phase in/phase-out periods, it is essential that attention be given to minimize interruptions or delays to work in progress that would impact the SWRMC mission. The Contractor must plan for the transfer of work control and delineate the method for processing and assigning tasks during the phase in/phase-out periods.

**4.22** Contract Data Requirements

**4.22.1** See Exhibit A Contract Data Requirement List (CDRLs).