

PERFORMANCE WORK STATEMENT (PWS)

**FLEET TECHNICAL ASSISTANCE
SUPPORT SERVICES**



November 2013

FOR OFFICIAL USE ONLY

1.0 INTRODUCTION

This is a performance based work statement. All information herein shall apply to the following items below to all tasks and requirements.

2.0 REFERENCES

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

- OPNAVINST 5100.23 (SERIES) NAVY SAFETY AND OCCUPATIONAL HEALTH MANUAL
- OPNAVINST 5090.1 ENVIRONMENTAL AND NATURAL RESOURCES PROGRAM MANUAL
- SWRMCSINST 5100.8 NAVAL OCCUPATIONAL SAFETY AND HEALTH (NAVOSH) MANUAL
- OPNAVINST 5100.19 NAVOSH SAFETY MANUAL (AFLOAT)
- 29CFR1910 OCCUPATIONAL SAFETY AND HEALTH STANDARDS FOR GENERAL INDUSTRY
- 29CFR1915 OCCUPATIONAL SAFETY AND HEALTH STANDARDS FOR SHIPYARD EMPLOYMENT
- SWRMCINST 4200.5 POLICY ON PREVENTION OF UNAUTHORIZED COMMITMENTS
- SWRMCINST 5400.1 TECHNICAL AUTHORITY
- OSHA COOPERATIVE STATE PROGRAM (CSP) 03-01-003 POLICIES AND PROCEDURE MANUAL
- OPNAVINST 4790.4 SHIPS' MAINTENANCE AND MATERIAL MANAGEMENT (3-M) MANUAL (NAVSEAINST 4790.8B)
- NAVSEA S9AAO-AN-SPN-010 GENERAL SPECIFICATIONS FOR SHIPS OF THE UNITED STATES NAVY (GENSPECS)
- NAVSEA S9AAO-AB-GOS-010/GSO GENERAL SPECIFICATIONS FOR OVERHAUL OF SURFACE SHIPS (GSO) INCLUDING AEGIS SUPPLEMENT
- NAVAL SHIPS' TECHNICAL MANUALS (NSTMS)
- INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) STANDARDS
- CINCLANTFLTINST 4700.10 POLICIES AND PROCEDURES FOR FLEET TECHNICAL SUPPORT
- CINCPACFLTINST 4341.1 FLEET TECHNICAL ASSISTANCE PROGRAM
- COMNAVAIRPACTINST 4700.1 NAVAL AIR FORCE SHIP MATERIAL MANUAL NAVSEA S9081-AB-GIB-010/MAINT RELIABILITY CENTERED MAINTENANCE (RCM) HANDBOOK
- OPNAVINST 4700.7 MAINTENANCE POLICY FOR UNITED STATES NAVY SHIPS
- OPNAVINST 9233.1 U.S. NAVY DIESEL INSPECTION AND INSPECTOR TRAINING CERTIFICATION PROGRAM

- OPNAVINST 9230.1 MARINE GAS TURBINE INSPECTOR PROGRAM
- NAVSEA SS521-AA-MAN-010 U.S. NAVY DIVING AND MANNED HYPERBARIC SYSTEMS SAFETY CERTIFICATION MANUAL
- MIL-STD-1330 STANDARD PRACTICE FOR PRECISION CLEANING AND TESTING OF SHIPBOARD OXYGEN
- NAVSEA STANDARD ITEMS (CURRENT EDITION)
- COMFLTFORCOMINST 4790.3 (CURRENT EDITION) JOINT FLEET MAINTENANCE MANUAL (JFMM)

3.0 REQUIRMENTS OVERVIEW

3.1 BACKGROUND

The Southwest Regional Maintenance Center (SWRMC) has primary responsibility to provide direct support to Fleet units and Type Commanders in matters of waterfront repair, assessment, 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 Combat Systems (CS) and 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, documentation and procedures, in accordance with defined Navy maintenance philosophies, and systematic program management oversight.

3.2 PURPOSE

Provide forward thinking, innovative, and well integrated/coordinated support that supports SWRMC's vision to be the Navy's premier maintenance organization. The contractor shall supply a full range of technical and repair support services throughout SWRMC's Engineering Department. The support team shall align itself to support the Government staff using a cost effective labor mix and number of support personnel with an adaptable, flexible structure that is suited to accomplishing both planned and emergent tasks.

3.3 GENERAL REQUIREMENTS

All support services shall be provided in the San Diego, CA metropolitan area unless other locations are specifically authorized. Frequent travel is required on this task order. The contractor shall transition and ramp up immediately upon award and have the support team in place and fully functioning within six (6) weeks after award of the contract. The support team shall align itself to support the Government staff 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 tasks. Emphasis shall be placed on a team structure that maximizes productivity, efficiency, and accountability within the labor hours specified in the Level of Effort table (see Section B).

3.3.1 Execute the scope of work in a manner that provides for high quality, timely and well-integrated support services while incorporating the proper mix of personnel that will demonstrate the most effective use of labor hours.

3.3.2 The contractor and Government management team shall meet as necessary to discuss optimum manning and task distribution.

3.3.3 The contractor shall have an electronic mail (e-mail) capability and have the necessary connectivity to communicate with SWRMC. Microsoft (MS) Outlook mail is preferred in order to communicate and coordinate meetings and schedules.

3.3.4 The contractor shall be readily accessible, as appropriate, to ensure all requirements, including emergent and immediate, are met.

3.3.5 The contractor shall have the capability to interface and access, as required, Navy Marine Corps Intranet (NMCI) and Navy-operated web-based programs such as Advanced Industrial Management for Regional Maintenance Centers (AIM4RMC), Navy Knowledge Online (NKO), Enterprise Safety Applications Management System (ESAMS), Technical Data Management Information System (TDMIS), Federal Logistics Information System Web Search (WEBFLIS), Web Visual Logistics Information Processing System (WEBVLIPS), One Touch Support (OTS), Department of Defense Electronic Mall (DOD EMALL) , Material Release Order (MRO) Tracker, General Services Administration (GSA) Advantage, Federal Logistics Data (FEDLOG), web search engines, Engineering Plan Files (access will be granted upon award), NSEDR (Ships Drawings), Technical Data Management Information System (TDMIS), MIL Specs, Navy Maintenance Database (NMD), Electronic Service Record Program (Branch Head, Subject Matter Expert (SME), and PE application for engineering service requests (ESRs)), Electronic Departure From Specification (EDFS) Program, Haystack (Free ASTMs and industry Standards), SPEAR (TAAS) work related to Automated Work Requests (AWR). Access to other systems, similar in function, may be deemed necessary as they evolve/become available.

3.3.6 Contractor personnel shall have a valid driver's license and/or forklift driver's license as required by task.

3.3.7 Contractors required to utilize Government vehicles shall possess a valid driver's license and complete two (2) Navy training courses prior to operating a Government vehicle: "AAA Driver Improvement Course" and "Drive for life and Low Speed Vehicle Training". Documentation of course completion shall be provided to the Government.

3.3.8 The contractor shall comply with Southwest Regional Maintenance Center Instruction 4200.5, Policy on Prevention of Unauthorized Commitments (see paragraph 2.1.7)

3.4 PERFORMANCE OBJECTIVE:

Provide technical experts who will keep pace with the changing environment that focuses on delivering increasing value added repairs for the US Navy ships the organization supports. These experts will ensure task manager(s) receive their perspectives on issues or topics affecting day to day performance. The technical experts will be led by a progressive management team using continual process improvement to assist the Government task manager(s) and Contracting Officer Representative (COR) with timely feedback and notification affecting contract delivery, contract performance and costs.

3.5 PERFORMANCE STANDARD:

3.5.1 Timeliness: Deliver products within deadlines identified by task manager.

3.5.2 Accuracy: Provide repairs in accordance with Naval Sea Systems Command (NAVSEA), Navy Air Systems Command (NAVAIR) and other United States (U.S.) Navy technical requirements, standards and policies, as applicable.

3.6 ACCEPTABLE QUALITY LEVEL:

3.6.1 The contractor shall complete repairs in accordance with technical work documents such as Formal Work Packages (FWP), Controlled Work packages (CWP), Process Control Procedures (PCP) and Expanded Process Control Procedures (EPCP) with required specific objective quality evidence (OQE) to be recorded during repair efforts.

3.6.2 Contract deliverables shall be free of spelling errors, grammatically correct, in the correct format and fully coordinated with any stakeholders. All deliverables must be fully compatible with Navy Marine Corps Intranet (NMCI) format for Microsoft Word, Excel, PowerPoint, Access, Project and other Government application programs.

3.7 MONITORING METHOD:

3.7.1 The Government shall review and assess deliverables and products via Contract Data Requirements List (CDRLs) in Exhibit (A) of SECTION J of this RFP. These CDRLs delivered by the Contractor shall identify work accomplished, including reports submitted on a periodic basis that summarize active and completed tasks for the reporting period. Additionally, the Government shall utilize the Quality Assurance Surveillance Plan (QASP) under Attachment (2) of SECTION J of this RFP to assess, review and monitor contractor performance.

3.7.2 Performance will be formally assessed during the annual Contractor Performance Assessment Reports.

4.0 RESERVED

5.0 RESERVED

6.0 SECURITY

6.1 The work to be performed under this task order may involve access to, handling of, and generation of classified material. The contractor shall appoint a Security Officer who shall:

- Be responsible for all security aspects of the work performed under this task order;
- Guarantee compliance with all DOD and U.S. Navy specific regulations regarding security; and
- Assure compliance with any written instructions from the Security Officers of the activity issuing under this task order.

6.2 A DD FORM 254 will be prepared by the ordering activity and issued with the solicitation, with a final DD Form 254 prepared and issued with the awarded Seaport-e Task Order. Work being performed under this task order requires access to Government Information Technology Systems.

6.3 The contractor shall submit visit requests and clearance information, as applicable, to the SWRMC Security Office. Pier lay-down areas, if required, shall be requested from the Naval Base San Diego Port Operations Department prior to the start of work.

6.4 Contractor employees shall accomplish all training requirements as mandated by DOD, Navy and SWRMC in a timely manner. These requirements must be accomplished by all contractor employees, whether or not they possess a Common Access Card (CAC) or access to NMCI/Navy computer-based training modules. The contractor shall comply with changes and updates to training requirements by keeping support personnel in compliance with the most current instructions.

6.5 The contractor shall be able to access Navy installations either with a CAC or RapidGate card.

6.6 The contractor shall be able to obtain a CAC and gain access to NMCI, as required by tasking.

7.0 PERSONNEL QUALIFICATIONS

7.1 Personnel utilized by the contractor in the performance of this task order shall, as a minimum, meet the experience, educational, and/or other background requirements set forth below and shall be fully capable of performing in an efficient, reliable, and professional manner.

7.2 The contractor must have the personnel, organization, and administrative control necessary to ensure that all services performed meet all requirements as specified in the applicable Task Order modification(s).

7.3 The work history of each Contractor employee shall contain experience directly related to the tasks and functions to be assigned.

7.4 Staff each site with permanent representatives commensurate with the expected workload as described by the Performance Work Statement and/or applicable Task Order modification.

8.0 MANDATORY NUCLEAR AND SAFETY TRAINING

During the performance of this task order all Contractor personnel that perform non-nuclear work on nuclear powered vessels must receive training (at no additional cost to the Government) in the areas delineated below prior to commencing work:

8.1 For work exclusive of the propulsion plant and exclusive of nuclear spaces and systems as defined in NAVSEAINST C9210.4 (series), training is required, at no cost to the Government, in the following:

- US citizenship and security requirements.
- Mercury exclusion.
- General ship safety and drill requirements.
- Basic radiation awareness, control areas, and signs.

8.2 For work that may be near or bordering secondary containment boundaries or bordering spaces and systems defined in NAVSEAINST C9210.4 (series), training is required on secondary containment boundaries.

8.3 For non-nuclear system work in or affecting propulsion system spaces or systems including those listed in NAVSEAINST C9210.4 (series), training is required in the following:

- Security requirements or NNPI IAW NAVSEAINST 5511.32 (series).
- Maintenance cleanliness requirements within propulsion spaces.
- Spaces access requirements, including dosimeter.

8.4 Refresher training is required at least annually (and semi-annually for personnel requiring paragraph 8.1 training). Simple training records including lesson plan, brief outline of class content and attendance records shall be maintained and made available to SWRMC on 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.

8.5 The contractor shall provide Safety Equipment / Personal Protective Equipment (PPE) to accomplish the tasks in this PWS. These items may include, but are not limited to: safety glasses/goggles, flashlights, ear plugs/hearing protection, gloves, hard hat, safety boots and coveralls.

9.0 CONTRACT DATA REQUIREMENTS LIST (CDRL)

CDRLs shall be submitted per Exhibit A, DD Form 1423 in support of paragraphs 12.0 through 38.0, unless stated otherwise. There are instances where a CDRL is explicitly called out in certain paragraphs. If a CDRL is not explicitly called out, it does not relieve the contractor from providing CDRLs in accordance with the requirements below and Exhibit A.

9.1.1 STATUS REPORT (CDRL A001); not to be reported on paragraphs 12.0, 13.0, 14.0, 15.0, 32.0, 30.0, and 37.0.

9.1.2 COST REPORTS (CDRL A002)

9.1.3 TECHNICAL ASSISTANCE VISIT REPORTS (CDRL A003); not to be reported on paragraphs 12.0, 13.0, 14.0, 15.0, 32.0, 30.0, 36.0 and 37.0.

9.1.4 INSPECTION AND SURVEY REPORT (CDRL A004); to be reported only on paragraph 12.0.

9.1.5 SITE SURVEY REPORT (CDRL A005); to be reported only on paragraph 13.0.

9.1.6 WEEKLY TIMESHEET (CDRL A006)

9.1.7 CONTRACTOR PERSONNEL ROSTER (CDRL A007)

10.0 VISIT REQUESTS

The contractor shall establish a method of submitting visit requests as required by and to support individual Task Order basic requirements and modifications. This method will be reviewed and approved by the Government prior to execution.

11.0 PROGRAM SUPPORT REQUIREMENTS

The contractor shall provide program support to typical programs and functional checks, as identified in paragraphs 12.0 through 38.0. These types of programs that the contractor will provide program support to are those that affect shipboard maintenance that SWRMC is responsible for.

11.1 The contractor shall provide on-board maintenance training support to Ship's Force, in support of the programs listed in paragraphs 18.0 through 29.0, including:

11.1.1 Plan, develop, prepare, and conduct maintenance training both on board ship and in the classroom.

11.1.2 Conduct on the job training, in conjunction with repair tasking, in the proper operation and maintenance of various systems and equipment.

11.1.3 Develop on board maintenance training curricula, student handouts and instructor guides for use in accomplishing on board maintenance training or familiarization workshops for forces afloat personnel or personnel who are tasked with repairing, operating or maintaining ship board systems and equipment. Much of the on board maintenance training curricula, student handouts and instruction guides shall be computer-based. On board maintenance training curricula that are not computer-based shall be converted to computer-based training as instructed by the Contracting Officer's Representative (COR).

11.1.4 Maintain records of all maintenance training conducted for Government personnel including identification of person(s) trained, parent command of person trained, location of training, subject of training, date of training conducted, and duration of training.

11.1.5 Revise existing curriculum to meet changing overall training and/or course objectives.

11.1.6 Evaluate aforementioned maintenance training curriculum.

11.1.7 Validate the effectiveness of the maintenance training and the meeting of the maintenance training objectives.

11.1.8 Provide appropriate recommendations to the COR based on feedback from executing paragraph 11.1.

12.0 BOARD OF INSPECTION AND SURVEY (INSURV) MATERIAL INSPECTION (MI) SUPPORT (CLINs 4001, 7101, 7201)

12.1 The contractor shall provide INSURV MI program support in the areas of SWRMC Assessments, Analysis & Alterations Division events for surface and submarine Navy assets. Ship underway dates are subject to change due to unforeseen circumstances. A reassessment of support of assigned subject matter experts (SMEs) may need to be considered based upon SME 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.

12.2 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 Automated Work Notifications (AWN), including:

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

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

12.2.3 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.

12.2.4 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.

12.2.5 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 (CDRL A004).

13.0 INTEGRATED TEST COORDINATION (CLINs 4002, 7102, 7202)

13.1 The contractor shall provide integrated test coordination support to project teams in support of Chief of Naval Operations Availabilities (CNO), Emergent Availabilities (EM), Continuous Maintenance Availabilities (CMAV) and Window of Opportunities (WOO).

13.2 The contractor shall provide support as the primary Naval Supervising Activity (NSA) point of contact for testing matters, including:

13.2.1 Evaluate information regarding integrated test plans, integrated test schedules and other test related documentation from the NSA project manager or other NSA representative.

13.2.2 Enforce systems engineering principles, integration approaches and accepted Department of the Navy test program fundamentals.

13.2.3 Support NSA project manager to ensure test plans comply with all requirements of NAVSEA Standard Item (NSSI) 009-67.

13.2.4 Assist the Government representative within the Total Ship Testing Task Group (TSTTG) as outlined in NSSI 009-67.

13.3 The contractor shall verify that test plans are functionally linked to the integrated production schedule per NSSI 009-60 and that changes in one system are accurately reflected in the other.

13.4 The contractor shall 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.

13.5 The contractor shall review non-standard test procedures that are called out in a work specification as required and verify that individual work to test relationships are accurately captured in the integrated test plan (ITP).

13.6 The contractor shall coordinate with the NSA project manager to verify the ITP accurately reflects the availability work package and the integrated production schedule.

13.7 The contractor shall review schedule and testing information from non-Lead Maintenance Activities (LMA), to include Ship's Force, SWRMC Intermediate Level (I-Level) Ship Superintendants, and Alteration Installation Teams (AIT). In addition the contractor shall:

13.7.1 Verify that the LMA's ITP includes all testing from all related maintenance activities.

13.7.2 Evaluate the Test Sequence Networks (TSN) provided by each non-LMA maintenance activity prior to submission to the LMA.

13.8 Review testing information with the LMA as required and verify accuracy of the overall TSN developed by the LMA.

13.9 Verify the test schedule is updated as required by NSSI, or as schedules change.

13.10 Ensure that test procedure deficiencies are forwarded to the appropriate Government representatives for correction.

13.11 The contractor shall provide testing support, in form of technical work documentation and deck plate support in the following areas:

13.11.1 Mechanical engineering as applicable to ship's auxiliary machinery, piping, refrigeration, combat, weight handling, and crew habitability systems.

13.11.2 Electrical engineering as applicable to the limitations, design, operations, performance, safety parameters and maintainability of the ship's electrical system functions,

13.11.3 Structural engineering as applicable to the limitations, design, operations, performance, safety parameters and maintainability of the ship's primary, secondary and miscellaneous structural systems, welding and non-destructive testing,

13.11.4 Electronic systems as applicable to limitations, design, operations, performance, safety parameters and maintainability of combat systems, weapons systems, navigation, controls, and communications.

13.11.5 Ship overhaul and building specifications and requirements, particularly NAVSEA requirements related to testing.

13.12 Applicable Documentation:

- Implementation of Controlled Work Packages (CWP) and EPCP on Surface Ships Commander Navy Regional Maintenance Center (CNMRC) ltr 4700 Ser C200/124 of 30 Sep 11
- Integrated Total Ship Testing; manage NSSI 009-67
- NAVSEA Standard Item- Schedule and Associated Reports for Availabilities Weeks in Duration; provide and manage NSSI 009-60
- NAVSEA S9AAO-AB-GOS-010 General Specifications for Overhaul, Section 092
- COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual (JFMM).

14.0 TOTAL SHIP READINESS ASSESSMENT (TSRA) SUPPORT (CLINs 4003, 7103, 7203)

14.1 The contractor shall provide support to the Total Ship Readiness Assessment (TSRA) program, which consists of a series of focused assessments scheduled at specific times in the ship's operational cycle, to provide a clear picture of the ship's material readiness. The Contractor shall be assigned to an assessment team and manage the execution of assessment visits and Class Maintenance Plan (CMP) assessment events.

14.1.2 Augment and/or assist the class teams in accomplishing CMP assessments.

14.1.3 Update the project team on progress in achieving established milestones and deadlines for completion of assignments, projects, and tasks. Ensure all team members are aware of and participate in planning for achievement of team goals and objectives.

14.1.4 Utilize data provided by SWRMC Fleet Technical Assist personnel to support the maintenance team in documenting the completion of the CMP assessment requirements.

14.1.5 Assist ships in achieving maintenance phase exit criteria through the execution of TSRA assessments.

14.1.6 Interact with multiple maintenance activities by effectively communicating technical information with senior engineers, technicians, project managers and maintenance team personnel.

14.2 The contractor shall perform assessments on communication equipment, navigation systems, EMI/IMI/antenna, antisubmarine warfare (ASW)/sonar systems, damage control systems, AC&R, and food service equipment, as well as data entry and logistical support, including:

14.2.1 Provide assistance to Government engineers and technicians, military personnel, contractors, data entry personnel and logisticians in support of assessment visits in PHNSY.

14.2.2 Support assigned ships during scheduled assessment visits throughout the ship's complete Fleet Response Plan (FRP) cycle, to include CNO availabilities. Support may be provided to various SWRMC functions and departments, as needed, to support unique events on the waterfront.

14.2.3 Assist the Visit Support Team (VST) by performing logistics validation, data entry and data collection support functions.

14.2.4 Interact with multiple maintenance activities by effectively communicating technical information with senior engineers, technicians, project managers and maintenance team personnel.

14.2.5 Identify, request, and consult with subject matter experts within the NSA engineering organizations for assistance when needed.

14.2.6 Provide debriefs and completed Material Assessment Findings (MAF) reports to the cognizant SWRMC Assessment Director upon completion of TSRA assessments.

14.2.7 Provide the engineering department with assessment and maintenance support for deficiencies identified on shipboard equipment and systems.

14.3 Participate in Class System Maintenance Plans (CSMP), Departure from Specifications (DFS) and Basic Authorized Work Package (BAWP) mid-cycle reviews, as well as life cycle planning conferences.

14.4 Provide support for operational interface parameters for naval systems and equipment.

14.5 Provide support for maintenance engineering program requirements that are pertinent to the development of scheduled maintenance requirements.

15.0 SURFACE SHIP TSRA VISIT SUPPORT TEAM AND FLEET ASSESSMENT SUPPORT TOOL SUPPORT (CLINs 4004, 7104, 7204)

15.1 The contractor shall use U.S. Navy's 3M Planned Maintenance Sub-system, Maintenance Data Sub-system, the Fleet Assessment Support Tool (FAST) program and the use of FAST to provide data in different formats.

15.2 The contractor shall provide support in managing the FAST automated data processing system, data entry, and logistics, including:

15.2.1 Assist in preparation of TSRA assessment packages.

15.2.2 Verify information on MAFs to ensure accuracy of data for entry into the ship's CSMP.

15.2.3 Enter data from MAFs into the FAST database.

15.2.4 Receive training reports from SMEs to produce a training matrix report.

15.2.3 Provide existing CSMP reports as requested by the Government Assessment Director.

15.2.4 Provide daily CSMP update/upload on disk.

15.2.5 Receive parts data from the logistician and process into FAST.

15.2.6 Provide copies of the discrepancy list, daily summary report, parts reports and any additional reports as requested by the Government.

15.2.7 Provide a summary of corrected discrepancies to the logistician, as requested.

15.2.8 Email daily reports and final analysis to designated CNSP, SWRMC and Ship's Force personnel.

15.2.9 Compile final report of archive assessment data in accordance with CNRMC and SWRMC requirements.

15.3 Applicable Documentation:

- TSRA CNSPINST 4700.1A/CNSLINST 4700.1A/CNRMCINST 4700.7 (29 June 2012)

16.0 G1N5 TANK AND VOID COATING AND G1N6 STRUCTURAL COATING (CLINs 4005, 7105, 7205)

16.1 The contractor shall provide support G1N5 Tank and Void Coating and G1N6 Structural Coating for all ship classes in SWRMC's area of responsibility (AOR), including:

16.1.1 Verify tanks, voids, and spaces are gas free and tagged out for entry prior to entering tank/space for assessment.

16.1.2 Document the condition of the tank in accordance with G1N5 or G1N6 Maintenance Requirement Card (MRC) and Corrosion Control Assessment and Maintenance Manual (CCAMM).

16.1.3 Photograph tanks and the ship's structure to document all discrepancies.

16.1.4 Enter assessment results in Corrosion Assessment Data Entry System (CADET) and internal SWRMC department spreadsheets, as required.

16.1.5 Generate required AWR/2Ks in CADET.

16.1.6 Provide SURFMEPP, Maintenance Team, and SWRMC Naval Architecture Department photographs and reports of space and tank discrepancies.

16.1.7 Diagnose material deficiencies and provide over-the-shoulder assistance to ship's force in Organizational Level (O-Level) repairs and training.

16.1.8 Provide written reports and photographs of findings and results in Technical Assistance Visit Reports and ESR formats (CDRLs A001 and A003).

16.1.9 Evaluate shipboard non-conformances for acceptability as a waiver or deviation.

16.1.10 Assist the Government in evaluating engineering service requests during shipboard availabilities.

16.2 Applicable Documentation:

- Corrosion Control Assessment and Maintenance Manual (CCAMM)
- Corrosion Control Information Management System (CCIMS)
- NAVSEA TM #T-9630-AB-MMD-010

17.0 ARCHITECTURAL SUPPORT (CLINs 4006, 7106, 7206)

17.1 The contractor shall provide support by preparing layout and detail drawings for varied and relatively complex design projects, such as ship alterations (SHIPALT) and repairs.

17.2 The contractor shall investigate complex and diverse design problems presented in Inspection Deficiency Reports (IDR) submitted by the SWRMC Engineering Department and Ships Force work requests.

17.3 The contractor shall perform engineering analytical tasks to identify and correct system deficiencies and provides solutions in the form of drawings, memoranda, reports and sketches.

17.4 The contractor shall serve as Design Liason Engineer and Coordinator (when designated to the project management team for ship repair or regular overhaul) for handling all technical issues that arise.

17.5 The contractor shall interface with project personnel on all matters pertaining to program management, administration, and work assignments for this program.

17.6 The contractor shall perform complex engineering calculations for design development and to calculate strength, vibration behavior, and safety of modifications and/or repairs to the ship.

17.7 The contractor shall review SHIPALT records (SAR) and design technical products and deliverables with supporting estimates for final review by Government in support of the accomplishment of SHIPALTs. During the design process, interface with cognizant executing activity and planning yard representatives on the final design product for technical accuracy and conformance to NAVSEA requirements prior to final acceptance by the Government.

17.8 Applicable Documentation:

- MIL-STD-519 (Handbook for the Design and Assessment of Naval Surface Ships)
- NAVSEA 0900-LP-097-4010 (Structural Design Manual for Surface Ships)
- DDS-100-4 (Strength of Structural Members)
- DDS-100-6 (Longitudinal Hull Girder Strength Assessment)
- NAVSEA S9AA0-AB-GOS-010/GSO (General Specifications for Overhaul of Surface Ships)

18.0 AIR SYSTEMS (CLINs 4007, 7107, 7207)

18.1 The contractor shall provide technical support with the responsibility to include functional checks, test and inspection, and material condition assessments on U.S. Navy surface ships, submarines and aircraft carriers on the following systems:

18.1.1 High/Medium/Low Pressure (HP/MP/LP) Air Compressors (AC)

Provide technical guidance and system troubleshooting in support of ship's force conducting system adjustments and minor repairs on Dresser-Rand/Rix/Meggitt/Bauer/Sauer HP ACs, Rix/Sauer MP ACs and Dresser-Rand/Rix/NASH LP ACs. These systems include compressor, programmable logic controls (PLC), and electrical controls associated with compressors.

18.1.2 Electronic Dry Air and Dehydrators

Provide technical guidance and system troubleshooting in support of ship's force conducting system adjustments and minor repairs on all electronic dry air system. These systems include dry air panels, pressure regulator valves, low air control air panels, dew points and intelligent material devices (IMD).

18.1.3 Pressure Air Systems

Provide technical guidance and system troubleshooting in support of ship's force conducting system adjustments and minor repairs on HP/MP/LP air valves. These systems include HP/LP air reducing manifolds, air flow measurement and calculations.

18.1.4 Deballast Air Compressors

Provide technical guidance and system troubleshooting in support of ship's force conducting system adjustments and minor repairs on deballast air compressors.

18.2 Applicable Documentation:

18.2.1 Technical Manuals:

- S9550-BZ-MMA-010 – HIGH PRESSURE AIR COMPRESSOR 5R5
- 1S6220-CL-MMO-010 HIGH PRESSURE AIR COMPRESSOR 20NL7
- S6220-ER-MMC-010 MEDIUM PRESSURE AIR COMPRESSOR SAUER
- S6220-EU-MMA-010 LOW PRESSURE AIR COMPRESSOR STAR 200
- S6220-CA-MMO-010 LOW PRESSURE AIR COMPRESSOR NAXI
- S6220-ES-MMC-010 BREATHING AIR COMPRESSOR
- 0959-LP-008-8020 DEBALLAST/BALLAST AIR COMPRESSOR
- S6230-A1-MMC-010 ELECTRONIC DRY AIR PANEL
- S9514-C7-MMA-010 MEMBRANE DEHYDRATOR
- S6434-AF-MMO-010 HP/LP REDUCING MANIFOLD

18.2.2 Navy Standard Technical Manuals:

- CHAPTER 551 COMPRESSED AIR PLANTS AND SYSTEMS
- CHAPTER 505 PIPING
- GENERAL SPEC OVERHAUL (GSO) 2012 EDITION

19.0 FRESH WATER SYSTEMS (CLINs 4008, 7108, 7208)

19.1 The contractor shall provide technical support with the responsibility to include functional checks, test and inspection, and material condition assessments on U.S. Navy surface ships, submarines and aircraft carriers on the following:

Provide technical guidance and system troubleshooting in support of Ship's Force conducting system adjustments and minor repairs on freshwater systems including electronics cooling, potable water, brominator pumps, reverse osmosis plants, plumbing and electrolytic disinfectant generators.

19.2 Applicable Documentation:

- MIL-STD-519 (Handbook for the Design and Assessment of Naval Surface Ships)
- NAVSEA 0900-LP-097-4010 (Structural Design Manual for Surface Ships)
- DDS-100-4 (Strength of Structural Members)
- DDS-100-6 (Longitudinal Hull Girder Strength Assessment)
- NAVSEA S9AA)-AB-GOS-010/GSO (General Specifications for Overhaul of Surface Ships)

20.0 ENVIRONMENTAL SYSTEMS (CLINs 4009, 7109, 7209)

20.1 The contractor shall provide technical support with the responsibility to include functional checks, test and inspection, and material condition assessments on U.S. Navy surface ships, submarines and aircraft carriers on the following:

Provide technical guidance and system troubleshooting in support of Ship's Force conducting system adjustments and minor repairs on oily water separators, oily waste transfer pump and system, oil content monitors, main and secondary drainage systems, trash incinerators, plastic waste processor, metal, plastic, and glass shredders, pulpers, and sewage plants (collection holding and transfer (CHT), vacuum collection holding and transfer (VCHT), evaporative toilet system (e.g. GATX)).

20.2 Applicable Documentation:

- Pollution Control- NSTM Chapter 593- S9086-T8-STM-010/CH-593R4
- Compressed Melt Unit (CMU) Legacy MIL- S9593-C4-MMM-010
- CMU Legacy COMM- S9593-C7-MMM-010
- Large Pulper- S9593-C2-MMM-010
- Small Pulper- S9593-C3-MMM-010
- Incinerator (CVN-73)- S9593-DC-MMM-010

- Incinerator (CVN657476)- S9593-CX-MMC-010 REV 3
- Incinerator (CVN68,69,70,71,72,75)- S9593-DZ-MMM-010 REV 3
- CMU MOD1- S9593-BM-MMA-010
- Plastics Shredder MOD1- S9593-DP-MMM-010
- S9593-BF-DDT-010 DESIGNED AND INSTALLATION GUIDANCE FOR OIL
- POLLUTION ABATEMENT SYSTEM ON SURFACE SHIPS
- S9593-CD-GYD-010 OIL CONTENT MONITOR (MOD - ET35N) DESIGNED AND INSTALLATION GUIDANCE
- S9593-CD-MM0-01A OIL CONTENT MONITOR (MOD-ET35N) DESCRIPTION, OPERATION AND MAINTENANCE
- S9593-AY-MMO-010 10 GPM BILGE OIL/WATER SEPARATOR (OWS) AAE MODEL 740581 FRAM MODEL OPB-10NP
- S9550-B2-MMA-01B 10 GPM BILGE OIL/WATER SEPARATOR MODEL 69031
- S9593-DK-MMO-A10 OWS 50 GAL/MIN MODEL C50 INSTALLTION, OPERATION, MAINTENANCE AND REPAIR
- S9593-DA-MMO-010 OWS 100 GPM MODEL C50/RF01
- S9593-DL-MMA-010 5 GPM MEMBRANE OWS POLISHING SYSTEM AAE MODEL 740956
- S9593-BN-MMC-010 OILY WASTE ULTRAFILTRATION SYSTEM UF-1001, INSTALLATION, OPERATION AND MAITENANCE
- S9593-EV-MMC-010 LITTORAL COMBAT SHIP (LCS 1) OWS TPE PPT-BWS/MESB 2.5
- S9593-BD-MMO-010 OWS MODLE CPS-3B15 INSTALLTION, OPERATION AND MAINTENANCE
- 0947-LP-283-2010 LAUNDRY, WASTE WATER DRAIN PUMP AND CHT ROOM BILGE PUMP
- S6225-S8-MMO-010 NONMAGNETIC OILY WASTE TRANSFER PUMP, INSTALLATION, OPERATION AND INSTRUCTIONS
- S9593-AN-MM0-01D 10 GPM OWS MODEL VGS-10 OPERATION, MAITENANCE AND INSTALLATION INSTRUCTIONS
- S9593-BE-MMA-010 5 GPM OWS MODEL VGS-10 OPERATION, MAITENANCE AND INSTALLATION INSTRUCTIONS
- S9593-BZ-GYD-010 SLIDING-SHOE PUMPS FOR OILY WASTE TRANSFER (OWTP) DESIGN AND INSTALLATION GUIDANCE MODEL H-125, H-200 AND H-300

- S6226-A4-MMO-010 OWTP SLIDING SHOE HORIZONTAL MODEL H-125 OPERATION, MAINTENANCE AND INSTALLATION INSTRUCTIONS
- S6226-A3-MMC-010 OWTP SLIDING SHOE HORIZONTAL MODEL H-200 OPERATION, MAINTENANCE AND INSTALLATION INSTRUCTIONS
- S6226-BZ-MMO-010 OWTP SLIDING SHOE HORIZONTAL MODEL H-300 OPERATION, MAINTENANCE AND INSTALLATION INSTRUCTIONS
- S6225-PF-MMA-010 OWTP SLIDING SHOE HORIZONTAL MODEL H-200 OPERATION, MAINTENANCE AND INSTALLATION INSTRUCTIONS
- S6225-PF-MMA-010 OWTP SLIDING SHOE HORIZONTAL MODEL H-200 OPERATION, MAINTENANCE AND INSTALLATION INSTRUCTIONS
- S6226-RY-MMC-010 OWTP MODEL # EB3SM TB3 "SPECIAL" OPERATION AND MAINTENANCE
- S9593-CE-MMA-010 SEWAGE VACUUM COLLECTION HOLDING AND TRANSFER SYSTEM
- S6226-QQ-MMC-010 EDDY PUMP MODEL CC3000 CLOSED COUPLED PUMP MODEL/PART #CC-3000-LHA-CHT-00 & 01/05 DUPLEX PUMP SYSTEM CONTROLLER MODEL # ECD-562408-02
- S6226-3E-MMC-010 EDDY PUMP MODEL CC3000 CLOSED COUPLED PUMP MODEL/PART #CC-3000-CG47-CHT, DUPLEX PUMP SYSTEM PNLC CONTROLLER MODEL # ECD-02-CCG47
- S6225-KY-MMA-010 MACERATOR PUMP SYSTEM WITH MAGNETIC CONTROLLER
- S9593-BW-MMA-010 MACERATOR PUMP SYSTEM WITH MAGNETIC CONTROLLER
- S9593-AS-MMO-A10 SEWAGE AERATION COMPRESSOR TP[E 3505JVN MAINTENANCE MANUAL ALL LEVEL

21.0 HEATING, VENTILATION AND AIR CONDITIONING (HVAC) SYSTEMS (CLINs 4010, 7110, 7210)

21.1 The contractor shall provide technical support with the responsibility to include functional checks, test and inspection, and material condition assessments on U.S. Navy surface ships, submarines and aircraft carriers on the following systems:

21.1.1 Air Conditioning (A/C) Plants:

Provide technical guidance and system troubleshooting in support of Ship's Force conducting system adjustments and minor repairs on reciprocating A/C plant R-12, R-22 and R-134a; centrifugal A/C plants R-114, R-236fa and R-134a; rotary A/C plants; and fan coil unit (FCU) plants. These plants and systems including A/C compressors, condensers, evaporators, thermal expansion valves (TXV), A/C plant capacity control systems, chilled water systems and chlorinator.

21.1.2 Reefer Plants:

Provide technical guidance and system troubleshooting in support of ship's force conducting system adjustments and minor repairs on reciprocating R-12, R 22, and R-134a reefer plants. These plants and systems include reefer compressors, condensers, evaporators, TXV, reefer plants capacity control system, freeze and chill Box.

21.1.3 Ventilation Systems:

Provide technical guidance and system troubleshooting in support of ship's force conducting system adjustments and minor repairs on ventilation systems. These plants and systems include ventilation fans, re-heater, pre-heater, cooling coil, thermostat, chill water pumps, air flows measurement, heating and cooling load calculation.

21.1.4 Collecting Protecting System (CPS):

Provide technical guidance and system troubleshooting in support of ship's force conducting system adjustments and minor repairs on CPS supply and exhaust fans, toxic gas vent dampers, CPS balancing dampers, CPS pressure control valves.

21.2 Applicable Documentation:

- S9514-CA-MMA-010 – A/C 200 TONS FOR CG47 CLASS
- S9516-AH-MMA-010 – REFEER SYSTEMS
- S9169-A1-MMA-010 – TOXIC GAS DAMPER FOR DDG CLASS
- S9550-C9-MMA-010 – TOXIC GAS DAMPER FOR CG CLASS
- S6200-AF-MMM-010 – COLLECTING PROTECTING SYSTEM FOR DDG CLASS
- S6230-BQ-MMO-010 – COLLECTING PROTECTING SYSTEM
- S9086-RQ-STM-010 - CHAPTER 510 HVAC SYSTEMS
- CHAPTER 470 – COLLECTING PROTECTING SYSTEM
- S9086-RW-STM-010 – CHAPTER 516 FOR REEFER SYSTEM
- GENERAL SPEC OVERHAUL (GSO) 2012 EDITION

22.0 ELEVATOR SYSTEMS AND HYDRAULICS (CLINs 4011, 7111, 7211)

22.1 The contractor shall provide technical support with the responsibility to include functional checks, test and inspection, and material condition assessments on U.S. Navy surface ships, submarines and aircraft carriers on the following:

Provide technical guidance 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. These major systems and subsystems include, but not limited to, boat davits, cranes, winches, capstan, anchor windless, vehicle ramps, boat ramps, steering, fin stabilizers, cable reels (cabling), controllable pitch propeller (CPP) hydraulic systems, and ballast/deballast hydraulic power units.

22.2 Applicable Documentation:

- SWRMCINST 9772.1A Cargo/Weapons Elevator Assessor Certification (Elevator Tech only)
- CNMRC ltr 4700 Ser C200/124 of 05 October 11 (Date correction from standard list)
- NAVSEAINST 5400.108 Policy for Quality Management of Work on Non-Nuclear Surface Ship Critical Systems
- SWRMCINST 5400.1 Technical Authority

23.0 FIRE FIGHTING SYSTEMS (CLINs 4012, 7112, 7212)

23.1 The contractor shall provide technical support with the responsibility to include functional checks, test and inspection, and material condition assessments on U.S. Navy surface ships, submarines and aircraft carriers on the following:

Provide technical guidance and system troubleshooting in support of ship's force conducting system adjustments and minor repairs on fire fighting systems. These systems include aqueous film-forming foam (AFFF), halon, CO₂, fire main, compartment sprinkling, freshwater fire fighting systems and countermeasure wash down system.

23.2 Applicable Documentation:

- S6226-D1-MMO-010 Rev.1 AFFF pump models X2NFK and X2NFM Part Nos. E-4326 and E-4587
- S9555-B9-MMA-01E Ch. E AFFF balanced pressure proportioning system type II and type III
- Bending Pipe or Tube Ship Piping Systems MIL-STD 1627, Fabrication Welding Inspection 1688, Cleaning of Shipboard Compressed Air Systems 1622D, Sampling Procedures Tables Inspection 105E, Schedule Piping Valve Fittings 777
- NSTM 074 Vol. 1 & 2, 078, 503, 505, 593
- S9555-DK-MMM-010 Halon 1301 fixed flooding systems illustrated parts break down
- S9555-D1-MMO-010 Carbon dioxide fixed flooding and hose reel system
- S6225-W6-MMA-010 Rev. 5 Navy standard titanium centrifugal pump 1000 GPM (NAVSEA drawing No. 803-5773203)
- S6226-R7-MMC-010 Operation and maintenance instructions with illustrated parts breakdown for water mist fire fighting pump.

24.0 PAINT AND CORROSION SUPPORT (CLINs 4013, 7113, 7213)

24.1 The contractor shall provide support by investigating and recommending solutions to complex and diverse engineering problems in the areas of paint coatings, structures and arrangements that arise during production work on U.S. Navy ships and craft. Recommended solutions are provided in the form of NAVSEA drawings, design memorandums, Navy messages, D-Level specifications, NAVSEA deviations and waivers and command correspondence.

24.2 The contractor shall perform inspections of the underwater hull and tank structures in ships and floating dry-docks to determine the extent of repairs required to correct damage due to corrosion.

24.3 The contractor shall prepare layout and detail drawings for entire overhaul packages encompassing many varied and complex projects (SHIPALT and repair) in areas of ship structures, load handling systems and cathodic protection.

24.4 The contractor shall provide expert support on structural corrosion to upper management, type commander, NAVSEA, other U.S. Navy activities and other contractors in areas of corrosion control, hull/tank preservation and cathodic protection.

24.5 The contractor shall provide expert support in the areas of paint coatings, preservation and material specification/substitution.

24.6 The contractor shall perform complex mathematical calculations (subject to review by Naval Architect in the SWRMC Engineering Division) to determine strength and safety of modifications and/or repairs to a ship.

24.7 The contractor shall provide support to lower graded personnel within the branch through expert advice and guidance based on knowledge and years of job experience.

24.8 The contractor shall develop work items in support of both Intermediate and Depot Level (I-Level and D-Level) Planning Branches.

24.9 Applicable Documentation:

- Cleaning and Painting Requirements; accomplish NAVSEA STD Item 009-32
- Preservation of Ships In-Service – Surface Ship/Submarine Applications NSTM 631
- Deck Covering NSTM 634
- Navy's Corrosion Control Assessment and Maintenance Manual (CCAMM)
- G1N5 & G1N6 (Tank & Void and Structural assessment MRCs)
- SSPC Volume 1 - Good Painting Practices and SSPC Volume 2 - SSPC Paint Manual SSPC Manuals 1 and 2
- Navy Basic Paint Inspection (NBPI) certification

25.0 ELECTRONIC CONTROLS (CLINs 4014, 7114, 7214)

25.1 The contractor shall provide technical support with the responsibility to include functional checks, test and inspection, and material condition assessments on U.S. Navy surface ships, submarines and aircraft carriers on the following systems:

25.1.1 Air Conditioning plants

Provide technical support and troubleshoot systems to support ship's force system adjustments and minor repairs on but not limited to electronic control systems and components of reciprocating A/C plant R-12, R-22 and R-134a, Centrifugal A/C plants R-114, R-236fa and R-134a, rotary A/C plants and FCU including A/C Compressor, A/C plant capacity control system, chilled water system and chlorinator.

25.1.2 Reefer plants

Provide technical support and troubleshoot systems to support ship's force system adjustments and minor repairs on but not limited to electrical wiring and components of reciprocating reefer plant R-12, R-22, R-134a including reefer compressor, reefer plants capacity control system, freeze and chill box.

25.1.3 Ventilation Systems

Provide technical support and troubleshoot systems to support ship's force system adjustments and minor repairs on electrical wiring and components of ventilation system including ventilation fans, interceptor hoods, food service electrical, re-heater, pre-heater, cooling coil, thermostat and chill water pump system controls.

25.1.4 Collective Protection System (CPS)

Provide technical support and troubleshoot systems to support ship's force system adjustments and minor repairs on electrical wiring and components of CPS system including CPS supply and exhaust fans, toxic gas vent dampers, pre-heater.

25.1.5 High/Medium/Low Pressure Air Compressors

Provide technical support and troubleshoot systems to support ship's force system adjustments and minor repairs on HPAC, MPAC and LPAC systems controls.

25.1.6 Electronic Dry Air and Dehydrators

Provide technical support and troubleshoot systems to support ship's force system adjustments and minor repairs on all electronic dry air systems including dry air panel, pressure regulator valve, low air control air panel, dew point and IMD controls.

25.1.7 Deballast Air Compressors

Provide technical support and troubleshoot systems to support ship's force system adjustments and minor repairs on deballast air compressors systems control.

25.2 Applicable Documentation:

- S6220-CL-MMO-010 HIGH PRESSURE AIR COMPRESSOR 20NL7
- S6220-EU-MMA-010 LOW PRESSURE AIR COMPRESSOR STAR 200
- S6220-CA-MMO-010 LOW PRESSURE AIR COMPRESSOR NAXI
- S6161-HA-FSE-010/09051 GREASE INTERCEPTOR HOODS
- S9514-CA-MMA-010 A/C 200 TONS FOR CG47 CLASS
- S9516-AH-MMA-010 REFEER SYSTEMS
- CHAPTER 551 COMPRESSED AIR PLANTS AND SYSTEMS
- S9086-RQ-STM-010 CHAPTER 510 HVAC SYSTEMS
- S9086-RW-STM-010 CHAPTER 516 FOR REEFER SYSTEM
- GENERAL SPEC OVERHAUL (GSO) 2012 EDITION

26.0 MARINE GAS TURBINE PROGRAM SUPPORT (CLINs 4015, 7115, 7215)

Encompasses both the mechanical and controls side of the U.S. Navy's surface gas turbine fleet. In the gas turbine controls area, the need to clear electrical grounds, perform other trouble-isolation efforts and assessments may be intensive. There may be requirements to provide very detailed technical expertise on a particular gas turbine, particularly when advanced Intermediate repairs are attempted on 501-K & LM2500 gas turbines.

26.1 The contractor shall provide support on DDG 51 Class machinery and propulsion plant control systems, including but not limited to the following:

26.1.1 Support for DDG 51 Flight I, Flight II and Flight IIA and DDG-Modernization Class.

26.1.2 Provide technical assistance to ships force for electrical ground isolation on the gas turbine propulsion control consoles.

26.1.3 Resolve emergent propulsion control system problems on the DDG 51 Class and its variants.

26.1.4 Provide technical assistance on complex machinery controls system technical problems beyond the capability of Ship's Force, intermediate maintenance activities (IMA), or repair activities to diagnose and correct.

26.1.5 Provide authoritative technical assistance recommendations on urgent mission degrading casualty reports (CASREP) and DFS.

26.2 The contractor shall provide support for CG 47 Class integrated ship controls, including but shall not limited to the following:

26.2.1 Emergent direct fleet technical support and troubleshoot systems to support Ship's Force system adjustments and minor repairs of the integrated control systems and subsystems on board CG 47 Class ships.

26.2.2 Oversight support and technical assistance to ships force for trouble isolation and system restoration.

26.2.3 Support for technical assistance on complex machinery controls system technical problems beyond the capability of ship's force, IMAs or repair activities to diagnose and correct.

26.2.4 Provide authoritative technical assistance recommendations on urgent mission degrading CASREPs and DFS.

26.3 The contractor shall provide support for LCS Class engineering plant control system including but not limited to the following:

26.3.1 Emergent direct fleet technical support and troubleshoot systems to support ship's force system adjustments and minor repairs of the integrated control systems and subsystems on board LCS Class ships (both variant platforms).

26.3.2 Oversight support and technical assistance to ships force for trouble isolation and system restoration.

26.3.3 Support for technical assistance on complex machinery controls system technical problems beyond the capability of ship's force, IMAs or repair activities to diagnose and correct.

26.3.4 Provide authoritative technical assistance recommendations on urgent mission degrading CASREPs and DFS.

26.4 The contractor shall provide support for LHD 8/LHA 6 Class engineering control systems (ECS), including but not limited to the following:

26.4.1 Support for the trouble-isolation and the repair of information technology (IT) systems, full authority digital controls with respect to commercial off the shelf computer workstations and local area networks (LAN) on gas turbine ships.

26.4.2 Support for emergent direct fleet technical support of the ECS and sub-systems aboard LHD 8 and LHA 6 Class ships.

26.4.3 Oversight support and technical assistance to ships force for trouble isolation and system restoration.

26.4.4 Technical assistance support on complex machinery controls system technical problems beyond the capability of ship's force, IMAs or repair activities to diagnose and correct.

26.4.5 Assist NAVSEA in inspections, functional checks and functional demonstrations of major systems on new construction ships, major conversions, TSRAs, Type Commander (TYCOM) Material Inspections (TMI), Pre-INSURV Assessments (PIA), and INSURV MIs.

26.4.6 Provide authoritative technical assistance recommendations on urgent mission degrading CASREPs and DFS.

26.5 The contractor shall provide support for 501-K17 / K34 & 250-KS4 gas turbines and the 104 / 119 / 139 / 9130 / 9140 gas turbine generator sets, including but not limited to the following:

26.5.1 Provide emergent fleet technical support of the 104 / 119 / 139 / 9130 / 9140 gas turbine generator sets.

26.5.2 Oversight and technical assistance support for I-Level and D-Level maintenance on the 501-K17 / K34 & 250-KS4 gas turbines.

26.5.3 Technical assistance support for the 501-K17 / K34 / 250-KS4 gas turbines and the Redundant Independent Mechanical Start System (RIMSS) transfer gear box.

26.5.4 Assist the team and provide engineering technical support of the systems and sub-systems identified in line item 26.5

26.5.5 Technical assistance support on complex gas turbine mechanical and gas turbine engine control technical problems beyond the capability of ship's force, IMAs or repair activities to diagnose and correct.

26.5.6 Provide authoritative technical assistance recommendations on urgent mission degrading CASREPs and DFS.

26.6 The contractor shall provide support for LM2500 / LM2500 plus gas turbines and associated support systems, includes but shall not be limited to the following:

26.6.1 Provide authoritative trouble isolation and repair guidance for the LM2500 & LM2500 plus gas turbines to organizational and intermediate repair organizations & personnel.

26.6.2 Provide a resource of knowledge on U.S. Navy LM2500 engineering improvements and intermediate and depot repair history.

26.6.3 Team lead support for complex I-Level repairs to the LM2500 & LM2500 plus gas turbines.

26.6.4 Provide authoritative technical assistance recommendations on urgent mission degrading CASREPs and DFS.

26.6.5 Provide emergent direct fleet technical support of the LM2500 / LM2500 plus gas turbines and supporting systems.

26.6.6 Provide emergent direct fleet technical support on the MT30 gas turbine and gas turbine systems.

26.6.7 On a case by case basis, provide support for consumables used during technical assistance and trouble-shooting.

26.7 Applicable Documentation:

- General Gas Turbine Bulletin Nr. 11, Marine Gas Turbine Inspectors
- General Gas Turbine Bulletin Nr. 25, Certification of Personnel to Conduct Marine Gas Turbine Inspector (MGTI) Level Maintenance
- General Gas Turbine Bulletin Nr. 16, Reporting Requirements for Fleet Modifications to Marine Gas Turbine Engine (MGTE)
- MGTI Program

27.0 MAIN AND AUXILIARY DIESEL ENGINE PROGRAM SUPPORT (CLINs 4016, 7116, 7216)

27.1 The contractor shall provide technical assistance on emergent CASREPs, problems affecting major systems, and complex technical problems for naval ships with main and auxiliary diesel engines.

27.2 The contractor shall assist Government representatives with fleet support of ships undergoing diesel engine repairs, overhauls, and modernization conversions.

27.3 The contractor shall provide oversight support of all shipboard, in-shop repairs and overhauls performed by Regional Maintenance Centers (RMC) and ship repair facilities.

27.4 The contractor shall inspect, analyze and provide recommended resolutions on diesel engines based on U.S. Navy diesel inspector program.

27.5 The contractor shall perform ready to start and post repair inspection and review of operational testing procedures.

27.6 Applicable Documentation:

- OPNAVINST 9920.3, Propulsion and Auxiliary Plant Inspection and inspector Certification Program
- NAVSEA S9233-CJ-HBK-010F, Diesel Engine Inspector Handbook
- 3 NAVSEA LETTER SER 05Z2/100, 21 Jul 2011, Diesel Engine Subject Matter Expert (SME) Technical Requirements
- U.S. Navy Diesel Inspection and Inspector Training and Certification Program

28.0 STEAM MAIN PROPULSION PROGRAM SUPPORT (CLINs 4017, 7117, 7217)

28.1 The contractor shall provide technical assistance and electrical troubleshooting on all naval ship classes with the installation, modification, repair, maintenance, troubleshooting, and testing. Systems include but shall not be limited to the following: new and existing marine electrical systems, electrical components, fixtures, electrical control equipment, and electrical systems that support propulsion plant and associated systems and components.

28.1.1 Provide electrical technician support for urgent mission degrading CASREPs or other system and component problems affecting propulsion plant systems onboard PACFLT ships, including but not limited to CG, DDG, FFG, LHA, LHD, LPD, LSD, MCMs, LCS and MSC ships.

28.1.2 Assist Ship's Force with obtaining supply and repair parts information as required.

28.1.3 Provide Ship's Force training on electrical troubleshooting techniques to identify and correct equipment failures.

28.1.4 Provide out briefs to Ship's Force representatives including ship's officers and supporting personnel to include command management and executive staff.

28.1.5 Assist with research and resolution to DFS.

28.1.6 Provide electrical support for ESRs to include work specification review, IDR and condition found report (CFR) resolution, and review of PCPs and EPCPs.

28.1.7 Provide support on electrical systems and subsystems outside the propulsion plant during periods of high workload. Systems and subsystems include:

28.1.7.1 Auxiliaries motors and controls to include automatic speed control.

28.1.7.2 Switch gear to include instrumentation, controls, circuit breakers, reverse power relays, and load shedding devices.

28.1.7.3 Motor generator sets to include voltage and frequency regulators and monitors.

28.1.7.4 Lighting and power distribution systems to include cable, automatic bus transfer switches and circuit breakers.

28.1.7.5 Battery chargers, power supplies and line voltage regulators.

28.1.7.6 Electric/electronic control, detection, alarm sensing, indicating, and monitoring systems and equipment.

28.1.8 Applicable Documentation

- Navy Electrical and Electronics Training Series (N.E.E.T.S.)
- Electrician's Mate NAVEDTRA 14344
- Electrician's Mate Rating Manual NAVEDTRA 14344
- Basic Military Requirements Manual NAVEDTRA 14325
- Engineering Apprentice PQS NAVEDTRA 43701
- Engineering Fundamentals NAVEDTRA 43103-A
- Damage Control Watches PQS NAVEDTRA 43119-4F
- Damage Control PQS NAVEDTRA 43119-J
- VISUAL LANDING AIDS NAVAIR 51-50ABA-1
- NSTM CH 300 ELECTRIC PLANT GENERAL NAVSEA S9086-KC-STM-010/CH-300
- NSTM CH 330 LIGHTING NAVSEA S9086-K9-STM-010/CH-330
- NSTM CH 302, ELECTRIC MOTORS AND CONTROLLERS
- NAVSEA S9086-KE-STM-010/CH-302
- NSTM CH 310, ELEC POWER GENERATORS AND CONVERSION EQUIP
- NAVSEA S9086-KN-STM-010/CH-310
- NSTM CH 320 ELECTRICAL POWER DIST SYSTEMS
- NAVSEA S9086-KY-STM-010/CH-320
- NSTM CH 375, MAGNETIC SILENCING NAVSEA S9086-QN-STM-010/CH-475
- TAGOUT USERS MANUAL NAVSEA S0400-AD-URM-010/TUM
- NAVY SAFETY MANUAL OPNAVINST 5100.19 SERIES

28.2 The contractor shall provide technical support and assistance on piping systems and components for main propulsion and associated systems, and other shipboard piping systems onboard PACFLT Ships, including but not limited to CG, DDG, FFG, LHA, LHD, LPD, LSD, MCMs, LCS and MSC ships.

28.2.1 Perform system cleanliness and flushing requirements including lube oil and hydraulic systems.

28.2.2 Conduct research to provide drawings, technical manual information, design specifications, and engineering technical recommendations for related corrective actions, including system flushes and the preventative measures for lube oil and hydraulic piping systems and components.

28.2.3 Accomplish investigation and technical resolution to piping related technical problems for Engineering Service Requests (ESR), Expanded Process Control Procedures (EPCP), Process Control Procedures (PCPs), and DFS for all naval ships.

28.2.4 Provide mechanical technical assistance and support on complex technical problems for piping systems for propulsion and auxiliary systems that are beyond the capability of forces afloat, intermediate maintenance activities or repair activities.

28.2.5 Perform out briefs to ship's force representatives including ship's officers and supporting personnel as well as briefs to command management and executive staff.

28.2.6 Applicable Documentation:

- NAVSEA S9AA0-AB-GOS-010/GSO GENERAL SPECIFICATIONS FOR OVERHAUL OF SURFACE SHIPS
- S9086-RK-STM-010 NSTM CHAPTER 505 PIPING SYSTEM
- MIL-STD-777 SCHEDULE OF PIPING, VALVES, FITTINGS AND ASSOCIATED PIPING
- COMPONENTS FOR NAVAL SURFACE SHIPS
- MIL-STD-22 WELDED JOINT DESIGN
- MIL-STD-278 WELDING AND CASTING STANDARD
- NAVSEA 0900-LP-001-7000 FABRICATION AND INSPECTION OF BRAZED PIPING SYSTEMS
- NAVSEA 0948-LP-045-7010 MATERIAL CONTROL STANDRAD
- Crane Technical Paper No. 410- Flow of Fluids through Valves, Fittings and Pipe
- VARIOUS UNIFORM INDUSTRIAL PROCESS INSTRUCTIONS (UIPI)

28.3 The contractor shall provide technical support and assistance on mechanical propulsion plant systems and components. Systems and subsystems include, but not limited to, main and auxiliary steam, feed and condensate, condensers, valves, distilling plant, lube and fuel oil, reduction gears, shafting and associated systems onboard PACFLT Ships including, but not limited to, CG, DDG, FFG, LHA, LHD, LPD, LSD, MCMs, LCS and MSC ships.

28.3.1 Provide mechanical technician support for urgent mission degrading CASREPs or other system and component problems affecting propulsion plant systems, auxiliary systems and related components onboard ships.

28.3.2 Assist ships force with obtaining supply and repair parts information as required.

28.3.3 Conduct research to provide drawings, technical manual information, design specifications, and engineering technical recommendations for corrective actions on mechanical propulsion plant systems, auxiliary systems and components.

28.3.4 Accomplish investigation and technical resolution to mechanical related technical problems for ESR, EPCPs, PCPs, and DFS for all naval ships.

28.3.5 Provide mechanical technical assistance and support on complex technical problems for propulsion plant systems and components that are beyond the capability of forces afloat, intermediate maintenance activities or repair activities.

28.3.6 Perform out briefs to Ship's Force representatives including ship's officers and supporting personnel as well as briefs to command management and executive staff.

28.3.7 Applicable Documentation:

- Preventive Maintenance System (PMS)
- Military Standard Specifications (MIL-STD)
- Department of Defense Standard Specifications (DOD-STD)
- Ship Class Advisories (CLADS)
- In Service Engineering Agent (ISEA) Advisories
- NSTM 505 (Piping Systems),
- NSTM 503(Pumps)
- NSTM 262(Lubricating Oils, Greases, Specialty Lubricants, and Lubrication Systems
- Lube Oil Purifier S9541-AN-MMA-010
- Filter/Separator Lube Oil AAE MODEL 741141 S9262-AQ-MMA-0101
- Fuel Oil Purifier S9260-AC-MMA-010
- S9243-AW-TRS-012/0203-086-501A Technical Repair Standard for Surface Ship's Main Propulsion Shafting, Examination, Test and Repair Action
- NAVSEA INSTRUCTION 9245.1A Ship Propellers and Propulsion Shafts
- NSI 009-057 Reduction Gear Security Requirements
- NSTM 241 Propulsion Reduction Gears, Couplings, Clutches and Associated Components

29.0 ELECTRICAL PROGRAM SUPPORT (CLINs 4018, 7118, 7218)

29.1 The contractor shall provide support for shipboard electrical and electronic systems and subsystems and components onboard naval ships including but not limited to CG, CVN, DDG, FFG, LHA, LHD, LPD, LSD, MCMs, LCS and MSC ships. Support includes technical assistance and problem resolution with the installation, modification, repair, maintenance, troubleshooting, and testing of new and existing electrical cables, power and lighting circuits, marine electrical systems, electrical components, fixtures, and electrical control equipment. This

includes electrical systems that support propulsion plant, power generation and auxiliary electrical systems to include the following:

29.1.1 Machinery Control System (MCS) system on new LPD-17 Class ships.

29.1.2 Cathodic current protection.

29.1.3 Gas turbine, steam turbine, and diesel driven generator sets including exciters, voltage regulators, electric/hydraulic governors and synchronizers.

29.1.4 Propulsion generators and motors and associated controls.

29.1.5 Auxiliaries motors and controls including automatic speed control.

29.1.6 Switch gear including instrumentation, controls, circuit breakers, reverse power relays, and load shedding devices.

29.1.7 Motor generator sets including voltage and frequency regulators and monitors.

29.1.8 Lighting and power distribution systems including cable, automatic bus transfer switches and circuit breakers.

29.1.9 Battery chargers, power supplies and line voltage regulators.

29.1.10 Electric/electronic control, detection, alarm sensing, indicating, and monitoring systems and equipment.

29.2 The contractor shall support cableway inspections and identify deficiencies of shipboard electrical cable hazards and corresponding level of priority and provide repair recommendations.

29.3 The contractor shall provide distance support to U.S. Navy ships, establishing necessary communication with Ship's Force representatives to obtain a complete description of symptoms related to the electrical system deficiencies, conduct necessary investigation, research and provide technical resolution and supporting information related to cause and the required corrective action.

29.4 The contractor shall assist with research and resolution to DFS.

29.5 The contractor shall provide support to ESRs, including work specification review, IDR and CFR resolution, and review of PCPs.

29.6 Applicable Documentation:

- Navy Electrical and Electronics Training Series (N.E.E.T.S.)
- Electrician's Mate NAVEDTRA 14344
- Electrician's Mate Rating Manual NAVEDTRA 14344
- Basic Military Requirements Manual NAVEDTRA 14325
- Engineering Apprentice PQS NAVEDTRA 43701
- Engineering Fundamentals NAVEDTRA 43103-A
- Damage Control Watches PQS NAVEDTRA 43119-4F
- Damage Control PQS NAVEDTRA 43119-J

- VISUAL LANDING AIDS NAVAIR 51-50ABA-1
- NSTM CH 300 ELECTRIC PLANT GENERAL NAVSEA S9086-KC-STM-010/CH-300
- NSTM CH 330 LIGHTING NAVSEA S9086-K9-STM-010/CH-330
- NSTM CH 302, ELECTRIC MOTORS AND CONTROLLERS
- NAVSEA S9086-KE-STM-010/CH-302
- NSTM CH 310, ELEC POWER GENERATORS AND CONVERSION EQUIP
- NAVSEA S9086-KN-STM-010/CH-310
- NSTM CH 320 ELECTRICAL POWER DIST SYSTEMS
- NAVSEA S9086-KY-STM-010/CH-320
- NSTM CH 375, MAGNETIC SILENCING NAVSEA S9086-QN-STM-010/CH-475
- TAGOUT USERS MANUAL NAVSEA S0400-AD-URM-010/TUM
- NAVY SAFETY MANUAL OPNAVINST 5100.19 SERIES
- NAVSEAINST 9304.1 SHIPBOARD ELECTRICAL CABLE AND CABLEWAY INSPECTION AND REPORTING PROCEDURES

30.0 INFRARED SURVEY PROGRAM SUPPORT (CLINs 4019, 7119, 7219)

30.1 The contractor shall accomplish infrared (IR) surveys to identify over heating condition of wirings and connections within switch boards, motor controllers and other electrical equipment. Surveys will include electrical equipment on all naval ship classes including 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 such as propulsion plant equipment, power generation and auxiliary electrical systems power and lighting circuits, marine electrical systems, electrical components, fixtures, and electrical control equipment.

30.2 The contractor shall provide “on the spot” repair recommendations and assist Ship’s Force with correcting selected discrepancies found during the infrared surveys. Deficiencies repaired “on the spot” include findings that are within Ship’s Force capability and support the available time scheduled for event.

30.3 The contractor shall ensure that personnel assigned to this requirement are Level I IR Certified and use infrared cameras to collect quality data. IR certification level I, II, and or III certification is available from <http://www.thesnellgroup.com/infrared-training/>. Any alternate training program substituted for the recommended training shall be approved by Government representative prior to attending.

30.4 The contractor shall accomplish surveys and calculate accurate, repeatable temperature measurements.

30.5 The contractor shall provide support for shipboard electrical and electronic systems and subsystems and components onboard naval ships including but not limited to CG, CVN, DDG, FFG, LHA, LHD, LPD, LSD, MCMs, LCS and MSC ships. Support includes technical assistance and problem resolution with the installation, modification, repair, maintenance, troubleshooting, and testing of new and existing electrical cables, power and lighting circuits, marine electrical systems, electrical components, fixtures, and electrical control equipment. This includes electrical systems that support propulsion plant, power generation and auxiliary electrical systems to include the following:

- 30.5.1 Provide technical electrical support and assistance on all naval ship classes.
- 30.5.2 MCS system on new LPD-17 Class ships.
- 30.5.3 Cathodic current protection.
- 30.5.4 Gas turbine, steam turbine, and diesel driven generator sets including exciters, voltage regulators, electric/hydraulic governors and synchronizers.
- 30.5.5 Propulsion generators and motors and associated controls.
- 30.5.6 Auxiliaries motors and controls including automatic speed control.
- 30.5.7 Switch gear including instrumentation, controls, circuit breakers, reverse power relays, and load shedding devices.
- 30.5.8 Motor generator sets including voltage and frequency regulators and monitors.
- 30.5.9 Lighting and power distribution systems, including cable, automatic bus transfer switches and circuit breakers.
- 30.5.10 Battery chargers, power supplies and line voltage regulators.
- 30.5.11 Electric/electronic control, detection, alarm sensing, indicating, and monitoring systems and equipment.
- 30.6 The contractor shall perform cableway inspections and identify deficiencies of shipboard electrical cable hazards and corresponding level of priority and provide repair recommendations.
- 30.7 The contractor shall provide distance support naval ships, establishing necessary communication with ship's force representatives to obtain a complete description of symptoms related to the electrical system deficiencies, conduct necessary investigation, research and provide technical resolution and supporting information related to cause and the required corrective action.
- 30.8 The contractor shall perform the necessary out briefs to Ship's Force representatives including ship's officers and supporting personnel to include command management and executive staff.
- 30.9 The contractor shall support ESRs to include work specification review, IDR and CFR resolution, and review of PCPs.
- 30.10 Applicable Documentation:
- N.E.E.T.S.
 - Electrician's Mate NAVEDTRA 14344
 - Electrician's Mate Rating Manual NAVEDTRA 14344
 - Basic Military Requirements Manual NAVEDTRA 14325
 - Engineering Apprentice PQS NAVEDTRA 43701
 - Engineering Fundamentals NAVEDTRA 43103-A
 - Damage Control Watches PQS NAVEDTRA 43119-4F

- Damage Control PQS NAVEDTRA 43119-J
- VISUAL LANDING AIDS NAVAIR 51-50ABA-1
- NSTM CH 300 ELECTRIC PLANT GENERAL NAVSEA S9086-KC-STM-010/CH-300
- NSTM CH 330 LIGHTING NAVSEA S9086-K9-STM-010/CH-330
- NSTM CH 302, ELECTRIC MOTORS AND CONTROLLERS
- NAVSEA S9086-KE-STM-010/CH-302
- NSTM CH 310, ELEC POWER GENERATORS AND CONVERSION EQUIP
- NAVSEA S9086-KN-STM-010/CH-310
- NSTM CH 320 ELECTRICAL POWER DIST SYSTEMS
- NAVSEA S9086-KY-STM-010/CH-320
- NSTM CH 375, MAGNETIC SILENCING NAVSEA S9086-QN-STM-010/CH-475
- TAGOUT USERS MANUAL NAVSEA S0400-AD-URM-010/TUM
- NAVY SAFETY MANUAL OPNAVINST 5100.19 SERIES
- NAVSEAINST 9304.1 SHIPBOARD ELECTRICAL CABLE AND CABLEWAY INSPECTION AND REPORTING PROCEDURES

31.0 VIBRATION ANALYSIS (CLINs 4020, 7120, 7220)

31.1 The contractor shall support and assistance onboard U.S. Navy surface assets in the areas of vibration analysis, machinery diagnostic testing, troubleshooting and evaluation of various system components.

31.1.1 Provide support of structure borne machinery vibration analysis and reporting requirements for surface ship maintenance.

31.1.2 Provide support of planning vibration surveys, data collection, recording, analysis, storage and retrieval.

31.1.3 Provide vibration test preparation, instrumentation, transducer locations, single direct and triaxial measurements, and mounting methods.

31.1.4 Provide assistance in data acquisition, test conditions, vibration levels, and raw vibration data.

31.1.5 Provide assistance in vibration data processing and analysis, including previous signatures as criteria, MIL STD 167-1 requirements, interim criteria, and repair recommendations.

31.1.6 Report preparation, terminology, content, and formatting of repair recommendations.

31.1.7 Use of motor generator sets including voltage and frequency regulators and monitors required.

31.1.8 Provide support of component repairs.

31.1.9 Provide support of balance, alignment, bearing issues, and other mechanical fundamentals as required for Vibration Analysis support.

31.1.10 Provide support and evaluation of marine gas turbine (MGT) vibration response based on shipboard or condition assessment system data.

31.1.11 Assist with the actions to assemble vibration test and diagnostic system equipment, verify operation, transport to naval ship, install, and maintain instrumentation used in onboard MGT vibration analysis

31.1.12 Plan and conduct vibration surveys and data acquisition to support MGT vibration analysis and rotor balance evaluation.

31.1.13 Assist with vibration data analysis, processing, archiving, and reporting for MGT vibration response and rotor balance evaluation.

31.1.14 Assist with the balance solution calculation and installation of required weights in support of MGT in-place rotor balancing actions.

31.1.15 Assist Government personnel with accomplishing the required oversight, training, and quality assurance actions of MGT shop personnel performing intermediate level MGT rotating assembly repairs

31.2 Applicable Documentation:

- S9073-AX-SPN-010/MVA NAVSEA Tech Spec Vibration Analysis, Machinery (LAT)
- MIL STD 167-1A Mechanical Vibrations of shipboard equipment
- NAVSEA STANDARD ITEM 009-104 DATED 01 AUG 2008 TITLE: Vibration Testing and Analysis

32.0 CHIEF ENGINEER AND ENGINEERING MANAGEMENT TEAM SUPPORT (CLINs 4021, 7121, 7221)

32.1 The contractor shall assist the Chief Engineer (CHENG) and the engineering management team with administrative tasks for ESRs, technical repair documents and actions required for the engineering department.

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

32.1.2 Develop metrics, reports, formatting of data, department correspondence and interpreting results for process improvement.

32.1.3 Facilitate team events.

32.1.4 Provide support of CNRMC requirements

32.2 The contractor shall provide support of ESRs and PCPs.

32.2.1 Coordinate Government requirements for DFS with D-Level and fleet DFSs.

32.2.2 Review all DFSs upon receipt from fleet for compliance with the JFMM requirements

32.2.3 Interface with TYCOM, Ship's Force and Maintenance Team representatives when reviewing DFSs

32.2.4 Process all fleet provided I-Level and SWRMC prepared D-Level DFSs that require action from the SWRMC CHENG (the NAVSEA Local Technical Authority (LTA)). Processing includes reviewing and assigning to appropriate technical matter expert (TME)/SME to develop technical resolution and propose recommendations, then

routing to the applicable Branch Head/Division Head for evaluation and review of the technical resolution and proposed recommendation from TME/SME, then final routing to CHENG and other applicable signatories for action.

32.2.5 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.

32.2.5.1 Communicate on behalf of the CHENG to NAVSEA for DFSs needing responses to support ship operational requirements and/or key event needs for availability.

32.2.6 Process evaluated DFSs prior to submitting to CHENG, Deputy CHENG or designated representatives for technical warrant holder approval.

32.2.7 Provide status updates, reports, and metrics to the engineering department management for DFSs.

32.3 Applicable Documentation

- NAVSEAINST 5400.95 Waterfront Engineering and Technical Authority Policy
- NAVSEAINST 5400.108A Policy for Quality Management of Work on Non-Nuclear Surface Ship Critical Systems
- NSSI 009-04
- NSSI 009-09
- NSSI 009-90
- NSSI 009-01

33.0 PASSIVE COUNTER MEASURE SYSTEM SUPPORT (CLINs 4022, 7122, 7222)

33.1 The contractor shall provide support to the Government lead and to organized teams with the responsibility for functional checks, test and inspection, and material condition assessment of major systems. Teams consist of TSRA, INSURV, IMA's on Passive Countermeasure System (PCMS), and the Material Condition Assessments.

33.1.1 Provide TYCOM data to prioritize the expenditure of critical maintenance funds on installed PCMS items.

33.1.2 Assist teams that consist of members from other RMC's, contractors and ISEA personnel with differing technical ability and experience.

33.1.3 Assist the Government lead in prioritizing work, resolving conflicts, establishing work schedules, briefing Commanding Officer of ship, etc. This work is typically in-port but may involve brief at sea-periods.

33.1.4 Provide technical assistance on less urgent but complex technical problems beyond the capability of forces afloat, IMA's or repair activities to diagnose and correct.

33.1.5 Assist the Government Lead in the inspection and functional checkout/demonstration of major systems on new construction ships or major conversions, as a full participant in pre-INSURV, builder trials (BT), acceptance trials (AT), and fleet acceptance trials (FAT).

33.1.6 Assist the Government lead for determining state of operability with installation objectives for the system(s) assigned.

33.1.7 Assist in the inspection and functional checkout/demonstration of major shipboard systems as a participant in INSURV MI, with responsibility for determining the material condition and state of operability of system(s) assigned.

33.2 The contractor shall provide technical and engineering guidance to Supervisors of Shipbuilding Naval Ship Yards, and TYCOM readiness support organizations in resolution of repair/overhaul or test/grooming problems beyond their level of in-house engineering expertise. This may include development and direction of test programs and on the spot evaluations of repairs required in situations where there is battle damage or significant environmental deterioration to the system.

33.3 The contractor shall provide technical support to Naval Shipyards and Supervisors of Shipbuilding during repair and test/grooming functions, for the purpose of supplementing Shipyard/SUPSHIPS staffing. The level of engineering guidance provided by the incumbent is generally comparable to that existing in the Shipyards/SUPSHIP Design/Combat Divisions in these instances.

33.4 The contractor shall perform special engineering analyses and studies in support of NAVSEA or ISEA for the purpose of developing or evaluating improvements in design, maintenance procedures, and material.

33.5 The contractor shall participate in select technical teams assembled for the purpose of resolving specific major deficiencies in operation, maintenance or logistics support of assigned systems. Direct contact with contractors may occur with some regularity in this work.

33.6 The contractor shall support in the data collection and integral data analysis efforts under the direction of the senior in-house ISEA or NAVSEA engineer. Support includes, but not limited to, the following:

33.6.1 Evaluate performance characteristics, assess improvements, and record trends.

33.6.2 Provide knowledge with equipment/system design features, operational procedures and performance specifications.

33.6.3 Perform functional checkout, grooming, adjustment and test of new modernized shipboard systems in an operational evaluation or training environment. Support at sea is often required.

33.7 The contractor shall support operations of a system or major subsystems to include but not limited to radars, launchers and computers.

33.7.2 Familiarize operators with procedures involved.

33.7.3 Indoctrinate organizational level (O-Level) maintenance personnel in trouble-shooting techniques and maintenance policies.

33.7.3 Participate as a team member in pier side functional checkout, grooming, adjustment and repair of shipboard systems.

33.7.4 Participate in Combat Systems Post Availability Test (CSPAT), Combat System Readiness Reviews (C5RA's), and like evolutions.

33.8 The contractor shall support participate in the installation of Ordnance Alteration (ORDALTS), SHIPALTs and field changes. Requirements include, but not limited to:

33.8.1 Assist the engineering department in regards to hands-on modification of components and/or tender (oversight) of ship's force work

33.8.2 Conduct functional checkout of modifications after completion.

38.8.3 Conduct indoctrination of O-Level personnel in new operational/maintenance procedures attendant to the modifications installed.

33.8.2 Assist with administrative non-supervisory management of the division, including performing tasks such as scheduling of personnel to meet command workload requirements.

33.8.2.1 Provide guidance on both technical and administrative issues.

33.9 Applicable Documentation

- Repair and Installation Manual RIM 05T1-99 Rev D
- NAVSEA SE400-DA-MMo-010 Rev 5
- Access Control and Disposal ACD-05T1-05
- 18M-R, S-1, A-1 and A-2 PCMS inspections

34.0 DOCK MASTER (CLINs 4023, 7123, 7223)

34.1 The contractor shall perform the following in support of the Dock Master:

34.1.1 Prepare layout and detail drawings for ship overhaul packages encompassing many varied and complex projects in the areas of ship stability, ship structure and arrangements, load handling systems and testing.

34.1.2 Investigate complex and diverse design problems presented in inspection deficiency reports submitted by production contractors, and Ship's Force work requests.

34.1.3 Perform troubleshooting and analytical tasks to identify issues and provide technical solutions in the form of memorandums, reports and sketches.

34.1.4 Assist the NAVSEA dry dock certification program at SWRMC, including, by not limited to:

34.1.4.1 Review information submitted by area contractors

34.1.4.2 Determine accuracy and completeness of data submitted

34.1.4.2 Write certification correspondence, to be approved and signed by the government

34.1.4.4 Track certification status

34.1.4.5 Inspect and evaluate the material condition of contractors dry-docking facilities

34.2 The contractor shall assist the docking inspector in support of dry-docking evolutions in the San Diego area which requires:

34.2.1 Provide support with the inspection and approval of docking block buildups.

34.2.2 Provide support with the review and approval of dry-dock stability calculations submitted by contractors.

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

34.3 The contractor shall 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.

34.4 The contractor shall track receipt of docking reports prepared by area contractors, review data for accuracy and distribute to all cognizant activities.

34.5 Applicable Documentation

- NAVSEA 9997.2A Docking Observer
- NAVSEAINST 9997.3A Docking Qualifications
- Naval Ships' Technical Manual Chap 079 and 997
- Naval Regulations, Article 0752 and 0753
- Graving Dock No. 1, San Diego Sec VI, Operating Instructions
- SWRMCINST 9997.1 Responsibility for Dry-Docks, Docking and Undocking Evolution

35.0 GAGE CALIBRATION (CLINs 4024, 7124, 7224)

35.1 Provide gage calibration support as follows:

35.1.1 Assist NAVSEA in managing, tracking, and coordinating calibration readiness.

35.1.2 Support SWRMC in coordinating weekly calibration readiness planning meetings in order to properly oversee advance calibration support planning for INSURV, Light-Off Assessments (LOAs), and fleet deployments.

35.1.3 Schedule calibration readiness assessment events.

35.1.4 Coordinate and maintain calibration readiness assessment schedules with the scheduling authority, Immediate Superior in Command (ISIC), SWRMC, and the ship's assigned port engineer.

35.2 Provide assessment of shipboard installed instrumentation and mechanical equipment to insure consistency with Metrology Bench (METBENCH) and calibration requirements list (CRL) configuration and inventory control requirements.

35.3 Validate equipment availability to support ongoing shipboard preventive and corrective maintenance requirements.

35.4 Verify that each ship is equipped with the approved and technically correct equipment to perform specified maintenance routines.

35.5 Maintain coordination with TSRA, INSURV, and calibration readiness assessment schedules.

35.6 Validate Type 1 and Type 3 installed instrumentation against current shipboard inventory and assist Ship's Force in correcting deficiencies identified, in order to increase engineering calibration readiness.

35.7 Perform data review, entry, collection, verification and validation, assessment, extraction, reduction, conversion, archiving, file/database updates, output of data products and associated functions to ensure data accuracy and file/database integrity. The following calibration data are gathered from the following databases/spreadsheets:

35.7.1 Matrix channel measurement systems (MCMS) and measurement recall systems; calibration recall systems that are utilized by the fleet and NAVSEA to monitor calibration events and readiness. Data is downloaded from the

recall system in order to perform the validation and calibration support. The team will update calibration events into MCMS after each hull's visit in order to reflect accurate inventory and calibration readiness.

35.7.2 CRL; the configuration data (installed instrumentation) for each specific hull. Data utilized to view configuration in support of the validation and calibration support.

35.7.3 INSURV Schedules; utilized to monitor upcoming INSURVs in order to support fleet priorities.

35.7.4 CNO Maintenance Schedule; utilized to monitor CNO maintenance schedules in order to support fleet priorities.

35.8 Provide shipboard equipment and systems documentation review and organization to insure conformance with established maintenance systems, standards, specifications and directive requirements.

35.9 Perform equipment and data validation services, including configuration data relating to system and component history, and life cycle changes.

35.10 Perform shipboard installed instrumentation and mechanical equipment calibrations.

35.11 Perform interface assessment inspection of shipboard equipment and test resources to insure suitability of maintenance equipment inventory and condition.

35.12 Provide Ship's Force calibration technical assists as requested by NAVSEA, squadron, and ship's command during scheduled calibration readiness assessments.

35.13 Provide technical assistance, training, and calibration support to resolve readiness, data integrity, and assessment issues.

35.14 Coordinate with Ship's Force and NAVSEA to update fleet approved the calibration recall system.

35.15 Provide NAVSEA, Ship's Force and various maintenance teams with accurate inventories and status of existing Shipboard Installed Instrumentation and mechanical equipment and a plan of action to increase calibration readiness.

35.16 Provide assessment in-brief and out-brief reports to Ship's Force and NAVSEA.

35.17 Compute and report fleet calibration readiness conditions to NAVSEA.

35.18 Analyze, develop, document, publish and revise documents, reports, program support documentation, program plans, budgets, fleet support requirements reports and program schedules.

35.19 Attend program reviews and planning meetings.

35.20 Applicable Documentation

35.20.1 OPNAVINST 3960.16A Navy Test, Measurement, and Diagnostic Equipment (TMDE), Automatic Test Systems (ATS), and Metrology and Calibration (METCAL).

35.20.2 ST700-AM-GYD-010/METCAL Metrology and Calibration (METCAL) Laboratory Requirements and Certification Guide.

35.20.3 NAVSEAINST 4734.1B NAVSEA Test, Measurement and Diagnostic Equipment (TMDE) and Calibration Program.

36.0 SUBMARINE TOTAL SHIP READINESS ASSESSMENT SUPPORT (CLINs 4025, 7125, 7225)

36.1 The contractor shall assist the SubTSRA support program, which consists of a series of focused assessments scheduled at specific times in the ship's operational cycle, which will provide a clear picture of the ship's material readiness.

36.2 The contractor shall perform assessments during Submarine Total Ship Readiness Assessments (SubTSRAs) in San Diego, CA; Pearl Harbor, HI; and Guam for the following systems:

36.2.1 Purifier Systems

36.2.2 Diesel Engines

36.2.3 Main Engines

36.2.4 Reduction Gears

36.2.5 Oily Water Systems

36.2.6 Collection and Holding Systems

36.2.7 Infrared (IR) Survey

36.2.8 Switchboard Systems

36.2.9 400 Hertz Systems

36.2.10 Uninterruptible Power Supply (UPS) Systems

36.2.11 Motor-Generator Sets

36.2.12 Static Frequency Converters

36.2.13 Circuit Breakers

36.2.14 Voltage Regulators

36.2.15 Ship Service Turbine Generator (SSTG) Voltage Systems

36.2.16 Air Systems

36.2.17 AC&R Systems

36.2.18 Auxiliary Systems

36.2.19 Submarine Control Systems

36.3 The contractor shall coordinate with internal and external stakeholders such as Submarine Force Pacific Fleet (SUBPAC), Submarine Squadron (SUBRON), and TYCOM, and provide feedback to SWRMC.

36.4 The contractor shall work collaboratively with Government and shipboard personnel and other contractors internal and external to SWRMC.

36.5 The contractor shall support the SubTSRA test plan approved by SUBPAC prior to each event, to the extent feasible.

36.6 The contractor shall use Microsoft Office Suite applications, as well as FAST or current submarine data applications, as required.

36.7 The contractor shall input findings into automated work request reports via Organizational Maintenance Management System - Next Generation (OMMS-NG), CSMP records, shipboard material ordering processes or alternate material sources (e.g. Responsive Automated Materiel Management (RRAM), Integrated Logistics Overhaul (ILO), Propulsion Examination Board (PEB)).

36.8 Applicable Documentation:

- COMSUBLANT/COMSUBPAC Instruction 9010.5B

37.0 INTERMEDIATE LEVEL PLANNING SUPPORT (CLINs 4026, 7126, 7226)

SWRMC's Engineering Department develops Intermediate Level (I-Level) specifications that are to be executed by SWRMC's Product Families.

37.1 The contractor shall provide expertise and knowledge in modifying and repairing a variety of shipboard systems and their components, including but not limited to machinery, diesel engines, electrical systems, electronics, combat systems, and structural.

37.1.1 Perform shipboard inspections and ship checks.

37.1.2 Assist in developing requirements by reviewing technical data compiled from shipboard inspections and other related technical assessments.

37.1.3 Provide labor and material estimates for requirements based on the evaluation and review of technical data.

37.1.4 Recommend and assess whether requirements can be accomplished at the I-Level by the SWRMC Product Families.

37.2 The contractor shall provide support to SWRMC's Engineering Planning Department in developing and planning I-Level Specifications to be included in Formal Work Packages (FWP), Control Work Packages (CWP) and Maintenance Procedures (MP), which are to be executed by SWRMC's Product Families.

37.2.1 Coordinate the development of specifications and address all related technical questions and issues in areas related to machinery, diesel engines, electrical systems, electronics, combat systems, structural, and other services (e.g. weight tests).

37.2.2 Recommend which specifications should fall under FWPs, CWPs and MPs.

37.2.3 Write FWPs, CWPs and MPs in support of I-Level maintenance, which are all subject to Government approval.

37.2.4 Write and review I-Level specifications, in 4E Spec format, for inspections and assessments of material conditions, which are all subject to Government approval.

37.3 The contractor shall use computer software programs in support of I-Level Planning Support.

37.3.1 Utilize the Advanced Industrial Maintenance System (AIMS) program.

37.3.2 Utilize drawing, technical manual, and configuration databases.

37.3.3 Utilize Microsoft Office Suite applications.

37.4 Effectively communicate with Ship Superintendents, Production Personnel and Quality Assurance Personnel.

37.5 Attend planning, production, and lean event meetings at the request of Planning Officers.

37.6 Possess a planner qualification in accordance with SWRMCINST 4790.9A.

37.7 Pass an oral board in accordance with NAVEDTRA 43523-B

37.8 Applicable Documentation

- COMUSFLTFORCOMINST 4790.3 Joint Fleet Maintenance Manual
- NAVEDTRA 43523-B Quality Maintenance Program Personnel Qualification Standard
- SWRMCINST 4790.9A Quality Maintenance Program Personnel Qualification Standard

38.0 INTEGRATED CLASS MAINTENANCE PLAN (ICMP) SUPPORT (CLINs 4027, 7127, 7227)

The Contractor shall:

38.1 Review screened ICMP tasks for capability and capacity, and report any ICMP tasks rejected by Ship's Supervisor, SWRMC, and/or Port Engineer's to the SWRMC ICMP Manager.

38.2 Schedule ICMP task visit with ship via SWRMC ICMP Manager.

38.3 Accomplish ICMP task in accordance with referenced Maintenance Requirement Card (MRC).

38.4 Report any repairs necessary to return equipment to the parent Allowance Parts List level and provide the list to the COR.

38.5 If authorized by the COR, accomplish repairs. Complete Material Assessment Form (MAF).

38.6 Review completed MAF for accuracy. Ensure the corrective action required for the problems identified shall be clearly defined.

38.7 Deliver MAF to SWRMC Code 211 for entry into Current Ship's Maintenance Project (CSMP) database.

38.8 Provide weekly Status Report of ICMP tasks screened, canceled, completed, completed but unable to close, work in progress, scheduled but not started, and upcoming tasks. Support SURFMEPP and Assessment directors in developing ICMP metrics to evaluate trends of ICMP deferrals and results (CDRL A002).

38.9 Accomplish assessments and events in support of the Surface Ship Readiness Initiative (SSRI), to include Combat Systems, Command, Control, Communications, and Computer Readiness Assessments (C5RAs) and Total Ship Readiness Assessments (TSRAs) events.

38.10 Coordinate with the Maintenance Team, Code 200, and SURFMEPP as required to ensure proper scheduling of ICMP tasks.