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1 INTRODUCTION

1.1 SCOPE

This attachment to the contract applies to any type of work performed on Air Assets and major components of the Air Asset used or intended for use with the air asset. This includes, for example, any aircraft, its associated C4ISR equipment, or any mission specific equipment. Any of these are hereafter referred to as an "Air Asset" for the purpose of applicability to this attachment. This work may include, but is not limited to design, test, construction, introduction, support and disposal (as offered) of the various Air Assets. The description of scope for each Contractor-developed SOW generated from this SOO shall clearly define the specific products and services to be delivered to the Government as a result of performance of the SOW. Delivery of data may be described by reference to the applicable Contract Data Requirements List (CDRL).

1.2 STRUCTURE OF THIS ATTACHMENT

This attachment is structured such that it is applicable to all types of work as indicated above. There are two main sections to this attachment in addition to this Introduction Section. The General Requirements Section (2) contains tasks required to be performed as a part of task and/or delivery orders for all phases of Air Asset related work. The Asset Phased Procurement Section (3) includes five subsections, each of which invokes the General Requirements Section tasks and further describes the minimum tasks to be performed for sequential acquisition phases as follows:

- Concept & Technology Development (3.1) includes, but is not limited to conducting studies and tests to establish technical feasibility and demonstrating that Air Asset Performance Specifications meet the Contractor established IDS requirements.

- Development & Demonstration (3.2) includes, but is not limited to detailed design and development, risk reduction, ensuring operational supportability, producibility and affordability, and demonstration of system integration, interoperability, and utility for each Air Asset.

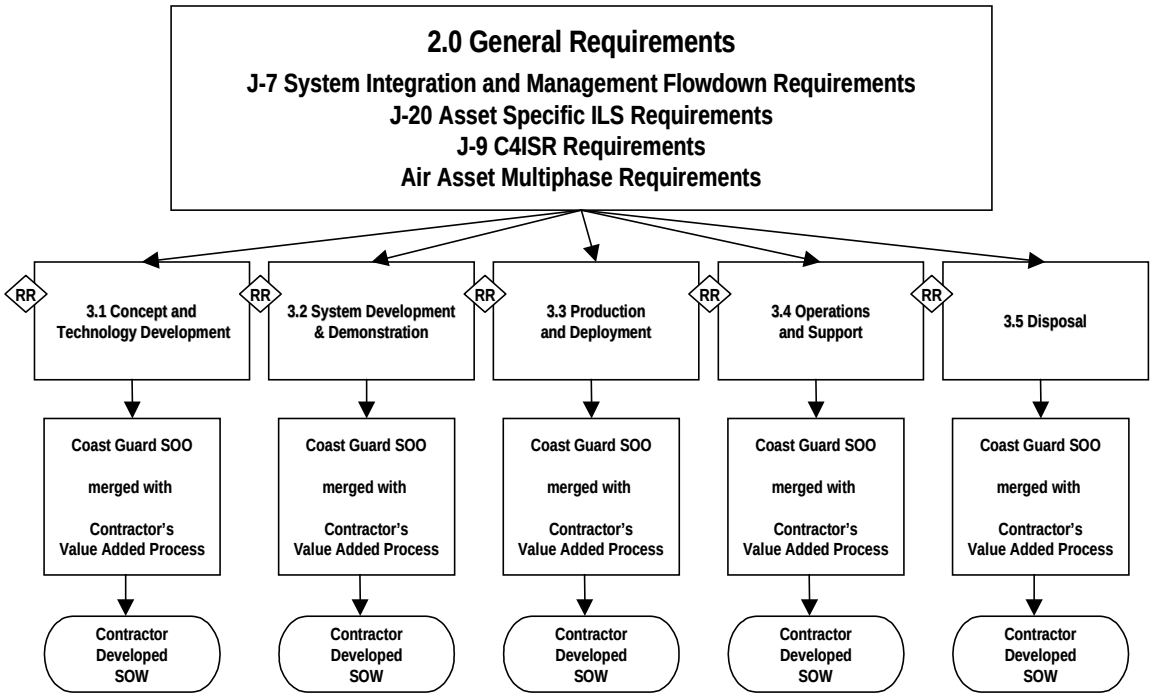
- Production & Deployment (3.3) includes, but is not limited to the development, fabrication, modification, test, qualification and delivery of Air Assets.

- Operations & Support (3.4) includes, but not limited to execution of supply, maintenance, transportation, sustaining engineering, data management, configuration management, manpower, personnel, training, habitability, survivability, safety, occupational health, IT (including NSS) supportability and interoperability, and environmental management support plans in accordance with the Contractors ISP.

- Disposal (3.5) includes, but is not limited to tasks to properly store, preserve, or de-preserve the Air Asset.

The figure below depicts the structure of this attachment and how it relates to the Contractor's SOW Development process.

Air Asset Statement of Objectives Structure / SOW Development Flow



2 GENERAL REQUIREMENTS

2.1 PROJECT MANAGEMENT

The Contractor shall perform Air Asset specific project management for each Air Asset in addition to IDS program management. It shall comply with all requirements set forth in section 2.1, including all subsections, of attachment J-7, the Statement of Work for Systems Integration and Management. In addition, the Contractor shall assign an Air Asset project manager specifically charged with the responsibility to establish, implement and maintain a management system and organization that will plan, organize, control, coordinate and oversee all contract activities relating to the Air Asset task orders. The Contractor shall also integrate sub-contractors and vendors to provide overall direction and guidance, track progress and status, and integrate products and services provided by sub-contractors and vendors with the products and services provided by the Contractor.

2.1.1 REVIEWS AND AUDITS

The following Task and/or Delivery Order Review and Audit requirements apply in addition to the Post Award Conference, Project Management Review, and Technical Review requirements invoked from section 2.1.9, including all subsections, of attachment J-7, the statement of work for IDS Systems Integration and Management. During each phase of Air Asset related work, the Contractor shall plan and conduct reviews and audits IAW standard acquisition practices. Department of Defense (DoD) 5000.2(series), Mandatory Procedures for Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) Acquisition Programs, and Chapter 11 of DSMC *Systems Engineering Fundamentals* (http://www.dsmc.dsm.mil/pubs/gdbks/sys_eng_fund.htm) shall be used for guidance. The following paragraphs identify the minimum review and audit requirements. The Contractor shall propose additional reviews/audits as deemed necessary and implement all reviews and audits in the appropriate phase as determined by the Contractor and approved by the Government.

2.1.1.1 Design Reviews

The Contractor shall evaluate the technical progress relative to its technical or contractual requirements. Design Reviews will be conducted at logical transition points in the development effort to identify and correct problems resulting from the work completed thus far before the problems can disrupt or delay technical progress. Design Reviews provide a method for the Contractor and Government to determine that the development of an asset and its documentation has met contract requirements. The following Design Reviews are considered the minimum requirement:

a) System Requirements Review (SRR)

b) System Design Review (SDR)

c) Software Specification Review (SSR)

d) Preliminary Design Review (PDR)

e) Critical Design Review (CDR)

f) Production Readiness Review (PRR)

2.1.1.2 Audits

The Contractor shall conduct audits with Government participation in order to examine and validate the development of the configuration item. The following Audits are considered the minimum requirement:

a) Functional Configuration Audit (FCA)

b) Physical Configuration Audit (PCA)

2.2 QUALITY ASSURANCE

The Contractor shall provide and maintain an Air Asset specific quality assurance system as part of the IDS quality assurance system. It shall comply with all requirements set forth in section

2.2, including all subsections, of Attachment J-7, the Statement of Work for Systems Integration and Management.

2.3 DATA MANAGEMENT

The Contractor shall ensure that all information for Air Asset task and/or delivery orders resides on the Integrated Product Data Environment (IPDE) required in Attachment J-7 as the data repository for all information required by this SOO including design and engineering work, logistics, production, management and other information which provides insight into the development and management of Air Assets and task and/or delivery orders.

2.4 ENVIRONMENTAL MANAGEMENT

The Contractor shall establish and implement an Air Asset-specific environmental management program as part of the IDS environmental management program. It shall comply with all requirements set forth in section 2.4, including all subsections, of Attachment J-7, the Statement of Work for Systems Integration and Management.

2.5 SYSTEMS ENGINEERING

The Contractor shall establish and implement an Air Asset-specific systems engineering program as part of the IDS systems engineering program. It shall comply with all requirements set forth in section 2.5, including all subsections, of Attachment J-7, the Statement of Work for Systems Integration and Management.

2.6 C4ISR DEVELOPMENT

The Contractor shall develop and deliver air intrinsic C4ISR hardware and software in accordance with the requirements of Attachment J-9, the Statement of Objectives for IDS C4ISR, and the C4ISR Architecture required in section 2.6, including all subsections, of Attachment J-7, the Statement of Work for Systems Integration and Management. Asset Intrinsic C4ISR task descriptions shall be provided in a companion SOW(s) to be prepared and provided by the Contractor as an attachment to any overarching Asset SOW developed from this SOO.

2.6.1 ELECTROMAGNETIC ENVIRONMENTAL EFFECTS (E^3) PROGRAM

In addition to the E^3 requirements of Attachment J-9, the Statement of Objectives for IDS C4ISR, the Contractor shall develop and submit for Government approval an Electromagnetic Environmental Effects Program for each air asset. In accordance with the guidance set forth in Mil-Std-464, the Contractor shall, as a minimum, include the following E^3 analyses and/or tests in an E^3 program and assessment report.

Intrasystem Electromagnetic Compatibility (EMC): This test determines if operation of one or more systems within the aircraft causes degraded performance, unacceptable response, or malfunctions to other aircraft systems. System baseline data as well as grounding, bonding, and shielding are measured and evaluated during this test phase.

Intersystem EMC or Electromagnetic Vulnerability (EMV): This test determines if external emitters such as search and air control radar, navigation aids, electronic jamming signals, or RF signals from broadcast stations cause degraded performance, unacceptable response, or malfunction of the aircraft and its systems. Naval Electromagnetic Radiation Facility (NERF) testing determines the effects of high intensity radiated fields encountered in Naval environments.

Hazards of Electromagnetic Radiation to Fuel (HERF): This test determines if a hazard exists in fuel handling or fueling areas from RF-induced arcs caused by high power radio and radar.

Hazards of Electromagnetic Radiation to Personnel (HERP): This test determines if the transmitters on the aircraft are a potential Radiation Hazard (RADHAZ) to personnel.

Atmospheric Effects: This test determines the aircraft's protection from natural electromagnetic threats such as high current transients (lightning), high voltage transients (Electrostatic Discharge (ESD)), and precipitation static (P-Static).

2.6.2 SOFTWARE IN AIRBORNE SYSTEMS AND EQUIPMENT

In addition to the requirements of Attachment J-9, the Statement of Objectives for IDS C4ISR, the Contractor shall also develop and submit for Government approval a program defining the planning, production or modification, verification, configuration management, and quality assurance of aviation software and its associated equipment that defines a level of confidence in safety that complies with FAA airworthiness requirements. RTCA/DO-178 and associated FAA Advisory Circulars, Orders, and Notices shall be used for guidance. This requirement applies to newly developed software and equipment, modifications to legacy software and equipment, and previously developed software and equipment being proposed for use in IDS aviation assets that affect airworthiness

2.7 LOGISTICS

The Logistics Requirements Matrix contained in Attachment J-20 lists requirements for system and asset level logistics development, design, production, implementation and disposal by ILS element. In developing an asset Statement of Work (SOW) from this SOO, the Contractor shall tailor this matrix for the asset by proposing additions, deletions and modifications consistent with their Asset and IDS ISP, CONOP, IMS/IMP, Implementation Plan, and unique production and support capabilities and processes. The matrix shall identify the asset applicability of, and proposed responsibility for, each requirement in each procurement phase in accordance with the instructions provided in Attachment J-20. The Contractor shall provide this tailored Logistics Requirements Matrix as an attachment to the proposed asset SOW. This attachment shall further include the specific, detailed, and phase-appropriate logistics work task descriptions for all Logistics Requirements Matrix requirements identified as either "Contractor" or "Joint" responsibility in the procurement phase for which the SOW is being developed.

2.8 TEST AND EVALUATION

The Contractor shall establish and implement an Air Asset-specific test and evaluation program in accordance with all requirements set forth in section 2.8, including all subsections, of Attachment J-7, the Statement of Work for Systems Integration and Management.

2.9 CONCEPT OF OPERATIONS

The Contractor shall develop and maintain an Air Asset-specific concept of operations reflecting realistic operational deployment of the Air Asset. The Air Asset concept of operations shall be consistent with the IDS concept of operations and shall comply with the requirements set forth in section 2.9.3 of Attachment J-7, the Statement of Work for Systems Integration and Management.

2.10 TASK AND/OR DELIVERY ORDER PLANNING AND DEVELOPMENT

Following the initial Air Asset delivery order, the Contractor shall comply with the requirements of the Task and Delivery Order Planning and Development section 2.10 of Attachment J-7, SOW for IDS Systems Integration and Management, to define and plan Air Asset work for the subsequent procurement phase.

2.11 CORROSION CONTROL PROGRAM

The Contractor shall develop and submit for Government approval an Air Asset Corrosion Control Program. The Contractor shall ensure that air intrinsic corrosion control procedures meet the service life requirements of the Air Asset Performance Specifications. Aeronautical engineering Maintenance Management Manual, COMDTINST M13020.1 series and Corrosion Control Process Guide, CGTO PG-85-00-60 shall be used for guidance. Corrosion has proven to be a significant burden both financially and in the loss of aircraft availability. As a minimum the program shall provide:

a) The amount, type and on-aircraft location of CPC’s applied to delivered aircraft.

b) The amount, type and on-aircraft location of CPC’s applied to the aircraft during all phases of maintenance.

c) The isolation of dissimilar materials to avoid galvanic corrosion.

d) The measures taken to avoid corrosion problems associated with salt water brought into the cabin during rescue swimmer operations.

e) The measures taken to protect from erosion the leading edges of propellers, engine intakes, wings, antennas, and radomes, etc.

f) The type of corrosion preventative measures taken during hardware installation.

g) The type of surface treatments (paints, primers, anodized) that will be used on the exterior skin, interior skin, and below the decks.

h) The corrosion preventative measures taken in any toilet area.

i) The sealing procedures in place for all panels including easy access panels.

j) The corrosion preventive measures taken in non-bladder type fuels cells.

k) The manner in which corrosion mapping will be accomplished.

l) The provisions for draining captured fluids and the effect (if any) this added equipment will have on the OEM drainage system(s).

m) The manner in which inaccessible and infrequently accessed areas will be inspected and treated for corrosion.

n) The provisions taken for shipboard aircraft to be properly rinsed, washed and hangared.

o) The potential for incorporating real time corrosion monitoring.

p) The limitations on mechanical and chemical aircraft paint removal.

q) The manner cannon plugs will be sealed to prevent water intrusion and corrosion.

r) The manner in which corrosion prevention will be incorporated into all avionics LRU's.

s) The provisions to prevent corrosion on LRU male and female connectors.

t) The manner in which corrosion prevention will be built in between all antenna and fuselage interfaces.

u) The manner in which Magnesium alloys are protected in areas that could be exposed to corrosive environments.

v) The manner in which corrosion resistant alloys and tempers are employed.

w) The extent to which joints are designed to prevent liquid entrapment.

x) The number, location, and effectiveness of drain holes for aircraft parked on non-level surfaces.

2.12 WEIGHT & MASS PROPERTIES CONTROL PROGRAM

The Contractor shall develop and submit for Government approval an Air Asset Mass Properties Control Program in accordance with Recommended Practice 7A and 8A of Society of Allied Weight Engineers.

2.13 PROGRAM MANAGER'S RESIDENT OFFICE (PMRO)FACILITIES

Consistent with requirements of the Inspection Facilities section of Section E, office facilities and services shall be provided and maintained for the Program Manager's Representative (PMR) and staff at each facility, other than Coast Guard Aircraft Repair & Supply Center, Elizabeth City NC, where extensive repair/modifications occur to Air Assets (e.g. those modifications to CANDI aircraft necessary to produce an IDS variant). The Government will assign personnel during the System Development and Demonstration and Production and Deployment Phases as required. The table below enumerates requirements for the PMRO. The number of people comprising the PMRO may vary depending on the complexity of the air asset work.

a) The facilities to be provided shall be equal to those the Contractor provides for their personnel for the purpose of visibility into design, engineering, process, production, testing, administration, and management under the IPPD process. The offices provided shall be located with the Contractors facility management offices to facilitate an IPPD relationship between the Government and the Contractor. The Government will provide the Contractor with at least 60 days notification of when the first facilities will be required at each site.

b) The Contractor shall provide separate, but adjacent, offices (private and open), facilities, and a conference room. The Contractor shall also provide restrooms, shower spaces, and a changing area with lockers for all Government personnel. These spaces shall be of adequate size for such purposes, and shall be furnished, ventilated, lighted, and heated. The Contractor shall furnish services for keeping the rooms orderly and clean. Air conditioning and interior communication shall be provided in the offices that are utilized. The PMR Office Space and Equipment Table describes the minimum acceptable facilities and furnishings that shall be provided by the Contractor, and may be modified from time to time under the provisions of this contract.

c) The Contractor shall provide and maintain telephones in the Contractor's telephone system for the PMR and staff, and provide at least one telephone line per person. Telephone service shall be direct dial - local and long distance - not through a switchboard, and shall include voice mail for each line. The Contractor shall provide and maintain an independent computer network that has direct connection to the Internet with at least a T-1 line for use by the Government personnel. The Contractor shall ensure that the Government representatives have connectivity to the IPDE, access to, and the capability to view any other asset-related information, including design, production, testing, logistics, configuration management, and quality assurance documentation. This system shall have the same functionality as that used by Contractor counterparts, including office software described in attachment J-18, and other specialty software for the purpose of facilitating the IPPD relationship. The Contractor shall test all computers, connectivity and peripherals (e.g. printers, plotters) in the office to ensure proper operation of the various software applications, and shall provide continuous technical support. The Contractor shall include in the contract price the full cost of providing all telecommunications service except for long distance telephone calls. Long distance calls shall be billed to the Government on an actual cost basis.

d) The conference room shall include a conference table, chairs for 12 people, and a teleconference facility. The latter shall include an additional network-connected computer (IPDE/Internet) and phone line, installed computer/video presentation machine, videocassette recorder, and large screen.

e) The Contractor shall provide parking spaces for Government personnel comparable to their counterparts within the Contractor's organization, and within close proximity to the Government office spaces.

f) The Contracting Officer may, by written notice to the Contractor, substitute, eliminate, or add to the office facilities or services specified in this general requirement. If any such

substitution, elimination or addition increases or decreases the Contractor's cost, an equitable adjustment shall be made in accordance with the clause of this contract entitled "CHANGES-FIXED PRICE."

PMR OFFICE SPACE AND EQUIPMENT TABLE

Item	QUANTITY
Number of Private Offices Included in Space	2
Number of Open Offices Included in Space	3
Double Pedestal Desk and Chair	5
4-6 Drawer Lay-Flat Drawing File Cabinet	1
High Capacity Copier or Ready Access Thereto	1
5-Drawer Legal Size File Cabinet	3
Telephone Lines	5
Plain Paper Telefax (w/ separate phone line)	1
Assigned Parking Spaces (near office)	5
Conference Room (described above).	1
White Board (minimum of 12 Sq. ft)	3
Plan Review Table for “H” Size Drawings	1
Clothes Locker	5
Side Chair	3
Book Case	5
Dry Copy Machine (Xerox Model 220ST, or equivalent)	1
Personal Computer (in accordance with attachment J-18)	5
Oversized-CAD Quality Computer monitor (24” min.)	2 (part of the 5 computers noted above)
Letter Quality Printer (HP LaserJet IV SI, or equivalent)	1

Plotter (HP DesignJet 1000, or equivalent)	1

3 ASSET PHASED PROCUREMENT

The following sections describe the objectives for the phased progression of asset-related work from concept and technology development through disposal. The objectives and the associated minimum requirements presented in each section form the basis for asset- and phase-specific task and/or delivery order SOW development in accordance with the Task and/or Delivery Order Planning and Development process described in Section 2.10. For all procurement phases appropriate to an asset, the Contractor shall augment and expand upon these minimum requirements to define the complete and detailed work effort required to achieve the stated objectives. Note that not all phases need apply to all assets. For example, for near term retirement of a legacy asset only support and disposal tasks may apply; if concept and technology demonstration was accomplished during Phase I, it may not need to be repeated; if no Contractor support is proposed, operations and support tasks may not apply.

3.1 CONCEPT AND TECHNOLOGY DEVELOPMENT

The objective of the Air Asset Concept and Technology Development Phase is to define Air Asset performance requirements and validate that they can be achieved.

3.1.1 GENERAL

The Contractor shall perform all tasks identified in Section 2, General Requirements, in a manner consistent with the objectives of this phase of Air Asset acquisition.

3.1.2 CONCEPT DEFINITION

The Contractor shall conduct trade-off studies, analysis of alternatives, tests and other design activities to define Air Asset concepts that meet allocated Air Asset-level requirements.

3.1.3 DEVELOP OR REVISE AIR ASSET PERFORMANCE SPECIFICATIONS

The Contractor shall develop or revise and submit for Government approval Air Asset Performance Specifications to reflect maturation of IDS performance demands on the Air Asset and proposed Air Asset characteristics; allocation of Air Asset-level requirements to its components; and the specification of system and component interfaces. The Air Vehicle Joint Services Specification Guide (JSSG) 2001 shall be used for guidance.

3.1.4 CERTIFICATION PROGRAM

The Contractor shall develop and submit for Government approval an Air Asset Certification Program, which shall delineate the methods to be used to certify the asset and modifications. This Program shall be used as the basis to develop the Air Asset Test and Evaluation Plan and as a minimum shall provide:

a) Proposed Air Asset Category, Class and description to meet Air Asset Performance Specification.

b) Certification basis of the proposed asset (e.g. FAA Type Certificate, DoD Acceptance, foreign certifications, etc.).

c) Modifications necessary for proposed asset to meet Air Asset Performance Specification.

d) Certification basis for proposed modifications (e.g. FAA Supplemental Type Certificate, DoD Changes, Orders, Clearances, Foreign Certifications, etc.).

3.2 SYSTEM DEVELOPMENT AND DEMONSTRATION

The objectives of the Air Asset System Development and Demonstration Phase are to: 1) complete the detailed design efforts necessary to ensure the producibility, operational supportability and affordability; and 2) demonstrate system integration, interoperability and utility for each Air Asset.

3.2.1 GENERAL

The Contractor shall perform all tasks identified in Section 2, General Requirements, in a manner consistent with the objectives of this phase of Air Asset acquisition.

3.2.2 DETAILED DESIGN INFORMATION

The Contractor shall provide the design criteria and all supporting data and analyses used to derive the design criteria that were used to develop the Air Asset Performance Specification. The level of detail shall allow the Government to validate/verify aircraft performance outlined in the Air Asset Performance Specification. As a minimum the design information shall include:

a) Payload data for all missions.

b) All data required to validate/verify (e.g. fuel consumption, weights, altitudes, ambient conditions, etc.) all air asset mission profiles.

c) Arrangement, layout, modification, and installation drawings.

d) Electrical/electronic diagrams and mechanical schematics.

e) Master equipment lists.

f) Flight performance, airframe structural, asset/subsystem, aerodynamic, availability, safety, weight & balance, and human factors analyses.

g) Aircraft service life estimates associated with the asset's planned lifecycle use and maintenance programs.

h) USCG facility and flight deck equipped cutter impact assessment(s). This includes needs for fuels, lubricants, fluids and inert gases (nitrogen or high-pressure air) and modifications required to hangars, shops, servicing equipment.

i) Other operators' service experience, such as a list of applicable manufacturer's service bulletins and/or FAA (or other certification authority) Airworthiness Directives.

Note: For aircraft that are currently in service with other operators, operational data or flight test records are preferred over analytic data.

3.3 PRODUCTION AND DEPLOYMENT

The objective of the Air Asset Production and Deployment Phase is to deliver an Air Asset that meets the readiness and operational capability requirements of the Air Asset Performance Specification.

3.3.1 GENERAL

The Contractor shall perform all tasks identified in Section 2, General Requirements, in a manner consistent with the objectives of this phase of Air Asset acquisition.

3.3.2 ACCEPTANCE

The Contractor shall develop and submit for Government approval Air Asset acceptance requirements, an Acceptance Plan, and acceptance procedures. Subsequent to acceptance of the plan, the Contractor shall implement and maintain the plan.

3.4 OPERATIONS AND SUPPORT

The objective of the Air Asset Operations and Support Phase is to assist in maintaining reliability, availability, maintainability and operational capability of Air Assets.

3.4.1 GENERAL

The Contractor shall perform all tasks identified in Section 2, General Requirements, in a manner consistent with the objectives of this procurement phase.

3.4.2 OPERATIONS AND SUPPORT

The Contractor shall execute all Contractor responsibilities in accordance with the approved Air Asset specific ISP, logistics requirements matrix and CONOPS.

3.5 DISPOSAL

The objective of the Air Asset Disposal Phase is to demilitarize and dispose of Air Assets in accordance with all legal and regulatory requirements relating to safety, security and the environment at the end of its useful service life.

3.5.1 GENERAL

The Contractor shall perform all tasks identified in Section 2, General Requirements, in a manner consistent with the objectives of this phase of Air Asset acquisition. In addition, the Contractor shall provide all services, labor, tools, tooling, materials when applicable, and equipment, except those listed as Government furnished, to properly store, preserve, or de-preserve the Air Asset in accordance with OPNAVINST 4790.2 series. The Government reserves the right to unilaterally exercise this requirement on a per-asset basis.

3.5.2 DISPOSAL PLAN

The Contractor shall develop a Disposal Plan for each Air Asset type at least two years prior to the phase-out, decommissioning, remediation or removal from service of any Air Asset. The plan will include at a minimum, methodology, cost, environmental issues and concerns, personnel impacts, equipment disposal, and required permits.