

ACTIVE RADIO FREQUENCY IDENTIFICATION-IV (aRFID-V)

SPECIFICATIONS AND PERFORMANCE WORK STATEMENT (PWS)

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1. Scope

The mission of Product Lead Automated Movement Identification Solutions (PL AMIS) is to provide contract vehicles for procurement and technical expertise across the suite of Automatic Identification Technology (AIT) enabling technologies that support focused logistics, Total Asset Visibility (TAV), and the integration of global supply chains. The Radio Frequency Identification-V (RFID-V) contract provides interoperable ISO/IEC 18000-7:2014 compliant active RFID (aRFID) hardware (which has Intellectual Property declarations), software, documentation, and Technical Engineering Services (TES) to authorized users worldwide.

1.1. Radio Frequency Identification Acquisition Objectives.

The objective of aRFID-V acquisition is to provide a state-of-the-art, common, integrated structure for logistic tracking, locating, and health monitoring of commodities and assets. In addition, Item Unique Identification (IUID) marking, data collection, storage information, retrieval methods, information processing, and transmission of transponder data greatly enhances systems within the DOD. The aRFID technology provides standardization and interoperability among Government users of aRFID components purchased from this contract. All aRFID hardware and software acquired under this contract shall be compliant with ISO 18000-7:2014 standards and the DoD Interoperability Guidelines.

1.2. Descriptions and Specifications.

This Description and Specification sets forth the requirements for the aRFID-V technology acquisition. The contract shall provide for commercial communications hardware, software, documentation, TES, and warranty services to provide a common, integrated structure for logistics tracking, locating, and monitoring of assets and IUID marking. For the purposes of this contract, aRFID components are those commercially available items necessary for Radio Frequency Identification, the tracking of tagged commodities and assets, data collection, keyless data entry, data processing, and data storage and retrieval. The aRFID-V contract will provide aRFID hardware and software that will be used in fixed and mobile installations.

- a) The aRFID-V requirements include microprocessor-based, Radio Frequency Identification hardware, software, data communications, TES and warranty services and turn-key integration services, to include: aRFID Technology and Fixed Interrogators; Tablet Interrogator Transit Case Groups; Satellite Modems; LAN Connectivity Devices; Rechargeable Batteries and Battery Chargers; Software (Configuration/Operational Software for PCs; Configuration/Operational Software for Tablet Interrogators); upgrades and updates to all delivered Software; Separately Orderable Components; Contractor-provided TES (Installation, De-installation, and Relocation of RFID components); Middleware Development Services; Commercially available Middleware; System Integration IUID marking and Implementation Support services; Software Development Services; and Warranty Services.
- b) Turnkey solutions, integrating technology purchased under the aRFID-V

Contracts with existing Government provided AIT and Passive RFID, shall be provided under TES Task Orders to provide a transparent solution to the user. To support the warfighter in field operations, the aRFID-V contract shall also provide transit cases to safely transport aRFID equipment and related accessories required to install and operate aRFID equipment. The aRFID equipment is required to meet worldwide Department of Defense (DoD) and U.S. Coast Guard, North Atlantic Treaty Organization (NATO), Coalition Partners, and other Federal Agencies needs in various CONUS and OCONUS locations. Since DoD components have shared RFID technology with Allied partners in joint operations, such as Resolute Support and Operation Inherent Resolve, the aRFID-V contract will be available for orders to meet Foreign Military Sales (FMS) requirements in order to provide interoperability for logistics support with Allies.

- c) The Government reserves the right to purchase In-Transit Visibility data related to DoD-owned RFID tags through the contract that are collected by OCONUS sites within the Contractor's commercial RFID networks to support missions that require deployment to worldwide areas that restrict DoD operations. In the event the Government has a requirement to purchase in-transit visibility data related to DoD-owned RFID tags through the contract, the Contracting Officer (KO) will request a CCP, and the Contractor shall submit a CCP in accordance with (IAW) Section 7 of the PWS.

1.3. General.

The Government intends to use aRFID technology in applications that demand performance on a higher level than that available with bar code and other automated data storage and retrieval technologies. The aRFID Transponders will be affixed to assets or other objects of interest to capture and transmit varying amounts of data, which is stored and processed. The Government will use aRFID Interrogators to communicate with Transponders through RF energy. The Interrogator shall read information from all transponders and write information to transponders with a read/write function. This feature enables a user to locate, track, and monitor the status of a Transponder and its associated commodity and asset, or to alter the data stored in a Transponder. Interrogators, Transponders, and RF Relays may be linked together to create a RFID system network.

1.4. RFID Applications.

Some anticipated applications of aRFID technology include, but are not limited to:

- a) Inventory and warehousing environments;
- b) Large open-area storage facilities (e.g., austere marshaling areas, and staging and assembly areas), with or without electrical power or an established communications infrastructure;
- c) The control of maintenance, repair, and tracking facilities;
- d) The control of entry and exit points of military facilities and roadside installations;
- e) Restricted office and laboratory environments;
- f) The control of transactions at custody exchange points (e.g., weapons issue

- facilities);
- g) The military transportation community (e.g., seaports and air terminals) and petroleum distribution points (including fueling operations at airports, in-flight, and at sea);
 - h) The handling of perishables (e.g., medical supplies, foods, and other items sensitive to temperature changes);
 - i) The handling of hazardous, explosive, or otherwise regulated materials;
 - j) The control of military convoys;
 - k) Health and intrusion monitoring (i.e., sensor technology: temperature, shock, humidity, light, and door alarms); and
 - l) Tracking Government-owned commodities and assets.

1.5. World-Wide Geographic Support.

The Government requires equipment that can be used worldwide. The Contractor shall provide Active RFID hardware, software, warranty services, and TES to support the DoD operations in U.S. Northern Command (USNORTHCOM), U.S. Indo-Pacific Command (USINDOPACOM), U.S. Central Command (USCENTCOM), U.S. European Command (USEUCOM), U.S. Southern Command (USSOUTHCOM), and U.S. Africa Command (AFRICOM).

1.6. Restriction of Hazardous Substances.

When required, hardware provided under the contract shall comply with ANSI/ISA-12.12.01-2015 of the International Society of Automation on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

1.7. Official Hours of Operation.

The scope of services can be world-wide. The Contractor shall provide support during local Official Hours of Operation, based on the geographic location of the Government site at which the support is required. Official Hours of Operation are normally from 8:00 a.m. to 5:00 p.m. local time, Monday through Friday, excluding U.S. Federal holidays, for each Government facility possessing aRFID-V components.

Help Desk requirements are specified in the paragraph entitled "Toll-Free Customer Support Help Desk."

1.8. Attachments and Exhibits.

The following is a list of Exhibits and Attachments associated with this PWS and incorporated into contract (reference solicitation Section J, List of Attachments):

- Exhibit A, CDRL A001, "Contract Data Requirements List" - Template/Format, aRFID-V Monthly Sales and Status Report
- Exhibit B, Antiterrorism/Operations Security Requirements

Attachment 0001, DoD Over Air Interface Guidelines

Attachment 0002, DoD Transponder Barcode Labeling Guidelines
Attachment 0003, DoD Transponder Hardwire Electrical Interface and Data Protocol
Attachment 0004, Description of DoD ISO-18000-7 Hardwire Reference Driver
Attachment 0005, DoD Interoperability Guidelines for the Over Air Interface
Attachment 0006, Description of DoD Table Manager Module (TMM)
Attachment 0007, DoD Table Manager Module Developers Guide
Attachment 0008, DoD Active RFID Common Abstraction Interface Developer's Guide
Attachment 0009, DoD Active RFID Common Abstraction Interface Developer's Guide Java
Attachment 0010, DoD Routing Code Guidelines
Attachment 0011, DoD Transponder Battery Guidelines
Attachment 0012, aRFID-V Software Functional Requirements
Attachment 0013, JD TAV2-5 RF Tag Format Version 2.5 (ISO Tables)
Attachment 0014, Post Award Product Testing Process
Attachment 0015, aRFID-V ITV Server Interface Document
Attachment 0016, Standard Cables and Connectors for Active Fixed Interrogator

2. Applicable Documents, Definitions, and Acronyms

2.1. Federal Information Processing Standards.

Copies of the Federal Information Processing Standards (FIPS) may be obtained from:

U.S. Department of Commerce National Technical Information
Service
5285 Port Royal Road
Springfield, VA 21861
Telephone: 1-800-553-6847

2.2. American National Standards Institute.

Copies of ANSI standards may be obtained from:

American National Standards Institute
25 West 43rd Street 4th Floor
New York, NY 10036

Customer Service or Document Sales 8:30am – 6:00pm EST
Telephone: 1-182-642-4980

<http://www.ansi.org>

2.3. International Organization for Standardization.

Copies of ISO standards may be obtained from:

<http://www.iso.org/iso/home.htm>

2.4. Federal Communication Commission Regulations.

Federal Communications Commission Regulations may be obtained from the Government Printing Office web site:

<http://bookstore.gpo.gov>

2.5. UID and IUID Policy.

Current Policy and associated standards, guides and supplier tips for Item Unique Identification (IUID) of Tangible Items may be obtained from the AMIS website at:

<http://www.usarmyamis.army.mil/AIT.html>.

<http://www.acq.osd.mil/dpap/pdi/uid/index.html>

2.6. Definition of Terms.

The following are definitions of terms used in this PWS. All other definitions and meanings used in this PWS shall be those that are commonly used in the Radio Frequency Identification Technology industry.

Continental United States (CONUS): All locations and sites within the 48 contiguous United States.

Industrially Hardened Components: Components that can operate in a warehouse or manufacturing setting and survive the rough treatment and handling often found in shipping areas, loading docks, catwalks, ladders, or on the floor of a manufacturing facility.

Mission Oriented Protective Posture (MOPP) Gear: Protective gear worn for a wide spectrum of environmental conditions, including, but are not limited to, extreme cold, heat, rain, snow, salt, fog, blowing dust or sand, and biological or chemical agents.

Outside Continental United States (OCONUS): All locations outside the 48 contiguous States of the U.S. OCONUS locations, including, but are not limited to, Alaska, Hawaii, U.S. Territories and Possessions, Europe, Asia, Africa, and Australia.

Order: The term "order," as used in this PWS, refers to a Delivery Order, Task Order, or Purchase Card Order.

Return Material Authorization (RMA): A number assigned by the Contractor and furnished to the aRFID-V user to assist in quickly ascertaining the status of components returned for warranty service.

Workday: Monday through Friday, excluding U.S. Federal holidays.

2.7. Acronyms.

The following are acronyms used in this PWS:

AC	Alternating Current
ANSI	American National Standards Institute
aRFID	Active Radio Frequency Identification
ASCII	American Standard Code for Information Interchange
CAI	Common Abstraction Interface
CCP	Contract Change Proposal
CLIN	Contract Line Item Number
CONUS	Continental United States
COR	Contracting Officer's Representative
DC	Direct Current
DISR	Defense Information Standards Registry
DOD	Department of Defense
EC	Engineering Change
EED	Electro-Explosive Devices
FCA	Functional Configuration Audit
FCC	Federal Communications Commission
FDU	Field Data Unit
FMS	Foreign Military Sales
HERO	Hazards of Electromagnetic Radiation to Ordnance
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
IUID	Item Unique Identification
IP	International Protection rating
IPT	Integrated Product Team
KO	Contracting Officer
LAN	Local Area Network
MESR	Monthly Equipment Service Report
MOPP	Mission Oriented Protective Posture
NEMA	National Electrical Manufacturer's Association
NEC	National Electrical Code
NI	Non-Incendive OCONUS
OEM	Original Equipment Manufacturer
PC	Personal Computer
PCA	Physical Configuration Audit
PL	Product Lead
PDK	Portable Deployment Kit
PPR	Project Progress Review

PWS	Performance Work Statement
RC	Repair Center
RAM	Random Access Memory
RFID	Radio Frequency Identification
RFP	Request for Proposal
ROM	Read-Only Memory
RMA	Return Material Authorization
SQL	Structured Query Language
SLIN	Sub-line item number
TES	Technical Engineering Services
UID	Unique Identification
USB	Universal Serial Bus

3. RFID System Requirements

3.1. General

The Contractor shall provide all necessary RFID hardware, software, data communications, cables, connectors, peripherals, training, installation support services, TES, and documentation to operate and maintain the RFID Configurations, as stated in this PWS. Because of the diversity of applications, the Contractor shall provide the TES necessary to configure, install, interface, and integrate the appropriate hardware and software to satisfy specified applications. The Government requires equipment that supports the requirements of the Joint Technical Architecture. The Government requires Contractor support during Official Hours of Operations (reference PWS Section 1.7). Active RFID-V equipment and its components shall operate in worldwide locations and in the identified environments. The equipment shall conform to required industry standards, where applicable. The equipment shall be compatible with and support U.S. and Host Nation Country power and radio frequency requirements. Transit Case Groups are required to support missions that require rapid deployment worldwide of groups of aRFID-V equipment. Satellite Communications shall be provided to allow users the alternative to communicate worldwide in real-time using a single approved frequency between RFID System components and possible host reporting stations. The Government requires commercial software packages and software for application development. Program Management is required to support the Government's efficient execution of this contract. Warranty services are required to ensure the operational availability of aRFID-V equipment. Technical Engineering Services are required to help the Government incorporate aRFID-V equipment into its applications. Training and documentation are required to inform and educate the Government users.

3.2. DoD Interoperability Requirements

Attachments 0001 through 0016, listed in PWS Section 1.8 "Attachments and Exhibits," specify the requirements to achieve interoperability for all aRFID transponders acquired through the aRFID-V contract. These documents are collectively referred to as the "DoD Interoperability Requirements."

3.3. Electromagnetic Environment

Commercial aRFID-V equipment may be used in the vicinity of spectrum-dependent devices that receive low-level signals and/or transmit high-level signals (see MIL-STD-464C, Interface Standard for Systems Electromagnetic Environmental Effects, and MIL-STD-461G, Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment). In order to certify the use of commercial aRFID-V equipment in these environments, the Government may subject representative categories of equipment to radiated emission and susceptibility tests (see MIL-STD-461G, Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment). The Contractor shall support Government-testing efforts by providing technical data sheets and responding to requests from the Contracting Officer's Representative (COR) for additional data.

3.4. Hazardous Environment

Where specifically required in this PWS, the Contractor shall provide equipment that is identified and certified as Non-Incendive (NI) for operation in environments where flammable and explosive gases and vapors may be present. At a minimum, the following NI requirements shall be met:

Class 1	(Gases and Vapors)
Division 2	(Not present in normal operation)
Groups:	
A	(Acetylene)
B	(Hydrogen)
C	(Ethyl Ether, Ethylene)
D	(Acetone, Ammonia, Benzene, Butane, Cyclopropane, Ethanol, Gasoline, Hexane, Methanol, Methane, Natural Gas, Naphtha, Propane)
Class 2	(Combustible Dust)
Division 2	(Not present in normal operation)
Groups:	
F	(Combustible carbonaceous dusts)
G	(All other combustible dusts, such as grain dust)
Class 3	(Easily Ignitable Fibers)
Division 2	(Not present in normal operation)

NI is a rating classification of equipment specifically defined in the National Electrical Code (NEC). To be given an NI rating, the Contractor shall have demonstrated that equipment cannot, under normal operation, produce a spark or other undesirable effects that might cause combustion in any potentially hazardous environment. The presence of gases, vapors, flammable liquids, combustible dust, or ignitable fiber or filings are examples of potentially hazardous environments. An approved testing laboratory meeting Occupation

Safety Hazards Act (OSHA) standards shall certify the equipment. Circuits shall not produce a spark under normal operation. Active RFID–V equipment may be used under conventional, chemical, or biological warfare conditions. The Contractor shall label components that are approved for use in a hazardous environment IAW governing body markings.

3.5. Ordnance Environment

3.5.1. Environment

Active RFID–V equipment may be used in the vicinity of ordnance susceptible to radiated energy. In order to certify that aRFID-V equipment is safe to use in these environments, the Government will select and subject a single item from each pertinent aRFID-V equipment category to stringent Hazards of Electromagnetic Radiation to Ordnance (HERO) environment testing (see MIL-STD 464C or latest version).

3.5.2. Testing

Each aRFID-V item tested shall successfully complete HERO testing prior to being made available for ordering on the aRFID-V contract, to include equipment added to the contract after contract award. The aRFID-V Contractor shall be responsible for providing any and all support required to successfully complete HERO testing for their equipment at the direction of the Government COR at no additional cost to the Government. Contractor may be required to provide on-site support at the Government test facility (USN Dahlgren Laboratory) to support testing. The Government will bear the cost of the initial testing for each aRFID-V hardware item. All subsequent testing costs due to failure of an item to meet the HERO requirements shall be the responsibility of the Contractor. Active Transponders shall be safe to use as close as one inch or less, and Active Interrogators shall be safe to use as close as five inches or less from unshielded munitions that contain 10 mA No-Fire Current, Electro-Explosive Devices (EEDs).

3.5.3. Safety

A determination of the required safe separation distance can be made by referring to the graph, entitled Safe “Separation Distance Between a RF Source and Unshielded Munitions Containing 10 mA No-Fire Current Electro-Explosive Devices (EEDs),” as identified in **NAVSEA OP 3565 VOLUME 2 NINETEENTH REVISION**.

Although many ordnance items have no EEDs, and other items have EEDs that are less sensitive to RF energy, this requirement represents a worst-case scenario that ensures safe operation around what is frequently unknown ordnance (unknown to transporters and others).

3.5.4. Label

All Interrogators, Transponders, and other hardware that emit RF delivered to the Government under the aRFID-V contract shall be furnished with a warning label that clearly indicates the safe separation distance that shall be maintained between

ordnance and the irradiating source.

3.6. Spectrum Supportability Compliance

- a) The DOD will obtain spectrum supportability guidance and approvals prior to procuring equipment that is designed to either transmit or receive electromagnetic (radio frequency) energy. Spectrum supportability includes spectrum certification, frequency assignments, and host nation coordination where employment of the system or equipment is planned. Radio frequency dependent components of the proposed system shall comply with applicable DoD, national, and international spectrum management policies and regulations to include spectrum certification IAW DoD Instruction 4650.01, Policy and Procedures for Management and Use of the Electromagnetic Spectrum, and DoD Directive 5000.01, The Defense Acquisition System.
- b) Frequency allocation shall be documented with a DD Form 1494 (APPLICATION FOR EQUIPMENT FREQUENCY ALLOCATION) and/or a "Note to Holder," as appropriate. The Contractor shall provide the technical data required to complete the spectrum supportability process, including information concerning specifications and testing of the transmitter, receiver, and antenna characteristics necessary for host nation coordination. The Contractor shall provide the technical support necessary to complete the DD Form 1494 no later than **30 calendar days** after the contract effective date or approval of a CCP to add or replace applicable items on the contract. All Contractor-provided spectrum supportability compliance support shall be provided at no additional cost to the Government.

3.7. Rugged Environment

Active RFID-V hardware will be used by the Government in "rugged environments" (i.e., industrial and field settings under temperate, arctic, maritime, desert, and tropical conditions). The words "rugged" or "ruggedized," when used in this PWS, mean that the Government requires aRFID-V hardware that is industrially hardened, designed, built, and tested to ensure reliable and continuous performance in all rugged and austere environments. In this environment, aRFID-V components may be subjected to rough handling, continuous operational use, vibration, dropping onto hard surfaces, and shock caused by transportation over rough terrain.

3.8. Original Equipment Manufacturer Engineering Changes

All Original Equipment Manufacturer (OEM)-sponsored Engineering Changes (ECs) adopted prior to the date of contract award shall be incorporated into the hardware, software, and firmware delivered under this contract.

3.9. Connectivity to Government-Owned Computers

The Government currently uses a wide variety of Intel/AMD processor-based computers running Microsoft Windows operating systems that shall be connected to the Contractor-provided RFID components. Connections shall be IAW standard protocols (e.g., RS-232, RS-485, USB.2.0 or higher, and TCP/IP).

3.10. AC/DC Power Requirements

3.10.1. Power Requirements

- a. The Contractor shall provide equipment designed and certified to meet the quality and safety standards of Underwriters Laboratory (UL) or equivalent certification.
- b. All aRFID-V components shall be compatible with the power supply, and power outlets or connectors, for the geographic area in which they are to be operated, as specified in the order.
- c. The Contractor shall also provide all necessary and appropriate Adapter Connector (AC) plug adapters (when required for AC operation) for aRFID components that are delivered. AC plug adapters are exempt from UL or equivalent certification.

3.10.2. Power Supplies

- a. aRFID-V devices and printers shall, to the extent available, automatically enter a low-power mode after a period of inactivity and automatically return to active mode upon resumption of system activity or receipt of external input.
- b. aRFID-V devices and printers shall be shipped with the power management feature enabled.
- c. The power supplies and ACs (when required for AC operation) shall be of a type to prevent damage to the device when transient high voltage is present.
- d. The Contractor shall provide a single unit to convert the plug type to one that is required by the country where the equipment will be operated.
- e. The power supplies and AC plug adapters shall be appropriately marked to indicate the product's safety and quality.

3.10.3. Rechargeable Batteries

Assuming 20 minutes of Interrogator-Transponder communication time each hour, the Rechargeable Batteries shall provide sufficient capacity to allow a minimum of four hours of continuous Interrogator operation.

- a. Rechargeable Batteries shall not require discharge in order to attain full functionality and total rated battery capacity.
- b. The Government desires Rechargeable Batteries that are rechargeable without removal from RFID components.
- c. All Rechargeable Batteries shall be user-replaceable by hand or with the use of commonly available tools.
- d. The Contractor shall provide Battery Chargers as Separately Orderable Components.
- e. Battery Chargers shall be designed to charge a minimum of a single battery set.
- f. Battery Chargers may be designed to concurrently charge multiple battery sets.

3.10.4. Retention of Configuration Settings

The Contractor shall provide a method to maintain the configuration settings within all applicable aRFID-V equipment.

3.10.5. Battery Protection

The Contractor shall provide a methodology to prevent premature battery depletion while in shipment or in storage before initial use for any device containing non-rechargeable batteries.

3.11. Accessibility

- a. The Contractor shall provide a comprehensive list of all offered Electronic and Information Technology (EIT) products (supplies and services) that fully comply with Section 508 of the Rehabilitation Act and Section 255 of the Communications Act, as set forth at Title 36 Code of Federal Regulations (CFR) Part 1194. The Contractor shall clearly indicate where this list, with full details of compliance, can be found (e.g., Contractor, Subcontractor, vendor, or other exact web page location). The Contractor shall ensure that the list is easily accessible by typical users no later than **five (5) calendar days** after the contract effective date. The Contractor shall maintain this detailed listing of compliant products for the life of the contract, including all forms of extensions, and shall ensure that the detailed listing is updated no later than **three (3) calendar days** after changes are made to the Contractor's, Subcontractor's, or vendor's product line.
- b. The Contractor shall ensure that all EIT products that are less than fully compliant are the most compliant products and services available to satisfy all contract requirements.
- c. For every EIT product provided under this contract that does not comply with Title 36 CFR Part 1194, the Contractor shall, at the discretion of the Government, replace or upgrade it with a compliant product or service, when commercially available at no additional cost to the Government.

3.12. Equipment Delivery Requirements

The Contractor shall provide all necessary software, cables, connectors, drivers, essential accessories, and ancillary items in order to make each deliverable hardware item fully operational. Software applications shall be pre-loaded to the hardware to meet the requirement of this contract. The Contractor shall deliver all hardware and software items to the destination specified in the order within **60 calendar days** after the date of the order, with the exception of the following:

- a. **Fixed Interrogators (CLIIN X001) and Iridium Modem (CLIN X007AA) - 75 calendar days** after the date of the order;
- b. **PDK III (CLIN X008) - 90 calendar days** after the date of the order;
- c. **Active RFID Transponders w/ DLA Labels (CLINS X006AA-X006AH and X006AK) - 90 calendar days** after the date of the order;
- d. **Active RFID Transponders w/ DLA Labels (CLIN X006AJ) - 90 calendar days** after the date of the order for quantity of 1-5,000; and **110 calendar days** after the date of order for orders greater than 5,000.

3.13. Expedited Delivery Requirements

Contractor shall provide expedited delivery for CONUS and OCONUS locations when required and specified in the equipment orders. The price and delivery time for expedited delivery shall be negotiated on a firm-fixed price basis, subject to product availability and timeliness. The Contractor's objective delivery of products to the destination is within **seven (7) calendar days** after the date of award for CONUS orders, and within **fourteen (14) calendar days** after the date of award for OCONUS order, unless other terms are negotiated and specified in the order. Expedited deliveries not requested by the Government will be acceptable if at no additional cost to the Government and the Government is notified of the early delivery. Prior approval is required for partial deliveries.

3.14. Item Unique Identification

- a. Applicable items, as identified in the Defense Federal Acquisition Regulation Supplement (DFARS) 252.211-7003, Item Identification and Valuation (Mar 2016) clause, shall be permanently marked with Item Unique Identification (IUID) IAW MIL-STD-130N_CHG-1, Department of Defense Standard Practice: Identification Marking of US Military Property, and Version 3.0 of the DoD Guide to Uniquely Identifying Items. If an original part number is used as a component of the Unique Item Identifier (UII), it shall be the identifier assigned by the enterprise at item creation. The required Error Correction Code 200 Data Matrix item marks containing the unique identification data shall be verified and validated as prescribed by MIL-STD-130N_CHG-1. The Contractor shall deliver an IUID Marking Activity, Validation and Verification Report (DI-MGMT-81804A) to the COR prior to or concurrent with the delivery of each IUID-marked first article. The DI-MGMT-81804A will report the results of verification and validation of the item mark. Items requiring IUID and with required marks absent or failing either verification or validation shall not be offered for Government acceptance.
- b. Packaging of items bearing IUID shall be marked as prescribed by MIL-STD-129 **latest version**, Department of Defense Standard Practice: Military Marking for Shipment and Storage (latest version). Machine readable packaging mark information shall be checked for readability and validated using either MIL-STD-129 **latest version** for validation software or a manual validation process. Instructions for manual validation may be downloaded from <https://www.usarmyamis.army.mil/iuid.html>. Within **30 calendar days** of the contract effective date, the Contractor shall notify the COR that the packaging of IUID items will be marked as prescribed in the latest version of MIL-STD-129 and validated. Contractors shall use the receiving report capability of WAWF to register the IUID of those end items (CLINs) requiring IUID, to include Government purchase card (GPC) orders. The Contractor may use alternate methods prescribed by DFARS 252.211-7003 for registering embedded items that require IUID

3.15. aRFID Transponders and Magnet Mounts/Mounting Brackets with Labels

The Government has the following packaging and marking requirements for some of

Active RFID Transponders and their associated Magnet Mounts/Mounting Brackets, as identified in Section B – Supplies or Services and Prices/Costs (Summary of CLIN/SLIN Structure):

- a. The Contractor shall package the items IAW MIL-STD-2073_1E_CHG-1, as follows: Method of Preservation code 10 (physical protection), Unit Container code A2 (limited to plastic bag/sack), and Intermediate Containers code D3 (ASTM-D5118, folding, metal edged, setup or fiberboard box).
- b. The Contractor shall label each **unit pack**, intermediate container and **exterior** container IAW **the latest version MIL-STD-129**. The Contractor shall ensure that the labels are clear and readable. Labels shall be white with black printing.
- c. The Contractor shall mark the NSN on the bare tag in code 39 barcode IAW MIL-STD-130N_CHG-1), and with the NSN in human readable text, when applicable. NOTE: The NSN mark shall be on the tag itself, not the mount or bracket.
- d. The Contractor shall comply with the following special packaging instructions for material/equipment containing small lithium batteries:

The outer packaging shall be marked, "PRIMARY LITHIUM BATTERIES—FORBIDDEN FOR TRANSPORT ABOARD PASSENGER AIRCRAFT," IAW Title 49 CFR 173.185 and labeled with the following HAZMAT warning:



3.16. IPV6 Capable Assets

The Contractor shall warrant that each item delivered under the aRFID-V contract shall accurately transmit, receive, process, and function using the Internet Protocol Version 6 (IPv6). Specifically, the Contractor warrants that:

- 1) Each item delivered complies with the current DISR developed IPv6 standards profile;
- 2) Each item delivered maintains interoperability with IPv4 (i.e., it shall operate on/coexist on a network supporting IPv4 only, IPv6 only, or a hybrid of IPv4 and IPv6); and
- 3) Each item delivered is supported by the Contractor's IPv6 technical support.

Additionally, as IPv6 evolves, the Contractor shall upgrade or provide an appropriate migration path for each item delivered. The duration of this warranty and the remedies available to the Government for breach of this warranty shall be as defined in, and subject to, the terms and limitations of the Contractor's standard commercial warranty or warranties contained in this contract, provided that the remedies available to the Government under this warranty shall include repair or replacement of any product whose non-compliance is discovered and made known to the Contractor no later than one year after acceptance, notwithstanding any provision(s) to the contrary in such commercial warranty or warranties. Nothing in this warranty shall be construed to limit any rights or remedies the Government shall otherwise have under this aRFID-V contract with respect to defects other than IPv6 performance.

4. RFID Equipment Requirements

4.1. The aRFID Class Configuration

4.1.1. General Requirements

- a. The Contractor shall provide aRFID Interrogators that provide an over air interface that conforms to ISO/IEC 18000-7:2014 Standards and the DoD Interoperability Requirements, and provides Global Positioning System (GPS) location coordinates.
- b. All Contractor-provided aRFID Interrogators shall have an outdoor omnidirectional, non-obstructed, active RFID read and write range of at least 300 feet, except as otherwise specified, with a configurable RF transmit power to allow a maximum radiated power to meet local regulations, and a manufacturer-provided table or formula to provide guidance to the installer.
- c. Active Interrogators shall operate with non-line-of-sight communication with active transponders.
- d. All aRFID interrogators shall discriminate among and communicate with any one Active Transponder among many.
- e. Active Interrogators shall manage at least 250 non-moving active transponders within the communication range of the Interrogator.
- f. Active Interrogators shall simultaneously search for user-specified data among multiple Active Transponders. Interrogators shall interface with Contractor-provided RF Relays to extend the range of the RF signal. The Contractor shall provide the fastest possible data transfer rate, using both RF and Transponder Hardwire Electrical Interface cable connections to ensure timely transmission of data between the host computer and transponder(s).
- g. The Contractor shall certify that the static effective RF data transfer rates between Active Interrogators and Active Transponders is at least 2400 BPS during periods of actual data transmission.
- h. Active Fixed Interrogators shall, at a minimum, collect at least 40 bytes of data per transponder at 25 MPH based on the presence of five (5) "in range" transponders during the collection sequence. When no active transponders are within range, the Active Interrogator and associated software shall be configurable to allow completion

of a single collection cycle within nine seconds (i.e., start of wake-up to last collection retry command), and any additional time required prior to commencing a new collection cycle shall be no longer than nine seconds.

- i. All Contractor-provided aRFID-V Interrogator antenna(s) shall be internal to the interrogator packaging.
- j. All Contractor-provided aRFID-V Interrogators shall be ruggedized (Industrial Hardened) and weatherproof (rain, wind, etc.), and shall comply with the IEC 60529 IP54 rating requirement.
- k. Each interrogator provided under the aRFID-V contract shall be assigned a Unique Infrastructure Device Identifier. The Unique Infrastructure Device Identifier shall have a 48-bit Unique Infrastructure Device Identifier that consists of a 16-bit Manufacturer ID and a 32-bit manufacturer defined Serial Number.
- l. The Manufacturer ID shall be the same Manufacturer ID assigned to each of the manufacturer's transponders IAW the ISO/IEC 18000-7:2014 Standard.
- m. The 48-bit Unique Infrastructure Device Identifier shall have the Manufacturer ID in the most significant 16-bits, with the Serial Number occupying the least significant 32-bits.
- n. The Unique Infrastructure Device Identifier number shall be translated into a single 15 digit (maximum) decimal number, without leading zeros; visible on the exterior of the interrogator; and readable through the Common Abstraction Interface (CAI) IAW "DoD RFID Common Abstraction Interface Developer's Guide Java" (reference solicitation Section J, Attachment 0009) and "DoD Transponder Bar Code Labeling Guidelines" (reference solicitation Section J, Attachment 0002).

4.1.2. Environment

- a. The Government requires Software that shall support, at a minimum, Windows-compatible PCs with the following operating systems: Windows 10, or the most current approved version of the operating system, to include the most recent Service Packs, patches and updates.
- b. The operating system on the Tablet Interrogators shall be an IA compliant Windows Operating System (i.e., Windows 10 or the most current version of the operating system).

4.1.3. Application Software and Software Development Kit

The Contractor shall provide the following software items:

- a. Fixed Interrogator Read Application
A PC software application that allows the operator to configure an FDU / interrogator(s) to a fixed read station. It will perform periodic collection of transponders, sending collection results to the ITV server on a periodic basis, which could be different from the collection period. Multiple connected interrogators shall be supported, and may be configured to be wake up only, wake up and collect, or collect only. The application should also support registration of the fixed read station with the ITV server (before results can be sent up). The software application shall use the GFE RFID middleware (TMM / CAI) for accessing hardware functionality, so that it is not tied to a specific

Contractor's hardware. Additional requirements are captured in "aRFID-V Software Functional Requirements" (reference solicitation Section J, Attachment 0012).

b. Write Station Application

A PC software application that allows an operator to commission transponders. Transponder commissioning can be accomplished using: (1) a USB write cable, (2) a fixed interrogator, or (3) a mobile interrogator pod. The application shall support registration of the write station with the ITV server. It shall support publishing commissioning information to the ITV server (as transponders are commissioned). The software application shall use the GFE RFID middleware (TMM / CAI) for accessing hardware functionality, so that it is not tied to a specific Contractor's hardware. Additional requirements are captured in "aRFID-V Software Functional Requirements" (reference solicitation Section J, Attachment 0012).

c. Tablet Interrogator Application

A Windows 10 or most current O/S software application that allows an operator to: (1) collect and query transponders, (2) act as a mobile choke point (periodic collects), (3) read barcodes (1D and 2D), (4) print MSL labels, (5) commission transponders (change contents), (6) create TAV data+ and write to transponder, and (7) interact with transponders. The application shall support registration of the tablet with the ITV server. It will also support publishing commissioning and transponder read information to the ITV server. The software application shall use the GFE RFID middleware (TMM / CAI) for accessing hardware functionality, so that it is not tied to a specific Contractor's hardware. Additional requirements are captured in "aRFID-V Software Functional Requirements" (reference solicitation Section J, Attachment 0012).

d. Software Development Kit

Software components, control, or class library products that can be used by application developers to build custom applications that allow access to the Contractor-provided RFID hardware outside of what is already defined in the GFE RFID middleware (TMM / CAI). The software development kit shall follow a developer license scheme, with a royalty-free runtime license, as defined below:

- i. A developer license is required by each developer who is developing code and directly using the product (accessing functionality not defined within the TMM / CAI).
- ii. A single developer may install the product on multiple computers, including development, build and test machines. There are no restrictions on the number of applications that may be developed using the product. There are no restrictions on the number of computers on which the product's runtime may be installed.
- iii. All developer licenses include royalty-free runtimes. No runtime licenses are required. This means that the developer may freely distribute the product runtime with an application.

- iv. Additional requirements are captured in “aRFID-V Software Functional Requirements” (reference solicitation Section J, Attachment 0012).

4.1.4. Active Fixed RFID Interrogator

- a. The Active Fixed Interrogator shall have the capability of reporting its GPS position.
 - i. The Active Fixed Interrogator shall acquire its GPS location at Power-Up time, and later, if requested, via a GPS Position Request command.
 - ii. The Active Fixed Interrogator shall report its success or failure in acquiring a GPS Fix and a GPS position in response to a GPS Get Status command.
 - iii. The GPS Position Request and GPS Get Status shall be handled through the DoD CAI.
 - iv. The Active Fixed Interrogator shall be able to acquire its GPS location while in its standard operational orientation.
- b. The Active Fixed RFID Interrogator shall be easily attached and detached in a fixed location.
- c. The Active Fixed Interrogator shall operate at heights up to 30 feet above ground level.
- d. The time interval and definition of the associated number and duration of interrogation cycles shall be user selectable.
- e. The Active Fixed Interrogator shall have a minimum of 128 Kbytes of non-volatile configuration memory.
- f. The Active Fixed Interrogator shall have the following physical Connections: RS-232 (configuration and diagnostics only), RS-485 (required for Contractor defined daisy chain network), and Ethernet. It is desirable that these connectors mate with, and are signal compatible with, existing RF ITV infrastructure cabling. If not compatible, the Active Fixed Interrogator shall come with adaptors to allow it to replace an existing interrogator without changing out power and signal cables IAW “Standard Cables and Connectors for Active Fixed Interrogator” (reference solicitation Section J, Attachment 0016).
- g. The Active Fixed Interrogator shall have a visual power indicator and be operational when power is applied to the interrogator (power on/off shall not be switch operated).
- h. The Active Fixed Interrogator shall be powered by 100V-220V, 50-60 Hz AC, and 12-30V DC vehicle electrical systems, and shall be electrically protected.
 - i. All power connector/cable shall provide a retention lock feature.
 - j. All external connectors shall be protected from the environment (e.g., tethered seal or plug).
- k. The operational temperature range for the Active Fixed RFID Interrogator shall be from -20C to +55C, and the storage temperature range shall be from -40C to +70C.
- l. The Active Fixed Interrogator shall not exceed 1.0 cubic feet in volume and 10 pounds in weight.
- m. The Active Fixed Interrogator shall be industrially hardened and weatherproof (rain, sand, etc.), and shall comply with the IEC 60529 IP54 rating requirement.
- n. The hardware interface driver to interface with PC application software shall be as described in “DoD Active RFID Common Abstraction Interface Developer’s Guide” (reference solicitation Section J, Attachment 0008) and “DoD Active RFID Common Abstraction Interface Developer’s Guide Java” (reference solicitation Section J,

Attachment 0009).

4.1.5. Tablet Interrogator (TI) (Non-Incendive)

The Tablet Interrogator (TI) shall operate with a mobile operating system (Microsoft Windows 10 or the most current approved version, to include the most recent Service Packs, patches and updates) that meets all of the security requirements in PWS Section 8 "Security." The TI will support a Java Virtual Machine (JVM) that conforms to the Java Connected Device Configuration (CDC) 1.1 specification or higher. All TIs shall be delivered with a Common Access Card (CAC) enabled reader with a FIPS 140-2 security solution. The mobile operating system shall be installed prior to delivery to the Government. The TI shall have a data input interface (e.g., Keypad), as well as user-programmable functions that provide the user with assistance or prompts to perform required functions. The Government desires a manual data input interface solution.

- a. The Contractor shall provide an ergonomically designed Active RFID Tablet Interrogator (TI) with omnidirectional, read and write functions for all Active Transponders provided under this contract.
- b. The TI shall have a non-obstructed read and write range of at least 150 feet.
- c. The Contractor shall provide a Non-Incendive, industrially hardened TI with a Non-Incendive CAC reader that shall, at a minimum, be the functional equivalent of the fixed interrogator, except as otherwise specified in this paragraph.
- d. The TI shall have an operating temperature range from -10C to +50C, and a storage temperature range from -30C to +60C. The Government desires a TI that can operate in a wider temperature range than the environmental temperature ranges stated here.
- e. The TI shall have a memory capacity of at least 4 GB LPDDR3
- f. The TI shall include an integrated memory storage card with a minimum of 64 GB.
- g. The TI shall be user-programmable, and shall provide the user with assistance or prompts to perform required functions.
- h. The TI shall not weigh more than 2.5 pounds, and shall be powered by a single replaceable, rechargeable battery and rechargeable spare battery with a charging cradle.
- i. The TI, antenna, power supply, and any component required for operation shall be integrated into a single, tablet unit.
- j. The Government requires the TI to incorporate a feature that allows the user to query and identify information on an individual Data Rich, Sensor, and Intrusion Detection Transponder in an area that contains numerous Active Transponders.
- k. The Active TI display shall be a minimum of 8" TFT LCD HD (1280 X 800) 2.0 sunlight readable display.
- l. The TI display shall be touch screen enabled, readable in direct sunlight, and backlit.
- m. The Contractor shall provide a hands-free device (e.g., holster or belt clip) for carrying the Interrogator.
- n. The Contractor shall provide an Active TI with an integrated 2D symbology reader and power supply.
- o. The TI shall have wireless LAN capability using built-in 802.11 (a/b/g) Wi-Fi.
- p. The Contractor shall provide Rechargeable Batteries, and a charger to simultaneously

charge the spare battery and the TI.

- q. The TI shall come with a USB 3 or better 4 port hub.
- r. Bar Code Requirements:
 - i. The aRFID equipment provided shall decode symbologies that comply with industry standards and specifications for Code 39, Code 128, CODABAR, interleaved 2 of 5, GS1 Bar Codes, Universal Product Code (UPC), Data Matrix, and PDF 417.
 - ii. The Contractor-provided equipment shall, at a minimum, read Medium (10.0 mil 'x' dimension) density Bar Code labels (7.5 mil cell size for Data Matrix) and decode labels IAW the specifications defined in:
 - a. ANSI MH10.8.2 Data Application Identifier Standard,
 - b. ANSI MH10.8.3M Material Handling – Unit Loads and Transport Packages – Two Dimensional Symbols,
 - c. ANSI MH10.8M For Material Handling – Unit Loads and Transport Packages – Bar Code Symbols, and
 - d. ANSI X3.152 Bar Code Print Quality Guidelines
 - iii. When additional standards are developed during the life of the contract, the Government may require other symbologies.

4.1.6. Active RFID Interrogator Pod

- a. The Contractor shall provide a small portable Active RFID Interrogator (referred to as an Active RFID Interrogator Pod).
- b. The Active RFID Interrogator Pod shall have a non-obstructed read and write range of at least 150 feet.
- c. The Active RFID Interrogator Pod shall use a USB 2.0 or greater compatible interface for communications and interrogator power.
 - i. The Active RFID Interrogator Pod shall have a USB 2.0 compatible Standard-B receptacle connector.
 - ii. A standard USB 2.0 compatible USB-A to USB-B cable of not less than three (3) feet in length shall be provided with the Active RFID Interrogator Pod.
- d. The Active RFID Interrogator Pod shall have an operational temperature range from -25C to +55C, and a storage temperature range shall from -40C to +70C.
- e. The Active RFID Interrogator Pod shall be industrially hardened and weatherproof (rain, sand, etc.), and shall comply with the IEC 60529 IP53 rating requirement.
- f. The Active RFID Interrogator Pod shall not exceed 25 cubic inches in volume and 8 ounces in weight.
- g. The Active RFID Interrogator Pod hardware interface to PC or handheld application software shall be through the DoD CAI.

4.2. Active RFID Transponders

4.2.1. General Requirements

- a. The Government requires aRFID Transponders that conform to the “DoD Over Air Interface Guidelines” (reference solicitation Section J, Attachment 0001) and the “DoD Interoperability Guidelines for the Over Air Interface” (reference solicitation Section J,

Attachment 0005).

- b. All Contractor-provided transponders shall be industrially hardened and weatherproof (rain, sand, etc.), and shall comply with the IEC 60529 IP64 rating requirement.
- c. All Transponders shall have an operating temperature range from -30C to +70C, and a storage temperature range from -40C to + 70C.
- d. All transponders shall be read from, and written to, wirelessly by Fixed Interrogators and pod interrogator at the distances specified in subsection g of this PWS section.
- e. The RF signal transmission and reception shall be unaffected by Transponder orientation.
- f. All Transponders shall have a unique, pre-set serial or identification number furnished by the Contractor IAW ISO 18000-7:2014 standard practices.
- g. All Transponder antennas shall be omnidirectional, internal to the transponder packaging; shall have an outdoors, non-obstructed read range of at least 300 feet on a fixed interrogator and 150 feet on a pod interrogator; and shall have a write range of least 150 feet for fixed and pod interrogators, except as otherwise specified.
- h. All Transponders shall be powered using removable batteries, except as otherwise specified in a. Replaceable batteries shall meet the requirements of "DoD Transponder Battery Guidelines" (reference solicitation Section J, Attachment 0011); be replaceable without need for tools; be firmly secured in the battery compartment at all times; have a visual battery polarity indication; a Battery life of at least 3 years with two collections per day; and an easily discernible audible beep indicator for power on.
- i. Replaceable batteries shall allow for reverse battery insertion for battery storage.
- j. Transponder power on/off shall not be operated by an external switch.
- k. All Contractor-provided Transponders with replaceable batteries shall be delivered with batteries that shall be inserted in the reverse position.
- l. All Contractor-provided Transponders shall be delivered with a barcode label IAW "DoD Transponder Barcode Labeling Guidelines" (reference solicitation Section J, Attachment 0002), and the barcode shall be visible in every transponder mounting orientation.
- m. The Transponder color shall be dark green or black.
- n. All Contractor-provided Transponders shall have a read only Manufacturer ID and number assigned and written at time of manufacture IAW the ISO 18000-7:2014 Standard, and shall have sufficient writeable memory for users to write a Routing Code (e.g., KUS000). The Contractor shall deliver all active RFID transponders with Routing Code KUS000 pre-written.

4.2.2. Functional Requirements

All Contractor-provided Active Transponders with replaceable batteries shall be able to store retrievable data for a minimum of five years.

4.2.3. License Plate Transponder

- a. The License Plate Transponder antennas shall be omnidirectional and internal to the transponder packaging.

- b. The License Plate Transponder shall have a replaceable battery.
- c. The License Plate Transponder shall provide an indication of low Transponder battery power to the interrogator.
- d. The attachment methods shall include a separately orderable Neodymium magnetic mount grade N28 or higher, and a separately orderable Mounting Bracket with a minimum of two holes on the bracket for tie-wrap attachment.
- e. The Mounting Bracket shall be easily attached and detached; require no modifications to the conveyance commodity / platform; and securely hold the transponder under all transport conditions.
- f. The License Plate Transponder size shall not exceed 7 inches L x 2.5 inches W x 2 inches H (including the mounting bracket).

4.2.4. Asset Transponder

- a. The Asset Transponder shall be RF writeable and contain at least 2 Kbytes of available database table memory IAW "DoD Interoperability Guidelines for the Over Air Interface" (reference solicitation Section J, Attachment 0005).
- b. The Asset Transponder shall have a replaceable battery.
- c. The Asset Transponder shall provide an indication of low Transponder battery power to the interrogator, and shall have a dormant (non-responsive) mode.
- d. The Contractor shall provide for a methodology to prevent premature battery depletion while in shipment or in storage before initial use any device containing non-rechargeable batteries.
- e. The Asset Transponder attachment methods shall include adhesives and a minimum of two holes for screws, rivets, or tie-wrap attachment.
- f. The Asset Transponder size shall not exceed 7 inches L x 2.5 inches W x 2 inches H (including the mounting bracket).

4.2.5. Data Rich Transponder

- a. The Data Rich Transponder shall have a minimum of 256 Kbytes of available database table memory IAW "DoD Interoperability Guidelines for the Over Air Interface" (reference solicitation Section J., Attachment 0005).
- b. The Hardwire Communication Interface shall be IAW "DoD Transponder Hardwire Electrical Interface & Data Protocol" (reference solicitation Section J, Attachment 0003).
- c. External connectors shall be protected from the environment (e.g., tethered seal or plug).
- d. The Data Rich Transponder shall provide an indication of low Transponder battery power to the interrogator.
- e. Attachment methods shall include a separately orderable Neodymium magnetic mount grade N28 or higher, and a separately orderable Mounting Bracket with a minimum of two holes on bracket for tie-wrap attachment.
- f. The Mounting Bracket shall be easily attached and detached; require no modifications to the conveyance commodity / platform; and securely hold the transponder under all transport conditions.
- g. The Data Rich Transponder size shall not exceed 7 inches L x 2.5 inches W x 2

inches H (including the mounting bracket).

4.2.6. Door Mounted Data Rich Container Transponder

- a. The Door Mounted Data Rich Container Transponder antennas shall be omnidirectional, external to the ISO container, and physically attached to the transponder.
- b. The Door Mounted Data Rich Container Transponder shall have a minimum of 256 Kbytes of available database table memory IAW “DoD Interoperability Guidelines for the Over Air Interface” (reference solicitation Section J., Attachment 0005).
- c. The Hardwire Communication Interface shall be IAW “DoD Transponder Hardwire Electrical Interface & Data Protocol” (reference solicitation Section J, Attachment 0003).
- d. External connectors shall be protected from the environment (e.g., tethered seal or plug).
- e. The Door Mounted Data Rich Container Transponder shall provide an indication of low Transponder battery power to the interrogator.
- f. The Mounting Bracket shall be easily attached and detached; require no modifications to the conveyance commodity / platform; and securely hold the transponder under all transport conditions.
- g. The Door Mounted Data Rich Container Transponder size shall not exceed 7 inches L x 5 inches W x 5 inches H (excluding the mounting bracket).

4.2.7. License Plate Door Mounted Container Transponder

- a. The License Plate Door Mounted Container Transponder antennas shall be omnidirectional, external to the ISO container, and physically attached to the transponder.
- b. The License Plate Door Mounted Container Transponder shall have a replaceable battery.
- c. The License Plate Door Mounted Container Transponder shall provide an indication of low Transponder battery power to the interrogator.
- d. The attachment methods shall include a separately orderable Neodymium magnetic mount grade N28 or higher, and a separately orderable Mounting Bracket with a minimum of two holes on the bracket for tie-wrap attachment.
- e. The Mounting Bracket shall be easily attached and detached; require no modifications to the conveyance commodity / platform; and securely hold the transponder under all transport conditions.
- f. The License Plate Door Mounted Container Transponder size shall not exceed 7 inches L x 5 inches W x 5 inches H (excluding the mounting bracket).

4.3. Satellite Iridium Communication Equipment

- a. The Satellite Communications Equipment provided shall allow users to fully integrate an aRFID Configuration solution over great distances to transmit data captured by RFID Interrogators/Readers from remote locations to In-Transit Visibility Servers located in CONUS and OCONUS.
- b. The Contractor shall provide all necessary hardware, software and procedures

required to process, install, operate, and configure the system, and to allow the user to monitor and transfer data over an Iridium satellite link.

- c. Procurement of Government SIM cards and Iridium airtime through Defense Information Systems Agency (DISA) by the Government shall allow users to utilize the DoD Iridium gateway.
- d. The Contractor shall provide all documentation necessary to install, configure, and operate the Satellite Communications Equipment.

4.4. Satellite Iridium Modem

- a. The modem shall function globally, to include the Polar Regions and all ocean areas, except N. Korea, Sri Lanka, Poland, and Hungary, without modification, using a single approved (commercial or military) frequency (spectrum).
- b. The modem shall provide real-time data and low propagation delays. The modem shall provide a minimum data rate of 2.4Kbps (10 Kbps with compression) and integrate via standard RS232 cable (or 3-wire RS232 configuration) or a USB cable (latest version)) into a notebook computer and Hand-Held and other devices.
- c. The modem shall include a 10-foot serial cable that does not exceed 3db; omnidirectional satellite antennas with 5-foot cable; an internal Subscriber Identification Module (SIM) Card Reader for access authorization; and appropriate connectors.
- d. The Contractor shall provide Iridium antennas, cables, and related components.
- e. The modem shall operate effectively in temperature ranges from -20C to +60C, and in a FIPS 140-2 compliant environment.
- f. The FIPS 140-2 certified version of the Satellite Modem shall be proposed by the Contractor when the product becomes commercially available.
- g. The modem shall be operable from Rechargeable Batteries and vehicle electrical systems; the voltages of 100V-220V, 50-60 Hz AC, and 12-30V DC vehicle electrical systems shall be supported.
- h. The Government requires a modem that is provided with Rechargeable Batteries of sufficient capacity to power the modem. The modem shall meet the requirements of Title 47 CFR Part 15 for Government operations.
- i. The Contractor shall provide the following separately orderable items:
 - i. Rechargeable Batteries,
 - ii. Battery Charger,
 - iii. Mast Mount Antenna,
 - iv. Stationary Magnetic Mount Antenna,
 - v. Portable Magnetic Mount Antenna,
 - vi. GPS Antenna,
 - vii. AC and DC Power Adapters (when required for operation), and
 - viii. Cables (vehicle electrical systems).

4.5. Portable Bar Code Label Printer

All Bar Code Label Printers shall be delivered with a minimum of 2 MB of memory and compliant with the defined Bar Code Symbologies; however, when additional standards

are developed during the life of the contract, the Government may require other symbologies. In addition, the following attributes and components are required:

- a. The printer shall store and support at least one form, such as the DD Form 1348-1, and a minimum of four label formats;
- b. The printer shall produce MIL-STD-129P shipping labels;
- c. The printer shall weigh no more than 10 pounds;
- d. The printer shall be easily fastened to a belt or shoulder strap;
- e. The printer shall interface with the Contractor-provided tablet;
- f. The printer shall have a minimum four-inch throat size;
- g. The printer shall be pre-configured from the factory to print bar code symbologies, including PDF 417, with a minimum nominal resolution of a 10 mil 'x' dimension and 10 mil cell dimensions for Data Matrix;
- h. The printer shall have a communications port that is compatible with the Contractor-provided Tablet Interrogator;
- i. The printer shall print at speeds of at least 1.5 inches-per-second;
- j. The printer shall print labels while the printer is being carried by the user;
- k. The printer shall print at least 1,200 linear inches of labels utilizing the power supplied by single battery;
- l. Printer Label Software shall be provided for the printer prior to delivery to the Government, and shall not be separately priced;
- m. All required documentation (reference PWS Section 18, Documentation Requirements) shall be included, and shall not be separately priced;
- n. The printer shall come with a Carrying Case with shoulder strap (for printer only);
- o. The printer shall come with an AC Adapter;
- p. The printer shall come with an Interface Cable;
- q. The printer shall come with an operating set and a spare set of Rechargeable Batteries;
- r. The printer shall come with one roll of 4-inch by 6-inch Polyester Labels; and
- p. The printer shall come with a Battery Charger.

5. Transit Cases

- a. The Contractor shall use best commercial practices in the design and manufacturer of the configured transit cases to protect the contained aRFID-V equipment.
- b. The transit cases shall be rigid, stackable, lockable, suitable for rugged environments, reusable, and waterproof to protect aRFID-V components during intermodal transport and storage.
- c. The transit cases shall protect aRFID-V components from rugged environment damage resulting from dropping during cargo loading and unloading, and vibration and shock when transported as loose cargo over unpaved secondary roads.
- d. The transit cases shall be flexible enough to absorb shock, yet durable enough to protect the contents from forces striking the case from any angle.
- e. The transit cases shall be equipped with automatic pressure-vacuum relief valves to accommodate differences in pressure from sea level up to an altitude of 40,000 feet.

5.1. Contents

- a. The Contractor shall provide Transit Cases that contain cutouts or molded cushioning to protect the contents from damage during transit and storage.
- b. aRFID-V components contained within the Transit Cases shall not be affixed to the Case, unless specified otherwise.
- c. The Transit Case cover shall be non-hinged and inserts shall be split so as to be an integral part of the top and bottom pieces of the case, unless specified otherwise.
- d. Cushioning material used for cutouts or molded compartments shall be non-flaking, permanent, reusable, and attached to the Transit Case.

5.2. Inventory List

Each Transit Case shall have a durable, permanent inventory list of all aRFID-V components in the case that includes: Nomenclature, Quantity of Each Component, Number of Cases per Configuration, and Graphic Packing Instructions. The Inventory list shall be affixed to the inside top cover and visible to the user.

5.3. Transit Case Color

The Contractor shall provide black Transit Cases.

5.4. Transit Case Survivability

Transit Case materials shall be treated, or otherwise engineered, to protect against Transit Case deterioration caused by moisture, mold, rot, ultraviolet radiation, industrial solvents, hydraulic fluids, petroleum products, and jet fuel. All metallic parts shall be corrosion resistant.

5.5. Human Factor Size, Weight, and Dimension Limitations

The Contractor shall make every effort to minimize the weight, size, and number of Transit Cases for each Configuration. Transit Cases shall be able to fit through a 30-inch wide opening, such as a doorway. The weight of the Transit Case contents shall be evenly distributed between the Transit Case handles, with a low center of gravity when fully loaded or unloaded. The gross weight of the Transit Case, plus contents, shall not exceed 37 pounds. The use of the Transit Case cover for storage shall not make the cover inordinately heavy or cause problems during the lifting or removal of the cover. The weight lifting limits per Transit Case shall not exceed those listed below:

- One-person lift: 37 pounds:

5.6. Handles and Clasps

The Contractor shall provide Transit Cases with a sufficient number of handles to facilitate movement by the specified number of personnel. All one-person and two-person lift Transit Cases shall have at least two handles. Handles shall return to a closed position by a spring-loaded mechanism or a simple restraining mechanism when not in use. Handles and clasps shall be recessed, non-reflective, dark in color, non-corrosive, easily accessible,

and operable by personnel wearing low-temperature protective gloves.

5.7. Identification Plate

An Identification (ID) Plate shall be permanently affixed to each Transit Case. ID Plate lines, letters, numerals, and characters shall be permanent and legible IAW MIL-STD 130N_CHG-1, Department of Defense Standard Practice: Identification Marking of US Military Property. Transit Cases ID Plates and mounting provisions shall be resistant to abrasion, rain and salt spray, and common cleaning solutions. ID Plates shall not detach from the Transit Case when subjected to the elements and extreme temperatures. ID Plates shall have smooth edges, and shall be free of blisters, cracks, sharp corners, foreign matter, or any other defects. The ID Plate drawings shall be provided to the COR for approval prior to commencement of manufacture of ID Plates and the assignment of serial numbers. The Contractor shall assign a serial number to each Transit Case, and this serial number shall be included in the UID.

5.8. Identification Plate Dimensions

Identification plate dimensions shall be no less than 1.75 inches wide by 3.0 inches long. The thickness for all identification plates shall be 0.03 inch, plus or minus 0.0005 inch, without backing material.

5.9. Identification Plate Printing

Letters printed on ID Plates shall be Gothic capitals, and numbers and characters shall be of similar appearance. The background color shall be black, and the printed characters shall be white. Bar codes shall be on a white background with the bar codes printed in black.

5.10. Identification Plate Information

At a minimum, the Government requires the following information on the ID Plate:

- a. Contract Number;
- b. Contractor and Government Entity (CAGE) Code;
- c. National Stock Number (NSN) of the Transit Case Group and Configuration;
- d. Government-Approved Nomenclature or Transit Case Group and Configuration Name;
- e. Type Designation;
- f. Transit Case Serial Number;
- g. Government ownership designation "PROPERTY OF THE U.S. GOVERNMENT;" and
- h. The UID of the Transit Case Group and Configuration bar-coded in Data Matrix Symbology.

5.11. Identification Plate Location

Identification Plates on Transit Cases shall be located at the left or center of the exterior, vertical surface of the top portion of the Transit Case that is facing the user when the case is ready to be opened. An ID Plate shall also be affixed to the left or center of the exterior, vertical surface of the bottom portion of the Transit Case that is facing the user when the

case is ready to be opened. Location of ID Plates shall be consistent for all Transit Cases.

5.12. Transit Case Health and Safety Labels

The Contractor shall label each Transit Case to inform users of health and safety considerations before moving or opening the Transit Case. Transit Case health and safety labels shall be placed horizontally (on the front of the case) and externally on the top of each Transit Case in a consistent manner. The health and safety labels shall identify:

- a. Gross or loaded weight;
- b. Volume in cubic feet and cubic centimeters;
- c. External linear dimensions in inches and centimeters;
- d. The number of persons required to lift the case (e.g., "ONE PERSON LIFT") IAW the paragraph entitled "Human Factor Size, Weight, and Dimension Limitations" above; and
- e. Any other considerations that may affect the health or safety of users attempting to lift, move, or open the Transit Case.

5.13. Transit Case Configurations

- a. The Contractor shall provide Transit Case Configurations consisting of aRFID-V equipment that meets all of the requirements as individually specified in this PWS.
- b. The make and model of all items included in the Transit Cases specified below shall be the same as the individual items listed in the Contractor's aRFID-V CLIN list.
- c. The Contractor shall provide Transit Case Configurations that are grouped as defined in the following subparagraphs.
- d. Each Configuration shall be self-contained, and shall include all necessary adapters, cables and components, and commercial user manuals to operate worldwide. Recognizing that many countries have unique power plug designs, the Government will accept operation with the three plug types designed for use in Central Europe (Germany), North America (United States), and the United Kingdom (Great Britain) as fulfilling the requirement for Worldwide Operation. Most countries of the world conform to one of these plug types. Generally, the North American type plug is acceptable in North and Central America, Western South America, Japan, and parts of Korea. The Central Europe type plug is acceptable in most of Continental Europe and some of the Middle East and Africa. The United Kingdom type plug is acceptable in Great Britain, Ireland, Malaysia, and many countries in the Middle East and Africa.
- e. The Contractor shall consolidate applicable accessories with the associated primary component identified in a Transit Case.
- f. Commercial user manuals shall be provided IAW the paragraph titled "USER MANUALS," and secured within appropriate width slot(s) within each Transit Case.

5.13.1. PDK III with and without a Printer (Non-Incendive)

- a. The tablet interrogator required for the Standard Active PDK III with Portable Printer Transit Case Group shall have a ruggedized, Industrially Hardened, I-7

processor or better, with a shock mounted and removable 8 SDRAM, 4 GB RAM and 2.8 GHz processing speed or better, and a 7 to 10-inch screen display.

- b. The tablet shall meet or exceed the IP 54/IEC 60529 standards for being sealed against water and dust intrusion and be NI in hazardous environments (ANSI/ISA 12.12.01-2012).
- c. The tablet shall weigh no more than 2 lbs. and be equipped with a touch screen display that is outdoor viewable.
- d. The power supply shall have a 7.2V, typical 3220mAh Lithium Ion main battery or better.
- e. The PDK tablet shall be configured with the Microsoft Windows XP 10 or the latest PL AMIS approved version Operating System (updated with the latest Service Pack). The Contractor shall harden the OS to the DISA Gold Disk Platinum settings.
- f. The POC at the Defense Information Systems Agency (DISA) for the Gold Disk

is: fso_spt@disa.mil.

- g. The PDK tablet shall have Contractor-provided aRFID-V functional software installed prior to delivery to the Government.
- h. The Contractor-provided software shall accomplish the following functions: user registration to the Radio Frequency In-Transit Visibility (RF-ITV) server; transponder read and write; transmit transponder read and write data to the RF-ITV server IAW "aRFID-V Software Functional Requirements" (reference solicitation Section J, Attachment 0012) and "aRFID-V ITV Server Interface Document" (reference solicitation Section J, Attachment 0015); and print produce MIL-STD-129R shipping labels.
- i. The software shall also contain a setup wizard that walks the user through the registration process with the RF-ITV Server.
- j. The tablet shall have a built-in barcode scanner capable to read 2D barcode.
- k. The tablet shall come with a USB 3 or better 4 port hub.

5.13.1.1 Active PDK III Transit Case Group (Non-Incendive and with Pod)

The Active PDK III Transit Case Group shall have a **90-day** delivery requirement and contain, at a minimum, the following:

- a. Tablet computer with a USB 3 or better 4 port hub and a 2D integrated barcode reader;
- b. AC Power supply with universal plug adapter kit;
- c. DC Power cable with cigarette lighter adapter input;
- d. DC Power cable with NATO slave connector;
- e. Active RFID interrogator pod;
- f. CAC Reader;
- g. Iridium Satellite modem (GPS enabled);
- h. Antenna for Satellite Modem;
- i. GPS Antenna;
- j. Wiring diagram place card;

- k. User's guide; and
- l. Transit Case(s).

5.13.1.2 Active PDK III Transit Case Group with Printer (Non-Incendive and with Pod)

The Active PDK III Transit Case Group with Printer shall have shall have a **90-day** delivery requirement and contain, at a minimum, the following:

- a. Tablet computer with a USB 3 or better 4 port hub and a 2D integrated barcode reader;
- b. AC Power supply with universal plug adapter kit;
- c. DC Power cable with cigarette lighter adapter input;
- d. DC Power cable with NATO slave connector;
- e. Active RFID interrogator pod;
- f. CAC Reader;
- g. Iridium Satellite modem (GPS enabled);
- h. Antenna for Satellite Modem;
- i. GPS Antenna;
- j. Wiring diagram place card;
- k. User's guide;
- l. Transit Case(s);
- m. Portable label printer;
- n. Printer Interface Cable;
- o. Tutorial application to provide the user with all information required to successfully install and operate a read or write station;
- p. Two (2) Printer Batteries (Operating and Spare);
- q. Printer Battery Charger;
- r. Printer AC Adapter, when required for AC operation;
- s. Printer Power Plug Adapter, when required;
- t. Other Printer Adapters and Cables, when required; and
- u. Printer Label Stock, 4" x 6" labels, polyester material.

6 Software and Firmware Requirements

6.1 General Software Requirements

The following requirements are applicable to all specified software, unless otherwise noted in the section for the particular package:

- a. The Government requires Software that shall support, at a minimum, Windows-compatible PCs with the following operating systems: Windows 10 or the most current approved version of the operating system, to include the most recent Service Packs, patches and updates. Product user manuals shall include information advising users where to locate software updates and patches and the method or methods used to apply updates and patches to products.
- b. All software packages shall include installation media (CD ROM or DVD), a user

guide, release notes, and developer documents (as appropriate). The installation media, user guide, release notes, and developer documents shall not be separately priced.

- c. Whenever changes or updates are made to Contractor-developed software, the Contractor shall submit the software to PL AMIS for approval IAW the CCP process prior to fielding the software.
- d. Access to or delivery of bundled line items shall be included at no additional cost or licensing fee.

6.2 Fixed Interrogator Software

- a. The Contractor shall provide an Interrogator CAI compliant driver, to be available on Contractor's website for unrestricted use within DoD-owned applications at no extra cost /license fee (Not Separately Priced (NSP)).
- b. The Contractor shall provide an Interrogator configuration application that:
 - i. Allows for configuration of transmit power, polling cycle timing, and any other vendor specific operating parameters that are end user configurable. End user configured settings shall be retained through power cycling of the interrogator and/or restart of the PC application program, as applicable.
 - ii. Allows for upgrade of interrogator firmware without opening or unsealing the interrogator's case.

6.3 Transponder Software

The Contractor shall provide access to the current PL AMIS approved version of OEM transponder driver, to be made available on Contractor's website for unrestricted use within DoD-owned applications at no extra cost/license fee.

6.4 Read / Write Station Software

- a. The Contractor shall include a Graphical User Interface (GUI), which shall conform to industry standards (<http://msdn.microsoft.com/en-us/library/windows/desktop/aa511238.aspx>).
- b. The Contractor shall provide software that conforms to all functional requirements defined in "aRFID-V Software Functional Requirements" (reference solicitation Section J, Attachment 0012), and is accessible from within the GUI.
- c. The Contractor's Write station software shall use the TMM / CAI to communicate with RFID hardware (interrogators and transponders).
- d. The Contractor's Read station software shall use the CAI to communicate with RFID interrogators.
- e. The Contractor's Read station software must automatically restart and function after power on/off/on cycling. Any user configured settings shall be retained following a power cycle.

6.5 Tablet Interrogator Software

- a. The Contractor shall provide the Interrogator CAI compliant driver.
- b. The Contractor shall provide an Interrogator configuration application that allows for configuration of transmit power, polling cycle timing, and any other vendor specific operating parameters that are end user configurable. End user configured settings shall be retained through power cycling of the interrogator and/or restart of the application software program, as applicable.

6.6 Tablet Read / Write / Query Application

- a. The Contractor shall use a current IA compliant (supports CAC authentication) Windows Mobile operating system or the most current approved version of the operating system for an interrogator.
- b. The Contractor shall include a GUI, which shall conform to the following industry standards:
 - i. <http://msdn.microsoft.com/en-us/library/windows/apps/hh465422.aspx>,
 - ii. http://developer.android.com/guide/practices/ui_guidelines/index.html, and
 - iii. <http://developer.apple.com/library/ios/#documentation/userexperience/conceptual/mobilehig/UEBestPractices/UEBestPractices.html>.
- c. The Contractor shall conform to all functional requirements defined in “aRFID-V Software Functional Requirements” (reference solicitation Section J, Attachment 0012), and is accessible from within the GUI.
- d. The Contractor shall use the TMM / CAI to communicate with RFID hardware (i.e., interrogators and transponders).
- e. The Contractor shall provide software that can function when disconnected from the Internet (i.e., no access to the ITV server) and store information to be passed when connectivity is restored.

6.7 PDK III Software Requirements

- a. The Contractor shall include read / write station software, as well as any other device bundled software.
- b. The Contractor shall use the TMM / CAI to communicate with RFID hardware (i.e., interrogators and transponders).
- c. The Contractor shall provide drivers and application software required to operate any other included devices (e.g., barcode printer).

6.8 Firmware Requirements

- a. The Contractor shall provide necessary firmware as part of the equipment configuration of aRFID-V contract components.
- b. Firmware shall reflect the baseline configuration and all subsequent Government-approved CCPs. All firmware available to the user shall be selectable by embedded software.
- c. All firmware shall be installed prior to equipment delivery.

6.9 Software Changes and Updates for Contractor-Developed Software.

- a. Whenever changes or updates are made to Contractor-developed software, the Contractor shall submit the software to PL AMIS for approval IAW the CCP process prior to fielding the software.
- b. Upon notification by the KO, the Contractor shall place the approved software on the dedicated web site specified in PWS Section 15.3, Web Site.
- c. The Contractor shall notify each Government POC (previously identified in Contract Orders) via email that the approved software is available for download.

7 Contract Change Proposals (CCP)

7.1 CCP Contents

The offer of product substitutions or additions shall include information sufficient to determine that the proposal satisfies the terms and conditions of the contract. The proposal shall, at a minimum, include the following information:

- a. For substitutions, a detailed comparative description of the difference(s) between the existing contract item and the proposed product substitution, and a specific analysis of the comparative advantages and disadvantages of each. The comparative description should be laid out in a "From this" - "To this" format, with all changes highlighted in yellow.
- b. For additions, a complete description of the new item and a correlative analysis of how the new item will benefit the Government.
- c. Specific items contained in the contract that are proposed to be changed if the proposal is accepted (e.g., if new equipment is offered to replace currently installed, will the old be exchanged for the new, and on what basis). List all sections of the contract affected by the proposed contract change, including changes to Section B, Supplies or Services and Prices/Costs. Outline contract changes in a "From this" - "To this" format, with all changes highlighted in yellow.
- d. A statement as to how the changes will affect performance, costs, etc., if accepted, and an item-by item summary of any "street pricing" of the items, including a reference to the source of the "street price" and GSA Schedule pricing, if any, to include GSA schedule number. The Contractor may be required to provide a minimum of three competitive quotes.
- e. If applicable, an evaluation of the effects the change would have on life cycle costs, such as GFP, maintenance, personnel, site modification, and energy.
- f. An analysis of a timeframe in which the change should be instituted so as to obtain maximum benefit for the Government for the remainder of the contract.

It is the Contractor's responsibility to manage and propose substitutions and additions in a timely manner, allowing sufficient time for government approval (review times will vary

depending upon the complexity and newness of the item), and to provide, without a lapse in availability, Government-approved products throughout the entire ordering period of the contract. The Contractor shall not be reimbursed for any costs associated with the preparation of a proposal for the technology changes described above. The decision as to the acceptability of such a proposal shall be at the sole and exclusive discretion of the KO and is not subject to the Disputes clause of this contract.

7.2 CCP Response Time

If the Government a request for proposal (RFP) for a technology change, or any other type of change to the contract, the Contractor shall submit a CCP within **20 calendar days** of the RFP date, unless the RFP specifies a later RFP due date. Regardless of which party initiates a proposed contract change, should the Government request supplemental information to analyze the Contractor's proposal, the Contractor shall provide the additional information within **seven (7) calendar days** of the request, unless the Government's request specifies a later due date.

8 Security

8.1 Tablet Access Protection

All tablet devices shall have the capability to prevent unauthorized access or lock the device.

8.2 Security Standards

All vendor solutions shall conform to the policies, requirements, and capabilities definitions for Unified Capabilities (UC), if/as applicable. UC-compliant products must have completed Interoperability (IO) and Information Assurance (IA) certification and be posted on the Unified Capabilities Approved Products List (UC APL) (<https://aplits.disa.mil>). Products offered on the aRFID-V contract that do not fall into the scope of the Unified Capabilities Requirements (UCR), or fall into an existing product category, shall still meet all the requirements outlined in this IA section of the PWS. When product version updates are announced on the DoD UC APL, the Contractor shall make the updated software available for their currently fielded TABLETs and integrate the updated software onto the TABLETs for new orders no later than **90 calendar days** after the product has been incorporated on the DoD UC APL. It is the Contractor's responsibility to monitor the UC APL to identify any required hardware or software additions and changes.

The Contractor shall comply with the following standards and Government guidelines, to include all new versions, amendments, and modifications made to the listed documents and standards, as applicable.

- a. Office of Management and Budget (OMB) Circular No. A-130 Revised, (Transmittal Memorandum No. 4) Management of Federal Information Resources – Appendix III, Security of Federal Automated Information Resources, 28 November 2002.
- b. National Institute of Standards and Technology (NIST) Federal Information Processing Standards (FIPS) Publication 140 – 3 Security Requirements for

Cryptographic Modules, 23 May 2001, with Change Notices 12-03-2002.

- c. Department of Defense Directive (DoDD) 8100.02, Use of Commercial Wireless Devices, Services, and Technologies in the Department of Defense (DoD) Global Information Grid (GIG), April 14, 2004 (Certified Current as of April 23, 2007).
- d. Department of Defense Instruction (DoDI) 8420.01, Commercial Wireless Local-Area Network (WLAN) Devices, Systems, and Technologies, November 3, 2017.
- e. DoDI 8500.01, Cybersecurity, March 14, 2014 (Incorporating Change 1, Effective October 7, 2019).
- f. DoDI 8510.01, Risk Management Framework (RMF) for DoD Information Technology (IT), March 12, 2014 (Incorporating Change 2, Effective July 28, 2017).
- g. Army Regulation (AR) 25-2, Army Cybersecurity, 4 April 2019.
- h. Department of the Army Pamphlet (DA PAM), Wireless Security Standards, 8 April 2019.
- i. DFARS Clause 252.239-7001, Information Assurance Contractor Training and Certification.

After award, the Contractor may propose alternatives at no additional cost to the Government that meet or exceed the provisions of the listed standards.

8.3 DoD Information Assurance Requirements

All devices and/or systems provided by the Contractor that receive, process, store, display or transmit information shall comply with the applicable IA requirements specified in DoDI 8500.01, Cybersecurity. Examples of systems that must meet these IA requirements include, but are not limited to: stand-alone information systems; networked computers and servers; mobile computing devices such as laptops, handhelds, and personal digital assistants operating in either wired or wireless mode; and other information technologies that may be developed and/or proposed by the Contractor.

8.4 DoD Wireless Device Security Requirements

aRFID implementations that utilize Institute of Electrical and Electronics Engineers (IEEE) Standard 802.11 Wireless Local Area Network (WLAN) products to store, process, or transmit unclassified information shall comply with the requirements specified in DoDI 8420.01, Commercial Wireless Local-Area Network (WLAN) Devices, Systems, and Technologies.

8.5 Army Wireless Device Security Requirements

Army aRFID implementations that utilize IEEE Standard 802.11 WLAN products or other wireless technologies to store, process, or transmit unclassified information shall comply with the applicable requirements specified in AR 25-2, Cybersecurity, and DA PAM 25-2-9, Wireless Security Standards.

8.6 Common Criteria Compliance Requirements

Common Criteria compliance is determined and verified by favorable product testing against a Common Criteria Protection Profile (CCPP). CCPPs are developed under

sponsorship of the National Security Agency (NSA). Common Criteria tests are conducted by a Common Criteria Test Laboratory (CCTL) that has been approved and accredited by the National Information Assurance Partnership (NIAP). NIAP is a partnership agreement between NSA and the National Institute of Standards and Technology (NIST). Upon approval and adoption of a CCPP for aRFID technology, for which no CCPP exists, the Contractor shall, no later than six months after the adoption of a relevant CCPP, submit product(s) with documentation to a designated CCTL for Common Criteria testing. Subsequently, only products tested and compliant at the Medium Robustness level (as defined in the CCPP standard) shall be provided under this contract.

Information regarding Common Criteria Compliance can be obtained from the following web site:

<http://www.commoncriteriaportal.org/>.

8.7 Security Assessment and Authorization Support

The Contractor shall support all Government efforts to obtain Assessment and Authorization (A&A) for the products provided under this contract IAW the guidance contained in DoDI 8510.01, Risk Management Framework (RMF) for DoD Information Technology (IT). In support of the Government's A&A activities, the Contractor shall provide copies, in vendor's format, of component design specifications, component user manuals, and the results of any security tests already completed. For testing in support of A&A, the Contractor shall provide the Government with access to Contractor personnel involved with the design, engineering, operations, and security attributes of the products.

8.8 Security Services

The Contractor shall ensure that the devices and/or systems provided under this contract comply with all new versions, amendments, and modifications made to the security documents and standards cited in this PWS, when applicable and commercially available. To ensure continued compliance, the Contractor shall perform the necessary configuration changes, as approved by the Government. These configuration changes may include, but are not limited to: performing system configuration changes, installing patches and bug fixes; and conducting hardware/software upgrades, updates, and replacements.

8.9 Government Evaluation

The Contractor shall support Government compliance verification evaluation and security certification and accreditation of the products provided under this contract. The Government will coordinate the scheduling of any evaluation with the Contractor. The Contractor shall cooperate with Government personnel and Government representatives who plan, conduct, and report any Government testing. Support of Government testing, when requested, includes providing the Government or its agents' access to Contractor facilities, documentation, and/or personnel used by the Contractor to produce the products provided under this contract. The Contractor shall assist in resolving any problems resulting from the Government verification evaluations and security certification

and accreditation process.

8.10 Product Solutions on Contract

For products (CLINs) not currently on the UC APL, the Contractor will have **21 calendar days** after the contract effective date to complete all documentation and submit to the Governing body the necessary paperwork to conform to the policies, requirements, and capabilities definitions for UCR. Until such products have completed IO and IA certification and been posted on the UC APL (<https://aplits.disa.mil>), the Government reserves the right to place these products (CLINs) on CONTRACT RESERVE. During the period of contract performance, any new products proposed, based on end-of-life issues or CCP insertion will also conform to the same stipulation. In addition, the Contractor shall provide biweekly email updates to the COR regarding the status of the product (CLIN) posting on the UC APL from the time the Contractor submit the necessary paperwork until the time the product (CLIN) is posed on the UC APL.

9 Management

The requirements found in this Management PWS Section, shall not be separately priced.

9.1 aRFID-V Program Management

The Contractor shall provide the following aRFID-V Program Management activities and services:

- a. Provide a response within **two (2) workdays** to program issues and problems associated with the execution of the contract, as identified by the KO or the COR;
- b. Support, by means of Electronic Commerce/Electronic Document Interchange (EC/EDI), web access for Contractor-provided information and data;
- c. Provide a response within **one (1) workday** to questions or problems unrelated to subparagraph 1, above;
- d. Provide information to various Services and Agencies with the approval of PL AMIS;
- e. Receive and process customer orders;
- f. Develop, update, and maintain the User Guide IAW Contract Data Requirement List (CDRL) A003 (reference solicitation Section J, Exhibit A);
- g. Coordinate shipments and deliveries;
- h. Report order and delivery status IAW CDRL A001 (reference solicitation Section J, Exhibit A) and PWS Addendum A;
- i. Provide the requisite Repair Center(s) (RC) to perform all warranty services required by this contract;
- j. Maintain warranty records IAW CDRLs A008, A009, and A010 (reference solicitation Section J, Exhibit A);
- k. Provide access for aRFID-V Users to an identified database location for this contract;
- l. Develop and execute a management plan that incorporates configuration management and risk management;
- m. Schedule project reviews and internal seminars and conferences, and present the

Contractor's vision of new technology;

- n. Conduct quarterly Project Progress Reviews (PPR) in the first year of the Base Period, and twice a year thereafter IAW CDRL A004 (reference solicitation
- o. Provide Semi-Annual Equipment and Service Reports (SAESR) IAW CDRL A008 (reference solicitation Section J, Exhibit A); and
- p. Report Contractor Manpower Information IAW CDRL A011 (reference solicitation Section J, Exhibit A) and PWS Section 11.3.

9.2 Points of Contact (POCs)

The Contractor shall provide a list of Contractor POCs to the COR no later than **10 workdays** after the effective date of the contract. The list shall include names, telephone numbers, facsimile numbers, e-mail addresses, and areas of responsibility for the aRFID-V contract. The Contractor shall notify the COR no later than **five (5) workdays** of replacement of a POC.

9.3 aRFID-V Program Manager

- a. The Contractor shall identify a Program Manager for the aRFID-V contract to the KO and the COR at the time the Contractor submits its proposal. The Program Manager (or a designee authorized to make binding decision for the Contractor) shall be available, with a 24 hours' notice, to meet with the Government at Fort Belvoir, Virginia, at no additional cost to the Government. The aRFID-V contract Program Manager shall address and resolve aRFID-V programmatic issues, facilitate information exchange with the Government, and enhance management coordination. Such information shall be reported IAW CDRL A001 (reference solicitation Section J, Exhibit A).
- b. The Contractor's aRFID-V Program Manager shall manage, be the POC for, and report on all orders IAW CDRL A001 (reference solicitation Section J, Exhibit A). The Contractor's aRFID-V Program Manager shall be responsible for formulating and enforcing work standards, assigning schedules, reviewing work discrepancies, and communicating the organization's policies, purposes, and goals to the assigned Contractor personnel for performance of this contract.

9.4 User Guide

9.4.1 Purpose

The Contractor shall develop and provide a User Guide (UG) to assist Government personnel in determining the system configuration that will best meet their aRFID-V operational requirements. The Contractor shall provide the final UG no later than **60 calendar days** after the contract effective date, and shall make the User Guide available on the Contractor's web site IAW CDRL A003 (reference solicitation Section J, Exhibit A). The UG shall be a comprehensive tool that aligns with the CLIN structure.

9.4.2 User Guide Review

IAW CDRL A002 (reference solicitation Section J, Exhibit A), the Contractor shall provide a draft UG electronically to the KO and the COR for review no later than **30 calendar days**

after the contract effective date. The KO will either approve the UG or provide comments to the Contractor for incorporation into the UG. The Contractor shall then have **15 workdays** to edit the UG based on the Government's comments. Upon the KO's approval of the UG, the Contractor shall make the UG available to Users on the Contractor's web site.

9.4.3 User Guide Approval and Posting

The initial UG must be approved by the KO prior to making the UG available on the Contractor's web site. Subsequent UG revisions resulting from a formal contract modification shall be made available to the Government personnel on the web site no later than **five (5) workdays** after the issuance of the contract modification. The Contractor shall update the UG for other changes (e.g., Government points of contact) no later than **five (5) workdays** after the receipt of a request from the COR. The Contractor shall post Contractor-related administrative changes no later than **five (5) workdays** after the change.

The UG shall be divided into logical sections for ease of use. The sections shall provide a User with a detailed description of the features of all hardware, hardware cables, software, user procedures, recommended equipment configurations; TES, training, and warranty services; the CLIN price list; and any additional information that the Contractor includes to simplify the implementation of an aRFID-V solution. The UG shall be a simple, easy to understand document that allows Users to order and build configurations that meet their needs. The Contractor shall provide access to the UG for authorized Government Users with ".MIL" email addresses via the World Wide Web.

9.4.4 Sections

Each section of the UG shall be technically accurate, align with the Pricing CLIN structure and complete with descriptions of the hardware (to include pictures), software, and TES. CLINs shall be used throughout the document to facilitate the User's ability to properly identify and order the appropriate item(s). CLINs shall be clearly annotated on drawings, charts, product descriptions, specification sheets, etc. When a product requires additional equipment to make a complete workable product, the additional equipment and CLINs, if applicable, shall be clearly identified in the description. All references to a geographic area where products may, or may not, be used shall be clearly annotated in the UG and the CLIN description, if applicable. The UG shall include, but not be limited to, the sections identified below, which address the minimum requirements for each section.

9.4.5 Hardware

The hardware section shall be organized into sub-sections based upon the major types of equipment provided, and shall include a discussion of the main features of each piece of equipment, including physical dimensions, power requirements (wattage and voltage), and heat generated by equipment. Precautions, such as the minimum distance between various devices, shall be provided. The UG shall contain instructions for the User to specify equipment destination to ensure the aRFID-V equipment is compatible with the

commercial power supply and adapter plugs for the geographic area in which it will be operated.

9.4.6 Hardware Cables

This section shall list all cables, with Model Numbers provided, and equipment cable requirements in a chart format that shall allow the User to identify the correct cables for connecting aRFID-V devices. CLINs shall be provided on the chart. All cable requirements for equipment installation shall be described in this section. This section shall clearly indicate the appropriate cables and interfaces for the various aRFID-V components and provide a reference to the applicable parts.

9.4.7 Software

This section shall provide a full description of all software provided that includes a discussion of the primary function, minimum memory requirements, program capabilities, and major features and benefits. This section shall explain, in non-technical terms, the recommended software packages for specific applications. The Contractor shall maintain an asset record showing the software version and configuration installed on all shipped products. The Contractor shall track and update the asset record when the Contractor makes changes to products and product software when returned for service or when the Contractor makes changes on fielded systems.

9.4.8 User Ordering Procedures

This section shall contain ordering procedures that provide the User with all the necessary information required to order aRFID-V products and TES. Contractor POCs, telephone numbers, Help Desk access, and addresses shall be included.

9.4.9 Recommended Equipment Configurations

This section shall address the Contractor's recommended equipment configurations to meet various Users' aRFID-V requirements, with easy to understand, step-by-step directions, and any physical or facility considerations. The recommended configurations shall represent the most economical hardware, software, and TES that meet possible User requirements. This section shall provide information to assist the User's with building an aRFID-V configuration that best meets their needs. The configurations shall include the appropriate CLIN numbers.

10 CLIN Price List

This section shall provide the contract's Contract Line Item (CLIN) Price List with products and services provided for each CLIN/SLIN. The CLIN Price List will be updated within **five (5) calendar days** of the addition or deletion of a CLIN/SLIN on contract.

11 aRFID-V Management Plan

The Contractor shall provide an aRFID-V Management Plan. The Plan shall be submitted to the KO and the COR no later than **30 calendar days** after the contract effective date specified. The Contracting Officer will either approve the Management Plan or provide comments to the Contractor for incorporation into the Management Plan. The Contractor shall then have **10 workdays** to incorporate the Government's comments into the Plan, and resubmit the Plan to the KO and the COR. The Contractor shall manage the contract IAW the Government-approved aRFID-V Management Plan. The aRFID-V Management Plan shall include, but not be limited to, the following:

- a. Technology Assessment and Quality Assurance; and
- b. Logistics Support, to include the Contractor's approach to satisfying unusual or surge requirements and addressing crises.

11.1 Project Progress Reviews

The Contractor shall conduct Project Progress Reviews (PPRs) for Government personnel at a mutually agreeable facility. The PL AMIS will schedule the PPR, and will provide notice to the Contractor of the date, time, and location. The Contractor representative shall attend the scheduled PPR in person. Any requests to change the scheduled date by the Contractor shall be addressed directly to the KO and the COR, and the KO will determine if the request is acceptable or not. Failure to attend the PPR will be duly noted on CPARS. It is anticipated that the first PPR will occur no later than **90 calendar days** after the contract effective date. Thereafter, PPRs shall occur on a quarterly basis for the first year of the contract, and twice a year thereafter for the life of the contract IAW CDRL A004 (reference solicitation Section J, Exhibit A), unless there is a need to conduct additional PPRs. During each PPR, the Contractor shall present material that addresses the following:

- a. Status of current aRFID-V hardware technological substitutions, additions, and future product enhancements;
- b. Status of configuration and risk management activities;
- c. Status of orders, including, but not limited to, received and processed dates (listed by ordering agency), scheduled delivery date, and shipped date;
- d. Actions under warranty;
- e. Significant trends (e.g., quantities ordered by CLIN, component reliability safety issues, problems, and recommended solutions);
- f. Minutes from the previous PPR;
- g. Activities determined to be of importance to the Government, such as unanticipated problems, and high visibility issues identified by the Government;
- h. Status of significant program events;
- i. Customer feedback;
- j. Agencies and organizations contacted and initiatives with each; and
- k. Reason for delinquent orders.

The Contractor shall include a current organizational chart in each review that includes the names and telephone numbers of all key personnel assigned or proposed for the aRFID-V

contract. All changes to key personnel changes will be identified at the time changes are known and the Contractor will explain how it intends to minimize the impact of such changes. Key personnel for this contract are the Senior Information Systems Engineer; Project Manager; Senior Programmer performing on Task Orders; and the contract Program Manager.

The Contractor shall prepare and coordinate with the COR, an agenda for all PPRs no later than **five (5) workdays** before a scheduled PPR IAW CDRL A005 (reference solicitation Section J, Exhibit A). The Contractor shall provide the briefing charts to the COR electronically **three (3) workdays** prior to the day of the PPR. The Contractor shall prepare and coordinate minutes of the PPRs with PL AMIS no later than **five (5) workdays** after the PPR. Coordination shall be accomplished through electronic mail. The Contractor shall post the minutes on the Contractor web site no later than **five (5) workdays** after PL AMIS approval IAW PWS Section 15.3 (Web Site) and CDRL A006 (reference solicitation Section J, Exhibit A).

11.2 Delivery Status Report

The Contractor shall prepare and submit a Status Report in Microsoft Office Excel format, monthly IAW CDRL A001 (reference solicitation Section J, Exhibit A). The report shall include all orders placed by the Government and by Government Contractors during the reporting period (see Exhibit A of this PWS).

The Contractor shall submit the first report to the COR on the **10th day of the month** following the one-month period after the contract effective date. The Contractor shall submit subsequent reports in monthly increments on the **10th day of the month** following the reporting period throughout the performance period of the contract. The report shall include, at a minimum, a list of all equipment delivered by:

- a. CLIN, , month, Service or Agency, with brief description and total quantities and dollar amounts;
- b. Year-to-date, with total quantities and dollar amounts; and
- c. Contract-to-date, with total quantities and cumulative dollar amounts.

The totals for each category (above) shall also reflect the values for products/equipment and services in a summary table.

11.3 Contractor Manpower Reporting

The Office of the Assistant Secretary of the Army (Manpower & Reserve Affairs) operates and maintains a secure Army data collection site where the Contractor shall report ALL Contractor labor hours (including Subcontractor labor hours) required for performance of services provided under the aRFID-V contract via a secure data collection site. The Contractor is required per CDRL A011 (reference solicitation Section J, Exhibit A) to completely fill in all required data fields using the following web address: <http://www.ecmra.mil>, and then click on "Department of the Army CMRA" or the icon of the DoD organization that is receiving or benefitting from the contracted services. Reporting

inputs will be for the labor executed during the period of performance during each Government Fiscal Year (FY), which runs October 1 through September 30. While inputs may be reported any time during the FY, all data shall be reported no later than October 31 of each calendar year. Contractors may direct questions to the help desk by clicking on "Send an e-mail" which is located under the Help Resources ribbon on the right side of the login page of the applicable Service/Component's CMR website. Contractors may use a direct XML data transfer to the data base server or fill in the fields on the website. The XML direct transfer is a format for transferring files from a Contractor's system to the secure web site without the need for separate data entries for each required data element at the website. The specific formats for the XML direct transfer may be downloaded from the website.

The required information includes:

- 1) Contracting Office, Contracting Officer, Contracting Officer's Technical Representative;
- 2) Contract number, including order number(s);
- 3) Beginning and ending dates covered by reporting period;
- 4) Contractor name, address, phone number, email address, and identity of Contractor employee entering data;
- 5) Estimated direct labor hours (including Subcontractors);
- 6) Estimated direct labor dollars paid during the reporting period (including Subcontractors);
- 7) Total payments (including Subcontractors);
- 8) Predominant Federal Service Code (FSC) reflecting services provided by Contractor (and separate predominant FSC for each Subcontractor if different);
- 9) Estimated data collection cost;
- 10) Organizational title associated with the Unit Identification Code (UIC) for the Army Requiring Activity (the Army Requiring Activity is responsible for providing the Contractor with its UIC for the purposes of reporting this information);
- 11) Locations where Contractor and Subcontractors perform the work (specified by zip code in the United States and nearest city, country, when in an overseas location, using standardized nomenclature provided on the website);
- 12) Presence of deployment or contingency contract language; and
- 13) Number of Contractor and Subcontractor employees deployed in theater during the reporting period (by country).

12 Configuration Controls

12.1 aRFID-V Configuration Management

The aRFID-V equipment shall be version/configuration-controlled, accounted for, and documented IAW the Contractor-developed and Government-approved, aRFID-V Configuration Management (CM) documentation IAW CDRL A012 (reference solicitation Section J, Exhibit A). The Contractor shall manage version changes to hardware and software and, upon request by the Government, shall submit documentation of such

changes to the Government.

For example, the Contractor shall have a baseline matrix that shall include, at a minimum: Equipment Nomenclature, Manufacture Model Number, Manufacture Part Number, Firmware Version, Date of Implementation, Software Version, Relevant Specification Paragraph, and any constraints. The matrix shall be in Microsoft Office Excel format. Any changes in hardware or software will be a change to the baseline and will require Government approval. Once changes to the baseline are reviewed and approved by the Government, the Contractor shall provide configuration updates to the User Guide showing changes in hardware and software versions, the date of the change, and other changes in nomenclature.

The Contractor shall notify the Government of pending changes to the aRFID-V Equipment and Software Baseline Configuration, to include Diminishing Manufacturing Sources and Material Shortages (DMSMS), and Product Life Cycle Obsolescence. Notifications shall address how new equipment is added to the contract (e.g., updating the User Guide, Testing/Certification, etc.) and shall define a process that manages orderly implementation of changes. For example, the CM must adequately manage multiple fielded Hardware / Software versions, as well as the interoperability of these multiple versions.

The CM shall address how they will provide Warranty Support for the aRFID-V products, inclusive of firmware and software, during the life of the product warranty period, including option years.

The CM shall comply with the requirements of the DISA UC APL (<https://aplits.disa.mil>). The CM shall identify the Contractor's defined processes and related timelines to address the UC APL product phases; i.e., product additions / substitutions, renewal, and End of Life (EOL). The Contractor shall notify the COR within **five (5) working days** if there are product or category changes to the UC APL that may have a direct or implied impact to the aRFID-V product offerings and certification requirements. In the event a aRFID-V UC APL product offering has been announced as EOL, placed on a removal list, or is approaching its scheduled UC APL certification maturity date; the Contractor will notify the COR and provide a corrective action plan within **five (5) working days** of said announcement / notification. If there is not a suitable certified replacement product the Contractor shall initiate the UCR and/or UC APL vetting process (if applicable) within sufficient lead-time to ensure that there is no lapse in product availability, functionality, and conformity.

12.2 Changes and Modifications

All OEM changes prior to contract award shall be included in equipment provided under this contract at no additional cost to the Government. The Contractor shall notify the KO of all OEM-sponsored changes to any equipment provided on the contract. IAW CDRL A007 (reference solicitation Section J, Exhibit A), all changes shall be provided to the Government no later than **45 calendar days** prior to implementation for evaluation, and will be subject to the KO's approval before the changed products may be placed on the contract.

12.3 Changes to Software

IAW CDRL A007 (reference solicitation Section J, Exhibit A), the Contractor shall notify the KO of all changes to the software and documentation provided under the contract throughout the warranty period, including any software updates and upgrades (e.g., bug fixes, new features, enhancements, and revisions) as they become available. Software changes are defined as any software product and documentation that is provided for any other customer free of charge, or that the software manufacturer does not consider a new product. Changes to firmware, software or documentation (e.g., User Manuals), including packaging and shipping, shall be provided at no additional cost to the Government.

12.4 Notification of Software Changes

For any software change involving a change to form fit or function, the Contractor shall provide PL AMIS one copy of the changed software, with documentation (e.g., User Manuals), for each affected software item previously accepted by the Government. Any changes to the baseline will require the Contractor to perform all functions detailed in the approved CM to ensure that any changes to the software or firmware will not affect performance, security requirements, safety, NI, HERO, or other requirements within this PWS. After Government evaluation of the changed software, the KO will notify the Contractor of the acceptance or rejection of the latest release. Software changes not involving a change to form fit or function shall be provided on the contract after notification is provided to the KO.

12.5 Correction of Safety Hazards or Equipment Malfunctions

The Contractor shall notify the KO and PL AMIS of all OEM-sponsored changes to correct safety hazards or equipment malfunctions no later than (7) workdays after discovery of the OEM-sponsored changes. The Contractor shall implement changes to correct safety hazards IAW commercial practices. The implementation shall be IAW a mutually agreed-upon schedule. All such changes shall be implemented at no additional cost to the Government.

12.6 Configuration Audits

The Government is required to maintain configuration control over functional and performance requirements (i.e., form, fit, and function). Subject to the issuance of a TES Task Order, the Contractor shall support the Government in performing Functional Configuration and Physical Configuration Audits. The Contractor shall provide a demonstration of the equipment. No later than **seven (7) workdays** prior to commencement of the equipment demonstration, the Contractor shall deliver a Demonstration Plan to the Government. The Plan shall include the agenda, demonstration procedures, and a matrix identifying the baseline equipment. The baseline matrix shall include, at a minimum: Equipment Nomenclature, Model Number, Firmware Version, Software Version, Relevant Specification Paragraph, and any constraints. The matrix shall be in Microsoft Office Excel format.

12.7 Physical Configuration Audit

A Physical Configuration Audit (PCA) is the formal examination of the “as-built” configuration of a commercial item against its technical documentation to establish or verify the commercial item’s product baseline.

12.8 Functional Configuration Audit

A Functional Configuration Audit (FCA) is the formal examination of the functional characteristics of a configuration item to verify that the item has achieved the requirements specified in its functional and allocated configuration documentation. The Government’s Configuration Management Team or Quality Control Representative performs the FCA by auditing the requirements specifications against the RFID Contractor specifications for each configuration item (e.g., hardware, middleware, and software).

13 Risk Management

Risk Management is an essential part of program management. The Contractor shall continually identify, assess, manage, and control project risks. The objective is to reduce program uncertainties, and to classify risks according to their probability of occurrence and possible consequences. IAW the Government-approved Management Plan, the Contractor shall identify project risks or actions that affect the accomplishment of program objectives. The program risk events include, but are not limited to the following:

- a. Technical performance;
- b. Operational performance
- c. Schedule performance;
- d. Supply Chain issues; and
- e. Repeated Hardware/Firmware Failures

The Contractor shall prioritize project risks and determine the status of risk reduction or mitigation efforts. The Contractor shall report the status of risk management efforts during the PPRs.

14 Semi-Annual Equipment and Service Report (SAESR)

The Contractor shall provide PL AMIS, the COR, and the KO with a Semi-Annual Equipment and Service Report (SAESR) in Microsoft Office Excel format via electronic mail IAW CDRL A008 (reference solicitation Section J, Exhibit A), and shall post it on the Contractor’s web site for on-line viewing and ad hoc inquiries by authorized users. The initial SAESR shall be submitted to cover the month the first aRFID IV repair (warranty) item is received by the Contractor. Thereafter, the report shall be provided on a **semi-annual basis**, and shall be due no later than **10 calendar days** after the end of the Government’s 2nd Quarter-end and Fiscal year-end (e.g., April 10th and October 10th). The Contractor shall provide, as part of the SAESR, a consolidated list of service user calls for troubleshooting assistance. This detailed information for warranty repairs will be

used to identify trends and compliance with equipment turn-around requirements. The SAESR shall include a separate line item to describe each RFID item service incident and, at a minimum, shall include the following:

- a. The Return Material Authorization (RMA) number and date assigned to User Category of service action, Warranty;
- b. Whether the User requests the same serial number item returned, and whether the User changed their mind because of a delay in receiving the same serial number in return;
- c. The identity of the Federal agency (e.g., Army, Navy, DLA, etc.), the Government User and POC, and the site requiring the Warranty service;
- d. The parts breakout, including the nomenclature; National Stock Number (NSN), if available; part numbers; model number; CLIN; and serial number;
- e. The quantity of each type of component repaired or replaced by CLIN under the contract to date;
- f. The Equipment Warranty expiration date;
- g. The Delivery Order number or purchase card order date and activity;
- h. The date the field engineer arrived on-site, or the date the failed aRFID-V equipment was received at the repair facility;
- i. The date the repair action was completed and the date the equipment was sent back to the User, shipper or carrier or picked up by the User; and
- j. A remarks section providing information outside of the items listed above, including, but not limited to: a brief, non-technical description of equipment problems identified; repair action accomplished; parts replaced; serial numbers of replacement aRFID-V items (if the item was replaced by the Contractor); problems identified, but causes not isolated and a statement of no evidence of failure if no evidence of failure was found.

15 Customer Support

Customer Support shall not be separately priced.

15.1 Technical Assistance

The Contractor shall provide Technical Assistance, as follows:

- a. Troubleshooting and correction of equipment problems;
- b. Processing Mail-in warranty service issues; for example, assigning RMA numbers; and
- c. Providing Contractor address of the Repair Center(s).

15.2 Toll-Free Customer Support Help Desk

The Contractor shall provide toll-free telephonic support for a Customer Support Help Desk in CONUS and OCONUS. The Help Desk shall be staffed **24 hours a day, seven (7) days per week**, except when U.S. Government holidays and OCONUS Host Nation holidays coincide. The Help Desk shall respond to the User's call no later than 4 hours after receiving the call 95 percent of the time; maintain a database of calls received and

acted upon; and track User calls for troubleshooting assistance. Except for the purpose of leaving a phone number for the Contractor to return a call no later than one hour later during periods of high call volume, recorded answering services are not acceptable to the Government; however, the Contractor may use an on-line knowledge base, and an on-line RMA input functionality to assist Help Desk staff meet the workload. Contractor personnel staffing the Customer Support Help Desk shall possess sufficient expertise to recommend troubleshooting procedures and possible corrective actions for equipment and software acquired under the aRFID-V contract. Contractor personnel staffing the Help Desk shall understand and speak fluent English. The Contractor shall maintain records of User calls for troubleshooting assistance that capture the following: failed item POC, location, date, problem, and resolution. This information shall be provided in the SAESR.

15.3 Web Site

The Contractor shall establish and maintain a worldwide web site for Government Users no later than **30 calendar days** after the contract effective date. The web site shall be hot linked to the PL AMIS web site and available daily on a 24-hour basis, until the expiration of the last active order issued under the contract. The web site shall not be password protected, and shall only be accessible from a *.mil or *.gov web domain. At a minimum, the Web site shall include, or provide hotlinks to the following:

- a. Methods for User to track the status of orders using the Government's order number and a Unique Control Number;
- b. Warranty tracking using the RMA number;
- c. Exchanges of technical information between the Contractor and individual User and groups;
- d. The POC, telephone and facsimile number, email address and mailing address for each RC;
- e. Technical troubleshooting support;
- f. Failed equipment tracking and status;
- g. User Guide;
- h. Reference and User Manuals (i.e., Commercial Manuals, Technical Manuals, Software Manuals);
- i. Project management reports (schedules, IPT and PPR minutes, etc.);
- j. Recent news items from PL AMIS or the Contractor (e.g., notifications of the web site being down for maintenance, etc.);
- k. Other data, as mutually agreed to by the Government and the Contractor;
- l. aRFID-V device drivers;
- m. The SAESR, Status Report, and Warranty Status Report; and
- n. The list of products that fully comply with Section 508 of the Rehabilitation Act and Section 255 of the Communications Act, as set forth at 36 Code of Federal Regulations Part 1194.

The Contractor shall ensure that all device drivers required to operate aRFID-V equipment are posted to the web site. At a minimum, the Contractor shall post to the web site those drivers that were developed by the Contractor for use under this contract. All initial drivers shall be posted to the web site no later than **30 calendar days** after the contract effective

date. New and updated drivers shall be posted to the web site no later than 48 hours after the COR's approval. In the event that drivers are updated, the Contractor shall also maintain the original version on the web site.

16 Warranty

The Contractor shall provide a five-year warranty for products offered on this contract. The warranty shall start at product acceptance by the user. All warranties shall include all parts, labor, and transportation costs for all aRFID-V components provided under this contract. The Contractor shall repair or replace all failed aRFID-V components (including software) covered under the warranty IAW the procedures described in the Warranty Support paragraph. All warranties shall be included in the purchase price of the component, and not priced separately. The Contractor shall immediately notify the ordering KO and order POC regarding equipment requiring repair or replacement due to apparent User abuse, negligence, or missing significant parts, such as circuit cards or boards.

16.1 Warranty Support

During the equipment warranty period, the Contractor shall implement changes to correct equipment malfunctions IAW best commercial practices. The implementation shall be IAW a mutually agreed-upon schedule. These changes shall be made at no additional cost to the Government. The warranty shall fully protect the Government against equipment malfunctions due to material defects, workmanship, or intrinsic operating problems.

The warranty period for items ordered by Delivery Order shall begin upon Government acceptance of the equipment. In the event the Contractor is authorized to use a Certificate of Conformance, the warranty period for items ordered by a Delivery Order shall begin on the date of shipment. The warranty period for items ordered by purchase card shall begin on the date of shipment.

16.2 Warranty Mail-In Procedures

The Contractor shall bear all shipping costs, both from and back to Government sites (CONUS and OCONUS). The Contractor shall be responsible for the equipment from the time of receipt until safe return to the Government. The Government will provide the Contractor with any unusual transportation instructions for return shipment after repair. When the User does not require the same serial number equipment, the Contractor shall ship a replacement item no later than 24 hours after notification of failed aRFID-V components. If the User requires the same serial number equipment, the Contractor shall restore all malfunctioning equipment covered under warranty to an operational condition and ship the equipment back to the User no later than **10 workdays** after receipt of the failed equipment (CONUS and OCONUS). In the event a same serial number component requested by the User cannot be repaired, the Contractor shall notify the Government User no later than **three (3) workdays** after receipt of the component at the Contractor's facility. The Government User will provide the Contractor with disposition instructions for un-

repairable aRFID-V components. The Government desires warranty turn-around times that exceed the stated requirements. Information regarding mail-in warranty services shall be provided in the SAESR.

16.3 Component Return and Tracking

The Contractor shall provide a method to enable the Government User and the Contractor to quickly identify and track aRFID-V components that have been sent to a Contractor RC for warranty service. The Contractor shall assign an RMA number for each aRFID-V component returned to the Contractor for warranty service, which shall be used as the tracking number, and inform the User of the RMA number and serial number.

16.4 Warranty Replacement Parts

The Contractor shall only use new parts, or parts warranted as new by the OEM, for repairs of failed Government aRFID-V components. Additionally, all replacement parts shall be equal to or better than the replaced parts in terms of quality and performance. The warranty for all replacement items installed during the initial warranty period shall be equal to the remaining warranty period for the original item, or **90 calendar days**, whichever is greater. Failed parts replaced by the Contractor shall become the property of the Contractor. However, the Government reserves the right to purchase unserviceable parts containing sensitive or classified material, as required by statute or regulation. This information for this section shall be provided in the SAESR.

16.5 Warranty On-Call Procedures

The Contractor shall provide instructions regarding on-call warranty service for aRFID-V in both CONUS and OCONUS IAW CDRL A009 (reference solicitation Section J, Exhibit A). For CONUS locations, the Contractor shall provide on-call repair no later than **five (5) workdays** after notification. For OCONUS locations, the Contractor shall provide on-call repair no later than **seven (7) workdays** after notification. The Contractor shall provide on-call warranty service outside the Official Hours of Operation when required by the using activity. When warranty service outside the Official Hours of Operation is ordered in CONUS locations, the Contractor shall replace or return the equipment to an operational condition no later than **five (5) calendar days** from the time the Contractor is notified of the malfunction. The requirement for OCONUS locations is that the Contractor shall replace or return the equipment to operational condition no later than **seven (7) calendar days** of notification. The Contractor shall provide On-call Warranty service support to repair the item on-site. The Government desires warranty turn-around times that exceed the stated requirements. Information regarding on-call warranty services shall be provided in the SAESR.

16.6 Warranty Status Report

The Contractor shall provide a Warranty Status Report in Microsoft Office Excel format, with each SAESR, or as requested by the COR. The warranty status report shall include, but not be limited to, a list of all equipment due to leave warranty status no later than the next twelve months with serial number, model number, Federal Agency, order number, shipping date, warranty end date, Government User or Government POC and telephone number. The initial report format shall be provided by the Contractor for Government review and approval no later than **30 calendar days** after the contract effective date.

17 Technical Engineering Services

17.1 General

The Contractor shall provide TES on-site at Government sites and at the Contractor's facility, as specified in each Task Order. TES shall include those services required for - End-to-End, aRFID-V turn-key implementation; IUID implementation support; equipment integration; site analysis; installation; de-installation; relocation; problem-solving; user unique training; IPT support; conducting PCAs/FCAs; software development; communications; interfaces to other Government systems, equipment and systems; engineering services, to include aRFID integration with passive RFID and automatic identification technology (AIT) equipment; and System Design and systems integration, to include middleware integration to enterprise systems. Any cables or adapters not listed in this contract, and any middleware or other items and materials required for installation of Contractor-provided aRFID-V components, may be ordered through this contract IAW the provision entitled "Incidental Materials." TES shall be ordered by a Task Order only. The Contractor shall maximize the use of hardware on the most recent aRFID-V contract whenever possible. All hardware and software solutions require Government approval. The Contractor shall identify any requirements for interface with any other systems, identify the required data elements, and identify the digital requirements for implementation of the End-to-End Turn-key solution. The Government Program Manager will have the right to reject or require correction of any deficiencies found in the system, subsystem, or supply items that do not meet the requirements of the TES Task Order. Government rights under DFARS 252.227-7014 apply to all Contractor-developed software that is delivered for turnkey solutions via a TES Task Order.

17.2 Proposal Request for TES

The Government will issue an RFP for TES, including a description of the required tasks. Upon receipt of an RFP for TES, the Contractor shall submit a price proposal as soon as possible, but not more than fifteen (15) workdays after receipt of the request, unless so agreed to by the Ordering Contracting Officer. The Contractor's proposal shall contain sufficient detail to enable the Government to determine the acceptability of the proposal, and shall include, at a minimum:

- a. A brief description of the Contractor's proposed technical approach to demonstrate

- the Contractor's understanding of the tasks(s).
- b. Proposed timeline schedule.
- c. Proposed labor categories from the Price Matrix and the number of hours for each category.
- d. Proposed Incidental Materials, including the price and description of each item.
- e. Proposed price for Travel, with a breakout of airfare(s), per diem, rental car(s), and any other travel-related expenses.
- f. For turnkey proposals only:
 - i. Proposed aRFID hardware and software CLINs/SLINs required for the proposed solution
 - ii. Any required Government-furnished AIT and aRFID hardware and software and the associated logistical requirements (e.g. locations and dates for the Government to furnish the items).

17.3 Travel

Prices for Contractor personnel travel and per diem to perform TES shall be IAW the requirements set forth in the Task Order.

17.3.1 TES Trip Report

The Contractor shall submit a TES Trip Report to the Task Order POC or Task Order COR, if applicable, no later than **five (5) workdays** after the completion of each trip made for TES. The trip report shall be in the Contractor's format, and shall contain, at a minimum:

- a. Report Date;
- b. Customer Name, address, POC and telephone number;
- c. Project Name;
- d. Time arrived and time departed;
- e. Any recommended or provided Incidental Material description;
- f. The Contractor's summary of work completed; and
- g. The Contractor's POC name and signature.

17.3.2 TES Response Time

The Contractor shall provide TES within the time specified in the Task Order for specific technical services. The on-site locations and objectives of the TES to be provided shall be stated in the Task Order.

17.3.3 Software Development Services

Software Development Services (SDS) shall be limited to development incidental to the aRFID-V related mission that utilizes equipment acquired under this contract. The aRFID-V SDS shall be limited to the development work required to implement, modify, interface, and integrate aRFID-V application(s) to an existing Government application(s) and database(s) (e.g., SARSS or TIS). Services include new software development, which may include translation of existing Government code that has been determined necessary to ensure operation of the system.

18 Documentation Requirements

18.1 Government Rights

The Government shall have unlimited rights, IAW copyright laws and regulations, to use and reproduce for its own use, all computer software documentation required to be delivered under this contract, as described in and governed by DFARS 252.227-7014. The Contractor shall provide the aRFID-V user community with online access to, and the ability to download, all User Manuals and software reference documentation for any piece of equipment that interfaces with a host computer system. User Manuals and software documentation shall be in English and in the Contractor's format, using Portable Document Format (PDF) files.

18.2 Commercial User Manuals

The Contractor shall provide commercial a User Manual in hard copy and through online access for each piece of equipment that provides step-by-step procedures for each function performed by the equipment. The User Manuals shall identify all preventive maintenance tasks and troubleshooting procedures. The User Manuals shall be included with each delivered piece of equipment, and shall not be separately priced.

18.3 Software Reference Documentation

The Contractor shall provide software reference documentation in hard copy and through online access for use by software developers creating aRFID-V applications for all software offered. The documentation shall contain specific details for the integration of aRFID-V equipment. The documentation shall be at a level of detail sufficient to fully define the operator interface and application operations. The software reference documentation shall be included with each delivered piece of equipment, and shall not be separately priced.

19 Certification

19.1 Non-Incendive Certification

The Contractor shall certify that equipment identified as Non-Incendive, as well as its sub-components, shall be designed, manufactured and tested to Non-Incendive standards, as specified at time of order in the most current National Electrical Code (NEC), for the environment specified in PWS Section 3.4 (Hazardous Environment).

19.2 Product Safety Certification

Equipment shall be certified that it meets ANSI/UL1650-1697 by an authorized, Nationally Recognized Testing Laboratory.

19.3 Electromagnetic Compatibility (EMC) Compliance and Hazards of Electromagnetic Radiation to Ordnance (HERO) Compliance

All applicable equipment shall meet, as appropriate, the requirements of National Telecommunications and Information Administration (NTIA) Manual Annex K, 47 CFR Part 15 for Government operations, and International Standards. In order to certify the use of commercial aRFID-V equipment in these environments, the Government may subject representative categories of equipment to radiated emission and susceptibility tests (see MIL-STD 461G or most receive version). The applicable equipment shall remain unchanged after installation of Contractor-provided internal devices. All applicable equipment for both CONUS and OCONUS shall meet the International Special Committee on Radio Interference (CISPR) 19, Class A (International) standards for Radio Frequency Interference/Electromagnetic Interference and be Underwriters Laboratory and European Community certified.

19.4 Self-Certification.

The Contractor's self-certification of standards (e.g., ISO 9075) and DISR shall be based on the results of testing or inspection the Contractor undertakes or authorizes others to undertake on the Contractor's behalf. Self-certification shall be performed IAW ANSI Z-34.2-1987, American National Standard for Certification Self-Certification by Producer or Supplier.

20 Background Investigations for Contractor Personnel

20.1 Background

When applicable, Contractor personnel performing services under this contract or a Task Order issued under this contract, shall be required to undergo a background investigation. Task Orders may require Contractor personnel to have access to Unclassified Sensitive information IAW DoDD 8500.01E, DoDI 8500.2, AR-25, and the Privacy Act of 19674 (Public Law 93-579). At a minimum, some CONUS and OCONUS Task Orders will require the Contractor personnel accessing this information to have a favorable National Agency Check (NAC) and/or a DoD Secret clearance (Interim Secret clearances are acceptable). Investigative packages may contain the following forms:

1. SF-85, Questionnaire for Non-Sensitive Positions
2. SF-85P, Questionnaire for Public Trust Positions
3. SF-86, Questionnaire for National Security Positions
4. Credit Report Release Form
5. FD-258, Fingerprint Card,
6. 28.2 NAC FILE RECORDS

20.2 NAC File Records

- a. The Contractor shall take the necessary steps to ensure the ability to timely respond

to Task Orders that require a NAC or DOD Secret clearance. When a Task Order specifically requires a NAC, the Contractor personnel assigned to this effort shall complete a Standard Form 85 or 85P. When a Task Order specifically requires a DOD Secret clearance, the Contractor personnel assigned to this effort shall complete a Standard Form 86.

- b. The completed paperwork shall be submitted to the Contractor Security Manager for review. The Contractor Security Manager shall obtain a DOD Secret clearance from the Defense Security Service (DSS) or from the appropriate Government agency. The Contractor shall maintain a record of all requested NAC and DOD Secret clearance approvals and disapprovals.

20.3 Continued Performance during Support of Crisis Situations, Contingency or Exercise

The Contractor shall provide continued performance during support of crisis situations, contingencies or exercises IAW Exhibit C, Continued Performance during Support of Crisis Situations, Contingencies and Exercises.

Exhibit A**CDRL A001, "Contract Data Requirements List" - Template/Format****aRFID-V Monthly Sales and Status Report**

		[Month-Year]		[Year-to-Date]		[Contract-to-Date]	
0002A	Army	10	\$50	17	\$100	50	\$25
	AF	0	\$0	3	\$15	10	\$5
	Navy	5	\$25	10	\$50	20	\$10
	Marine	0	\$0	0	\$0	2	\$1
	Coast Grd	0	\$0	0	\$0	0	\$0
	DLA/Other	0	\$0	5	\$25	10	\$5
0002B	Army	10	\$50	17	\$100	50	\$25
	AF	0	\$0	3	\$15	10	\$5
	Navy	5	\$25	10	\$50	20	\$10
	Marine	0	\$0	0	\$0	2	\$1
	Coast Grd	0	\$0	0	\$0	0	\$0
	DLA/Other	0	\$0	5	\$25	10	\$5
	TOTALS	15	\$75	35	\$190	92	\$460

Note: The CLINs, Quantity numbers and Total Amounts shown above are for illustrative purposes only. The Contractor may provide each of the three summaries (Current month, Year- to-date, and Contract-to-date) on separate worksheets of the same spreadsheet file.

Exhibit B

Antiterrorism/Operations Security Requirements

Each order placed under this contract may have different requirements, resulting in different considerations for AT/OPSEC, etc. Each order will specify which of the following provisions apply.

1. AT Level I Training. All contractor employees, including subcontractor employees, requiring access to Army installations, facilities, and controlled-access areas will complete AT Level I awareness training within **14 calendar days** after the contract start-date or effective date of incorporation of this requirement into the contract, whichever is applicable. The contractor will submit certificates of completion for each affected contractor employee and subcontractor employee to the COR or to the contracting officer, if a COR is not assigned, within **14 calendar days** after training is completed by all employees and subcontractor personnel. AT Level I awareness training is available online at <https://atlevel1.dtic.mil/at>.

2. AT Awareness Training for Contractor Personnel Traveling Overseas. Specific AOR training content may be directed by the USEUCOM Commander, with the USAREUR ATO being the local POC.

3. Access and General Protection/Security Policy and Procedures. Contractor and all associated subcontractor employees shall provide all information required for background checks to meet installation access requirements to be accomplished by installation provost marshal office, director of emergency services, or security office. Contractor workforce must comply with all personal identification verification requirements (FAR clause 52.204-9, Personal Identity Verification of Contractor Personnel) as directed by DOD, HQDA, and/or local policy. In addition to the changes otherwise authorized by the changes clause of this contract, should the Force Protection Condition (FPCON) at any individual facility or installation change, the Government may require changes in contractor security matters or processes.

3a. For contractors requiring common access cards (CACs). Before CAC issuance, the contractor employee requires, at a minimum, a favorably adjudicated National Agency Check with Inquiries (NACI) or an equivalent or higher investigation in accordance with Army Directive 2014-05. The contractor employee will be issued a CAC only if duties involve one of the following: (1) Both physical access to a DOD facility and access, via logon, to DOD networks on-site or remotely; (2) Remote access, via logon, to a DOD network using DOD-approved remote access procedures; or (3) Physical access to multiple DOD facilities or multiple non-DOD federally controlled facilities on behalf of the DOD on a recurring basis for a period of 6 months or more. At the discretion of the sponsoring activity, an initial CAC may be issued based on a favorable review of the FBI fingerprint check and a successfully scheduled NACI.

3b. For contractors that do not require CACs, but require access to a DOD facility or installation. Contractor and all associated subcontractor employees shall comply with adjudication standards and procedures using the National Crime Information Center Interstate Identification Index (NCIC-III) and Terrorist Screening Database (TSDB) (Army Directive 2014-

05/AR 190-13), applicable installation, facility and area commander installation/facility access and local security policies and procedures (provided by government representative), or at OCONUS locations, in accordance with status of forces agreements and other theater regulations.

4. iWATCH/iSALUTE Training. The contractor and all associated subcontractors will brief all employees on the local iWATCH/iSALUTE program (training standards provided by the requiring activity ATO). This locally developed training will be used to inform employees of the types of behavior to watch for and instruct employees to report suspicious activity to the COR. This training will be completed within **30 calendar days** after the contract is awarded and within **30 calendar days** after new employees commence contract performance, with the results reported to the COR within **45 calendar days** after the contract is awarded.

5. For Contracts That Require Performance or Delivery in a Foreign Country. DFARS 252.225-7043. The clause will be used in solicitations and contracts that require performance or delivery in a foreign country. This clause applies to both contingencies and non-contingency support. The key AT requirement is for non-local national contractor personnel to comply with theater clearance requirements and allows the combatant commander to exercise oversight to ensure the contractor's compliance with combatant commander and subordinate task-force commander policy and directives.

6. Contractor Employees Who Require Access to Government Information Systems. All contractor employees with access to a Government information system must be registered in the Army Training Certification Tracking System (ATCTS) at commencement of services, and must successfully complete DOD information assurance awareness training before access to the information system and then annually thereafter.

7. For Contracts That Require an OPSEC Standing Operating Procedure/Plan. The contractor will develop an OPSEC standing operating procedure (SOP)/plan within 90 calendar days after the contract is awarded, to be reviewed and approved by the responsible Government OPSEC officer, according to AR 530-1. This SOP/plan will include the Government's critical information, why it needs to be protected, where it is located, who is responsible for it, and how to protect it. In addition, the contractor will identify an individual who will be an OPSEC coordinator. The contractor will ensure this individual becomes OPSEC Level II certified according to AR 530-1.

8. For Contracts That Require OPSEC Training. According to AR 530-1, new contractor employees must complete Level I OPSEC training within **30 calendar days** after they report for duty. All contractor employees must complete annual OPSEC awareness training.

9. For Information Assurance (IA)/Information Technology (IT) Training. All contractor employees and associated subcontractor employees must complete DOD information assurance awareness training before issuance of network access and annually thereafter. All contractor employees working IA/IT functions must comply with DOD and Army training requirements in DODD 8570.01, DOD 8570.01-M, and AR 25-2 within **6 months** after being employed.

10. For Information Assurance (IA)/Information Technology (IT) Certification. According to DFARS 252.239.7001, DOD 8570.01-M, and AR 25-2, contractor employees supporting IA/IT functions will be appropriately certified on contract award. The baseline certification as stipulated in DOD 8570.01-M must be completed on contract award.

11. For Contracts That Require Handling or Access to Classified Information. The contractor will comply with FAR Clause 52.204-2. This clause involves access to information classified "Confidential," "Secret," or "Top Secret" and requires contractors to comply with The Security Agreement (DD Form 441), including DOD 5220.22-M and any revisions, notice of which has been provided to the contractor.

12. For Contractors Authorized to Accompany the Force. DFARS 252.225-7040. This clause will be used in solicitations and contracts that authorize contractor personnel to accompany U.S. Armed Forces deployed outside the United States for contingency operations, humanitarian or peacekeeping operations, or other military operations or exercises when designated by the combatant commander. The clause discusses the following AT/OPSEC-related topics: required compliance with laws and regulations, pre-deployment requirements, required training (according to combatant command guidance), and required personnel data.

13. Threat Awareness Reporting Program. Per AR 381-12, Threat Awareness and Reporting Program (TARP), contractor employees must receive annual TARP training by a CIA agent or other trainer as specified in 2-4b.

