

February 04, 2013

STATEMENT OF WORK

FOR

SMALL FORM FACTOR (SFF) IDENTIFICATION

FRIEND OR FOE (IFF) DIGITAL TRANSPONDER

Version 10.1

Prepared by

NAVAL AIR TRAFFIC MANAGEMENT SYSTEMS  
(PMA213)

## CONTENTS

Section/Para.	Page
1. Introduction	1
1.1 Scope	1
2. Documents	1
2.1 Applicable Documents	1
3. Requirements	4
3.1 General	4
3.1.1 Production Representative SFF Transponder Delivery Requirements	4
3.1.2 Engineering Technical and Integration Support	4
3.1.3 Program Risk Management	4
3.2 Drawings and Unique Identification (UID) Markings	5
3.2.1 Production Drawings and Associated Lists	5
3.2.2 Unique Identification (UID)	5
3.3 Test and Test Data Reports	5
3.3.1 Airworthiness Qualification Specifications (AQS)	5
3.3.2 Test Plans/Test Reports	5
3.3.2.1 Electromagnetic Interference (EMI) Testing	6
3.3.2.2 Spectrum Supportability	6
3.3.2.3 Technical Standard Order (TSO) Certification	6
3.3.3 Test Readiness Review (TRR)	6
3.4 Program Management (PM)	6
3.4.1 Program Protection Implementation Plan (PPIP)	6
3.4.2 Kick-Off Meeting	7
3.4.3 Technical Interchange Meeting (TIM)	8
3.4.4 Program Management Review (PMR)/Meetings	8
3.4.5 Program Progress/Status Report (Monthly)	8
3.4.6 Associate Contractor Agreement (ACA)/Non Disclosure Agreement (NDA)	9
3.5 Diminishing Manufacturing Sources and Materials Shortage and Obsolescence Management (DMSMS)	9
3.6 Configuration Management (CM)/Data Management	9
3.6.1 Configuration Identification	9
3.6.2 Configuration Verification and Audit	9
3.6.3 Engineering Change Proposal (ECP)	10
3.6.3.1 Request for Deviation (RFD)	10
3.6.3.2 Requalification SFF	10
3.6.4 Configuration Status Accounting	10
3.6.5 Data Accession List (DAL)	10
3.7 Reliability	11
3.7.1 Reliability and Maintainability (R&M) Allocations	11
3.7.2 Failure Reporting, Analysis, and Corrective Action System (FRACUS)	11
3.8 Quality/Production	11
3.8.1 Quality Management	11
3.8.2 Quality Assurance Program Plan (QAPP)	11

3.8.3	Product Acceptance System (PAS)	11
3.9	Logistics Support	12
3.9.1	Technical Manual	12
3.9.2	Bill of Materials (BOM)	12
3.9.3	Nomenclature, Identification Plates, and Serial Numbers	12
3.9.4	Test Set	12
3.9.5	Warranty Program	13
3.9.6	Training	13
3.10	Security Requirements	13
3.11	Information Assurance (IA)	14
3.11.1	IA Requirements	14
3.11.2	IA Accreditation Documentation	14
3.11.3	IA Accreditation Assessment	14

1. INTRODUCTION

1.1 Scope

This Statement of Work (SOW) defines the efforts required from the Contractor to fabricate, manufacture, and deliver Small Form Factor (SFF) transponders in support of the U.S. Army Shadow Unmanned Airborne System (UAS). This effort includes the associated Program Management, Systems Engineering, Software Management, Airworthiness, Reliability, Maintainability, Quality Assurance, and Logistic Support requirements.

2. DOCUMENTS

2.1. Applicable Documents

All applicable documents are listed below in Table 2.1.

In the event of a discrepancy between the MIL-PRF-SFF (SFF Spec) and the DoD AIMS 03-1000A specifications, the DoD AIMS 03-1000A will take precedence.

Table 2.1 Applicable Documents

DOCUMENT NUMBER	TITLE
DO-260B	Minimum Operational Standards for 1090 MHz Extended Squitter ADS-B and Traffic Information Services – Broadcast (TIS-B)
DoD AIMS SCG January 2009	DoD International Air Traffic Control Radar Beacon System Identification Friend or Foe (IFF) Mark X11A Systems (AIMS) Program Security Classification Guide
Airworthiness Qualification Plan (AQP) 8 March 2011	Airworthiness Qualification Plan (AQP) for the Reduced Form Factor (RFF) Transponder
DoD AIMS 97-1000 With Addendums 1 & 2 18 March 1998	Performance/Design Qualifications Requirements Technical Standard for the ATCRBS/IFF/Mark XII Electronic Identification System and Military Mode 5
DoD AIMS 03-1000A including Change Notices 1, 2, and 3, March 2006	Implementation of Mode S
DMSMS Guidebook 01 November 2006	Diminishing Manufacturing Sources and Material Shortages (DMSMS) Guidebook
ISO/ASQ 9001: 2008	Quality Management Systems Requirements
MIL-PRF-49506 11 November 1996	Performance Specification Logistics Management Information

MIL-STD-129P with Change 4 19 September 2007	Department of Defense Standard Practice Military Marking for Shipment and Storage
MIL-STD-130N 17 December 2007	Department of Defense Standard Practice Identification Marking of United States (U.S.) Military Property
MIL-STD-2073-1E w/Ch 1 07 January 2011	Department of Defense Standard Practice for Military Packaging
NAVAIR Instruction 4355.19B 25 June 2003	System Engineering Technical Review Process
NAVAIR Instruction 5000.21 25 June 2003	Program/Project Risk Management
MARK XIIA MODE 5 CID PPP May 2006	Mark XIIA Mode 5 Cooperative Identification Capability Program Protection Plan
DOC-044-12	Operational Security Doctrine for the Mark XIIA Air Identification Friend or Foe (AIFF) Mode 4/5, DOC-044-12, dated, September 2012
EIA-649-B	Electronic Industries Alliance (EIA) National Consensus Standard for Configuration Management
NAVAIR Instruction 4130.1D 19 December 2006	Naval Air Systems Command Configuration Management Process
MIL-HDBK-61A 18 November 2006	Military Handbook Configuration Management Guidance
MIL-STD-882D 10 February 2000	DoD Standard Practice for System Safety
DoD Instruction 5200.39 16 July 2008	Critical Program Information (CPI) Protection Within the Department of Defense with Change 1, December 28, 2010
DoD Manual 5200.1-M March 1994	Acquisition Systems Protection Program
MIL-HDBK-1785	Security Engineering Program Management Requirements
National Security Decision Dir 298, 22 January 1988	National Operations Security Program
TSO-C166b 02 December 2009	Extended Squitter Automatic Dependent Surveillance - Broadcast (ADS-B) and Traffic Information Service - Broadcast (TIS-B) Equipment Operating on the Radio Frequency of 1090 Megahertz (MHz)

MIL-STD-31000	Department of Defense Standard Practice: Technical Data Packages (TDP), 05 Nov 2009 [Superseding MIL-DTL-31000C]
SAE AS9102A	Aerospace First Article Inspection Requirement
NAS411-94 Effective Date: January 1, 1994	Hazardous Materials Management Program
MIL-STD-461	Requirements for the Control of Electromagnetic Interference (EMI) Characteristics of Subsystems and Equipment
DFARS 252.211-7003 June 2005	Item Identification and Valuation
MIL-PRF-SFF 31 January 2013	Performance Specification for Small Form Factor (SFF) Transponder Set
SAE AS9100C	Quality Management Systems - Requirements for Aviation, Space and Defense Organizations
MIL-STD-40051/2 30 July 2007	Department of Defense Standard Practice: Preparation of Digital Technical Information for Page-Based Technical Manuals (TMs)
DoD Directive 8500.01E 23 April 2007	Information Assurance (IA)
DoD Instruction 8500.2 06 February 2003	Information Assurance (IA) Implementation
DON CIO Memo, 02-2610 26 April 2010	Department of the Navy Chief Information Officer Memorandum 02-10, Information Assurance Policy Update for Platform Information Technology
DoD Directive 8570.01 23 April 2007	Information Assurance Training, Certification, and Workforce Management
DoD Manual 8570.01-M 24 January 2012	Information Assurance Workforce Improvement Program, Incorporating Change 3
EKMS-1B 05 April 2010	EKMS Policy and Procedures for Navy Electronic Key Management System Tiers 2 & 3
EKMS 5A 05 April 2010	EKMS 5A Cryptographic Equipment Information/Guidance Manual
MIS-STD-52406(IS)	System Interface Requirements for Engineering Data
TSO C-112d 17 Mar 2011	Air Traffic Control Radar Beacon System/Mode Select (ATCRBS Modes) Airborne Equipment
DoD 5400.7-R September 1998	DoD Freedom of Information Act Program
DoDI 8520.02 24 May 2011	Public Key Infrastructure (PKI) and Public Key (PK) Enabling

DoDI 5000.2 12 May 2003	Operation of the Defense Acquisition System
DoDI 8580.1 09 July 2004	Information Assurance (IA) in the Defense Acquisition System
SECNAVINST 5239.3B 17 June 2009	Department of the Navy Information Assurance Policy
SECNAVINST 5239.3A 18 January 2008	Navy Implementation of Department of Defense Intelligence Information System (DODIIS) Public Key Infrastructure (PKI)
OMB A-130 Appendix III	Management of Federal Information Resources

### 3. REQUIREMENTS

#### 3.1. General

The work required by this contract shall be performed in accordance with (IAW) the Performance Specification for Small Form Factor (SFF) Transponder Set (MIL-PRF-SFF) 31 Jan 2013 (Attachment 2) and Airworthiness Qualification Plan (AQP) for the Reduced Form Factor (RFF) Transponder dated 8 March 11 (Attachment 3) and this Statement of Work (SOW).

##### 3.1.1. Production Representative SFF Transponder Delivery Requirements

The Contractor shall produce and deliver production representative SFF transponders IAW the delivery schedule in Section F of the contract.

##### 3.1.2. Engineering Technical and Integration Support

Under this contract, engineering technical and integration support requirements, and/or a need for Subject Matter Experts (SME) may emerge that must be resolved immediately. "Emergent Engineering and Integration Support" as used below means requirements that are not already addressed in this SOW. This support shall be covered under CLIN 0004.

CLIN 0004 shall cover routine emergent support requirements such as phone support, e-mail support, and support to emergent Government meetings held at the Contractor's facility, the Shadow UAV Prime Contractor facility, or Government facilities. The Contractor shall NOT incur costs for this support until the PCO provides authorization in writing. The Contractor shall notify the PCO once \$ 10,000 has been incurred against this line item. All Emergent Engineering Technical and Integration Support shall be identified in the Monthly Program Progress/Status Report IAW CDRL A001.

##### 3.1.3. Program Risk Management

The Contractor shall establish a Risk Management Program for the identification, mitigation, and the elimination of hazardous, schedule, performance and cost risks. All

identified risks shall be maintained in the Contractor's risk management database. The Contractor shall create updated statuses of each risk and brief status at each PMR. The Contractor shall participate via teleconference and provide the following updates to the Government's monthly risk management board:

1. Perform timely and thorough assessments of costs, schedule, and performance risks.
2. Identify and track medium and high risk areas
3. Define, implement, and track appropriate risk mitigation actions
4. Plan and integrate risk mitigation activities into the Integration Master Schedule (IMS) as defined in the Risk Management Plan
5. The Government shall have access to the Contractor's Risk Management Data Base.
6. Risk reporting shall be provided IAW **CDRL A002**.

The Contractor shall deliver a Risk Management Plan IAW **CDRL A004**.

### 3.2. Drawings and Unique Identification (UID) Markings

#### 3.2.1. Production Drawings and Associated Lists

The Contractor shall prepare and deliver the Product Baseline (PBL) for SFF configuration items procured, changed, and managed under this contract. The engineering drawing tree shall be in block diagram format that identifies all system and subsystem equipment drawings to be delivered as part of the drawing package. The tree shall be structured in top down breakdown order at the lowest level of assembly or the lowest component piece part. The Contractor shall prepare and deliver the Product Drawings and Associated Lists to include the engineering drawing tree IAW **CDRL A003**.

#### 3.2.2 Unique Identification (UID)

The Contractor shall determine applicability of UID marking to each replaceable item and the system in accordance with MIL-STD-130N and the clause at DFARS 252.211-7003, "Item Identification and Valuation (JUN 2011)". The Marked items shall be registered and validated with the DOD UID Registry. The Contractor shall update the Product Drawings and Associated Parts Listings for each item to include the UID marking method and location.

### 3.3. Test and Test Data/Reports

#### 3.3.1. Airworthiness Qualification Specification (AQS)

The Contractor shall deliver an AQS IAW **CDRL A004**, which consists of a verification matrix documenting the qualification methods used to identify how the SFF meets Airworthiness IAW Airworthiness Qualification Plan (AQP) and Performance Specification for SFF Transponder (MIL-PRF-SFF Specification).

#### 3.3.2 Test Plans/Test Reports

The Contractor shall submit all analyses, simulations, test plans, test procedures, and test reports to verify compliance with the Army's Aviation Engineering Directorate (AED) AQP for the RFF Transponder, Dated 8 March 11 and MIL-PRF-SFF Specification. The substantiation reports shall contain the consolidation and documentation of all significant

airworthiness data accumulated during the testing conducted by the Contractor. The Contractor shall provide these documents IAW **CDRL A004**.

#### 3.3.2.1. Electromagnetic Interference (EMI) Testing

The Contractor shall ensure that the EMI tests will be conducted at a laboratory accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) and under the guidance of National Association of Radio and Telecommunication Engineers (NARTE)-certified personnel. Accreditation of facilities shall be administered by agencies that have a Mutual Recognition Agreement with the National Institute of Standards and Technology to conduct EMI qualification testing to the requirements of MIL-STD-461.

#### 3.3.2.2. Spectrum Supportability (SS)

The Contractor shall prepare and update the existing Stage 3 Equipment Location – Certification Information Database (EL-CID) Application for Equipment Frequency Allocation and generate a DD Form 1494, throughout the development of the equipment and shall perform analysis and testing to verify that the system meets its SS performance requirements IAW **CDRL A004**.

#### 3.3.2.3. Technical Standard Order (TSO) Certification –TSO C-112d and TSO C-166b

The Contractor shall submit all the documents required by the Federal Aviation Administration (FAA) for the TSO-C112d and TSO C-166b certification to the Government whether a TSO has been obtained or not, IAW **CDRL A004**.

#### 3.3.3 Test Readiness Review (TRR)

The Contractor shall support two TRRs. The first TRR (ground test with SFF integrated) will be at PM UAS Prime Contractor (Baltimore, MD). The second TRR (Flight Test) will be held at Naval Air Station at Patuxent River. The Contractor shall provide one week of on-site engineering support per TRR. The Government will notify the Contractor fifteen calendar days in advance of when these TRRs are scheduled to take place.

#### 3.4 Program Management (PM)

##### 3.4.1 Program Protection Implementation Plan (PPIP)

The Contractor shall develop, and after Government approval, implement technology protection at the Contractor, Subcontractor, and Vendor-controlled locations IAW **CDRL A005**. Technology protection at each of these facilities shall comply with the Government's approved Program Protection Plan (PPP) for the Mark XIIA Mode 5 Cooperative Identification Capability Program Protection Plan (CPPP), dated May 2006. The Government will provide the PPP (less data from the costs section) and all appendices, via secure means, to the Contractor as Government-Furnished Information (GFI).

The PPIP must address integration of all security disciplines, technology protection, System Security Engineering (SSE) and Information Assurance, counterintelligence and Operations Security (OPSEC), and provide for no cost user agency (NAVAIR Program Office and/or NAVAIR Security Officer) inspections and program protection surveys of the Contractor's technology protection efforts. The PPIP must explain how the Contractor's technology protection efforts ensure coordination of systems, data and products during the acquisition process with SSE efforts to build life-cycle security features into acquisition systems and products covered by this contract.

### 3.4.2 Kick-Off Meeting

The Contractor shall host a kick off meeting thirty days after contract award not to exceed (NTE) more than four days in length. The Contractor shall submit a meeting agenda IAW **CDRL A006** and deliver minutes which shall include details of discussions, action items, list of attendees, and presentation package IAW **CDRL A007**. It is expected that the meeting will consist of presentations by the Contractor, PM Shadow UAS Prime Contractor, and the Government.

The Contractor shall present the following:

#### **PROGRAM OVERVIEW**

Introduction (Organization breakdown/Identify Key team members)

Contracts Overview (SOW/CDRL submissions)

Program Schedule/Cost, Technical Performance Management, and Production Status

Risks and Risk Management Status

Parts Obsolescence Process/Status

#### **ENGINEERING REVIEW**

System Overview (design of SFF box/how it functions, operates)

AQS (verification matrix)

Mechanical/Electrical -Power Output

Software Overview/Status and Metrics

Discuss Software Requirements Specification (SRS)/Interface Control Documents (ICDs)

System/Software Safety

Contractor Logistics

Configuration Management Status

Reliability and Maintainability (R & M); Failure Reporting Analysis and Status

Long lead items/BOM

#### **PRODUCTION OVERVIEW**

- Plant Layout
- Discuss Production line operation
- Quality Assurance
- Overview of manufacturing processes
- Incoming parts screening process
- Supplier Management/Resources
- Tour of Facility

3.4.3 Technical Interchange Meeting (TIM)

The Contractor shall travel to Baltimore or Patuxent River, Maryland and provide technical support for up to three TIMs, for two days per TIM, to assist the Government.

3.4.4 Program Management Review (PMR)/Meetings

The Contractor shall host two PMRs and allow for two additional program-related meetings per calendar year at its facility. The Contractor's PMRs will be tailored to include the current program status and shall include the following as required by the Government:

- Program Management Overview
- Program Schedule
- Risk Management
- Contract Data Requirements List (CDRL) Data Item Submissions
- Technical Program Status
- Logistics Program Status
- Configuration Management Status
- Engineering Change Proposals (Class I and Class II ECPs)
- Deviations
- Quality Assurance (QA)
- Reliability and Maintainability (R&M), Failure Reporting Analysis and Status
- Parts Obsolescence Issue/Status
- Software Status and Metrics
- System/Software Safety

The Contractor shall submit a meeting agenda **IAW CDRL A006** and deliver minutes, which shall include details of discussions, action items, list of attendees, and presentation package for all meetings **IAW CDRL A007**.

3.4.5 Program Progress/Status Report (Monthly)

The Contractor shall prepare and submit monthly Program Progress/Status Reports. The monthly Program Progress/Status Report shall address, as necessary, technical issues,

software, delivery schedule, quality assurance, Government Furnished Equipment (GFE)/Government Furnished Property (GFP) summary, reliability and maintainability information, all repair actions, any contractual actions, and funding expenditures IAW **CDRL A001**.

3.4.6 Associate Contractor Agreement (ACA)/Non Disclosure Agreement (NDA)

The Contractor shall establish and maintain an ACA and a NDA with PM Shadow UAS Prime Contractor. The Contractor shall provide the Government a copy of the signed ACA and NDA NLT 90 DAC.

3.5 Diminishing Manufacturing Sources and Materials Shortage and Obsolescence Management (DMSMS)

The Contractor shall establish a process for identifying and notifying the Government of forecasted and identified DMSMS issues. The Contractor shall develop a method to proactively forecast and monitor parts for DMSMS. The Contractor shall provide access to the Government or Advisory and Assistance Services Contractors (A&ASA), for review of, all DMSMS information. The Contractor shall provide DMSMS updates upon request, during Technical/Program Management Reviews and immediately upon discovery that a potential DMSMS issue may severely impair system Life Cycle Cost (LCC) or readiness in the monthly Program Progress/Status Report IAW **CDRL A008**.

Up to the point of Government acceptance of the hardware to be delivered under this contract and any repairs resulting from a warranty claim against that hardware, the Contractor shall resolve all parts obsolescence and/or diminishing manufacturing source issues that arise with respect to the hardware to be delivered under CLINs 0001 and 0002 and Option CLINs 0101, 0201, and 0301 within the Firm Fixed Price (FFP) of these line items. In the event that resolution of parts obsolescence/diminishing manufacturing source (DMS) issues require incorporation of a Class 1 ECP, the Contractor shall accomplish any Non Recurring Effort (NRE) and/or design requalification effort required by that ECP within the Firm Fixed Price of the contract. These costs may not be charged to any other line items or contracts.

3.6. Configuration Management (CM)/Data Management

The Contractor shall establish, maintain, and execute an integrated CM program that includes CM Planning & Management, Configuration Identification, Configuration Change Control, Configuration Status Accounting, and Configuration Verification & Audits. The CM program strategy shall be documented via a CM plan using NAVAIRINST 4130.1D, MIL-HDBK-61A, and Electronic Industries Alliance (EIA)-649 as guidance and submit IAW **CDRL A009**. CM includes system hardware and software and shall cover the duration of the contract.

3.6.1 Configuration Identification

The Contractor shall identify hardware and software Configuration Item (CIs), assign unique identifiers to each, and establish a structure for products and product configuration.

3.6.2 Configuration Verification and Audit

The Contractor shall establish that the performance and functional requirements defined in the product definition information have been achieved by the design and that the design has been accurately documented in the product definition information IAW MIL-HDBK-61A. The Contractor shall submit a Configuration Audit Plan IAW **CDRL A010**.

The Contractor shall perform a formal Functional Configuration Audit/Physical Configuration Audit (FCA/PCA), with Government participation, prior to delivery of the first three production representative units. The Contractor shall deliver a Configuration Audit Summary Report IAW **CDRL A011**.

### 3.6.3 Engineering Change Proposal (ECP)

The Contractor shall ensure that changes to a configuration baseline are properly identified, recorded, evaluated, approved or disapproved, and incorporated and verified. Class I changes to the configuration baseline shall only be approved by PMA213 Decentralized Configuration Control Board through submittal of an ECP to PMA213. An engineering change shall be classified as Class I or Class II using MIL-HDBK-61A as a guide. The ECP shall be submitted IAW **CDRL A012**.

#### 3.6.3.1 Request for Deviation (RFD)

The Contractor shall notify and obtain approval from the Government when the Configuration Item (CI) product does not conform to the Government baseline configuration documentation. The Contractor shall utilize MIL-HDBK-61A as a guide. Major and Critical deviations shall be submitted to the PCO and PMA213 for approval IAW **CDRL A013**.

#### 3.6.3.2. Requalification SFF

The Contractor shall re-qualify the SFF box once a configuration item (hardware/software changes) changes through a Class 1 Engineering Change Proposal (ECP). The Contractor shall notify the Government of this change through an ECP. The Government will determine what test requirements are needed to re-qualify the box. The Contractor shall develop and submit Test Plans and Test procedures to the Government for approval prior to the start of test. All Test Plans and Test Reports, which encompass each element of the MIL-PRF-SFF Specification and AQP for the RFF Transponder shall be provided IAW **CDRL A004**.

### 3.6.4 Configuration Status Accounting

The Contractor shall capture and maintain Product Configuration information IAW MIL-HDBK-61A necessary to account for the configuration of a product throughout the product life cycle.

### 3.6.5 Data Accession List (DAL)

The Contractor shall deliver data generated under this contract in support of information, analysis, studies, software code/tools, test procedures, papers, and reports and deliver IAW **CDRL A014**. Data contained in this listing shall include, if applicable, but not limited to: All Contractor generated data.

### 3.7 RELIABILITY

#### 3.7.1 Reliability and Maintainability (R&M) Allocations

The Contractor shall provide allocated requirements and predictions to the system, subsystem, and Line Replaceable Unit (LRU) levels, and shall update and document R&M predictions to address the impact of engineering design changes as a result of corrective actions. The Contractor's maintainability analysis shall address the task times for maintenance performed. The Contractor shall prepare and deliver R&M Allocation and Prediction Reports IAW **CDRL A015**.

#### 3.7.2 Failure Reporting, Analysis, and Corrective Action System (FRACAS)

The Contractor shall establish and implement proactive closed loop FRACAS for managing failure reporting, failure trends, failure analyses, corrective action implementation, review, and closure processes. Failure analysis shall be initiated by the Contractor for all failures that occur throughout production and any Contractor-supported activities, including known failures in the field. The Contractor shall analyze the failure data to identify failure trends, root cause, problem areas and product effectiveness. FRACAS reports shall be detailed down to the lowest level necessary to determine the true root cause of a failure and to assure corrective action has been instituted. The Contractor shall deliver FRACAS Report IAW **CDRL A016**.

### 3.8 QUALITY/PRODUCTION

#### 3.8.1 Quality Management.

The Contractor shall maintain a Quality System IAW ANSI/ISO/ASQ 9001:2008, SAE AS9100, or approved equivalent systems as submitted IAW **CDRL A017**. Any exclusion to the Contractor's Quality Management system shall be noted in the submittal of **CDRL A017**. The Contractor shall provide Government access to quality system procedures, planning and all other documentation and data that comprise the Contractor's Quality System for hardware. The Government will review the documents that comprise the quality system, and may perform any necessary inspections or evaluations to confirm conformance to requirements and adequacy of the quality system.

#### 3.8.2 Quality Assurance Program Plan (QAPP).

The Contractor shall prepare QAPP and provide to the Government for approval. The QAPP shall describe the methodology used throughout all phases of the program (fabrication, test, delivery and post-delivery support) to meet the quality requirements for this program. The QAPP shall maximize the use of existing Contractor policies and procedures. The QAPP shall contain a listing of the procedures that are used to satisfy the Quality Assurance (QA) requirements of the program IAW **CDRL A017**.

#### 3.8.3 Product Acceptance System (PAS)

The Contractor shall maintain a PAS that demonstrates compliance to the technical requirements. The PAS shall address system and subsystem component requirement verification, in-process inspection, and final acceptance testing at all levels, including lower tier Subcontractors and suppliers. The PAS shall identify all end items that require individual Acceptance Test Procedures (ATPs) based on the criticality of the item. The

Government will witness the ATPs being conducted on the first three production ready SFF transponders. At a minimum, the following tests shall be conducted:

Group A Production Tests as detailed in Attachment 2 - Group A tests shall be conducted on all production transponders, including those units supplied as spares IAW MIL-PRF-SFF.

All items shall successfully complete acceptance testing prior to acceptance by the Government and prior to use of the item in any test activity. System level and end item ATPs shall be prepared and submitted IAW **CDRL A018**. End item ATPs and test equipment, including Special Inspection Equipment (SIE) and Special Test Equipment (STE), shall be validated prior to use for delivery of hardware. The Government will participate in the validation of the SIE/STE on the first three production ready SFF transponders. The Contractor shall submit the SIE/STE ATP IAW **CDRL A019**. The Contractor shall prepare a Test/Inspection Report after SIE/STE validation for Government approval. The Contractor shall submit IAW **CDRL A020**.

Changes to ATPs will be approved by the Government. The Contractor shall notify the Government in writing of any changes to equipment, vendor changes, line relocations, production disruptions, or downtime exceeding 12 months for review and determination of revalidation requirements. The ATPs shall be assessed and updated with any of these changes, as necessary IAW the applicable CDRL.

### 3.9 LOGISTICS SUPPORT

#### 3.9.1 Technical Manual (TM)

The Contractor shall deliver a TM in compliance with MIL-STD-40051/2 IAW **CDRL A021**. The TM shall be updated and revised after contractual implementation of any ECP, as required.

#### 3.9.2 Bill of Materials (BOM)

The Contractor shall provide a BOM representing the current configuration of the end item down to and including the lowest component level, vendor part number, and source of supply IAW **CDRL A004**. The BOM shall be updated as required for configuration changes, and obsolescence issues requiring alternate parts.

#### 3.9.3 Nomenclature, Identification Plates, and Serial Numbers

The Contractor shall update and maintain the current identification plates and serial numbers marking program. The Contractor shall be responsible for obtaining the product nomenclature. The Government will own the configuration of the nomenclature. A report of Assignment of Serial Number and Approval of Identification Plates shall be submitted when required IAW **CDRL A004**.

#### 3.9.4 Test Set

The Contractor shall prepare all organizational and intermediate level test and maintenance procedures using the Army approved TS-4530A/UPM Radar Test Set. Contractor shall also maximize the use of existing DoD Automated Test Equipment for Depot level testing prior to developing any new test equipment solutions. The

Government reserves the right to observe and participate in the analysis, testing or integration of any test equipment.

### 3.9.5 Warranty Program

The Contractor's warranty terms shall cover all SFF transponders delivered under this contract for a period of three years. The specific warranty provisions are provided in the contract terms and conditions. The warranty period shall begin upon the date of hardware acceptance by the Government. A warranty technical bulletin with specific warranty implementation procedures shall be prepared and submitted IAW **CDRL A004**. The Contractor shall perform Repair Status reporting that document all the repair/replacement actions occurring under this warranty and deliver IAW **CDRL A004**.

### 3.9.6 Training

The Contractor shall prepare and deliver courseware material to support the following training: Operator, Maintenance, Troubleshooting, Theory of Operation, Maintenance Operational Checkout (MOC), and Routing/Repair Inspections IAW **CDRL A004**. The Contractor shall conduct training at the Contractor's facility for the Government and Advisory and Assistance Services Contractors (A&ASC). The training shall not exceed forty hours per student for fifteen students.

### 3.10 Security Requirements

The Contractor shall implement and maintain security procedures and controls to prevent unauthorized disclosure of controlled unclassified and classified information and to control distribution of controlled unclassified and classified information in accordance with the National Industrial Security Program Operating Manual (NISPOM) and DoDM 5200.01, Information Security Manual. The DoD Contract Security Classification Specification, DD Form 254, Attachment 4 defines program specific security requirements. All controlled unclassified information shall be appropriately identified and marked as For Official Use Only in accordance with DoDM 5200.01, Information Security Program: Controlled Unclassified Information (CUI) Volume 4 (enclosure 3) and DoD 5400.7-R (Freedom of Information Act Regulation) (Chapter 3). All Contractor facilities shall provide an appropriate means of storage for controlled unclassified and classified documents, equipment, and materials in accordance with Operations Security (OPSEC) requirements.

For Official Use Only information generated and/or provided under this contract shall be marked and safeguarded as specified in DoDM 5200.01 (DoD Information Security Program: Controlled Unclassified Information (CUI)) Vol. 4 (enclosure 3 pages 11-17) available at [http://www.dtic.mil/whs/directives/corres/pdf/520001\\_vol4.pdf](http://www.dtic.mil/whs/directives/corres/pdf/520001_vol4.pdf) and DoD 5400.7-R, Freedom of Information Program Chapter 3 (pages 31-42) available at <http://www.dtic.mil/whs/directives/corres/pdf/540007r.pdf>.

All controlled unclassified technical information shall be appropriately identified and marked with the distribution statement identified on the source document or directed by

the Procuring Contracting Officer (PCO).

Operations Security (OPSEC): The Contractor shall develop, implement, and maintain an OPSEC program to protect controlled unclassified and classified activities, information, equipment, and material used or developed by the Contractor and any Subcontractor during performance of the contract. The Contractor shall be responsible for the Subcontractor implementation of the OPSEC requirements. This program may include Information

Assurance and Communications Security (COMSEC). The OPSEC program shall be in accordance with National Security Decision Directive (NSDD) 298, and at a minimum shall include:

- 1) Assignment of responsibility for OPSEC direction and implementation.
- 2) Issuance of procedures and planning guidance for the use of OPSEC techniques to identify vulnerabilities and apply applicable countermeasures.
- 3) Establishment of OPSEC education and awareness training.
- 4) Provisions for management, annual review, and evaluation of OPSEC programs.
- 5) Flow down of OPSEC requirements to Subcontractors when applicable.

The Contractor shall prepare an Operations Security Plan for Government review in accordance with the **CDRL A022**.

### 3.11 Information Assurance (IA)

#### 3.11.1 IA Requirements

The Contractor shall ensure the SFF IFF Transponder is in compliance with all applicable Information Assurance (IA) requirements as defined in DoDD 8500.0IE, DoDI 8500.2, DoDI 8520.2, DODI 5000.02, DODI 8580.1, SECNAVINST 5239.3B, SECNAVINST 5239.3A, OMB A-130, Appendix III, and DON CIO Memo, Information Assurance Policy for Platform IT, dated 26 April 2010.

#### 3.11.2 IA Accreditation Documentation.

The Contractor shall provide technical data required to document Information Assurance Accreditation compliance so the Government may pursue and maintain a Platform Information Technology (PIT) Risk Approval (PRA) IAW **CDRL A023**. Data submitted by the Contractor shall include at minimum, system descriptions, system diagrams of all IT components of the system, PIT boundary IT interface information and IT ports, protocols and services required for any connectivity external to the SFF IFF Transponder.

#### 3.11.3 IA Accreditation Assessment.

The Contractor shall furnish test reports, system scans or compliance results upon request to support the accreditation assessments IAW **CDRL A004**.