

ATTACHMENT A

PRODUCTION DELIVERABLES AND MANAGEMENT

SUPPORT RESPONSIBILITIES OF THE CONTRACTOR

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1.0 GENERAL

1.1 Introduction

The Contractor shall be responsible for the satisfactory and timely performance of all tasks defined in the Statement of Work (SOW), see Section C of the RFP.

This SOW, with its supporting attachments and referenced documentation, describes the total requirements for the procurement, fabrication, assembly, test and delivery of the Gun and Guided Missile Director, MK 82 MOD 0; Director Controller, MK 200 MOD 0; ancillary equipment; and other supporting efforts as delineated in Section C of the RFP.

The Contractor shall organize, coordinate, control, and approve actions designed to accomplish overall program objectives.

1.2 Scope of Tasks

The following sections and Attachments A1-A9 contain or reference the principal summary documents and related aspects that identify the scope and parameters of the effort to be performed in accordance with the SOW.

1.2.1 Security

This SOW is unclassified. The highest security classification under this contract is SECRET. The Contractor shall adhere to all security requirements imposed by the National Industrial Security Program Operating Manual and ensure that all lower tier subcontractors and vendors are provided with information on and comply with applicable security requirements.

1.2.2 Program Authority

This contract shall be managed by the Program Executive Office for Integrated Combat Systems, IWS 1PR, 1333 Isaac Hull Avenue SE Stop 2317, Washington Navy Yard DC 20376-2317, Telephone 202/781-2789.

1.2.3 Applicable Documents

This SOW may refer to pertinent applicable and referenced documents. A listing of such documents identified is contained in Attachment A1.

1.2.4 Electrostatic Discharge Control Program and High Reliability Soldering

The Contractor shall apply MIL-STD-1686 "Electrostatic Discharge Control Program for Protection of Electrical and Electronic Parts, Assemblies and Equipment" and MIL-HDBK-263. Implementation shall consist of identification of static sensitive parts and flowdown of applicable requirements to subcontractors and vendors as well as adherence to handling precautions and related procedures. Addition of protective circuits to existing designs shall not be required. Redesigns or new designs shall incorporate protective circuits. The Contractor shall comply with ANSI/J-STD-001B (Class 3) "Requirements for Soldered Electrical and Electronic Assemblies".

1.2.5 Product Oriented Survey

- a. In accordance with the provisions of DOD FAR Supplement (specifically Paragraph 246.103), the Government reserves the right to conduct product-oriented survey(s) of the Contractor to determine compliance with contractual requirements.
- b. The Contractor shall insert a clause substantially similar to paragraph (a) of this clause in all subcontracts hereunder.

2.0 DELIVERABLE EQUIPMENT

2.1 Scope of Work

The Contractor shall procure, fabricate, assemble, and test the Guided Missile Director, Mark 82 Mod 0 with Director Controller Mark 200 Mod 0 equipment and Interim Repair Parts as identified in Section C of the RFP using the production drawings, weapon specifications and documentation developed under previous AEGIS contracts, subcontracts and under this contract. In the event of conflict between the drawings and weapon specifications, the weapon specifications shall take precedence. Shipment shall be in accordance with Attachment B.

2.1.1 Contractor Production Qualification

Qualification of the Contractor and its facilities as well as all subcontractors and their facilities for this build to print procurement will be established upon successful completion of the Government-conducted Production Readiness Review (PRR) and Production Qualification Review (PQR)

The Contractor shall support the Government-conducted PRR, Functional Configuration Audit (FCA), Limited Physical Configuration Audit (LPCA) and PQR for the first Director and the Director Controller. These events will be held at the Contractor's production facility in accordance with and agenda provided by the Government.

During the PRR the Contractor shall be prepared to demonstrate the ability to manufacture and test the Director by providing various artifacts to include, but not be limited to, the Manufacturing, Testing, Quality Assurance and Configuration Management Plans. Policies, Procedures, Processes & Plans demonstrating production processing & fabrication capability, facilities/equipment capacity, production scheduling, manpower resources/training, parts/material procurement and shop loading will also be required. Processes must be able to produce repeatable conforming hardware within cost and time constraints of the contract so as to ensure capabilities and production rates are achieved. During the PRR, the Contractor shall be prepared to discuss manufacturing/procurement planning status, issues, problems, risks and schedule associated with the production program.

The Government will provide a report summarizing the proceedings and identifying deficiencies and issues, as applicable. The Contractor shall provide a response to the Government prior to conducting the FCA and LPCA.

The Contractor shall support a Government-conducted FCA to ensure that the Director and Director Controller meet the functional and performance requirements defined in the Test Requirements Specification for Director and Director Controller Units (TR 5365225), Acceptance Test Plan (CDRL A004) and Test Procedures (A005).

Likewise, the Contractor shall support a Government-conducted LPCA to ensure that the Director and Director Controller match the physical configuration specified by the top-level drawings contained in the Technical Data Package. This will be limited to non-destructive inspection of easily accessible components that will not required major disassembly of the completed assemblies.

The Government will provide a report summarizing the audits and identifying deficiencies and issues, as applicable. The Contractor shall provide written response within 30 days that will address any deficiencies or issues identified.

Successful qualification is predicated on the Government's determination that the system requirements are fully met in the final production configuration, and that production capability demonstrates a satisfactory basis for proceeding into Low-Rate Initial Production and/or Full-Rate Production.

In order to complete the qualification process, the Contractor shall support the Government-conducted PQR. The Contractor shall be prepared to discuss final status of issues, problems, risks and schedule associated with the production program and the foregoing audits. The Government will provide a report summarizing the PQR proceedings and, upon completion by

the Contractor of any remaining corrective actions, will establish qualification of the Contractor for continued production. A-3

2.1.1.1 Production Facility Qualification

The Contractor for the procurement of the AEGIS Director/Director Controller System (Mark 82 Mod 0/Mark 200 Mod 0) can qualify a previously non-qualified production facility with an approved factory acceptance test of a production deliverable under this solicitation. The contract will use Navy-approved acceptance test procedures. The term "acceptance" shall be deemed to mean Government acceptance at the production site in accordance with the applicable production drawings and Factory Acceptance Test Plan/Procedures and the execution of a "Material Inspection and Receiving Report." Additionally, qualification of a production facility includes, but is not limited to, the successful completion of the Government-conducted Production Readiness Review (PRR) and Production Qualification Review (PQR) process, a site visit, and Product Oriented Survey as outlined in DFAR Supplement 246.103.

2.1.1.2 Subcontractor Qualification

The utilization of AEGIS-qualified vendors for purposes of satisfying the requirements specified in the Technical Data Package is optional. The Contractor shall ensure that the requirements of the TDP will be met by whichever vendor is chosen. This requires either selection of qualified vendors identified on the source-controlled drawings contained in the TDP or qualification of a new vendor.

For purposes of satisfying the above qualified vendor provision, the Contractor agrees that the degree of tolerance to be achieved shall result in interchangeability between AEGIS Fire Control System equipment at the Lowest Repairable Unit (LRU).

The Government-owned tooling located at Vendors does not indicate either the vendors' capabilities to perform or that Government tooling at a vendor location is fit for its intended purposes. The Government is not directing the use of specific subcontractors. The contractor is responsible for selecting their own subcontractors and the performance of its selected subcontractors.

2.1.2 Factory/Production Acceptance Test Plan

The Contractor shall prepare for approval, maintain and update the factory/production acceptance test plan for all deliverable equipment. The Contractor shall perform the acceptance test for each Gun and Guided Missile Director, MK 82 MOD 0 and the Director Controller, MK 200 MOD 0 as specified in the RFP in Section E – INSPECTION AND ACCEPTANCE. CDRL A004 requires that test plans be consistent with A-spec provisions.

2.1.3 Contract Specifications Configuration Baseline

The configuration baseline shall be in accordance with the drawing revision as follows:

<u>ITEM</u>	<u>DRAWING #</u>	<u>REV</u>	<u>DATE</u>
Director	5204574	FA	07/02/07
Controller	5204575	CC	04/14/08

3.0 PROGRAM MANAGEMENT

The Contractor shall perform those program management functions that provide for the technical and administrative planning in order to accomplish total contract objective. This includes, but is not limited to, analyzing performance data, preparing briefing material, coordinating meetings and providing customer liaison actions.

3.1 Reviews

3.1.1 Program Management Reviews

The Contractor shall report program progress to the Navy in quarterly reviews as scheduled by the Navy. The reviews shall address contract progress, problems and risk areas, and shall include schedule and technical performance data. The reviews shall normally be held at the Contractor's facility and attended by Navy personnel. One quarterly review per year may be held in the Washington, D.C., metropolitan area. Review format will be flexible and subject to agreement between the Navy and the Contractor. Copies of presented material shall be provided at each review.

3.1.2 Informal Reviews

Periodic technical meetings and informal reviews may be held at the Navy's discretion, so as to enhance and maximize the information flow between the Contractor and the Navy's Program Management Office. Scope of these reviews will normally be limited to specific areas of requirement or performance. There shall also be mutually agreed to reviews at the Contractor's major subcontract vendors as requested by the Navy through the Contractor.

3.1.3 Assessment of AEGIS Supplier Base

The Contractor shall perform assessments of their supplier base to determine/monitor the impact of loss of other Department of Defense Programs or the reduction in AEGIS ships on the suppliers viability. Areas of assessment will include quality assurance, schedule adherence, capacity and financial stability. The Contractor shall present assessment to PEO IWS IPR on a quarterly basis as part of the quarterly Program Management Reviews.

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4.0 OTHER REQUIREMENTS

4.1 Accelerometers

In the event accelerometers are required for use during shipment of hardware, they shall be supplied by the Contractor. These accelerometers are to be returned to the Contractor for reuse in subsequent shipments.

4.2 Identification Plates and Nameplates

Nameplates or equipment identification plates shall conform to MIL-P-15024/10 as defined in OD 32187.

4.3 Safety

The Contractor shall take appropriate measures to ensure that the equipment safety achieved in the design is not compromised during the production process. MIL-STD-882 shall be used as guidance.

The Contractor shall conduct a safety review of new operating and maintenance procedures and technical manuals, or changes thereto, to ensure that the procedures, warning, cautions and other safety information are adequate, and that inherent safety is not degraded.

The Contractor shall provide a statement of safety impact with each engineering change or waiver request. Existing hazards analyses shall be updated to reflect approved engineering changes.

ATTACHMENT A1
REFERENCE DOCUMENTS

REFERENCE DOCUMENTS

The following documents form a part of this contract to the extent specified herein. In the event of conflict between the documents referenced herein and the contents of this contract, this Attachment A1 shall be considered the superseding requirement.

The revision levels of the documents referenced herein apply to this contract. New designs developed on this contract, as a result of an ECP, will meet the applicable design requirements of the documents referenced herein unless specific exception is contained in the authorizing contract modification. In the event of a conflict between existing designs and the requirements of the documents referenced herein, the existing designs shall take precedence. Except as provided above, existing designs shall not be changed to meet new requirements imposed by revisions of documents referenced herein that occurred after the existing design.

For those military specifications and standards listed in Part I of this Attachment A1, the Contractor is encouraged to seek ways to take advantage non-government (commercial) specifications or standards and processes in the manufacture of the AEGIS Guided Missile Director and Director Controller components. The Contractor should seek Government approval to implement any non-government specification, standard and process which will allow an increase in the supplier base and/or reduce equipment cost without loss of performance or quality specified by WS-10501. Review of potential applications of non-government specifications and standards, should include any military specification or standard referenced at any tier that may satisfy the above criteria with or without application of a new primary reference document. The Government considers the initiative toward Single Process Manufacture at Contractor and subcontractor facilities to be advantageous. The Contractor is encouraged to continue this important initiative and pledge to the AEGIS Navy Program Office its support in implementing sensible, cost saving applications. The Contractor shall assure that its subcontractors and suppliers are made aware of and participate in these acquisition reform initiatives. The Contractor is to present its activities, progress and recommendations at the regular quarterly meetings.

Whenever any specification or standard applicable to this contract is amended or revised subsequent to this contract's effective date, the Contractor may comply with, or authorize its subcontractor(s) to comply with, the amended or revised document, provided that no increase in price is required and that the form, fit and/or function will not be altered. The Contractor shall not be required to comply with the amended or revised document except as may be required by a modification to this contract. If the Contractor elects to comply with or authorize sub-contractor(s) (including a single subcontractor of a multi-sourced part) to comply with the amended or revised document, he shall notify the DCMA and the AEGIS TECHREP in writing of this election and shall comply or require the specific subcontractor(s) to comply with the provisions of the amendment or revision in full. Any product supplied as compliant QPL product will reflect the specifications in effect at the date of product manufacturing and will not require customer notification.

OZONE DEPLETING SUBSTANCES

In compliance with 10 U.S.C. 2301, and notwithstanding prescribed or allowed usage by any referenced specification or standard in the instant contract, the following ozone depleting substances (ODS) shall not be used in any manufacturing process or operation, nor shall any product required by the instant contract contain such ODS:

Prohibited Class I ODSs

Group I:

chlorofluorocarbon-11 (CFC-11)
chlorofluorocarbon-12 (CFC-12)
chlorofluorocarbon-113 (CFC-113)
chlorofluorocarbon-114 (CFC-114)
chloropentafluoroethane-115 (CFC-115)

Group II:

halon-1211
halon-1301
halon-2402

Group III:

chlorofluorocarbon-13 (CFC-13)
chlorofluorocarbon-111 (CFC-111)
chlorofluorocarbon-112 (CFC-112)
chlorofluorocarbon-211 (CFC-211)
chlorofluorocarbon-212 (CFC-212)
chlorofluorocarbon-213 (CFC-213)
chlorofluorocarbon-214 (CFC-214)
chlorofluorocarbon-215 (CFC-215)
chlorofluorocarbon-216 (CFC-216)
chlorofluorocarbon-217 (CFC-217)

Group IV: carbon tetrachloride

Group V: methyl chloroform

PART I**MILITARY SPECIFICATION**

DOD-D-1000B	Drawings, Engineering and Associated Lists	Not 2, 20 April 05
MIL-PRF-5480G	Reproduction Requirements for Engineering and Technical Data	01 Jul 98
MIL-P-15024F	Plates, Tags and Bands for Identification of Equipment	28 Nov 97
MIL-P-15024/10A	Name Plates, ORDALT Plates and Information Plates	7 Mar 86
MIL-E-16400H	Electronic, Interior Communication and Navigation Equipment, Naval Ship and Shore; General Specification for For new designs MIL-STD-2036 which replaced MIL-E-16400H will be used	Not 1, 18 Jun 91
MIL-F-18870F	Fire Control Equipment, Naval Shipboard General Specification For	Amd 1, 26 May 86
MIL-C-28809B	Circuit Card Assemblies, Rigid, Flexible, and Rigidflex	Not 1, 21 Apr 95
MIL-P-55110F	Printed Wiring Boards, Specification for	31 May 97
MIL-S-83490	Specifications, Types and Forms	Not 1, 31 Aug, 95
MIL-DTL-31000C	Detailed Specifications for Technical Data Packages (New Drawings)	9 July 09

STANDARDS

ASME Y14.100	Engineering Drawing Practices	30 Jan 98
MIL-STD-109C	Quality Assurance Terms and Definitions	2 Sep 94
MIL-STD-129P	Marking for Shipment and Storage	15 Dec 02
MIL-STD-130N	Identification Markings of U.S. Military Property	01 Jun 97
MIL-STD-202G	Test Methods for Electronics and Electrical Component Parts	8 Feb 02
MIL-STD-242H	Electronic Equipment Parts Selected Standard Switches	25 Mar 85
MIL-STD-275E	Printed Wiring for Electronic Equipment	Not 3, 30 Sep 99
MIL-STD-454N	Standard General Requirements for Electronic Equipment (less requirement 5)	Not 4, 4 May 95
MIL-STD-480B	Configuration Control-Engineering Changes, Deviations and Waivers	Not 1, 17 Jul 92
MIL-STD-482A	Configuration Status Accounting Data Elements and Related Features	Not 1, 17 Jul 92
MIL-STD-490A	Specification Practices	Not 1, 31 Aug 95
MIL-STD-794E	Parts and Equipment Procedures for Packing	Not 2, 23 Jun 93
MIL-STD-882G	System Safety Program Requirements	10 Feb 00

STANDARDS (Continued)

MIL-STD-974	Contractor Integrated Technical Information Service (CITIS)	20 Aug 93
MIL-STD-1285C	Marking of Electrical and Electronic Parts	Not 1 22 Aug 03
MIL-STD-1520C (with mods)	Corrective Action Disposition System for Non Conforming Material	Not 15 Mar 93
MIL-STD-1686C	Electrostatic Discharge Control Program for Protection of Electrical and Electronic Parts, Assemblies, and Equipment (Excluding Electrical Initiated Explosive Devices) (Metric)	25 Oct 95
MIL-STD-2036A	General Requirements for Electrical Equipment Specifications (FOR NEW DESIGN)	3 Sep 93
MIL-STD-2073-1D	DOD Material Procedures for Development and Application of Packaging Requirements	15 Dec 99
MIL-PRF-19500L	Performance Specification Semiconductor Devices, General Specification for"	22 Oct 98
MIL-PRF-38535F	Performance Specification "Microcircuits, General Specification for"	01 Dec 02
MIL-PRF-49506	Performance Specification, Logistic Management Information	Not 1, 18 Jan 05

NON-GOVERNMENT STANDARDS

ANSI/J-STD-001B (Class 3)	Requirements for Soldered Electrical and Electronic Assemblies	Oct 96
ANSI B18.2.1-1981 w/1992 supplement	Square and Hex Bolts and Screw Inch Cadimum Plated	Not 1, 3 Aug 90
ANSI/ASQC Z1.4-1993	Sampling Procedures and Tables for Inspection by Attributes	10 May 89
ANSI/ISO/IEC 17025:2005	General Requirements for the Competence of Testing and Calibration Laboratories	2005
ANSI/NCSL Z540.3-2006	Requirements for the Calibration of Measuring and Test Equipment	2007
ANSI/ISO/ASQC Q9001: 2000 or 2008	Quality Systems-Model for Quality Assurance in Design, Development, Production, Installation and Servicing	2000/2008

OTHER DOCUMENTATION

MIL-HDBK 263B	ESD Control Handbook for Protection of Electrical and Electronic Parts, Assemblies, and Equipment (Excluding Electrical Initiated Explosive Devices) (Metric) (For Guidance Only)	31 Jul 94
MIL-HDBK-512	Guidance for implementing an effective Parts Management Program (PMP)	04 Oct 00
TE000-AB-GTP-020	Government Stress Screening of Hardware (For Guidance Only)	Jan 92
OD 32187	AEGIS Ships Programs Standard Manual Vol II Vol I and III SEE NOTE IN PART III Changes thru Bulletin 2032	Mar 86 May 90

OTHER DOCUMENTATION (Continued)

OD 32396E	AEGIS PHST Implementation Plan (DDGs)	1 Mar 98
L-P-519C	Plastic Sheet: Tracing, Glaced, and Matte Finish	Not 1, 01 Sep 92
DOD 5220.22M	National Industrial Security Program Operating Manual	28 Feb 06
NAVSEA S0300- BU-GYD-010	Government-Industry Data Exchange Program (GIDEP) Contractor Participation Requirements	Apr 08

****PEO IWS Combat System Change Control
Procedures Manual**

****NOTE:** Copy of this document may be obtained by written request to:

Department of Navy
Program Executive Office Integrated Warfare Systems
ATTN: IWS 1CM
1333 Isaac Hull Avenue SE Stop 2313
Washington Navy Yard, DC 20376-2313

PART II - UNIQUE DOCUMENTS

WS-10501 Part I	Critical Item Development Specification for Director Group, Guidance MK 81 Mod 0	02 Jan 80 and SCNs 1 thru 14
WS-10501 Part II	Critical Item Development Specification for Director Group, Guidance MK 81 Mod 0	02 Jan 80 and and SCN 1
WS-10233A	Process specification Inspection of oil Seepage for Director 5204574	19 Sep 83

PART III - DEVIATIONS/MODIFICATIONS/CONDITIONS/TAILORING

The following exceptions shall apply in this contract to those specifications and standards listed in Part I of this Attachment A1.

1. MIL-STD-1520C Corrective Action Disposition System for Non Conforming Material

Exceptions:

(a) Exception to paragraph 4.5 as stated below:

A Government representative or designee will be a principal member of the MRB established by MIL-STD-1520C.

2. OD 32187 AEGIS Ships Programs Standard Manual

The AEGIS Standards Manual VOLS I, II, & III will be modified by Bulletins reflecting the most recently approved Non- Standard Parts. The effective version of OD 32187 as applied to this contract shall include all Bulletins issued prior to and during the performance of this instant contract.

3. The following specifications apply: WS-10501, Part I, SCNs 1 thru 14 (see exceptions below); WS-10233A. Exceptions to the applicability of WS-10501 are (i) tracking (C Band or search functions presently contained in the specification) and (ii) specifications dealing with the Antenna AS-3444/SPG-62 including: a) Paragraph 3.2.1.2.7 - Radiation; b) Paragraph 3.2.1.2 and attendant subparagraph of Table IV - Test and Inspection Chart; c) Paragraphs 3.2.1.3 and 4.2.2.3 - Beam Forming Assembly Performance Test; and d) Paragraph 4.2.2 - Verification Methods.

ATTACHMENT A2

QUALITY ASSURANCE REQUIREMENTS

QUALITY ASSURANCE REQUIREMENTS

I. CONTRACT PROVISIONS

- A. The Contractor shall provide and maintain a quality program acceptable to the Government for supplies and services covered by this contract. The Quality Program shall be in accordance with ANSI/ISO/ASQC Q9001- 2000 or 2008.
- B. Quality Assurance Contract Requirements implementing, supplementing or contrary to ANSI/ISO/ASQC Q9001- 2000 or 2008 shall be in accordance with the Quality Provisions included herein.
- C. Definitions

Quality System may be referred to as “Quality Program” and/or “Quality Management System”.

Supplier may be referred to as “Vendor” or “Sub-Contractor”.

Organization may be referred to as “Contractor”.

Customer and Government are the same and refer to the body of the government procuring, administering or providing contract oversight activities.

NOTE: If the Contractor has previously provided a Quality Assurance Program Plan (QAPP) that was found acceptable in accordance with ANSI/ISO/ASQC Q9001- 2000 and/or satisfied the requirements of previous contracts for the same supplies or services required herein, it shall be acceptable for this contract except all changes to the original QAPP shall be approved prior to implementation. When the Contractor proposes changes in the QAPP, IWS 1PR shall be notified in writing of the proposed changes and obtain approval of IWS 1PR in writing prior to implementing the change.

II. QUALITY ASSURANCE REQUIREMENTS

- A. The Quality Program shall be in accordance ANSI/ISO/ASQC Q9001- 2000 or 2008 and the requirements stated herein:
 - 1. The Contractor shall comply with all the requirements of ANSI/ISO/ASQC Q9001-- 2000 or 2008 and these provisions with regard to all supplies and services developed and delivered under this contract. This applies to items manufactured or performed by the Contractor at his plant or any other outsourced facility.

2. The Contractor shall flowdown in his purchasing documents the appropriate quality requirements to all suppliers, e.g. ANSI/ISO/ASQC Q9001, MIL-Q-9858, Quality Program, MIL-I-45208, Inspection System, or the AQAP Century Series. The quality requirement imposed on the supplier shall be based on complexity and criticality of the items being procured. The Contractor shall identify in the purchase document any item which is critical to the deliverable product and require the supplier to submit their quality program or inspection system documentation for review and approval prior to production. These plans shall be made available to the designated Government representative upon request.
- B. The following Quality Assurance Provisions are incorporated. These provisions interpret or supplement provisions contained in the referenced clauses of ANSI/ISO/ASQC Q9001-2000 or 2008.
1. Notwithstanding, the requirements of ANSI/ISO/ASQC Q9001- 2000 or 2008:

“The Quality System shall be judged acceptable by the Contractor and the Government representative before fabrication or procurement of any product for eventual delivery. Acceptance of the Contractor's Quality Program shall not in any way relieve the Contractor of his responsibility for compliance with all contract requirements.”
 2. Notwithstanding, Clauses 4.1 General Requirements:

The authority and responsibility of personnel performing quality functions shall be stipulated in the company organization plan or other appropriate document. Personnel responsible for directing and implementing the quality system shall have direct unimpeded access to a management level sufficient to provide solutions to quality problems and shall report on the status and adequacy of the Quality System Quarterly. The report and documented review thereof shall be made available to the Government representative.
 3. Notwithstanding, Clause 4.2.2 Quality Manual:

The Contractor's quality assurance system shall be documented in the form of a Quality Assurance Program Plan (QAPP) which shall contain a description of the quality organization (including the responsibility and authority for each functional element), flow charts, work instructions and other documentation prepared to implement the Quality System. The plan shall identify all policies, existing instructions and procedures which are necessary to comply with the provisions of this standard. The plan shall be made available for review by the Government representative and must be judged acceptable before implementation of the Contractor's quality assurance program.

Subsequent to acceptance of the QAPP, the Government representative shall be

notified within 10 days of instituting any change to the QAPP.

The Government's right to perform independent assessments is recognized by the Contractor including the Government's right to disapprove the Contractor's quality program whenever procedures do not accomplish their objective.

4. Notwithstanding, Clause 4.2.3 Control of Documents:

All fabrication, assembly, inspection and test instructions shall be placed under the Contractor's document control system to the extent necessary to maintain control of changes.

5. Notwithstanding, Clause 4.2.4 Quality Records:

The Contractor shall maintain records of all tests and formal inspections performed throughout the entire process, fabrication and assembly cycle. The records shall provide objective evidence that required inspections and tests have been performed and shall include part, component or system identification, inspection or test involved, number or articles inspected or tested, number rejected, and causes for rejection. The records shall cover both conforming and nonconforming items. Where variable data are involved, the actual numerical result obtained shall be indicated, and where data or information are recorded, the film, tape or other recording media shall be identified with the characteristic measured, the date and identification of the article under test. For nonconforming articles, the records shall include the results of analysis, cause and corrective action taken. These records shall be available for review by the Government Representative and copies of individual records shall be furnished on request.

6. Notwithstanding, Clause 6.2.2 Competence, Training, and Awareness:

The Contractor shall determine indoctrination and training requirement of this contract and based upon this, establish a training program for manufacturing, quality control and other personnel whose work affects the quality of the product. Personnel responsible for manufacture, inspection and control of special processes and operations that require special skills that could affect product quality shall be certified.

Records indicating course, schedule, detailed content and personnel attending shall be maintained and a method established for identifying certified personnel at the location where they conduct operations for which they are certified.

7. Notwithstanding, Clause 7.2 Customer-Related Processes:

The quality program shall assure that there is complete compliance with contract requirements for proposing, approving and effecting of engineering changes.

The quality program shall provide for monitoring effectively compliance with contractual engineering changes requiring approval by Government design authority.

The quality program shall provide for monitoring effectively the drawing changes of lesser importance not requiring approval by Government design authorities.

Delivery of correct drawings and change information to the Government in connection with data acquisition shall be an integral part of the quality program. This includes full compliance with contract requirements concerning rights and data both proprietary and other.

The quality program's responsibility for drawings and changes extend to the drawings and changes provided by the subcontractors and vendors for the contract.

8. Notwithstanding, Clause 7.1 Planning for Product Realization:

Flow charts, indices or listings shall be prepared outlining each step in the fabrication, processing, inspection and testing operations for each item of assembly. Identification numbers shall be assigned to specifications, inspections, work instructions and test procedures. The flow charts, indices or listings shall utilize these identification numbers so as to provide a complete fabrication sequence.

Fabrication and assembly instructions shall define the work to be done, the step-by-step method for accomplishment, tooling and test or inspection equipment required the criteria for acceptance, record keeping instructions and disposition. Use of multi-color or multi-shade graphics, diagrams, overlays and visual standards should be made when practicable.

The contractor shall monitor and measure the characteristics of the product/assembly to verify that the product requirements have been met. This shall be carried out at the appropriate stages of the assembly process in accordance with the assembly process plan. Evidence of conformity to the acceptance criteria shall be maintained through the use of the "Assembly & Subassembly Manufacturing Quality Reports" (i.e. DPMO Charts, Pareto Charts, Histograms, etc.).

All instructions shall be legible, shall contain the date of issue and revision level and shall be subject to audit under Clause 8.2.2 Internal Audit. Handwritten changes may be made because of special or unusual circumstances provided they are accomplished in accordance with the Contractor's approved change control procedures and are authenticated by responsible personnel. The instructions shall be clearly legible and shall be protected from damage by appropriate means. Faded, defaced, illegible or otherwise damaged instructions shall be replaced promptly.

All instructions shall be accessible to the operator at all times. No operation shall be performed without direct access to the appropriate instructions.

Written inspection and test procedures shall be prepared as appropriate for each inspection and test operation to be performed by the Contractor. These inspection and test procedures shall be maintained current in accordance with the change control system requirements. The inspection and test procedures shall include the following:

- (1) Identification of the item to be inspected or tested.
- (2) Identification of or reference to measuring and test equipment, listing type, manufacturer, and model number except for Standard Measuring Instruments, such as inside and outside micrometers, plug and ring gauges.
- (3) Detailed operations to be performed by the test operator, including operational checks and/or preliminary calibration of test setup.
- (4) The characteristics to be inspected, with inspections defined in terms of:
 - (i) The conditions that shall exist at each inspection or test point;
 - (ii) The tolerance limits that define conformance.
 - (iii) On Multi-scale Devices, the particular scale, dial or device to be observed;
and
 - (iv) The method for performing the inspection or test, including manipulation of controls on the item and on the inspection and test equipment.
- (5) Data collection requirements, such as data sheet, time/cycle logs and control charts.
- (6) Conditions to be maintained during inspection and test, including environment when required.
- (7) Special precautions to be followed for safety of personnel and to prevent damage to the items and to the inspection and test equipment.
- (8) Criteria for passing or failing the test and for determining the conformance and nonconformance of the item.
- (9) Details of the acceptable condition for visual inspection characteristics by reference to workmanship.
- (10) Details of sampling plans to be used.

Inspection and Test Planning. The Contractor's program shall provide the necessary planning function for tests and inspection conducted during the entire phase of fabrication, processing and assembly. The planning shall be based on a comprehensive study of the supplies, the fabrication and processing operations, the methods of material integration, assembly and checkout and the final test and inspection procedures. Inspections shall be established at points which will minimize delays resulting from deficiencies, and in all cases shall be at or before the last point at which the acceptability of the operation or quality of the characteristic may be verified.

Process Control Procedures. Process control procedures shall be prepared when necessary to supplement applicable process specifications to provide detailed performance and control methods. These procedures shall document the preparation, fabrication details, conditions to be maintained during each phase of the process, the method of verifying the adequacy of processing materials, solutions, equipment, their associated control parameters, including statistical quality control plans where applicable, and the required records to indicate the results of such inspection and process verification. The Contractor's quality organization shall review the written procedures for these process controls and conduct audits to determine that the actual operations conform with approved methods and procedures.

9. Notwithstanding, Clause 7.3.7 Control of Design and Development Changes:

The quality program shall assure that there is complete compliance with contract requirements for proposing, approving and effecting of engineering changes.

The quality program shall provide for monitoring effectively compliance with contractual engineering changes requiring approval by Government design authority. The quality program shall provide for monitoring effectively the drawing changes of lesser importance not requiring approval by Government design authorities.

Delivery of correct drawings and change information to the Government in connection with data acquisition shall be an integral part of the quality program. This includes full compliance with contract requirements concerning rights and data both proprietary and other.

The quality program's responsibility for drawings and changes extend to the drawings and changes provided by the subcontractors and vendors for the contract.

10. Notwithstanding, Clause 7.4 Purchasing:

A Quality Program Plan conforming to the specified Quality requirement and this document shall also be required of subcontractors producing items defined by Critical Item Product Specifications. The program shall be approved by the Contractor and shall be made available to the designated Government representative upon request.

The contractor's responsibility shall include assistance and training to suppliers as necessary to achieve required quality levels.

The Contractor shall have access to objective evidence that the subcontractor complies in detail with applicable requirements in accordance with Clause 4.2.4 Control of Records. Objective evidence shall include inspection data supplied by the subcontractor, source inspection data and /or receiving inspection data.

The Contractor shall assure that all specified inspections and tests required for acceptance (including qualification, preproduction and quality conformance) have been satisfactorily performed. Evidence of such inspections and tests shall be made available to the Government upon request.

The Contractor's written procedure shall indicate that procurement documents are reviewed by the Contractor's quality organization prior to release and shall be available for review by the Government representative. This review shall encompass determination that the applicable provisions of this paragraph are included, that the supplier has been approved in accordance with the source selection requirements of Clause 7.4.1 Purchasing Process.

11. Notwithstanding, Clause 7.4.3 Verification of Purchased Product:

Qualified Products List (QPL) only signifies that at one time the manufacturer made a product which met specifications requirements. It does not relieve the contractor of his responsibility for furnishing supplies that meet all specification requirements for the performance of specified inspections and tests for such material.

The Government reserves the right to perform quality audits to verify the prime Contractor and subcontractor's compliance with their Quality Programs. Such audits will consist of evaluations of records, processes and products.

The Contractor will be notified of deficiencies found during these audits and will be given a specified period of time to correct such deficiencies.

The Contractor shall make available to the Government Representative reports of any nonconformance found on Government source-inspected supplies and shall (when requested) require the supplier to coordinate with his Government Representative on corrective action.

The Quality Program shall provide for planning and performance of inspections and tests on all supplies to assure verification of quality requirements of specifications and drawings. The quality and degree of inspection performed shall be consistent with the complex and critical nature of the article. Supplies shall not be accepted in stores or into production without satisfactory evidence that such inspection was accomplished. Procured supplies which are subject to age deterioration shall include an indication of the date that the critical life of the article was initiated and the date

after which the material shall not be used in the manufacturing process. All such supplies shall be adequately controlled in subsequent stores and handling operations, and the expiration date shall be prominently marked on each of the smallest containers that may be issued for use.

12. Notwithstanding, Clause 7.5.3 Identification and Traceability:

All material and products received at the plant shall be clearly identified and this identity maintained in storerooms and during processing in order that receipts for this contract may be readily identified. Receipts shall be specified at receiving and this identification shall be maintained either on the fabricated article or on records traceable to the fabrication article. The receipts released from the Contractor receiving inspection shall be clearly identified to indicate conformance or rejection.

Inspection and testing records shall, as a minimum, indicate the nature of the observations, number of observations made, date of observations, individual making the observations and the number and type of deficiencies, found. Data included in inspection and test records shall be complete and accurate and shall be used for trend analysis and to assess corrective action effectiveness.

13. Notwithstanding, Clause 7.5.4 Customer Property:

This section articulates clear provisions for handling government property and material. The term “material” applies to government-furnished equipment to be installed in or furnished with the end item. The term “property” is government equipment that is used in the fabrication or assembly of the end item, and is not delivered as part of the end item.

When material is furnished by the Government, the Contractor’s procedures shall include at least the following:

- a. Examination upon receipt, consistent with practicality, to detect damage in transit;
- b. Inspection for completeness and proper type;
- c. Periodic inspection and precautions to assure adequate storage conditions and to guard against damage from handling and deterioration during storage;
- d. Functional testing, either prior to or after installation, or both, as required by contract to determine satisfactory operation;
- e. Identification and protection from improper use or disposition; and
- f. Verification of quantity.

The Contractor shall report to the Government representative any Government-furnished property found damaged, malfunctioning or otherwise unsuitable for use. In the event of damage or malfunction during or after installation, the Contractor shall determine and record probable cause and necessity for withholding material from use.

The Contractor shall, as required by the terms of the Bailment Agreement, establish procedures for the adequate storage, maintenance and inspection of bailed customer property. Records of all inspections and maintenance performed on bailed property shall be maintained. These procedures and records shall be subject to review by the Government representative.

14. Notwithstanding, Clause 7.6 Control of Monitoring and Measuring Equipment:

Calibration. The Contractor shall maintain a system for calibration of all measuring devices against standards of proven traceable accuracy, in accordance MIL-STD-45662 or ANSI/ISO/IEC 17025:2005 and ANSI/NCSS Z540.3-2007 "Calibration System Requirements."

Tool and Gauge Control. The Contractor shall maintain a system for the selection and control of inspection and production tools, measuring instruments, test equipment and controlling or recording instruments. All such devices must perform to the degree necessary within the envelope of engineering parameters relative to accuracy range, resolution, tolerance, sensitivity, regulation and other applicable requirements.

Special Purpose Test Equipment. All special purpose test equipment shall be validated as appropriate by the Contractor prior to use under this contract. This requirement includes all final acceptance equipment and major subassembly test equipment with provisions for including lower level equipment if problems or circumstances indicated such a requirement. The requirement applies to both prime and major subcontractors. Contractor procedures shall provide for special purpose test equipment to assure that the test system accuracy, stability, operability, calibration procedures and techniques, operation procedures, servicing requirements, environmental requirements, drawings, fault detection, correlation with similar equipment, supporting equipment, calibration marking and records, and control of unauthorized access are acceptable.

Production Tools and Inspection Media. When production gauges, jigs, fixtures, test equipment or other manufacturing devices are used as inspection or test media, they shall be initially inspected or calibrated for accuracy and shall be proof tested prior to release for production and at established intervals thereafter. The Contractor shall determine the extent and frequency of such inspections as part of its inspection procedures and shall maintain records of inspection or other conclusive evidence that control is being maintained.

Use of Contractor's Inspection Equipment. The Contractor's gauges, and measuring and testing devices shall be made available for use by the Government when required

to determine conformance with contract requirements. If conditions warrant, the Contractor's personnel shall be made available for operations of such devices and for verification of their accuracy and condition.

Test Software (i.e. non-deliverable software). Reference DOD-STD-2168, "Defense System Software Quality Program:

Only paragraphs 4.7, 4.8 and 5.6 shall apply as follows:

Implementation of paragraphs 4.7 (software quality records) and 4.8 (software corrective action) shall be limited to the evaluation of non-deliverable software per paragraph 5.6 and previously identified non-deliverable software that has been requested for delivery by the Navy. All records provided will be in contractor format.

15. Notwithstanding, Clause 8.2.2. Internal Audits:

The Contractor's quality system shall include an on-going process of audits to ensure that the documented quality system is implemented and working as planned and that effective corrective action is taken when it is not.

The procedures for performing Internal Quality Audits shall be documented and maintained. Audits shall be planned and scheduled on the basis of status and importance of the activity to be audited. Auditors shall be independent of any responsibility for the activity being audited. As a minimum, the requirements of this standard shall be audited annually.

The results of audits shall be recorded and reported to management and personnel having responsibility for the action being audited who, in turn will take timely corrective action in response to any nonconformities found during an audit.

Follow-up audit activities shall verify and record implementation and effectiveness of corrective actions taken.

16. Notwithstanding, Clause 8.3 Control of Non-Conforming Product:

The Contractor's system for controlling nonconforming material shall comply with the requirements of MIL-STD-1520 as tailored in Attachment A1.

Repair and rework of nonconforming material shall be in accordance with documented procedures acceptable to the Government.

17. Notwithstanding, Clause 8.4 Analysis of Data:

Quality Reporting shall be used to define the quality level of the assembly & subassembly process in conjunction with the Defect Reduction Program.

The contractor shall monitor and measure the characteristics of the product/assembly to verify that the product requirements have been met. This shall be carried out at the appropriate stages of the assembly process in accordance with the “Assembly and Subassembly Manufacturing Quality Report” and the “Manufacturing Defect Reduction Report”.

18. COST RELATED TO QUALITY:

The Contractor shall maintain and use quality cost data as a management element of the quality program. Specific cost data to be maintained and used will be determined by the Contractor. This data shall, on request, be identified and made available for “on-site” review by the Government Representative.

19. DEFECT REDUCTION PROGRAM

As part of the requirements of the AEGIS Weapon System quality requirements, the Contractor shall have a defect reduction program that includes an organized data collection and corrective action system. The Contractor will implement a Defect Reduction Program as described herein. The Defect Reduction Program shall include maintenance of a corrective action and disposition system for non-conforming material in accordance with the requirements of MIL-STD-1520, except as “tailored” in attachment A1. This system will incorporate statistical process control techniques designed to continuously improve quality and reduce the number of defects in all procurement, processing, assembly and test areas involved in the manufacture of items to be delivered under the contract. The Contractor’s defect reduction program shall be fully documented and made part of the Quality Assurance Program Plan. Defect data shall be organized, formatted and presented as required in this attachment. Defect history data shall be reported to the Government on any item that falls into one or more of the following categories:

- (1) Weapon Replaceable Assembly (WRA)
- (2) Lowest Order Replacement (LOR) items as identified in Logistics Support Analysis (LSA)
- (3) Lowest assembly level identified with S/N
- (4) Controlled configuration item
- (5) Any assembly level higher than 1, 2, 3, or 4 above

Defect history data shall identify the defect rates between adjacent production units and shall be plotted with the units in chronological order of production against the corresponding defect rates. The Contractor will determine the appropriate defect rate computation for the level of assembly being reported. Commonly used defect rates for plotting defect history follow:

- a. Defect per Unit (DPU);
- b. Defects per Million Opportunity (DPMO).
DPMO equates to Parts per Million (PPM).

The corrective action threshold shall be plotted as an Upper Control Limit (UCL) using Poisson distribution theory at the 97.5% confidence level or 3 sigma limits on the Poisson approximation to the normal distribution. The process averages shall be computed at least once quarterly for the reporting period. There shall be immediate aggressive corrective action taken whenever the defect rate is greater than the corrective action threshold.

Defect distribution data shall be analyzed at the same hardware levels as in paragraph b., above. Defect distribution should be subjected to "Pareto" analysis and plotted in bar graph showing the defect classifications that contribute most to the overall defects. The defect classifications shall be charted in descending order of cumulative frequency occurrence. The charts shall be drawn quarterly, and if production rates are low, may be cumulative.

Defect reduction charts shall be kept in "learning curve" format on log-log paper beginning with the first production unit. These charts shall be kept at assembly level 3 of the AEGIS Weapon System Work Breakdown Structure. Defects per unit at his level shall be plotted on the vertical axis with the cumulative number of corresponding units on the horizontal axis. The chart should be approximately linear with a negative slope to show learning progress. This chart is a top management tool and management use of the learning curve shall be discussed at the program review.

20. Software Quality Assurance Program – See clause 7.6.

ATTACHMENT A3
CONFIGURATION MANAGEMENT REQUIREMENTS

CONFIGURATION MANAGEMENT REQUIREMENTS

I. CONFIGURATION MANAGEMENT PROGRAM

The Contractor shall provide the administrative systems and disciplines necessary to perform configuration identification, change control, status accounting and reporting, and auditing of the material and data required herein in accordance with the defined production baseline and with the Contractor's approved AEGIS Configuration Management Plan implemented by Contractor Program Directives. The configuration management effort shall encompass a framework of management policies, procedures, instructions and practices to accomplish effective coordination and control of the production baseline.

The Contractor shall prepare for approval and maintain an AEGIS Configuration Management Plan (CMP) to meet the requirements of MIL-STD-480 and this attachment.

II. PRODUCTION CONFIGURATION BASELINE(S)

The production configuration baseline for the configuration items specified in Section B of the RFP as defined in the TDP.

III. CONFIGURATION IDENTIFICATION

The Contractor shall maintain a disciplined process to document the physical and functional characteristics of each configuration item required under the contract as defined in his approved AEGIS Configuration Management Plan. The Contractor shall maintain and ensure accuracy of drawings, specifications, engineering lists and other data as required to fully define each configuration item.

The Contractor shall provide information to the AEGIS Combat System (ACS) Design Agent for establishing and maintaining the required configuration item identification data.

IV. CONFIGURATION AUDITS

- A. The Contractor shall maintain an effective Configuration audit process in accordance with the approved AEGIS Configuration Management Plan to provide a configuration audit process for the configuration items required under the instant contract. The Contractor's process shall verify that each Configuration Item (CI) and its configuration identification are accurate, complete and meet the CI's functional and physical characteristics and contract requirements. This shall be accomplished as a continuing process of surveillance of methods, controls, tests and accuracy of the status accounting records. Government representatives may review or participate in this process at their discretion.

- B. The Contractor shall verify that the technical data package to be released to the production facility is in compliance with the production configuration baseline specified in the instant contract and applicable drawing lists.
- C. Functional Configuration Audits (FCAs) or Physical Configuration Audits (PCAs) may be required and directed by the Government as a result of deficiencies in the Contractor's audit process or as a result of authorized changes. In the case of authorized changes an FCA and/or PCA, as directed, shall be conducted for the first of each item produced/delivered under this contract which is modified by an authorized change to the configuration baseline of the item. These audits will be conducted in conjunction with the Administrative Contracting Officer (ACO)/AEGIS Program representatives at their discretion. "Item" in this context is defined as the lowest order unit(s) assembly(ies) or subassembly(ies) to which the configuration modification applies. Contractor shall be responsible for the accuracy of Label Plates and Modification Plates for each physical configuration item.

V. CONFIGURATION STATUS ACCOUNTING

The Contractor shall update and maintain the Configuration Status Accounting Report in accordance with MIL-STD-482.

The Contractor shall provide information to the AEGIS Combat System Design Agent for updating and maintaining the AEGIS Status Accounting System.

VI. CONFIGURATION CONTROL

The Contractor shall maintain all documentation defining AEGIS configuration items (specifications and drawings) under a configuration control process in accordance with MIL-STD-480. Control of changes to the Production Configuration Baseline (and delivered configuration items) shall be as prescribed herein.

- A. Configuration Control Board. The Contractor shall operate the Configuration Control Board (CCB) as described in the Contractor's approved Configuration Management Plan to review all proposed changes originated from any source. The Government reserves the right to participate in the operation of the Contractor's Configuration Control Board at the Contractor's facility.
- B. Change Forms. The Contractor shall submit Change Forms in accordance with PEO IWS Combat System Change Control Procedures Manual. . The IWS Enterprise Change Control Process mandates that an approved SCD is required to begin development of Engineering Change Proposals.

- C. Engineering Changes Proposals. The Contractor shall submit any Engineering Changes Proposals in accordance with MIL-STD-480. All Class I changes, except those defined as Class I (compatibility) in MIL-STD-480, shall be clearly marked as such and approved or disapproved and, if approved, issued by the Naval Sea Systems Command Principal Contracting Officer. Those defined as Class I (compatibility) shall be clearly marked as such and shall be approved or disapproved and, if approved, issued by the ACO.

Once the ECP has been approved, a Configuration Control Board Directive (CCBD) will be issued by PEO IWS 1CM.

Any corrections or comments included in the CCBD shall be addressed/corrected in the next update of the ECP, if and when an update is required. No updated ECP is required simply to agree with the CCBD.

All proposed Class II changes shall be handled as follows:

1. The Contractor proposing the change shall submit a copy to the ACO for review.
2. Concurrent with the submittal to the ACO, a copy will be provided to the ACS Design Agent for review. If no response is received within thirty (30) working days, the Contractor proposing the change will assume that there is no impact on the ACS.
3. Concurrence as to the classification of Class II changes shall be made by the ACO.

D. Engineering Deviations/Waivers

Each request for deviation or waiver shall be prepared and submitted by the Contractor in accordance with the requirements of Paragraphs 5.3 and 5.4 of MIL-STD-480 and MIL-HDBK-61A shall use the forms referred to therein. Minor deviations will be approved or disapproved by the ACO. Minor waivers will be approved or disapproved by the local Material Review Board which shall include at least one member from the cognizant DCMA office whose vote for approval shall be necessary for approval of the minor waiver. Approval or disapproval of major or critical deviations and waivers shall be made by the PCO.

- E. Change implementation. The Contractor shall implement those SCDs approved by the Government's Configuration Control Board (CCB) and as authorized by the Principle Contracting Officer and those Class II changes approved by the Contractor's CCB. The Contractor shall update all approved configuration changes throughout the applicable configuration identification documentation and verify that the documentation accurately defines the production baseline as modified, and the as-built configuration.
- F. Coordination of Configuration Control. The Contractor shall coordinate with and assist the ACS Design Agent to ensure that all aspects of configuration control are fully performed and configuration documentation is maintained current.

ATTACHMENT A4
ENVIRONMENTAL STRESS SCREENING
AND SEMICONDUCTOR TESTING PROGRAM

ENVIRONMENTAL STRESS SCREENING AND SEMICONDUCTOR TESTING PROGRAM

I. Environmental Stress Screening Program Requirements

The Contractor shall conduct an Environmental Stress Screening (ESS) Program which shall be considered as part of the manufacturing process under the control of the Contractor subject to Government surveillance. The objective of the ESS Program shall be to transform latent part and workmanship defects into detectable failures for their elimination prior to delivery of the equipment to the ultimate users and to adjust manufacturing processes as necessary to eliminate or reduce the frequency of latent defects. The ESS Program Plan shall be a part of the Contractor's Reliability and Maintainability Program Plan. The plan shall be approved by the AEGIS Program Office prior to implementation of the ESS Program. The Contractor shall analyze and report on the effectiveness of its ESS Program in the Tri-annual R&M Corrective Action Summary Report.

Environmental Stress Screening levels used by the Contractor for each equipment type subjected to screening shall be based on the use of TE000-AB-GTP-020 as a guideline. However, at no time shall equipment be stressed at or beyond their design limits.

The ESS Program shall be dynamic in nature and structured so that high screening effectiveness is obtained without causing equipment degradation due to overstress or incurring prohibitive cost or schedule impacts on the manufacturing process. The program shall be designed so that the manufacturing process can readily be adjusted to minimize recurrence of defects found during stress screening. Records shall be kept on failure, rework and yield data and reviewed and analyzed on a regular basis to monitor the overall effectiveness of the program. All such records and analysis results shall be made available to the Government. Changes to the ESS Program to make it more cost-effective are encouraged. The Contractor is expected to make recommendations based on its assessment of screening effectiveness and the Navy shall request changes as appropriate. The Contractor may flow down environmental stress screening requirements where applicable to subcontractors. Responsibility for the ESS Program remains with the Contractor and subcontractor ESS programs shall be documented in the Contractor's R&M Program Plan.

II. Environmental Stress Screening Plan

The ESS Plan shall provide a detailed description of the ESS Program at all levels of ESS testing (e.g., Parts/Components, Circuit Card Assemblies). The plan shall identify the ESS test parameters, provide the rationale for test parameter selection and verify that the parameters do not induce harmful effects that would shorten the life, or reduce the reliability of the equipment. The ESS plan shall describe the Contractor's process of ESS data analysis and effectiveness evaluation and its process for feeding back the results to adjust the manufacturing program to minimize recurrence of defects found during ESS.

The requirements of this SOW are general requirements for ESS in AEGIS Weapon System (AWS) production programs. It is expected that any previously approved AWS contractor ESS

program will satisfy these requirements. When submitting revisions for Government approval, the Contractor shall identify the differences from the most recently approved ESS plan and provide rationale for these differences.

III. Environmental Stress Screening Requirements

A. Parts

The ESS approach for semiconductors, microcircuits and other parts shall be function of whether military parts are used or not. Rescreening of parts shall consist of: electrical (Go/No-Go), Hermetic seal, PIND (Particle Impact Noise Detection) (as appropriate), and Destructive Physical Analysis (DPA) as required.

Non-military Parts shall be tested on a 100% basis if there is no previous defect rate data. If the defect rate for the last 12 months of screening is below 0.5%, the Contractor may develop a sampling program provided it has substantiating data. The Contractor shall return to a 100% testing basis if the sample screening defect rate exceeds 1.0%.

B. Printed Wiring Assemblies (PWAs)/Circuit Card Assemblies (CCAs)

PWAs/CCAs shall be subjected to thermal cycling stress screening. Temperature shock may be substituted for temperature cycling. Power on/off cycling or operating is not required during screening. During thermal cycling, the temperature shall be measured on the unit under test (UUT) and the temperature range shall be such that the difference in the low and high temperature range shall be 120°C. The temperature range shall be within the design limits of the unit.

The Contractor may elect to subject selected PWAs/CCAs to non-operating random vibration screening. The actual response to the vibration stimuli shall dictate the vibration levels and the PWAs/CCAs shall be subjected to at least two axes of vibration. The ESS Plan shall fully describe the Contractor's screening levels (e.g., temperature range, number of axes, acceleration spectrum and duration of vibration). See Note (1).

C. Subassemblies (Power Supplies, Modules, Chassis)

Each power supply, module, chassis and other electrically testable subassembly shall be subjected to random vibration and temperature cycling non-operating. Low voltage power supplies, RF modules and other Contractor selected items may be subjected to ESS while operating. Vibration profiles for the UUT shall be based on actual response to vibration stimulus and shall not overstress the UUT. Temperature shall be measured on the UUT. (See Note (1)).

Note (1): The Contractor can reduce sample screening if the historical defect rate of an item with 2000 or more units screened is 0.2% or less.

ATTACHMENT A5
PROGRAM RELIABILITY AND MAINTAINABILITY
REQUIREMENTS

PROGRAM RELIABILITY AND MAINTAINABILITY REQUIREMENTS

The Contractor shall comply with the following requirements through acceptance of the items detailed in Section B of the RFP and for a period of twelve (12) months following award of contract, or exercise of options, for continued (post delivery) Reliability and Maintainability analysis and support.

1. RELIABILITY AND MAINTAINABILITY

The Contractor shall provide the necessary personnel, equipment, supplies and services required to plan, implement, conduct and support a tailored Reliability and Maintainability (R&M) program as specifically described in the AEGIS Production R&M Program Plan. The Program shall ensure that the R&M characteristics of the equipment, as defined in their respective Development Specifications, are not degraded during manufacturing and testing.

2. RELIABILITY AND MAINTAINABILITY PROGRAM PLAN

The AEGIS Production R&M Program Plan developed under the latest operating contract shall be modified, as required, to identify any changes made under this contract. If no changes are necessary, the existing AEGIS Production R&M Program Plan shall apply.

The AEGIS Production R&M Program Plan will be prepared in contractor format and approved by the Government.

3. MONITOR AND CONTROL OF SUBCONTRACTORS AND SUPPLIERS

The Contractor shall ensure that equipment obtained from suppliers, where applicable, meet their assigned reliability requirements. This effort shall apply to items obtained from suppliers, whether in the first or any subsequent tier, or items obtained by an intra-company order from any element of the Contractor's organization.

All subcontracts, regardless of tier, shall include provisions for review and evaluation of their supplier's reliability effort by the prime Contractor and as required by the procuring activity.

The Contractor shall flow down to his subcontractors and suppliers the reliability specifications that are consistent with overall system requirements and objectives. Provisions shall be made for the monitoring of their reliability activities, test plans, procedures, and reports of corrective action and testing details.

The Government shall reserve the right to send personnel, including Government representatives, into subcontractor/supplier facilities to evaluate the reliability program and related activities.

The Contractor shall ensure that subcontractors and suppliers provide necessary technical and administrative support for the item they supply and are advised of field reported trends and

problems as applicable.

4. PROGRAM REVIEW

The Contractor shall conduct, participate in, and ensure adequate preparation for an annual R&M program review. The Contractor R&M personnel shall support all formal and informal meetings, design reviews, working groups and Product Oriented Surveys to the extent necessary to ensure milestones and the quantitative R&M requirements will be achieved. Agenda shall be provided far enough in advance of each review to ensure adequate coverage of topics and participant preparation.

5. FAILURE REPORTING, ANALYSIS AND CORRECTIVE ACTION

The Contractor shall have and shall require his subcontractors, where applicable, to have a closed loop system for collecting and recording all failures (both critical and non-critical) which occur during all test and inspection procedures, conducted from the initial testing of parts through and including final delivery to the Government. Individual Failure Records shall include, as a minimum, the failure record number, part number, nomenclature, manufacturer, date of failure, operating hours, problem description, investigation procedures, corrective action status and corresponding Engineering Change Proposal (ECP) number when applicable. All failures shall be analyzed and corrective action implemented to preclude recurrence of the failure. The effectiveness of the corrective action shall be evaluated by the continued review of Failure Records. The Contractor's Program shall include follow-up audits to review all open Failure Records to ensure timely closure and identification of problem areas. Investigations shall be performed to establish root cause of failure and corrective action for R&M problems and failure trends.

Logbooks, utilizing the Contractors format shall be maintained at the cabinet level. These logbooks are not deliverable but, may be audited on site by the Navy or their designated representative.

Documentation of failure reporting and problem solving accomplished within the Failure Reporting and Corrective Action System (FRACAS) program shall be reported in the R&M Corrective Action Summary Report.

The Contractor shall support the AWS Integration Contractor's Continuing Analysis of Post Delivery failures associated with Contractor's equipment to identify and resolve R&M problems during the production process.

The Contractor shall ensure that all post DD-250 field R&M problems identified by the Government are fed back to the AWS integration contractor and support him in resolving recurring R&M problems.

6. PROBLEM REVIEW BOARD

The Contractor shall establish an internal Problem Review Board (PRB) to review production problems and failure trends, and to discuss corrective action status.

This task shall be coordinated with the Quality Assurance organization to ensure against duplication of effort. Contractor PRB members shall include appropriate representatives from Design, Reliability and Maintainability, System Safety, Manufacturing, and Quality Assurance activities as necessary. The PRB shall be chaired by the cognizant R&M Engineer. The Navy reserves the right to appoint a representative(s) to the PRB.

The PRB shall review functional/performance failure data collected under the Contractor's FRACAS program. All items shall be followed up until failure mechanisms have been satisfactorily identified and corrective action initiated. When corrective action results in the development of an ECP, reliability and maintainability shall be assessed and documented in the ECP submitted to the Government.

The Contractor shall participate in and support a bimonthly Navy PRB to review the status of R&M factory and field (PTC, Shipyard, and Fleet) problems. The Contractor shall maintain data and information gathered on each Navy PRB problem or concern in a database format using Government provided software. Detailed procedures of the internal and Navy PRBs shall be outlined in the R&M Program Plan.

Minutes of the PRB activity shall be recorded and delivered to the Government

ATTACHMENT A6
AEGIS STANDARDIZATION PROGRAM

AEGIS STANDARDIZATION PROGRAM

The Contractor shall provide standardization engineering services to include: assessment of the impact of updated or revised military specifications and standards or the applications of commercial standards on current manufacturing processes, facilities and material acquisition; maintenance of a parts control program in accordance with the AEGIS Program Standards Manual (OD 32187) and MIL-HDBK-965; qualification of new lower tier contractors for manufacture of AEGIS components, assemblies, subassemblies and material; continuing assessment of the AEGIS supplier base and support in solutions of Diminishing Manufacturing Sources (DMS) issues; and performance of assessments to determine the impact of engineering changes on AEGIS standard parts, materials and processes. The Contractor shall participate, as required, in the various steering and working groups established by OD 32187 and IWS 1PR, to coordinate and oversee the AEGIS Standardization Program and assure the exchange of data as required to support the program.

Detailed requirements of the AEGIS Standardization Program are provided in the following sections.

I. ASSESSMENT OF SPECIFICATIONS AND STANDARDS

The Contractor shall perform an assessment of super sessions, updates and revisions to the referenced specifications as requested by IWS 1PR. The order of performance will be mutually established between the Contractor and IWS 1PR. The assessment shall consider the time and cost to implement the new requirements, flowdown to subcontractors, and benefits derived in terms of reduced cost, improved quality and reliability and/or other factors. The Contractor shall submit these assessments to the AEGIS Combat System Integration Agent and IWS 1PR and provide assistance to IWS 1PR in establishing future applicability. Implementation of a new or revised specification or standard will be by separate contract action.

The Contractor shall review non-Government standards as requested by PEO IWS 1PR or as deemed by the Contractor to provide a substantial benefit if made applicable to IWS 1PR. The Contractor shall advise IWS 1PR of any potential benefits and, if authorized, perform a detailed assessment as required for military specifications and standards above. The Contractor shall take appropriate measures to ensure that subcontractors are aware of national policy to employ non-Government specifications and commercial off the shelf (COTS) items as a matter of preference.

II. AEGIS PARTS CONTROL PROGRAM

- A. All plans, agreements and conditions as documented in the AEGIS Program Standards Manual, OD 32187, for approval and qualifications of non-standard parts/materials/processes for AEGIS will be in effect for the duration of this contract. The Contractor shall comply with MIL-HDBK-512 operations and procedures to support OD 32187 requirements and to ensure that the MIL-HDBK-512 parts control process becomes integral to this contract. The DLA PMATs shall be integral to the standard and non-standard parts approval process for this contract.
- B. The Contractor shall maintain a parts control program in accordance with the AEGIS Program Standards Manual (OD 32187) and MIL-HDBK-512.
- C. The selection of parts shall be from the approved AEGIS Program Parts Selection List (PPSL) which is maintained at the PMATs (only for same design application) or the AEGIS Preferred Parts list (PPL) listed in OD 32187. Only AEGIS PPL items are considered "STANDARD". Where other parts are required, but not included in the PPL or are to be used in a different application than those on the approved PPSL, they shall be selected in accordance with the order of precedence for part selection set forth in OD 32187.
- D. Requests for approval of parts proposed as additions to the AEGIS PPL or Volume III of OD 32187 shall require procuring activity approval and undergoing PMAT review in accordance with MIL-HDBK-512. When "Non-Controlled" (those FSC's not listed in MIL-HDBK-512) items are used, the NSPAR review will be performed by each OEM. The procuring activity or their designated representative has final approval authority. Test data will be requested in writing by the procuring activity. If existing test data is not available, testing shall commence only upon written request of the procuring activity.
- E. The Contractor shall insure that a parts control meeting in accordance with Paragraph 5.2.1.3 of MIL-HDBK-512, Procedure II is supported when convened. PMATs shall be requested to attend to present details of the MIL-HDBK-512, Procedure II operational process.
- F. The requirements of MIL-HDBK-512, Procedure II do not relieve the Contractor of the responsibility for complying with all performance requirements specified in this contract.
- G. The Contractor shall provide for vendor control and parts audit to ensure compliance with the AEGIS Program Standards Manual, OD 32187, and maintenance of parts reliability consistent with the specified reliability. All AEGIS approved parts, material and processes (Status Codes 1, 5 and 7), as delineated in the AEGIS Program Standards Manual OD 32187, Volume III, may be used without further approval by the originally submitting Contractor.

- H. All non-standard parts and vendors other than those listed in OD 32187 or its on-line databases shall require approval prior to use. All non-standard electrical, electronic and electro-mechanical parts and vendors will require qualification as a prerequisite for approval. Since no formal parts qualification test program is authorized, part and vendor qualification will be by analysis, similarity, previous usage, or existing test data for new non-standard parts or for non-standard parts from new vendors.
- I. No formal parts/materials qualification test program is required unless requested by procuring activity. Request for approval of non-standard parts shall include the qualification information and shall be submitted to meet the requirements of OD 32187 and MIL-HDBK-512.
- J. All previously submitted approved non-standard parts are considered approved for this contract when used in the same design application. Parts qualification will be by analysis, similarity, previous usage or test data for new non-standard parts or non-standards from new vendors. Items such as fasteners, mounting hardware, extrusions, terminals gaskets and other non-complex mechanical parts used in non-critical applications will not be subjected to individual testing and may be qualified by higher level equipment testing. NSPAR submittal shall still be required for all mechanical items which are not defined as "fabricated" items.
- K. The DLA PMATs shall be integral to the standard and non-standard parts approval process of this contract.

III. QUALIFICATIONS OF LOWER TIER MANUFACTURERS

When necessitated by the performance requirements of the instant contract, the Contractor shall establish and qualify new lower tier contractors or recertify existing subcontractors to manufacture and provide conforming material for the AEGIS Program. In other instances, such as qualifying additional sources for the same material, the Contractor shall obtain approval to establish and qualify a lower tier contractor from the IWS IPR prior to proceeding. In each case the Contractors shall establish a Qualification and Start Up Plan, and provide status briefings to IWS IPR periodically. The Government reserves the right to have its personnel or representative participate with the Contractor's personnel in conducting reviews and milestone events established in the Contractor's qualifications plan.

IV. DIMINISHING MANUFACTURING SOURCES (DMS)

The Contractor shall, in conjunction with the AEGIS Standards Program, establish and maintain subcontractor and vendor monitoring, utilizing guidelines and procedures established by the AWS DMS Working Group, to assure the continuing availability of quality parts and assemblies for the AEGIS Program. The Contractor shall advise IWS 1PR and the AWS DMS Working Group Chairperson (Combat System Integration Agent, Lockheed Martin Maritime Systems & Sensors (LM MS2) of any actual or detected potential loss of a source of materials.

The Contractor shall provide representatives to the AWS DMS Working Group and shall provide support to the Group in establishing a recovery plan which will ensure the continued, on schedule delivery of equipment and spare parts under the instant contract and planned future AWS requirements.

The Contractor shall initiate action to establish an alternative source of material, when it is determined that an alternative source is available, in accordance with the Standard Parts Program requirements of OD 32187 and the instant contract. When an alternate source of material is not identified and the AWS DMS Working Group's recommended recovery plan requires redesign, life-of-type procurement or other measures, the initiation of the recovery plan shall be determined by IWS 1PR and authorized by the PCO in a separate contract action.

V. CHANGE ASSESSMENT

The Contractor shall maintain a continuing program of assessing the impact of all engineering changes and drawing changes as they impact the application of standard parts and processes in AWS productions. This effort shall be coordinated with the AEGIS Combat Systems Integration Agent and other AWS prime contractors in accordance with OD 32187 policy and procedures to ensure action taken will provide a conforming product and acceptable life time costs.

ATTACHMENT A7
AEGIS FIRE CONTROL SYSTEM
INTERIM REPAIR PARTS

AEGIS FIRE CONTROL SYSTEM
 INTERIM REPAIR PARTS
 (Procured by Contractor)

1 SHIPSET

<u>QTY</u>	<u>DRAWING NUMBER</u>	<u>NOMENCLATURE</u>
2	2907775	RELAY, 10 AMP, RPDT
2	2910417	PWB ASSY, TN, SERVO ELECT
2	2910419	PWB ASSY, ELEC, SECANT
2	2910421	PWB, ASSY, INTFC & BITE
2	2910425	PWB ASSY, ORTS AFT START
2	2910426	PWB ASSY, ORTS ASSIGNED
2	2910427	PWB ASSY, ORTS MOT & PWR AMPL
2	2910429	PWB ASSY, ORTS SERVO
2	5193015	RELAY ASSY, PLUG IN
2	5204591	PWB ASSY, EL SERVO ELEC
2	5365269	PWB ASSY, ORTS SERVO PWR AMP
2	5860253	MODULE ASSY, PWR SUPPLY
2	5860272	CCA, OVERSPEED DET
2	5860275	CCA, ANTI-RESNOTCH FILTER
2	5860277-1	CCA, ORTS PRESTART
2	6259598	PWB ASSY, ORTS INTERFACE

ATTACHMENT A8
CONTRACTOR DRAWING REQUIREMENTS

CONTRACTOR DRAWING REQUIREMENTS

I. REQUIREMENTS FOR NEW DRAWINGS

Engineering drawings shall be prepared in accordance with the following:

- A. Military Specification, Engineering Drawings and Associated Lists, MIL-T-31000.
- B. All drawings and associated lists except Interface Control Drawings (ICD) and Tools, Jigs and Fixture Drawings shall satisfy Level 3 Drawing requirements. ICD and Tools, Jigs and Fixture Drawings shall be Level 2.
- C. All drawings and associated lists for military equipment shall have Government Activity CAGE Code and drawing numbers. All drawings and associated lists for Commercial-Off-The-Shelf (COTS) equipment shall have Contractor CAGE Code and drawing numbers. When COTS equipment and military equipment are merged into a design, the drawings up to free-standing unit level shall have Contractor CAGE Code and drawing numbers.
- D. Drawings prepared with the Naval Sea Systems Command as the Design Activity shall use CAGE code 53711. NAVSEA drawing numbers shall be obtained from the Naval Sea Systems Command, Code 04L313 (Mr. William Buchanan), 1333 Issac Hull Ave SE, Washington DC, 20376.
- E. The applicable Data Item Descriptions (DIDs) are DI-CMAN-80776 (Technical Data Package), DI-E-7031 (Engineering Drawing and Associated Lists), DI-E-3130 (Process Specifications), and DI-E-3131 (Material Specifications).
- F. Metric System will not be used.
- G. Use of Electrical and Electronic Reference Designations will be in accordance with ANSI Y32.16-1975 in lieu of ANSI Y32.16-68.
- H. The practice of converting Contractor standards to “WS” identification will continue to be acceptable for Process and Material Specifications. The applicable DIDs are DI-E-3130 and DI-E-3131, respectively.
- I. Technical Data Package Index (TDPI), prepared in accordance with CDRL requirements, and Parts Lists, prepared in Contractor format, will be used.

- J. A Parts List shall be prepared for each assembly. A TDPI shall be prepared in accordance with CDRL requirements. It shall include all AEGIS systems that require a TDPI.
- K. The Mono-Detail System, including Tabulated Detail Drawings, will continue to be used.
- L. New Level 3 drawing types developed in support of this contract shall be selected from DOD-STD-100C with Notice 6. Existing drawings not conforming to DOD-STD-100C with Notice 6 shall not be upgraded.
- M. New control drawing types developed in support of this contract shall be selected from DOD-STD-100C with Notice 6. Existing drawings not conforming to DOD-STD-100C with Notice 6 shall not be upgraded.
- N. Integral Parts Lists will apply in inseparable assemblies; all other assemblies will require separate Parts Lists.
- O. Drawing format material shall comply with L-P-519, Type I, Class 2. Computer-generated drawings shall be printed on 20 lb. Bond paper.
- P. Quantity and type of reproduction shall be in accordance with CDRL requirements.
- Q. Microfilm aperture cards are not required.
- R. Delivery of original drawings is not required.
- S. Drawings will be delivered in accordance with CDRL requirements.

II. MAINTENANCE OF EXISTING DRAWINGS/IDENTIFICATION OF NEW ITEM DRAWINGS

When parts are re-identified in accordance with contractual requirements, all outstanding approved Engineering Change Notices existing before re-identification shall be incorporated in the drawings. These drawings shall be delivered in accordance with CDRL requirements.

ATTACHMENT A9

INSTALLATION AND CHECKOUT (INCO) /PTC SPARES LIST -

INSTALLATION AND CHECKOUT (INCO) LIST

<u>Drawing Number</u>	<u>Nomenclature</u>	<u>Quantity</u>
7517297	FCS GYRO BLOCK ASSY	1
2907782	Blower Centrifugal	1
2910421	Circuit Card Assy	1
2910425	Circuit Card Assy	1
2910427	Circuit Card Assy	1
2259390G1	Relay Assy, Plug-in	1
6259598	Circuit Card Assy	1
5974768-1	A4A1 Motor and Manual Drive Assembly	1

EXHIBITS A AND B

ATTACHMENT B
DELIVERY SCHEDULE, DD FORM 4336/1

SHIPPING INSTRUCTION DATA

ATTACHMENT # B

 N00024-09-NR-41196

CONTRACT NO. N00024-10-R-5114			MODIFICATION NO.			PAGE <u> 1 </u> OF <u> 1 </u>	
RDD (1)	ACRN (2)	CLIN / SLIN (3) (4)	QTY (5)	SHIP TO AND MARK FOR (6)	ADDRESS CODE (7)	TAC (8)	MILSTRIP
01 MAR 2012		0001 0002 0005	3/EA 1/ST	Lockheed Martin Corporation Government Electronics Systems PURELAND WAREHOUSE 405 Heron Drive Bridgeport, NJ 08014 ATTN: GFE Manager M/F DDG 113	Q98086		
01 APR 2013		1001AA 1002AA	3/EA	Lockheed Martin Corporation Government Electronics Systems PURELAND WAREHOUSE 405 Heron Drive Bridgeport, NJ 08014 ATTN: GFE Manager M/F DDG 114	Q98086		
01 OCT 2013		1001AB 1002AB	3/EA	Lockheed Martin Corporation Government Electronics Systems PURELAND WAREHOUSE 405 Heron Drive Bridgeport, NJ 08014 ATTN: GFE Manager M/F DDG 115	Q98086		

ATTACHMENT C
ACCOUNTING AND APPROPRIATION DATA
(To Be Provided at Award)

ATTACHMENT D
GOVERNMENT FURNISHED
PROPERTY

GOVERNMENT FURNISHED PROPERTY

Subject to the clause of this contract entitled "Government Furnished Property (Incorporation)", the Government shall furnish to the Contractor, as or when specific herein the following property which will be incorporated during production.

<u>ITEM DESCRIPTION</u>	<u>PART NO.</u>	<u>QTY</u>	<u>DATE REQUIRED</u>
*HINIL Device	2907795	216	90 DAC**
HINIL Device	2907796	6	90 DAC**
HINIL Device	2907797	72	90 DAC**
HINIL Device	3161091	6	90 DAC**
HINIL Device	3161092	6	90 DAC**
	2907787	18	90 DAC**
	OM2940-5STM	3	90 DAC**

*High Noise Immunity Logic

** Ninety (90) days after contract award (DAC)/or exercise of Option(s). This requirement also applies to the listing below.

Subject to the clause of this contract entitled "Government Furnished Property (Performance)", the Government shall furnish to the Contractor, as or when specified herein, for the performance of this contract, the following property which will not be incorporated during production:

#	Item Number	Item Description	Qty
1	5366052	1 CAV COMP MOLD	1
2	52-4208	30 DEG 9"ERX EXTENSION	1
3	SA1596705	4 IMP ON MATCH BD	1
4	55-5555	45 DEG 24" ENX EXTENSION	1
5	T1213062	45 PIN I/F BD TST ADAPT	3
6	T1213061	72PIN I/F BD TST ADAPT	3
7	52-4160	90 DEG 9" EBX EXTENSION	1
8	PE-53007-9	ACCELEROMETER	3
9	5204586	ADAPTER CARDS AND PERIPHERALS	1
10	QCT01586	ADAPTOR CABLE	20
11	SA2307632	AEGIS FIXT	1
12	SA2691984	AEGIS INTERFACE	1
13	CM0FFS	AEGIS L260 TEST ADAPTER	1
14	SA2691951	AEGIS MOD BREAKOUT BOX	1
15	TARGA-QUAL	AEGIS TARGA QUAL	1
16	SA2691941	AEGIS TST BX	4
17	SA2691980	AEGIS TST BX	1
18	5204574	AEGIS, HANGER QUEEN MK82 & ALIGNMENT FIX/STAND	1

19	5204575	AEGIS,HANGER QUEEN MK200,	1
20	SA2692551	ALIGNMENT BAR	1
21	SA2692820	ALIGNMENT FIXTURE	1
22	SER378181	ALIGNMENT PIN	1
23	SA26925516	ALIGNMENT PLUG	1
24	ASC83A	ALIGNMENT SCOPE	1
25	SA286091	AMPP CONTROL PANEL	1
26	SA2860602	ANTENNA STAND AND FIXTURE	1
27	SA26925661	ASSY FIXT	4
28	SA23127071	ASSY STAND AND RING	1
29	SA2692809	ASSY TEST FIXT	1
30	SA269252	ASSY TOOL AND PERIPHERALS	1
31	SA269283	AUTO COLLIMATOR, STAND AND PERIPHERALS	1
32	SA2818235	BEARING ASM TL	8
33	SER329883	BEARING ASSY FIXT	1
34	SER37805	BEARING INSERTION TOOL	1
35	SA268678	BEARING INSTAL TL AND TUBE	1
36	SER378507	BEARING PLATE FIXT AND PULLER	1
37	SA2686780	BEARING RING ASSY AND SLEEVE	1
38	SA2688806	BREAKOUT BOX	1
39	M25 F	Brunson Magnetic Mirror	1
40	SA2861237	CABLE SET	1
41	2907966	CHECK FIXT	1
42	2910010	CHECK FIXT	1
43	6736842H-VCKF	CHECK FIXT	1
44	6259575	CHECK FIXTURE AND PERIPHERALS	1
45	520457	CHECKING FIXTURE	1
46	2907659H-VCKF	CHECKING FIXTURE	1
47	CMI10G	CLINOMETER	1
48	SA2860221	COMPTOR GAUGES	4
49	STE07107	COMPUTER CONTROL STATION AND PERIPHERALS	1
50	SA286160	COMPUTER, SOFTWARE AND PERIPHERALS	1
51	5860250	CONTROL LOGIC CCA	1
52	5365248	CURRENT SENSE CCA	1
53	SA2691950	CURRENT SENSOR TST ADAP (PE-51087)	1
54	PE-Q2218B	DC AMPLIFIER	1
55	SER37870	DEPTH MIC	1
56	DSBG200A	DIGITAL BORE GAGE 1-2"	1
57	SA2692811	DIRECTOR BARBETTE AND TEST STAND	1
58	SA2691921	DISASSY TOOL	1
59	SER266761C	DOLLY	1
60	SA26926	DRILL FIXT	12
61	SA2692498	DRILL JIG	1

62	SA2692624	DRILL JIG	1
63	QEL8111	DYNAMIC SIGNAL ANALYZER	1
64	T1210882	ELEC TEST FIXT	1
65	SA2861270	ELEV DATA DRIVE ADP BX (PE-53242)	1
66	5204599	ELEV HSG COVER PLATE AND INSTALLATION TOOL	1
67	2910362	ELEV SERVO AND ROLLERS	1
68	4496885	ELEVATION STAND	1
69	PE-50695	EXTENDER BOARD	1
70	10055447	FIXTURE, TEST, HOUSING, GYRO BLOCK	1
71	SA2819975	GEAR TIMING FIXT	1
72	PE-51754-B	GENERATOR, FUNCTION, TEKTRONIX, FG501A	1
73	CM3N1C	GH LOOP TEST BOX	1
74	SA2692810	GOULD STRIP CHART RECORDER/PANEL	1
75	SER37880	GRANITE PLATE	1
76	SA28598	GROOVE RUNOUT GAGE	2
77	MODEL95	GUN MODEL 95 AIR SRPAY	1
78	PE-53238	GYRO BLK HSG ADAPT BOX	1
79	SA26868	GYRO BLK TST PANEL & BS MODULE TEST PANEL	1
80	6259584-G	GYRO BLOCK HOUSING ASSEMBLY	1
81	SA26887	GYRO CONTROL LOGIC TESTER & PERIPHERALS	1
82	SA2861258	GYRO ELEV VERT VIB FIXT	1
83	11T1371	GYRO TEST COMPUTER	1
84	SA2691888	HOLD FIXT	1
85	SA269247	HOLD FIXT	1
86	SA2692499	HOLD FIXT	1
87	SA269250	HOLD FIXT	5
88	SA2692565	HOLD FIXT	1
89	SA26926	HOLD FIXT	1
90	SA2860462	HOLD FIXT	1
91	SA28601	HOLDING FIXT	1
92	SA28599	HOLDING FIXTURE AND PERIPHERALS	1
93	10T11	HOLDING FIXTURE PERIPHERALS	1
94	SER329842	HYD JAWS	1
95	SER329841	HYD PUMP	1
96	SER38287	HYD PUMP PLATE AND ACCESSORIES	1
97	SA2692850	IE ADAPTER #18 (TOP/BOT)	16
98	SA26927591	IND STAND ASSY	1
99	SA2692917	INJ MOLD	1
100	2910421	INTERFACE BITE CCA	1
101	SA26925391	JACK STAND ADAPTOR/STAND	1
102	2907666	LATHE FIXTURE AND PATTERN	1
103	6736826-VMF	LEAK TEST FIXTURE	1

104	SER378681	LG SNAP RING TL	1
105	SA268677	LIFT/BRKT/ASSY AND COMPONENTS	1
106	SA2692535	LIFTING DEVICE	1
107	SA2860910	LING VIBRATION TABLE AND PRINTER	1
108	SA2692666	LOC FIXT	1
109	SA28612	LOW LEVEL PWR SUPP (PE-53240)	1
110	5204598	MFG AID	1
111	2907664	MILL FIXTURE	1
112	2097676-20-VMF	MILL FIXTURE	1
113	GFE432-8A	MK73 L7 MODULE TST BX	1
114	2805789	MK73 TEST BOX	1
115	PE-52493	MOTOR ADAPT TST	1
116	T1211105	MOTOR DR ASSY TST BX	1
117	SA2861259	MOTOR MANUAL DRIVE VIB FIXT	1
118	PE-53239	MOTOR/MANUAL DRIVE ADAPT BOX	1
119	SA2692566	MRL HAND CONT	1
120	SA26144764	MTL HAND CONT	1
121	SA2819952	MTL HAND CONTAINER	1
122	SER26673	MTL HAND EQUIP	1
123	2907705	N.C. FIXTURE	2
124	SA2858948	NAFI CONN EXTENDER	1
125	SA26926	NC FIXT	4
126	QEL8174	NORTH ATLANTIC ANGLE POSTION IND.	1
127	6259598	OIM MODULE	1
128	5365269	ORTS SERVO PEW AMP	1
129	PE-50307	OSCILLATOR KH 4100B P/O SA2687797+A	1
130	90603	PATTERN	1
131	90705-2	PATTERN	1
132	SA2907659	PATTERN	1
133	SA5204571	PATTERN	1
134	SA5365247	PATTERN 90705-1	1
135	SA2907664	PATTERN ON BD W/3 CB	1
136	SA282032	PATTERNS	1
137	SA28599221A	PISTOL GAGE	1
138	SA2907705	PLASTER MOLD CASTING	1
139	SER329882	PLATE	1
140	SA2861269	POWER AMPLIFIER ADAPTOR BOX	1
141	SA2860667	PRESSURE REG ASSY AND FIXTURE	1
142	SER38289	PRESSURE TEST RING	1
143	SER383241A	PRESSURE TESTER	1
144	SA2687355	PRTABLE RELAY TST SET	1
145	SA26927174	PTP1/2-14 NPTF	1

146	SA2691920	PULL OUT TOOL	1
147	SA2687797	PWR AMP MCLINTOCH M1-75	1
148	SA2691948	PWR AMP TST ADAPTER	1
149	T1213063	PWR SECTION AMP I/F BD	1
150	SA2691944	RADAR TEST DISH AND ANTENNA	1
151	9T999	RATE TABLE & CONTROLLER	1
152	SA2687393	RE EXTENDER	1
153	PE-51821	RECORDER DC AMP	1
154	SER2C70776	RELAY ACT TESTER	1
155	5204575	RELAY TESTER AND ACCESSORIES	1
156	SA2691863	RING GAGE	1
157	SA2692578	RING PRESSURE TST AND ASSY RING	1
158	SER341051	ROTATING FLR STAND	1
159	SER378661	ROTATING FLR STAND AND RING MOUNT	1
160	SER38299	ROTATING JACK	1
161	SER379091	RT ANGLE BRKT	1
162	SA2687797	SCOPE BREAKOUT PANEL	1
163	GFE432-7	SEE 2805793+A	1
164	SLAVE-MODULES	SET OF GYRO BLK MODULES	1
165	SA2692727	SETTING DISC MASTER	7
166	SA2819956	SHAFT EXTENSION FIXT	1
167		SHAKER BLOWER AND CABLES	1
168	4494513	SHIMS	1
169	981E347-MHE	SHIPPING STAND	3
170	SA269257	SPANNER WRENCH	3
171	STAIR-COLLIMATOR	STAIRS	1
172	STAIRSBARBETTE	STAIRS	1
173	SER37392	STR/REL FIXT	1
174	2907668	STRAIGHTENING FIXTURE	1
175	SA2860599	STRIP CHART RECORDER	1
176	SA269281	SYSTEM TEST CONSOLE	1
177	SA269200035	TEST BOX & CABLE	1
178	PE-52501	TEST CABLE	1
179	SA268779	TEST CONSOLE POWER PANEL AND PERIPHERALS	1
180	6259625 Rev H	TEST DRAWING	1
181	STATIC-10003	THERMOTRON COLD CHAMBER	1
182	SA2692642	TRACE TEMPLATE	1
183	PE-53243	TRAIN DATA DRIVE ADAPTER BOX	1
184	SA2861277P100	TRAIN DATABX VIB FIXT	1
185	SA2692557	TRANS JACK CRADLE	1
186	SA26926321	TRUNION DRILL JIG	1
187	GM0WD9-2	UPS FOR IE390 TEST STAT ASSET	1

188	SA2861277P200	VERT TRAIN VIB FIXT	1
189	6736841-VIB	VIBRATION FIXTURE	1
190	5860251	VOTAGE TO FIRING ANGLE	1
191	2907966	WAX DIE AND FIXTURE	4
192	SA2692541	WELD FIXT	1
193	SER26689	WIRE HARNESS BOARD	1
194	2907662	WOOD SAND PATT	3
195	SER38308	WOODEN PALLET	1
196	SA2686781	WRENCH	1

ATTACHMENT E
CONTRACT SECURITY CLASSIFICATION SPECIFICATION,
DD FORM 254 WITH ATTACHMENTS
(TO BE SUPPLIED WITH FINAL CONTRACT)

ATTACHMENT F

NAVSEA ADDENDUM FOR PTD REQUIREMENTS FOR DEVELOPMENT ITEMS

PROCURED AS GOVERNMENT FURNISHED EQUIPMENT

ATTACHMENT G
SMALL BUSINESS/SMALL DISADVANTAGED BUSINESS
SUBCONTRACTING PLAN
(TO BE SUPPLIED IN PROPOSAL SUBMISSION)

ATTACHMENT H

LIST OF DATA ITEMS THAT THE CONTRACTOR IS TO DEVELOP
AND RETAIN ON-SITE FOR GOVERNMENT REVIEW

This list consists of data products (applicable to the USN data only) that the Contractor shall develop, maintain and retain on-site to be readily available for Government review.

New plans will not be developed unless otherwise specified in the contract. Change pages will be used to update current plans and procedures, and the requirement for Government approval, if applicable, shall be made by the cognizant manager specified below or his designated representative.

The content and format of the data shall be consistent with the requirements that have been imposed under prior AEGIS contract.

<u>NAVY COG MGR.</u>	<u>DATA PRODUCT</u>	<u>CONTRACT REFERENCE</u>
AEGIS TECHREP	REPORTS, TEST (FACTORY/PRODUCTION ACCEPTANCE OF CONTRACTOR SUPPLIED EQUIPMENT) DID Status: Active	ATT A, Page A-4 PARA 2.1.2
NSWC/PHD A28	REPORT, FAILURE SUMMARY AND ANALYSIS (R/M CORRECTIVE ACTION SUMMARY REPORT) DID Status: Active	ATT A5, Page A5-2 PARA 5; RFP SECT E, PARA N
PEO IWS 1PR2	ASSEMBLY & SUBASSEMBLY MANUFACTURING QUALITY REPORT DID Status: Active	ATT A2 Page A2-11 PARA 17
PEO IWS 1PR2	END ITEM MANUFACTURING DEFECT REDUCTION REPORT DID Status: Active	ATT A2 Page A2-11 PARA 19
PEO IWS 1PR2	TEST DATA FOR NONSTANDARD PARTS DID Status: Active	ATT A6, Pages A6-2 –A6-3, PARA II

ATTACHMENT I

“MAKE OR BUY” PLANNING GUIDANCE
(MAKE OR BUY PLAN TO BE PROVIDED W/ PROPOSAL)

TITLE 48 - FEDERAL ACQUISITION REGULATIONS SYSTEM

Make - or - buy plan guidance.

Definitions.

Buy item means a work activity, supply, or service to be produced or performed by an outside source, including a subcontractor or an affiliate, subsidiary, or division of the contractor.

Make item means a work activity, supply, or service to be produced or performed by the contractor using its personnel and other resources at the Contractor's facility or site.

Make-or-buy plan means a contractor's written program for the contract that identifies work efforts or requirements that either are make items or buy items.

(a) Make-or-buy plan. The contractor shall develop and implement a make-or-buy plan that establishes a preference for providing supplies and services on a least-cost basis, subject to any specific make or buy criteria identified in the contract or otherwise provided by the contracting officer. In developing and implementing its make-or-buy plan, the contractor agrees to assess subcontracting opportunities and implement subcontracting decisions in accordance with the following:

(1) The contractor shall conduct internal productivity improvement and cost-reduction programs so that in-house performance options can be made more efficient and cost-effective.

(2) The contractor shall consider subcontracting opportunities with the maximum practicable regard for open communications with potentially affected employees and their representatives. Similarly, a contractor shall communicate its plans, activities, cost-benefit analyses, and decisions to those stakeholders, including representatives of the community and local businesses, likely to be affected by such actions.

(b) Submission and approval. For new contract awards, the contractor shall submit an initial make-or-buy plan, for approval, within 180 days after contract award. If the existing contract is to be extended, the contractor shall submit a make-or-buy plan for review and approval at least 90 days prior to the commencement of the negotiations for the extension. The following documentation shall be prepared and submitted:

(1) A description of the each work item, and if appropriate, the identification of the associated Work Authorization or Work Breakdown Structure element;

(2) The categorization of each work item as must make, must buy, or can make or buy, with the reasons for such categorization in consideration of the program specific make or buy criteria (including least cost considerations). For non-core capabilities categorized as must make, a cost/benefit analysis must be performed for each item if:

(i) The contractor is not the least-cost performer, and

(ii) A program specific make-or-buy criterion does not otherwise justify a must make categorization;

(3) A decision to either make or buy in consideration of the program specific make or buy criteria (including least cost considerations) for work effort categorized as can make or buy;

(4) Identification of potential suppliers and subcontractors, if known, and their location and size status;

(5) A recommendation to defer a make or buy decision where categorization of an identifiable work effort is impracticable at the time of initial development of the plan and a schedule for future re-evaluation;

(6) A description of the impact of a change in current practice of making or buying on the existing work force; and

(7) Any additional information appropriate to support and explain the plan.

(c) Conduct of operations. Once a make-or-buy plan is approved, the contractor shall perform in accordance with the plan.

(d) Changes to the make-or-buy plan. The make-or-buy plan established in accordance with paragraph (a) of this clause shall remain in effect for the term of the contract, unless:

(1) A lesser period is provided either for the total plan or for individual items or work effort;

(2) The circumstances supporting the make-or-buy decisions change, or

(3) New work is identified.

At least annually, the contractor shall review its approved make-or-buy plan to ensure that it reflects current conditions. Changes to the approved make-or-buy plan shall be submitted in advance of the effective date of the proposed change in sufficient time to permit evaluation and review. Changes shall be submitted in accordance with the instructions provided by the contracting officer. Modification of the make-or-buy plan to incorporate proposed changes or additions shall be effective upon the contractor's receipt of the contracting officer's written approval.

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ATTACHMENT I

ATTACHMENT J
NON-DISCLOSURE AGREEMENT
(TO BE PROVIDED BEFORE AWARD IF NEEDED)