PASSIVE

RADIO FREQUENCY IDENTIFICATION (pRFID)

SPECIFICATION AND STATEMENT OF WORK

Date: 23 Apr 08

1 SCOPE.

The Mission of Product Manager Joint-Automatic Identification Technology (PM J-AIT) is to provide a single point of contact 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 Passive Radio Frequency Identification (pRFID) Contracts are multiple award, Indefinite-Delivery-Indefinite-Quantity (IDIQ) Contracts that will provide Passive RFID Electronic Product Code (EPC) Class 1, Gen 2, (and when available Class 2, Gen 2) hardware, software, documentation, and, incidental services to authorized users worldwide. Incidental services include training, warranty and maintenance services, and technical engineering services (TES). Hardware and software delivery and installation, as well as performance of associated training and warranty and maintenance services, will be required at CONUS and OCONUS Government sites. Performance of TES will be required at CONUS and OCONUS Government sites, and the Contractor facility.

1.1 PROJECT OBJECTIVES.

The objective of the pRFID acquisition is to provide a state-of-the-art, common, integrated structure for logistic identification, tracking, locating, and monitoring of commodities and assets. In addition, Item Unique Identification (IUID) marking, data collection, storage information, retrieval methods, information processing, and transmission of Tag data will greatly enhance systems within the Department of Defense (DoD), United States Coast Guard, other Federal Agencies, North Atlantic Treaty Organization (NATO), Coalition Partners and, other Foreign Military Sales (FMS). Passive RFID EPC, Class 1, Gen 2, technology, and when available Passive RFID EPC, Class 2, Gen 2, technology, will provide standardization and interoperability amongst Government Users of Passive RFID EPC equipment and incidental services acquired from the pRFID Contracts. The pRFID Contracts offer business opportunities to multiple Contractors through competitively awarded Task Orders and Delivery Orders and through Government wide Commercial Purchase Card (hereinafter referred to as “purchase card”) orders (reference Contract Part C-1-1, paragraph entitled Ordering Procedures).

1.2 DESCRIPTION AND SPECIFICATION.

This Description and Specification sets forth the requirements for the pRFID Contracts.

The Contracts shall provide for commercially available Passive RFID EPC Class 1, Gen 2, communications hardware, software, TES, documentation, training, and warranty and, maintenance services, to provide a common, integrated structure for logistics tracking, locating, and monitoring of assets for all Users.

The Government has a requirement for Passive RFID EPC, Class 2, Gen 2, Tags and compatible readers. Therefore, Contractors shall submit a Contract Change Proposal (CCP) for addition to the Contract Class 2, Gen 2, Tags and compatible readers, printers, software, and maintenance no later than six months after the publication of the ISO EPCGlobal Class 2, Gen 2, Specification. The CCP shall comply with the requirements of Contract Part C-1-1, paragraph entitled “Current Technology Substitutions and Additions.”

The definition of Passive RFID EPC (also referred to as pRFID) components for the purposes of this Contract are those commercial products necessary for Passive Radio Frequency Identification, the tracking of tagged commodities and assets, data collection, keyless data entry, data processing, data storage, and retrieval. The standalone terms “Passive RFID EPC” and “pRFID” as used in this Contract initially refer to Passive RFID EPC Class 1, Gen 2, technology. However, in the event the Contract is modified to add RFID EPC Class 2, Gen 2, technology, the aforementioned terms shall apply to both Class 1 and Class 2, Gen 2, technology.

The pRFID Contracts will provide RFID EPC Class 1, Gen 2, (and when available, Class 2, Gen 2) hardware and software that will be used in fixed and mobile locations. The pRFID requirements include, but are not limited to, microprocessor-based RFID hardware, software, data communications, and turnkey integration services to include: Passive RFID EPC Tags, EPC Fixed Readers; EPC Enabled Printers; EPC Hand-Held Readers; Rechargeable Batteries and Battery Chargers; Software (Configuration/Operational

Software for PC, Configuration/Operational Software for Hand-Held Reader, Application Development Software and Special Software Development Tool Kits/Utility Libraries, Integration Software, RFID EPC Enabled Printer Software); upgrades and updates to all delivered Software; Separately Orderable Components; TES (Installation, De-installation, and Relocation of Passive RFID EPC components); Software Development Services; Middleware Development Services for Task Orders; Commercially available Middleware for Task Orders; System Integration; IUID marking and Implementation Support; Warranty; Maintenance; Program Management; and Training.

Turnkey solutions integrating technology purchased under the pRFID Contracts with existing Government provided AIT and Active RFID shall be provided under TES Task Orders to provide a transparent solution to the User. The Passive RFID EPC Tags provided under this Contract shall have 100% readability in an optimal environment, as defined by the Contractor, when applied to but not limited to the following materials, fiberboard, plastic, wood, and glass. Passive RFID EPC Tags (available in roll form) provided on this Contract shall be compatible with the Printer provided under this Contract. Passive RFID EPC Printers shall write to and correctly verify programmed Tags after printing / encoding. Passive RFID EPC technologies are applied to areas such as inventory and warehousing environments; supply chain tracking, control of maintenance, repair, and tracking facilities; control of entry and exit points of military facilities, and roadside installations; control of transactions at custody exchange points (e.g., weapons issue facilities); the military transportation community (e.g., seaports and air terminals); the handling of hazardous explosives; and for other regulated materials.

The Government reserves the right to add a transit case(s) to the Contract to support missions that require rapid deployment worldwide of groups of pRFID equipment. In the event the Government has a requirement to add a transit case(s) to the Contract, the Contracting officer will request a CCP, and the Contractor shall submit a CCP in accordance with the paragraphs “Current Technology Substitutions and Additions” and “Contract Change Proposal (CCP) Response Time” in Part C-1-1 and other applicable paragraphs in this Contract.

1.3 GENERAL.

The Government shall utilize pRFID technologies in applications that demand performance on a higher level than that available with bar code and other automated data storage and retrieval technologies. Passive RFID EPC Tags will be affixed to pallets, cases, and assets or other objects of interest to capture and transmit varying amounts of data, which can be stored (either permanently or temporarily) and processed. The Government requires multi-protocol Passive RFID EPC Class 1, Gen 2, Readers that shall be programmable to read RFID EPC Class 1, Gen 2, Tags. The Reader shall read and write information to Passive RFID EPC Class 1, Gen 2, Tags. This feature shall enable a User to locate, track, and monitor the status of a Tag and its associated commodity and asset, or to alter the data stored on a Tag.

1.4 PASSIVE RFID EPC APPLICATIONS.

Some anticipated applications of Passive RFID EPC technology include, but are not limited to the following:

a. Inventory and warehousing environments;
b. Supply chain tracking;
c. Large open-area storage facilities (austere marshaling areas, and staging and assembly areas), with or without electrical power or an established communications infrastructure;
d. The control of maintenance, repair, and tracking facilities;
e. The control of entry and exit points of military facilities, and roadside installations;
f. Restricted office and laboratory environments;
g. The control of transactions at custody exchange points (for example, weapons issue facilities);
h. The military transportation community (for example, seaports and air terminals), and petroleum distribution points (including fueling operations at airports, in-flight, and at sea);
i. The handling of hazardous, explosive, or otherwise regulated materials; and
j. The control of military convoys.

1.5 GEOGRAPHIC LOCATIONS.

The Government requires equipment that can be used worldwide in accordance with the EPC Global Standard, Version 1.0.9

1.6 OFFICIAL HOURS OF OPERATION.

The Contractor shall provide support during local Official Hours of Operation (defined in paragraph "Definition of Terms" in this Part), based on the geographic location of the Government site at which the support will be provided except for Hours of Operation requirements that are specified in paragraphs "Toll-Free Customer Support Help Desk" and "On-Call Maintenance" in this Part.

1.7 ATTACHMENTS AND EXHIBITS.

The following exhibits are contained in this Part:

a. Exhibit A - Safe Separation Distance Between a RF Source and Unshielded Munitions Containing 10 mA No-fire Current Electro-explosive Devices (EEDs).
b. Exhibit B – pRFID Contract Status Report

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 22161
Telephone: 1-800-553-6847

2.2 ELECTRONIC PRODUCT CODE (EPC) GLOBAL STANDARDS.

Copies of the EPCglobal Standards may be obtained from:

EPCglobal US
Princeton Pike Corporate Center
1009 Lenox Drive, Suite 202
Lawrenceville, NJ 08648
Phone: 609.620.4671
Fax: 609.620.0255
Website: http://www.epcglobalinc.org/standards

2.3 FEDERAL COMMUNICATION COMMISSION (FCC) REGULATIONS.

Federal Communications Commission (FCC) Regulations can be obtained from the Government Printing Office web site listed below:

http://www.access.gpo.gov/cgi-bin/cfrassemble.cgi?title=200547

International Transcription Services
2100 M. Street, N.W., Suite 140
Washington, DC 20037

Telephone Ordering: 202-512-1800

2.4 UID AND IUID POLICY REGULATIONS.

Updates to Policy and associated Guides for Unique Identification (UID) and Item Unique Identification (IUID) of Tangible Items, can be obtained from the web sites listed below:

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

2.5 ARMY SECURITY POLICY REGULATIONS.

http://www.army.mil/usapa/epubs/25_Series_Collection_1.html

2.6 DOD SECURITY POLICY REGULATIONS.

http://www.dtic.mil/

2.7 OMB CIRCULAR NO. A-130 REVISED

http://www.whitehouse.gov/omb/circulars/a130/a130trans4.html

2.8 DEFINITION OF TERMS.

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

a. Continental United States (CONUS): All locations and sites within the 48 contiguous States.
b. Industrially Hardened Components: Components that can operate in a warehouse or manufacturing setting and are capable of surviving the rough treatment and handling often found in shipping areas, loading docks, catwalks, ladders, or on the floor of a manufacturing facility.
c. Non-incendive: See paragraph entitled “Hazardous Environment.”
d. Outside Continental United States (OCONUS): All locations outside the 48 contiguous States of the U.S. OCONUS locations include, but are not limited to, Alaska, Hawaii, U.S. Territories and Possessions, Europe, Asia, and Australia.
e. Official Hours of Operation: Official hours of operation are from 8:00 a.m. to 5:00 p.m. local time, Monday through Friday, excluding Federal holidays, for each Government facility possessing Passive RFID EPC components.
f. Return Material Authorization (RMA): This is a number that shall be assigned by the Contractor for tracking Passive RFID EPC components returned for warranty or maintenance service. This number shall be furnished to the RFID user to assist in ascertaining the status of those components.

2.9 ACRONYMS.

The following are acronyms used in this Specification:

AC	Alternating Current
AES	Advanced Encryption Standard
AIS	Automated Information System
ANSI	American National Standards Institute
CLIN	Contract Line Item Number
CONUS	Continental United States
COR	Contracting Officer’s Representative
DC	Direct Current
DoD	Department of Defense
EC	Engineering Change

EIT	Electronic and Information Technology
EPC	Electronic Product Code
FCA	Functional Configuration Audit
FCC	Federal Communications Commission
FIPS	Federal Information Processing Standard
FMS	Foreign Military Sales
HERO	Hazards of Electromagnetic Radiation to Ordnance
HHR	Hand-Held Reader
IA	Information Assurance
IEEE	Institute of Electrical and Electronics Engineers
IPT	Integrated Product Team
IUID	Item Unique Identification
JTA	Joint Technical Architecture
LAN	Local Area Network
LP	Location Processor
MESR	Monthly Equipment Service Report
NI	Non-incendive
NIAP	National Information Assurance Partnership
NIST	National Institute of Standards and Technology
NTIA	National Telecommunications and Information Administration
OCONUS	Outside Continental United States
OEM	Original Equipment Manufacturer
PC	Personal Computer
PCA	Physical Configuration Audit
PM	Product Manager
PPR	Project Progress Review
RC	Repair Center
RFID	Radio Frequency Identification
RICC	RFID Integrated Component Configuration
RMA	Return Material Authorization
SLIN	Sub-Line Item Number
SOW	Statement of Work
TCP/IP	Transmission Control Protocol/Internet Protocol
TES	Technical Engineering Services
UID	Unique Identification
UL	Underwriters Laboratory
USB	Universal Serial Bus

3 PASSIVE RFID EPC TECHNOLOGY REQUIREMENTS.

3.1 GENERAL.

The Contractor shall provide all necessary hardware, software, data communications, cables, connectors, peripherals, training, installation support services, TES, and documentation (e.g., User Manuals) to operate and maintain the Passive RFID EPC technologies as stated in this Specification. Due to 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, which will identified in the TES Task Order. The Government requires equipment that supports the requirements of the Joint Technical Architecture, if applicable. The Government requires Contractor support during Official Hours of Operations except for Hours of Operation requirements that are specified in paragraphs “Toll-Free Customer Support Help Desk” and “On-Call Maintenance” in this Part. All pRFID products shall meet applicable EPCGlobal Specifications. 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

pRFID equipment. TES / Turnkey solutions are required to help the Government incorporate pRFID equipment into various Automated Information Systems (AIS). Training and documentation are required to inform and educate the Government User.

3.2 JOINT TECHNICAL ARCHITECTURE COMPLIANCE.

The Joint Technical Architecture (JTA) is the minimal set of rules governing the arrangement, interaction, and interdependence of the parts or elements that together form an information system. Its purpose is to ensure that DoD systems are interoperable, scaleable, and portable. The pRFID equipment specified herein is not considered by DoD to be a system; rather, pRFID equipment is used to provide data entry front-ends for DoD systems. This Specification includes small computer platforms and components that may be proprietary, or that have neither the capacity nor the scope to satisfy JTA requirements. JTA requirements for modeling and designing a system are also not required by this solicitation. Systems developers incorporating Passive RFID EPC equipment acquired from this Contract shall address RFID product modeling and design requirements in their system models and designs. The JTA requirement for purposes of this Contract is for pRFID equipment to interface with existing systems, e.g., Standard Army Retail Supply System (SARSS), Transportation Information Systems (TIS). JTA compliance shall be verified based on component equipment interfaces that conform to JTA adopted Automated Information System (AIS) and Local Area Network (LAN) interfaces. Each individual equipment component shall be verified to include one or more of the following interfaces: RS-232, RS-485, USB and Ethernet. Interface requirements for Passive RFID EPC equipment are part of the specifications for these components.

3.3 OPERATING ENVIRONMENTS.

The pRFID equipment may be subjected to operating in diverse / rugged environments, and under a full spectrum of climatic conditions (desert and Arctic areas). The pRFID equipment may be subjected to rough handling, shock, and vibration during transportation, setup, and dismantling. The pRFID equipment shall be capable of use in industrial, hazardous, and ordnance environments, on board surface and subsurface naval vessels, aircraft, tanks, in conditions that range from protected and controlled (office settings) to extremely harsh and severe environments and in areas with high levels of electromagnetic noise and interference. All components acquired from this Contract shall meet applicable Environmental Protection Act requirements. The Government requires pRFID equipment that shall operate in the following environments: electromagnetic, hazardous, ordnance and radio frequency environments. The Government requires pRFID equipment that shall operate, at a minimum, in the following temperature ranges:

Passive RFID EPC Class 1, Gen 2, Multi-Protocol Fixed Reader
Operating Temperature - -4 to 120 degrees F
Storage Temperature - -4 to 140 degrees F

Passive RFID EPC Class 1, Gen 2, Hand Held Reader
Operating Temperature - 32 to 120 degrees F
Storage Temperature - -4 to 140 degrees F

Passive RFID EPC Class 1, Gen 2, Enabled Bar Code Label Printer
Operating Temperature – 45 to 95 degrees F
Storage Temperature – 25 to 100 degrees F

3.3.1 Electromagnetic Environment.

Commercial pRFID 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-464: Interface Standard for Systems Electromagnetic Environmental Effects). In order to certify the use of commercial pRFID equipment in these environments, the Government may subject representative categories of equipment to radiated emission and susceptibility tests (See MIL-STD 461D: Requirements for the Control of Electromagnetic Interference Emissions and Susceptibility, and MIL-STD-462D: Measurement of Electromagnetic

Interference Characteristics). The Contractor shall provide timely support for Government-testing efforts by providing technical data sheets and responding to Contracting Officer's Representative requests for additional data.

3.3.2 Electrostatic Discharge.

Commercial pRFID packaging of the Tags shall control and dissipate the effects of electrostatic discharge, minimally 5kV, with regard to the degradation or damage to the electronics, which make up the components of the Tag.

3.3.3 Hazardous Environment.

The Contractor shall provide, no later than 90 days after the Notice to Proceed, equipment that is identified and certified as Non-incendive (NI) for operation in environments where flammable and explosive gases and vapors may be present, where specifically required in this Specification. The following minimum NI requirements shall be met:

Class 1 and 2 (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 flyings are examples of potentially hazardous environments. Equipment shall be certified by an approved testing laboratory meeting Occupation Safety Hazards Act standards. Circuits shall not be capable of producing a spark under normal operation. The pRFID equipment may be used under conventional, chemical, or biological warfare conditions. The Contractor shall label Passive RFID EPC components that are approved for use in a hazardous environment in accordance with governing body markings.

3.3.4 Ordinance Environment.

The pRFID equipment may be used near ordnance susceptible to radiated energy. In order to certify the use of pRFID equipment in these environments, the Government may subject representative categories of equipment to stringent Hazards of Electromagnetic Radiation to Ordnance (HERO) environment testing (See MIL-STD 464). The Contractor shall support HERO testing via a TES Task Order.

3.3.5 Testing.

The Contractor shall support Government-testing efforts by providing technical data sheets and responding to the COR's requests for additional data.

3.3.6 Safety.

A determination of the required safe separation distance can be made by referring to the graph entitled "Safe Separation Distance Between an RF Source and Unshielded Munitions Containing 10 mA No-fire Current Electro-Explosive Devices (EEDs)" in Exhibit-A. This graph relates safe separation distances to irradiate output power as a function of operating frequency. 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 frequently is unknown ordnance (unknown to transporters and others).

3.3.7 Label.

All Readers and Printers shall be furnished with a warning label that clearly indicates the safe separation distance that must be maintained between ordnance and the irradiating source after HERO evaluation is completed after contract award.

3.3.8 Radio Regulatory Compliance.

The Government requires Passive RFID EPC technologies that operate in worldwide frequency spectrums. DoD will obtain "Equipment Frequency Allocation Guidance" approvals for procuring equipment that is designed to either emit or receive electromagnetic (radio frequency) energy. DoD will also obtain frequency assignments to operate the items at each specific location in CONUS. The Government will operate equipment acquired under this Contract consistent with Federal regulations governing the use of the electromagnetic spectrum and the policies and procedures of DoD Directives and Instructions: DoDI 3222.3 Operation of the DoD Electromagnetic Environmental Effects Program; DoDD 4650.1 Policy for Management and Use of the Electromagnetic Spectrum; DoDD 5000.1 The Defense Acquisition Program; and DoDI 5000.2 Operation of the Defense Acquisition Program. To facilitate obtaining frequency allocations and assignments in CONUS, the Government requires equipment that is non-licensed to comply with National Technical Information Association Manual Annex K and with FCC Part 15, regulations for Government operations. In order to verify the use of pRFID equipment the Government may subject selected pieces of equipment to electromagnetic compatibility tests (see MIL-STD-462D). The Contractor shall provide all technical data required to complete a DD Form 1494, Application For Equipment Frequency Application, after Contract award to support the DoD frequency allocation-to-equipment process, including information concerning specifications and testing of the transmitter, receiver and antenna characteristics.

3.3.9 Rugged Environment.

Certain pRFID equipment will be used by the Government in "rugged environments" (i.e., industrial and field settings under temperate, arctic, maritime and desert conditions). The words "rugged" or "ruggedized," when used herein mean that the Government requires that such pRFID equipment be designed, built, and tested to ensure reliable and continuous performance in all rugged environments. In this environment, pRFID equipment may be subjected to rough handling, continuous operational use, vibration, dropping onto hard surfaces, and shock caused by transportation over rough terrain.

3.4 BAR CODE REQUIREMENTS.

When bar code capability is required by this specification, equipment and software shall decode and printers shall print symbologies that comply with industry standards and specifications for Code 39, Code 128, CODABAR, Interleaved 2 of 5, European Article Numbering System (EAN), Universal Product Code (UPC), PDF 417, and Data Matrix ECC 200. Where bar code capability is required by this specification, the Contractor-provided equipment shall provide for the printing and decoding of the data printed on the Passive RFID EPC Enabled Bar Code Labels per these standards. Equipment shall be capable of printing or decoding these symbologies with a nominal 'x' dimension of 10 mils for linear and PDF (10 mil cell module width for Data Matrix).

3.5 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 and software delivered under this Contract.

3.6 CONNECTIVITY TO GOVERNMENT-OWNED COMPUTERS.

The Government currently uses a wide variety of Pentium processor-based computers that will connect with the Contractor-provided pRFID equipment. Connections shall be in accordance with standard protocols (ex., RS-232, RS-485, USB, TCP/IP, Institute of Electrical and Electronics Engineers (IEEE) 802.11).

3.7 AC/DC POWER REQUIREMENTS.

3.7.1 Power Requirements.

The Contractor shall provide equipment designed and certified to meet quality and safety standards of Underwriters Laboratory (UL) or an equivalent laboratory. The Contractor shall provide pRFID equipment equipped with power supplies, fuses, adapters, and cables to use with locally available commercial power. The pRFID equipment shall be compatible with the power supply, and power outlets or connectors, for the geographic area in which the component is to be operated as specified in the Task Order, Delivery Order, or purchase card order. Plug Types for geographic locations are listed on the web site: http://www.interpower.com/pcc/guide.htm.

3.7.2 Battery Operated Passive RFID EPC Readers.

Each battery operated Reader shall be delivered with two sets of rechargeable batteries and an AC Adapter (if required for AC operation).

3.7.3 Rechargeable Batteries.

Rechargeable Batteries shall provide sufficient capacity to allow a minimum of four hours of continuous Reader operation. Rechargeable Batteries shall not require discharge in order to attain full functionality and total rated battery capacity. The Contractor shall provide rechargeable Batteries that are capable of charge operations without removal from pRFID equipment no later than one year after the Notice to Proceed. All Rechargeable Batteries shall be User-replaceable by hand or with the use of commonly available tools. The Contractor shall provide Battery Chargers as Separately Orderable Components. The Contractor may provide Battery Chargers designed either to charge a single operating set of batteries, or to charge multiple battery sets concurrently.

3.7.4 Internal Back-up Power.

The Contractor shall provide:
a. A method to maintain the configuration settings within all applicable pRFID equipment (any Hand-Held Reader (HHR), Reader, or other products that include firmware);
b. A method for the configuration settings to be maintained for a minimum of 400 hours when the rechargeable battery or the AC Adapter power (if required for AC operation) is not available; and
c. A method for the rechargeable battery or AC Adapter power (if required for AC operation) source to recharge the internal back-up power source, if any.

3.7.5 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.

3.7.6 Hand-Held Reader (HHR) Low-Power Operation.

Battery-operated Hand-Held Passive RFID EPC Readers shall provide the User at a minimum with a low battery power indicator. The low-battery power indicator shall provide the User with at least five minutes of advanced warning of an automatic shutdown. Battery-operated Hand-Held Readers shall automatically shut down before battery power is completely exhausted in order to preserve stored data and conserve power. Battery-operated Hand-Held Readers shall have an automatic, User-definable, time-out capability to conserve battery power during periods of inactivity. The Government requires a feature that allows the User to terminate the time-out period and restore full operation with a single command to the Reader.

3.8 ACCESSIBILITY.

The Contractor shall provide a comprehensive list of all provided specific electronic and information technology (EIT) products (supplies and services) that fully comply with Section 508 of the Rehabilitation Act of 1973, per the 1998 Amendments, and the Architectural and Transportation Barriers Compliance Board's Electronic and Information Technology Accessibility Standards at 36 CFR Part 1194. The Contractor shall clearly indicate where this list with full details of compliance can be found (e.g., Contractor, subcontractor, vendor's, or other exact web page location). The Contractor shall ensure that the list is easily accessible by a typical User beginning five calendar days after receipt of the pRFID Contract award. The Contractor shall maintain this detailed listing of compliant products for the full Contract term, including all forms of Contract extensions, and shall ensure that the detailed listing is updated no later than three calendar days of any changes to the Contractor's, subcontractor's, or vendor's product line. The Contractor shall ensure that all EIT products that are not fully compliant are the most compliant products and services available to satisfy this pRFID Contract. The Contractor shall, for every EIT product provided under this pRFID Contract that does not comply with 36 CFR Part 1194, make every effort to replace or upgrade it with a compliant product or service, if commercially available at no additional cost to the Government.

3.9 COMMON CRITERIA COMPLIANCE REQUIREMENTS.

All Contractor provided equipment shall be compliant for robust environments and adhere to the requirements in the following documents:

a. DoD Memorandum, 9 June 2003, Subject: Internet Protocol Version 6 (IPv6).
b. DoD Memorandum, 29 September 2003, Subject: Internet Protocol Version 6 (IPv6) Interim Transition Guidance.
c. DoDD 8100.1 Global Information Grid Overarching Policy, September 19, 2002.
d. DoDI 8500.2 Subject Information Assurance (IA) Implementation, February 6, 2003.

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). No such CCPP currently exists for Passive RFID EPC technology. Therefore, upon approval and adoption of a CCPP for Passive RFID EPC technology, 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 compliant for robust environments shall be permitted through this Contract.

3.10 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, which meets the intent of this Contract.

3.11 EXPEDITED DELIVERY REQUIREMENTS.

The Contractor shall provide Expedited Delivery for CONUS and OCONUS locations when specified in equipment orders (Delivery Orders and Government wide Purchase Card Orders). Delivery shall comply with the requirements of the paragraph entitled "Expedited Delivery" in Part C-1-1.

3.12 UNIQUE IDENTIFICATION.

Applicable items, as identified in DFARS 252.211-7003, Item Identification and Valuation (Jun 2005), in Contract Part C-1-1, shall be permanently marked in accordance with the "Revision of Update to Policy for UID and IUID of Tangible Items - New Equipment, Major Modifications, and Reprocurement of Equipment and Spares," December 22, 2003. Marking shall include the UID on the item or identification plate in Data Matrix Bar Code symbology with Human Readable Interpretation (if adequate space is available). Data format shall be in accordance with the "Department of Defense Guide to Uniquely Identifying Items," Version 1.6, June 1, 2006. See Paragraph 2.4 for the website for UID and IUID Policy Regulations.

3.13 IPV6 CAPABLE ASSETS.

The Contractor shall warrant that each item delivered under the Passive RFID Contract shall accurately transmit, receive, process, and function correctly using the Internet Protocol Version 6 (IPv6), if available. Specifically, the Contractor warrants that: 1) each item delivered complies with the current JTA developed IPv6 standards profile; 2) each item delivered maintains interoperability with IPv4 (specifically, 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 notwithstanding any provision(s) to the contrary in such commercial warranty or warranties, 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. Nothing in this warranty shall be construed to limit any rights or remedies the Government shall otherwise have under this pRFID Contract with respect to defects other than IPv6 performance. In particular, the Contractor shall retrofit all non-IPv6 capable equipment, as defined by this paragraph, fielded under this pRFID Contract with IPv6 capable equipment no later than one year after the availability of a compliant IPv6 solution at no additional cost to the Government.

3.14 HAZARDS OF ELECTROMAGNETIC RADIATION TO PERSONNEL (HERP).

The Contractor shall ensure that all equipment provided under the Contract shall comply with all applicable human exposure to RF safety standards per the following regulations:

a. DODI 6055.11 - Protection of DoD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers

b. IEEE Std C95.1, 1999 Edition - IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz

c. CFR 47 Chapter I, Part 1, Subpart I, Section 1.1310 - Radiofrequency radiation exposure limits

d. NTIA Manual of Regulations and Procedures for Federal Radio Frequency Management - 8.2.28 Radiation Hazards, and Annex K - Technical Standards for Federal "Non-Licensed" Devices

3.15 EPCGLOBAL STANDARDS.

Passive RFID EPC Class 1, Gen 2, technologies shall be in accordance with the EPCglobal Standards, Version 1.0.9.

4 PASSIVE RFID EPC EQUIPMENT REQUIREMENTS.

4.1 PASSIVE RFID EPC CLASS 1, GEN 2, REQUIREMENTS.

a. The Government requires all Class 1, Gen 2, Tags be read and written, using a variety of Readers as described in this Part.

b. All 902-928MHz pRFID EPC Class 1, Gen 2, Multi-Protocol Readers and Printers provided under this Contract shall be furnished with a permanently affixed warning label that clearly indicates that the item is approved for use in the Americas, Korea, Australia and Israel only.

4.1.1 PASSIVE RFID EPC CLASS 1, GEN 2, FUNCTIONAL REQUIRMENTS.

4.1.1.1 Passive RFID EPC Class 1, Gen 2, Multi-Protocol Fixed Reader.

The Contractor shall provide a 902-928MHz Passive RFID EPC Class 1, Gen 2, multi-protocol fixed Reader that shall read Class 1, Gen 2, tags without any firmware and software changes. In addition, Readers shall be Multi-Protocol and shall be programmable to read Passive RFID EPC Class 1, Gen 2, Tags. Passive RFID EPC Class 1, Gen 2, multi-protocol fixed Reader shall write to Class 1, Gen 2, Tags. The reading range of Tags shall be attenuable from its maximum operating distance to near contact through the Reader's firmware or other easily addressable method. The Reader shall accommodate a minimum of two antennas. The Reader shall read a minimum of 100 tags per second. The write range of Tags shall be attenuable from its maximum operating distance to near contact through the Reader's firmware or other easily addressable method. The Passive RFID EPC Class 1, Gen 2, multi-protocol fixed Reader shall also be easily upgradeable to accommodate any future firmware changes. Also, the Passive RFID EPC Class 1, Gen 2, multi-protocol Fixed Reader shall be easily installed by one individual in a location using the Contractor-provided, separately orderable, Mounting Kit. The Contractor shall provide a Mounting Kit as a Separately Orderable Component. No later than one year after the Notice to Proceed, the Contractor shall provide an EPC Global compliant UHF frequency band multi-protocol fixed reader that shall be a single, non tethered, one-piece, functionally integrated unit. The EPC Global multi-protocol Fixed Reader shall have a method by means of software, hardware, firmware or any combination thereof that allows the operator to select the correct EPC Global compliant UHF frequency band for their instant operating requirement prior to the reader’s radio transmission.

4.1.1.2 Passive RFID EPC Class 1, Gen 2, Multi-Protocol Hand-Held Reader.

The Contractor shall provide a NI 902-928MHz Passive RFID EPC Class 1, Gen 2, multi-protocol Hand-Held Reader that shall read/write to Passive RFID EPC Class 1, Gen 2, Tags. The Reader shall read a minimum of 100 tags per second. The reading range of Tags shall be attenuable from its maximum operating distance to near contact through the Reader's firmware or other easily addressable method. The write range of Tags shall be attenuable from its maximum operating distance to near contact through the Reader's firmware or other easily addressable method. The Passive RFID EPC Class 1, Gen 2, multi-protocol Hand-Held Reader shall also be easily upgradeable to support future product revisions. The Passive RFID EPC Class 1, Gen 2, multi-protocol Hand-Held Reader shall be an ergonomically designed unit that shall be functionally equivalent to the fixed reader. The Passive RFID EPC Class 1, Gen 2, multi-

protocol Hand-Held Reader shall be User-programmable, and shall provide the User with assistance or prompts to perform required functions. The Passive RFID EPC Class 1, Gen 2, multi-protocol Hand-Held Reader shall be portable and lightweight, and powered by Rechargeable Batteries. The Passive RFID EPC Class 1, Gen 2, multi-protocol Hand-Held Reader, antenna, power supply, and any component required for operation shall be integrated to operate as a one-piece (non-tethered) Hand-Held unit. The Passive RFID EPC Class 1, Gen 2, multi-protocol Hand-Held Reader shall support Industry Standard Operating Systems. The Passive RFID EPC Class 1, Gen 2, multi-protocol Hand-Held Reader shall have a manual data input interface as well as User-programmable functions. The manual data input interface shall be capable of utilizing a full alphanumeric data entry system (26 alphabetic and 10 numeric characters). The Passive RFID EPC Class 1, Gen 2, multi-protocol Hand-Held Reader shall have a User-selectable, night-readable display, capable of displaying at least 80 characters without scrolling. The Contractor shall provide a hands-free device (e.g., holster or belt clip) for carrying the Hand-Held Reader. The Government requires that the Passive RFID EPC Class 1, Gen 2, multi-protocol Hand-Held Reader be capable of scanning and decoding the linear and 2D symbologies listed in the paragraph entitled "Bar Code Requirements." The Passive RFID EPC Class 1, Gen 2, multi-protocol reader shall operate in rugged environments. The Government desires a Passive RFID EPC Class 1, Gen 2, multi-protocol Hand-Held Reader that can operate in a wider temperature range than the environmental temperatures stated in the paragraph entitled "Operating Environments" in this Part. If Radio Frequency Data Communication capability is included in the Hand-Held Reader, it shall be WiFi compliant and conform to the requirements of IEEE 802.11g. All IEEE 802.11g products shall be compliant with FIPS-140-2 wireless security. No later than one year after the Notice to Proceed, the Contractor shall provide a Global multi-protocol Hand-Held Reader that will be a one-piece unit design (single platform) to support worldwide EPC Global compliance. The EPC Global compliant UHF frequency band multi-protocol Hand Held Reader shall be a single, non tethered, one-piece, functionally integrated unit that can be held in one hand. The EPC Global compliant UHF frequency band multi-protocol Hand Held Reader shall have a method by means of software, hardware, firmware or any combination thereof that allows the operator to select the correct EPC Global compliant UHF frequency band for their instant operating requirement prior to the reader's radio transmission.

Separately Orderable Components.

The Contractor shall provide the following Separately Orderable Components for the Passive RFID EPC Class 1, Gen 2, Multi-Protocol Hand-Held Reader:

a. Rechargeable Batteries;
b. Battery Chargers;
c. Carrying devices;
d. AC Adapters.

4.1.1.3 Passive RFID EPC Class 1, Gen 2, Tags.

The Government requires Passive RFID EPC Class 1, Gen 2, General Purpose Tags. These Tags will be used in industrial, hazardous, and ordnance environments described in this Part.

4.1.1.4 Passive RFID EPC Class 1, Gen 2, Enabled Bar Code Label Printer.

The Contractor shall provide a 902-928MHz Passive RFID EPC Class 1, Gen 2, Enabled Bar Code Label Printer that concurrently prints bar codes, text, and graphics, as well as writes, reads, and verifies the Tag's information. The Passive RFID EPC Class 1, Gen 2, Enabled Bar Code Label Printer shall have the ability to encode Tag information and print the label utilizing embedded Bar Code Label and Form Design Software. The Contractor shall also provide Passive RFID EPC Class 1, Gen 2, Enabled Bar Code Label Printers with the same capabilities a stated in this paragraph for frequencies of 862-870MHz and 950-956MHz within one year of Notice to Proceed. The Contractor shall provide a Passive RFID EPC Class 1, Gen 2, Enabled Bar Code Label Printer with the following features and components:

a. Ruggedized construction;
b. Concurrently printing bar code symbols, text, graphics, as well as write/read/verify the Tag;

c. Pre-configured from the factory to print labels and write to/read tags upon delivery;
d. Easily upgradeable to new firmware revisions;
e. Print using thermal transfer printing;
f. Print Class 1, Gen 2, roll-fed continuous Tags;
g. Print bar code symbologies with a minimum resolution of 203 dpi;
h. Print all bar code symbols and densities with at least a Grade A print quality, as defined in ANSI X3.182-1990 (R1995);
i. Print bar codes and nomenclature in all four of the cardinal directions;
j. Store User-designed forms and label formats in printer protected memory comparable in size and data content to the DD Form 1387, Military Shipment Label;
k. Print the linear (with Human Readable Information) and 2D bar code symbologies listed in the paragraph entitled "Bar Code Requirements," in addition to free text, symbols, graphics;
l. Have at least the following ports: USB, parallel, IEEE 802.3/Ethernet Network Interface Card with 10BaseT connector supporting TCP/IP;
m. A minimum four-inch throat size;
n. Delivered with one 4" wide resin-based printer ribbon;
o. Delivered with an Operator Maintenance Kit;
p. Driver support provided for Microsoft Windows 2000 and Windows XP, or Windows Vista, or the most current version of the operating system;
q. Non-operational Tags shall not be utilized and shall be marked accordingly.

4.1.1.4.1 Separately Orderable Components.

The Contractor shall provide the following Separately Orderable Components for the Passive RFID EPC Class 1, Gen 2, Enabled Bar Code Label Printer:

a. Operator's Maintenance Kit;
b. Replacement Print Head;
c. General Purpose Passive RFID EPC Class 1, Gen 2, Tag Label 4"x6" media stock.
d. General Purpose Passive RFID EPC Class 1, Gen 2, Tag Label 4"x2" media stock.
e. Wireless operation. This wireless option is an 802.11b/g Wi-Fi compatible interface with data rates up to 54Mb/sec.

4.1.1.4.2 Consumable Supply.

The Contractor shall provide a Resin-based printer ribbon as a Consumable Supply for the Passive RFID EPC Class 1, Gen 2, Enabled Bar Code Label Printer.

4.2 PASSIVE RFID TAG READABILITY REQUIREMENTS.

Passive RFID tags shall meet the following performance requirements as set forth in Military Standard 129P, paragraph 4.9, Radio Frequency Identification:

a. The requirement for the palletized unit load passive RFID tags, the passive RFID tags on the shipping containers and exterior containers within the palletized unit load, and the UID item unit pack passive RFID tags that are passing through a portal, is that the read distance shall be at least 3 meters (3.3 yards), reading passive RFID tags at 10 miles per hour (for example, forklift).

b. Conveyor. The requirement for an individual shipping container passive RFID tag, an individual exterior container passive RFID tag, and the UID item pack passive RFID tag moving on a conveyor, is that the read distance shall be a minimum of 1 meter (1.1 yards), reading passive RFID tags traveling at a speed of 600 feet per minute.

5 SOFTWARE, FIRMWARE, AND SECURITY REQUIREMENTS.

5.1 SOFTWARE REQUIREMENTS.

5.1.1 Environment.

The Contractor shall provide Software that shall support, at a minimum, PCs with Intel Core Dual or AMD Athlon™ 64 X2 Dual-Core Processors and the following operating systems: Windows 2000, Windows XP, Windows Vista, or the most current version of the operating system. Hand-Held readers shall be provided with an industry standard operating system, which allows users to execute applications on the Hand-Held reader. The operating system on the handheld shall be an IA compliant Windows Operating System Win Mobil 5 or the most current version of the operating system. The Contractor shall provide as a minimum, Configuration/Operational Software to utilize all components that make up the RFID Class of devices for each technology for both the Desktop PCs and Hand-Held readers, Software Development Kit license, and Application Development Software.

5.1.2 Graphical User Interface.

All Contractor-provided software for Desktop PCs shall provide a Graphical User Interface (GUI), which shall be the industry-based application software package that supports Passive RFID EPC Class 1, Gen 2, technology. The Government requires that the GUI is integrated on the Passive RFID EPC Hand-Held Readers.

5.1.3 Capability.

All Passive RFID EPC Class 1, Gen 2, software shall be provided on CD ROMs. The Government's requirement is to have the necessary software to enable the Government User to perform the technical, functional, and operational requirements of the Passive RFID.

5.2 CONFIGURATION / OPERATIONAL SOFTWARE FOR FIXED READER PC.

The Contractor shall provide Configuration / Operational Software for PC that shall, as a minimum, provide the Government User with the necessary software utilities to set up, control, and operate the Passive RFID EPC Class 1, Gen 2, equipment in actual operational environments. The Government requires software that is user programmable utilizing High Order programming languages. The Contractor shall provide Configuration / Operational Software for PC and shall add, delete, revise, configure, and test Readers / Tags in the operating environment and provide operational status of all Passive RFID EPC Class 1, Gen 2, system components and indicate which components need attention, and provide selective addition and deletion of data. Passive RFID EPC Class 1, Gen 2, software shall schedule Reader time management and report low battery power conditions for Readers that are battery powered. Passive RFID EPC Class 1, Gen 2, software shall perform adhoc and global searching for specific Tag data stored in a database and subsequently, paste the data into an Microsoft Word or Excel document; manage queried data via database functions; import and export data to database files; and print reports from data gathered from the RFID System, such as manifests, and lists of Tags and Readers present in the operating environment. The Fixed Reader Configuration/Operational Software and all required documentation (in accordance with Paragraph 12, "Documentation Requirements," in this Part D) shall be provided for installation on a PC with the fixed reader to the Government and shall not be separately priced.

5.3 CONFIGURATION / OPERATIONAL SOFTWARE FOR HHR.

The Contractor shall provide Configuration Software for the HHR that allows the User to manage the Passive RFID EPC Class 1, Gen 2, hardware when away from the host computer, which includes data collection from Passive RFID EPC Class 1 reading and writing to tags, and if wireless communications are included, communication with a host computer. As a minimum, the Configuration Software for HHR shall provide the Government User with the software utilities to set up, control, and operate the Passive RFID

EPC Class 1, Gen 2, hardware in actual operational environments. The Government understands that some software functions on the HHR are developed as part of the firmware; however, the Government requires the capability to execute code using High Order programming languages. The Configuration Software for the HHR shall add, delete, revise, configure, and test Readers / Tags in the operating environment and provide operational status of all Passive RFID EPC Class 1, Gen 2, system components and provide selective addition and deletion of data. Passive RFID EPC Class 1, Gen 2, software shall schedule Reader time management and report low battery power conditions for Readers that are battery powered. The HHR Configuration Software shall be installed on the HHR prior to delivery to the Government and shall not be separately priced. All required documentation (in accordance with Paragraph 12 "Documentation Requirements," in this Part D) shall be included and shall not be separately priced.

5.4 APPLICATION DEVELOPMENT SOFTWARE.

5.4.1 Passive RFID EPC Class 1, Gen 2, Application Development Software.

The Contractor shall provide Application Development Software that shall support, at a minimum, AT-compatible PCs with the following operating systems: Windows 2000, Windows XP or Windows Vista, or the most current version of the operating system. The Government requires the ability to program, develop, and execute code to support the Passive RFID EPC Class 1, Gen 2, Configuration Software. Some of the desired features of the Application Development Software include the ability to download executable code to other devices; tools, libraries, and executive software needed to generate executable code; ASCII file import and export capability; and Structured Query Language capability.

5.4.2 Separately Orderable Components.

The Contractor shall provide any special tool kits or utility libraries as Separately Orderable Components.

5.4.3 HHR Software Development Kit

The HHR software development kit (SDK) shall support all of the features of the HHR. Software development kit libraries provided by the Contractor shall interface with Basic, .NET, and C/C++ language compilers and program development environments. Library routines shall be callable by programs developed with standard languages, including Basic, .NET, and C/C++. The SDK shall include all necessary library routines, run time support, and distribution rights to permit full functionality of developed software using the SDK on all deployed platforms, including scanner/imager, Passive RFID-EPC Reader, screen backlight, and other device-specific features.

5.5 PASSIVE RFID EPC CLASS 1, GEN 2, ENABLED PRINTER SOFTWARE.

The Contractor shall provide Passive RFID EPC Class 1, Gen 2, Enabled Printer Software that combines the features of bar code printing with encoding Passive RFID EPC Class 1, Gen 2, embedded labels. The Passive RFID EPC Class 1, Gen 2, Enabled Printer Software shall automatically test each RFID label and the encoded data before actually printing the label. If the RFID label is deemed "non-operational," the label shall not be utilized and shall be marked accordingly. The process of verifying each label and printing shall continue with the next "usable" label. In addition, the Passive RFID EPC Class 1, Gen 2, Enabled Printer Software shall provide bar code label, form design, and printing software with graphic support, as well as ISO 9075 SQL Call-Level Interface (open database connectivity). The software shall be capable of generating low, medium, and high density bar codes, as well as 2D Symbology (as a minimum, PDF 417, Data Matrix ECC 200, etc.), in addition to free text, symbols, and graphics. The software shall generate the DD 1387 form. The Contractor shall provide software that allows rapid label and form design without requiring the User to learn the complexities of bar code symbologies and printer control languages, displays a "what-you-see-is-what-you-get" editor for designing bar code labels and forms, and allows viewing of the bar code labels and forms prior to printing. The software shall also permit the use of fixed

or variable data for label, form text, and bar codes, and shall import information to be utilized with labels and forms from databases. The Passive RFID EPC Class 1, Gen 2, Enabled Printer Software shall execute under, Windows 2000, Windows XP, or Windows Vista, or the most current version of the operating system. The pRFID RFID EPC Class 1, Gen 2, Enabled Printer Software shall be supplied withwith the printer and shall not be separately priced.

5.6 SECURITY.

5.6.1 Passwords.

The Contractor shall provide software to initiate password protection at the device level and at the application level when manual operations are required.

5.6.2 Security Standards.

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 – 2, Security Requirements for Cryptographic Modules, 25 May 2001.
c) National Institute of Standards and Technology (NIST) Federal Information Processing Standards (FIPS) Publication 199, Standards for Security Categorization of Federal Information and Information Systems, December 2003.
d) National Institute of Standards and Technology (NIST) Federal Information Processing Standards (FIPS) Publication 200, Minimum Security Requirements for Federal Information and Information Systems, March 2006.
e) Department of Defense Directive (DoDD) 8100.2, Use of Commercial Wireless Devices, Services, and Technologies in the Department of Defense (DoD) Global Information Grid (GIG), 14 April 2004
f) Assistant Secretary of Defense Memorandum, Use of Commercial Wireless Local-Area Network (WLAN) Devices, Systems, and Technologies in the Department of Defense (DoD) Global Information Grid (GIG), 02 June 2006.
g) Department of Defense Directive (DoDD) 8500.1, Information Assurance (IA), 24 October 2002.
h) Department of Defense Instruction (DoDI) 8500.2, Information Assurance (IA) Implementation, 06 February 2003.
i) Department of Defense Instruction (DoDI) 8510.bb DoD Information Assurance Certification and Accreditation Process (DIACAP), April 5, 2006
j) Interim Department of Defense (DoD) Certification and Accreditation (C&A) Process Guidance, 06 July 2006
k) Army Regulation (AR) 25-2, Information Assurance, 03 August 2007
l) Army AR 25-2 Best Business Practice 03-EC-M-003, Wireless Security Standards, Version 2.0, 15 June 2007.

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

5.6.3 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 Information Assurance (IA) requirements specified in Department of Defense Directive 8500.1, *Information Assurance (IA)* (reference g) and Department of Defense Instruction 8500.2, Information *Assurance (IA) Implementation* (reference h). Examples of

systems which 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 as may be developed and/or proposed by the Contractor.

5.6.4 DoD Wireless Device Security Requirements.

RFID 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 *Assistant Secretary of Defense Memorandum, Use of Commercial Wireless Local-Area Network (WLAN) Devices, Systems, and Technologies in the Department of Defense (DoD) Global Information Grid (GIG)* (reference f). RFID implementations that utilize other wireless of cellular technologies (e.g., 2.5G, 3G, 4G, 802.15.1 (Bluetooth), proprietary Radio Frequency, 802.16 (WIMAX), and infrared) shall comply with the requirements specified in DoD Directive 8100.2 *Use of Commercial Wireless Devices, Services, and Technologies in the Department of Defense (DoD) Global Information Grid (GIG)* (reference e).

5.6.5 Army Wireless Device Security Requirements.

RFID implementations that utilize Institute of Electrical and Electronics Engineers (IEEE) Standard 802.11 Wireless Local Area Network (WLAN) products or other wireless technologies to store, process, or transmit unclassified information shall comply with the applicable requirements specified in Army Regulation (AR) 25-2, *Information Assurance* (reference k) and Army AR 25-2 Best Business Practice 03-EC-M-003, *Wireless Security Standards* (reference l).

5.6.6 Security Certification and Accreditation Support.

The Contractor shall support PM J-AIT's effort to obtain Certification and Accreditation (C&A) for the products provided under this Contract in accordance with the guidance contained in the *Interim Department of Defense (DoD) Certification and Accreditation (C&A) Process Guidance* (reference j) and DoD Instruction 8510.bb, *DoD Information Assurance Certification and Accreditation Process (DIACAP)* (reference i). In support of the Government's C&A activities, the Contractor shall provide copies in vendor format of component design specifications, component user manuals, results of any security tests already completed, and component vulnerability assessments. For testing in support of certification and accreditation, the Contractor shall provide the Government with access to Contractor personnel involved with design, engineering, operations, and security attributes of the products.

5.6.7 Security Maintenance 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 Solicitation, 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; conducting hardware/software upgrades, updates, and replacements.

5.7 FIRMWARE REQUIREMENTS.

The Contractor shall provide all necessary firmware required for the operation of the Passive RFID EPC Class 1, Gen 2, equipment configuration and components. Firmware shall reflect the baseline configuration and all subsequent Government-approved Engineering Changes. All firmware provided shall be easily implemented by methods determined by the Contractor. All firmware shall be installed prior to equipment delivery.

6 MANAGEMENT. The requirements found in this section 6, Management, shall not be separately priced.

6.1 pRFID PROGRAM MANAGEMENT.

a. The Contractor shall provide the following pRFID Program Management activities and services:

1. Two-work day response to program issues and problems associated with the execution of the Contract as identified by PM J-AIT;
2. Support by means of Electronic Commerce/Electronic Document Interchange (EC/EDI), web access for Contractor-provided information and data;
3. Maintain accurate records
4. Provide response within one workday to questions or problems;
5. Provide information to various Services and Agencies with the approval of PM J-AIT;
6. Receive and process customer Delivery Orders, purchase card orders, and Task Orders;
7. Develop, update, and maintain the Ordering Guide;
8. Coordinate shipments and deliveries;
9. Report order and delivery status;
10. Provide the requisite Repair Center(s) (RC) to perform all warranty and maintenance services required by this Contract;
11. Maintain warranty and maintenance records;
12. Provide access for pRFID Users to an identified database location for this Contract;
13. Develop and execute a management plan that incorporates configuration management and risk management, and provide a pRFID Management Plan;
14. Schedule project reviews and internal seminars and conferences, and present Contractor's vision of new technology;
15. Schedule and perform demonstrations;
16. Conduct Project Progress Reviews (PPR);
17. Provide Status Reports to include Warranty Status Reports;
18. Provide Monthly Equipment and Service Reports (MESR).
19. Report Contractor Manpower Information in accordance with the paragraph entitled "Contractor Manpower Reporting" in this Part.

b. The Government desires Contractors, and their respective subcontractors, teaming partners and commercial manufacturers who currently hold and maintain commercial quality certifications, e.g. ISO certifications, Lean Six Sigma, Capability Maturity Model Integration (CMMI), over the life of the Contract.

6.1.1 Points of Contact.

The Contractor shall provide a list of Contractor points-of-contact to the Contracting Officer's Representative (COR) no later than ten 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 pRFID Contract. The Contractor shall notify the COR no later than five workdays of replacement of a point-of-contact.

6.1.2 pRFID Contract Program Manager.

a. The Contractor shall identify to the Government a Program Manager for the pRFID Contract. The Program Manager shall at no additional cost to the Government be available with a 24 hours notice to meet with the Government at Fort Belvoir, Virginia. The pRFID Contract Program Manager shall address and resolve pRFID programmatic issues, facilitate information exchange with the Government, and enhance management coordination.

b. The Contractor's pRFID Program Manager shall manage all Delivery Orders, Task Orders, and purchase card orders, and shall be the Contractor's authorized point-of-contact for the PM J-AIT, the COR, and the point-of-contact for Delivery Orders, Task Orders and purchase card orders. The Contractor's pRFID Program Manager shall be responsible for formulating and enforcing work standards, assigning

schedules, and reviewing work discrepancies, communicating policies, purposes, and goals of the organization to the assigned Contractor personnel for performance of this Contract. The Contractor's pRFID Program Manager shall manage Delivery Order and Task Order performance.

6.1.3 Ordering Guide.

6.1.3.1 Purpose.

The Contractor shall develop and provide to the Government an Ordering Guide (OG) to assist Government Users in determining the system configuration that will best meet their operational requirements. The Contractor shall provide the OG no later than 90 calendar days after issuance of the Contract effective date specified in the Notice to Proceed and be available to Users on the Contractor's web site. The OG shall be a comprehensive tool that enables prospective Users to formulate and complete a Delivery Order, Task Order, or purchase card order, and to determine which CLINs best meet operational requirements.

6.1.3.2 Ordering Guide Review.

The Contractor shall provide a draft OG electronically to the COR, PM J-AIT, and Contracting Officer for review no later than 30 calendar days after issuance of the Contract effective date specified in the Notice to Proceed. The Contracting Officer will either approve the OG or provide comments to the Contractor for incorporation into the OG. The Contractor shall then have 15 workdays to edit the OG based on Government comments. Upon Government acceptance and approval by the Contracting Officer of the draft, the Contractor shall make the OG available to Users on the Contractor's web site.

6.1.3.3 Ordering Guide Approval and Posting.

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

The OG shall be divided into logical sections for ease of use. The sections shall provide a User with a complete guide list, with a detailed description of features and prices for ordering of all hardware, software, cables, documentation, training, and technical services provided under the Contract. The OG shall also include sections that provide information regarding warranty, maintenance support, ordering procedures, customer support, Central Order Processing Offices, points of contact, and the CLIN list with prices, and other support services. The OG 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 for authorized Government Users only to the OG via the World Wide Web.

6.1.3.4 Sections.

Each section of the OG shall be technically accurate and complete with descriptions of the equipment (to include pictures), software, or services. 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 OG and the CLIN description, if applicable. The OG shall include,

but not be limited to, the sections identified below which address the minimum requirements for each Section.

6.1.3.5 Ordering Procedures.

This section shall contain procedures that provide the User with all the necessary information required to order pRFID products and services. Service or Agency points-of-contact, telephone numbers, and addresses shall be included. All necessary documents and forms required to order pRFID products and services shall be clearly indicated.

6.1.3.6 Equipment.

The Equipment 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. All cable requirements for equipment installation shall be described in the Section titled "Cables." This Section shall clearly indicate the appropriate cables and interfaces for the various Passive RFID EPC components and provide a reference to the applicable parts of the Section titled "Cables." The OG shall contain instructions for the User to specify equipment destination to ensure the Passive RFID EPC equipment is compatible with the commercial power supply and adapter plugs for the geographic area in which it will be operated.

6.1.3.7 Recommended Equipment Configurations.

This section shall address the Contractor's recommended equipment configurations to meet various User's Passive RFID EPC requirements with easy to understand, step-by-step directions. The recommended configurations shall represent the most economical equipment, software, and service items that meet the User's requirements. This section shall provide information to assist the User's with building and ordering a Passive RFID EPC configuration that best meets their needs. The configurations shall include the appropriate CLIN numbers.

6.1.3.8 Software.

This section shall provide a full description of all software packages provided that include 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.

6.1.3.9 Cables.

This Section shall list all cables provided, and equipment cable requirements in a chart format that shall allow the User to identify the correct cables for connecting Passive RFID EPC devices. CLINs shall be provided on the chart.

6.1.3.10 Technical Engineering Services (TES).

This Section shall contain procedures that provide the User with all necessary information required to order TES. All TES identified in the paragraph entitled "Technical Engineering Services" shall be addressed in this Section.

6.1.3.11 Training.

This Section shall provide course descriptions, lengths, prerequisites, course objectives, and recommended audiences for each Training Course.

6.1.3.12 Warranty Support.

This Section shall address all warranty provisions of the Contract.

6.1.3.13 Maintenance Support.

This Section shall describe the various maintenance services available to User worldwide and instructions for ordering maintenance support.

6.1.3.14 CLIN List and Prices.

This Section shall provide the CLIN List and Prices.

6.2 pRFID MANAGEMENT PLAN.

The Contractor shall provide a pRFID Management Plan. The Plan shall be submitted to the COR no later than 30 calendar days after issuance of the Contract effective date specified in the Notice to Proceed. The PM J-AIT 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 COR. The Contractor shall manage the Contract in accordance with the Government-approved pRFID Management Plan. The pRFID Management Plan shall include, but not be limited to the following:

a. Management and Reporting Methodology for Gathering, Validating and Generating Reports;
b. pRFID Configuration Management Plan;
c. Risk Management;
d. Repair Center Approach;
e. Integrated Process Team (IPT) Methodology;
f. Electronic Commerce and Electronic Data Interchange Methodology;
g. Web Site Methodology;
h. Training Development and Support;
i. Technology Assessment and Control;
j. Logistics Support to include the Contractor's approach to satisfying unusual or surge requirements and to deal with crisis situations.

6.2.1 Integrated Product Teams.

The Contractor shall participate with the Government on pRFID Integrated Product Teams (IPTs) and provide minutes of the meetings no later than five workdays after each meeting. IPTs will be composed of representatives from all functional disciplines, working together to identify and resolve issues. IPTs will also make sound and timely decisions, build a successful and balanced program, and make maximum use of timely input from the entire Team, including customers and suppliers.

6.2.2 Project Progress Reviews.

The Contractor shall conduct Project Progress Reviews (PPRs) for Government personnel at a mutually agreeable facility. The PM J-AIT will schedule the initial PPR. It is anticipated that the first PPR will occur no later than 90 calendar days after the Contract effective date specified in the Notice to Proceed.

Thereafter, PPRs shall occur on a monthly basis for the next twelve months of the Contract, and quarterly thereafter, for the life of the Contract. During each PPR, the Contractor shall present material that addresses:

a. Status of current technological substitutions and additions;
b. Status of configuration and risk management activities;
c. Status of Task Orders, Delivery Orders and purchase card orders, to include but not limited to, received and processed dates (listed by ordering agency), scheduled delivery date, and shipped date;
d. Actions under warranty and maintenance;
e. Significant trends (quantities 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;
k. Reason for delinquent Task Orders, Delivery Orders, and purchase card orders.

The Contractor shall include in each review, a current organizational chart that includes the names and telephone numbers of all key personnel, and any key personnel changes highlighted. The key personnel for this Contract are Senior Information Systems Engineer; Project Manager; and
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 at least five workdays before a scheduled PPR. The Contractor shall provide the briefing charts to the COR electronically three workdays prior to the day of the PPR. The Contractor shall prepare and coordinate minutes of the PPRs with PM J-AIT no later than five workdays after the PPR. Coordination shall be accomplished through electronic mail. Upon PM J-AIT approval, the Contractor shall, no later than five workdays, post the minutes on the web site specified in the paragraph “Web Site” in this Part. The Contractor shall hotlink the web site to the PM J-AIT web site.

6.2.3 Status Report.

The Contractor shall prepare and submit a Status Report in Microsoft Office Excel format, twice a year. The report shall include all orders placed by the Government and by Government Contractors (reference the paragraph “Government Contractor’s Use of Contract” in Part C-1-1) during the reporting period. The Contractor shall submit the first report to the COR on the 10th day of the month following the six-month period after the Contract effective date specified in the Notice to Proceed. The Contractor shall submit subsequent reports in six-month increments on the 10th day of the month following the reporting period throughout the performance period of the Contract. The report shall include, as a minimum, a list of all equipment delivered by:

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

An example report format is located at Exhibit B in this Part.

6.2.4 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 manpower (including subcontractor manpower) required for performance of this Contract. The Contractor is required to provide all of the required information using the following web address:
https://Contractormanpower.army.pentagon.mil. The required information includes: (1) Contracting

Office, Contracting Officer, Contracting Officer's Technical Representative; (2) Contract number, including task and Delivery Order number; (3) Beginning and ending dates covered by reporting period; (4) Contractor name, address, phone number, email address, identity of Contractor employee entering data; (5) Estimated direct labor hours (including sub-Contractors); (6) Estimated direct labor dollars paid this reporting period (including sub-Contractors); (7) Total payments (including sub-Contractors); (8) Predominant Federal Service Code (FSC) reflecting services provided by Contractor (and separate predominant FSC for each sub-Contractor 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 sub-Contractors 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 sub-Contractor employees deployed in theater this reporting period (by country). As part of its submission, the Contractor shall also provide the estimated total cost (if any) incurred to comply with this reporting requirement. The reporting period shall be the period of performance not to exceed 12 months ending September 30 of each Government fiscal year and shall be reported by 31 October of each calendar year. Contractors may use a direct XML data transfer to the database server or fill in the fields on the website. The XML direct transfer is a format for transferring files from a Contractor's systems to the secure web site without the need for separate data entries for each required data element at the web site. The specific formats for the XML direct transfer may be downloaded from the web site.

6.3 CONFIGURATION MANAGEMENT.

6.3.1 pRFID Configuration Management Plan.

The pRFID equipment shall be configuration-controlled, accounted for, and audited in accordance with the Government-approved, pRFID Configuration Management Plan. The Contractor shall provide the pRFID Configuration Management Plan as an Annex to the pRFID Management Plan, which shall be submitted to the COR for approval no later than 30 calendar days after issuance the Contract effective date specified in the Notice to Proceed. The pRFID Configuration Management Plan shall reflect best commercial practices and shall be in accordance with accepted industry standards. The Plan shall define those instances when the Contractor shall notify the Government of pending changes to the pRFID Equipment Baseline Configuration.

6.3.2 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 Contracting Officer of all OEM-sponsored changes to any equipment provided on the Contract. All changes shall be provided to the Government at least 45 calendar days prior to implementation for evaluation and will be subject to the Contracting Officer’s approval before the changed products may be placed on the Contract.

6.3.3 Changes to Software.

The Contractor shall notify the Contracting Officer of all changes to the software and documentation provided under the Contract throughout the warranty period, including any software updates and upgrades (for example, bug fixes, new features, enhancements, and revisions) as they become available. Software changes are further defined as any software product and documentation which is provided for any other customer free of charge, or which the software manufacturer does not consider a new product. Changes to software or documentation (e.g., User Manuals) (including packaging and shipping) shall be provided at no additional cost to the Government.

6.3.4 Notification of Software Changes.

The requirement for any software change involving a change to form, fit or function, is that the Contractor shall provide PM J-AIT one copy of the changed software with documentation (e.g., User Manuals) for each affected software item previously accepted by the Government. After Government evaluation of the changed software, the Contracting Officer 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 to the Government on the Contract after notification is provided to the Contracting Officer.

6.3.5 Correction of Safety Hazards or Equipment Malfunctions.

In accordance with commercial practices, the Contractor shall notify the Contracting Officer and PM J-AIT of all OEM-sponsored changes to correct safety hazards or equipment malfunctions. The Contractor shall implement changes to correct safety hazards in accordance with commercial practices. The implementation shall be in accordance with a mutually agreed-upon schedule. All such changes shall be implemented at no additional cost to the Government.

6.3.6 Configuration Audits.

The Government is required to maintain configuration control over functional and performance requirements (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. At least seven 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.

6.3.7 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.

6.3.8 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 FCA is performed by the Government’s Configuration Management Team or Quality Control Representative, by auditing the requirements specifications against the pRFID Contractor specifications of each configuration item (hardware, middleware, and software).

6.4 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. In accordance with 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:

a. Technical performance;
b. Operational performance;
c. Schedule performance;

d. Training;
e. Technical standards;
f. Logistics readiness.

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.

6.5 MONTHLY EQUIPMENT AND SERVICE REPORT.

The Contractor shall provide PM J-AIT, the COR, and Contracting Officer with a Monthly Equipment and Service Report (MESR) in Microsoft Office Excel format via electronic mail and post it on the Contractor's web site for on-line viewing and ad hoc inquiries by authorized Users. The initial MESR shall be submitted covering the month the first pRFID item is received by the Contractor for repair (warranty or maintenance), and shall be provided no later than 10 calendar days after the end of each subsequent month e.g., January report is due by 10 February. The Contractor shall provide, as part of the MESR, a consolidated list of service User calls for troubleshooting assistance. This detailed information for warranty and maintenance repairs will be used to identify trends and compliance with equipment turn-around requirements. The MESR shall include a separate line item of description for each pRFID item service incident and, as a minimum, shall include the following:

a. Return Material Authorization (RMA) number and date assigned to User Category of service action: Per-incident maintenance, Monthly Maintenance, On-call maintenance or Warranty;
b. Identify if User requests same serial number item returned. Also, note if User changed their mind because of time delay in receiving the same serial number in return;
c. Identity of the Federal agency (that is, Army, Navy, DLA, etc.), Government User and Point of Contact, and site requiring the maintenance;
d. Parts breakout: nomenclature; National Stock Number (NSN), if available; part numbers; model number, CLIN; and serial number;
e. Quantity of each type of component repaired or replaced by CLIN under the Contract to date;
f. Equipment warranty expiration date;
g. Equipment maintenance start date and expiration date for monthly maintenance;
h. Delivery Order number or purchase card order date and activity;
i. Date field engineer arrival on-site, or receipt of the failed pRFID equipment at the repair facility;
j. Date repair action was completed, or equipment was sent back to the User, shipper or carrier, or when picked up by the User;
k. Remarks section providing information outside of the items listed above, which gives a brief, non-technical description of equipment problems identified, repair action accomplished, parts replaced, serial numbers of replacement pRFID items (if the item was replaced by the Contractor), problems identified but causes not isolated, or a statement of no evidence of failure.

6.6 WARRANTY STATUS REPORT.

The Contractor shall provide a Warranty Status Report in Microsoft Office Excel format, once each Contract year as requested by the COR, to include but not 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, Unique Control Number, Delivery Order number, shipping date, warranty end date, Government User, point of contact 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 issuance of the Contract effective date specified in the Notice to Proceed.

7 REPAIR REQUIREMENTS.

7.1 REPAIR CENTERS.

The Contractor shall provide a Repair Center(s) (RCs) to be operational no later than 90 calendar days after the first Delivery Order is issued. The Contractor shall repair or replace failed equipment, provide on-call and mail-in repair, and provide technical assistance to the Users. The Contractor shall provide maintenance personnel who have maintenance experience on the pRFID equipment. The maintenance personnel shall have obtained experience with the pRFID configurations prior to their assignment to the pRFID Contract. All Contractor personnel providing assistance shall understand and speak fluent English.

7.1.1 Points of Contact.

The Contractor shall provide the Contracting Officer and the COR with the Point-of-Contact, telephone numbers, facsimile numbers, e-mail addresses, and mailing addresses for each RC. The Contractor shall provide updates to the Government as changes occur.

7.1.2 Repair Center (RC) Hours of Operation.

The RC(s) shall be operational between the hours of 8:00 A.M. through 5:00 P.M., local time, Monday through Friday. This excludes U.S. Federal and Host Nation Country holidays in the geographic location of the RC.

7.1.3 Equipment Return and Tracking.

The Contractor shall provide a method to enable the Government User and the Contractor to quickly identify and track components being forwarded to, and returned from, the Contractor RCs for warranty and maintenance services. The Contractor shall assign the User a RMA number prior to the Government mailing-in the failed equipment to the RC for repair or replacement. The User shall be informed of the RMA number and serial number of each component returned to the Contractor for warranty and maintenance service. All failed equipment returned to the RC shall be identified by the RMA number. The RMA number will be used by the Government to help track the failed component through the warranty or maintenance service process.

8 CUSTOMER SUPPORT. The requirements found in this section 8, Customer Support, shall not be separately priced.

8.1 TECHNICAL ASSISTANCE.

The Contractor shall provide Technical Assistance, as follows:

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

8.1.1 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, 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 User call 95% 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 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 pRFID Contract. Contractor personnel staffing the Help Desk shall understand and speak fluent English. The Contractor shall maintain records of User calls for troubleshooting assistance capturing the following: failed item Point-of-Contact, location, date, problem, and resolution. This information shall be provided in the MESR.

8.1.2 Web Site.

The Contractor shall establish and maintain a worldwide web site for Government Users no later than 60 calendar days after the Contract effective date specified in the Notice to Proceed. The web site shall be hot linked to the PM J-AIT web site and be available daily on a 24-hour basis, until the expiration of the last active Order issued under the Contract. As a minimum, the Web site shall include, or provide hotlinks to:

a. Methods for User to track status of Delivery Orders and Task Orders using the Government's order number and a Unique Control Number;
b. Warranty and maintenance support;
c. Warranty and maintenance tracking using the RMA number;
d. Exchange of technical information between the Contractor and individual User and groups;
e. Point-of-Contact, telephone and facsimile number, email address and mailing address for each RC;
f. Technical troubleshooting support;
g. Failed equipment tracking and status;
h. Ordering Guide;
i. Reference and User Manuals (i.e., Commercial Manuals, Technical Manuals, Software Manuals);
j. Project management reports (schedules, IPT and PPR minutes, etc.);
k. Recent news items from PM J-AIT or the Contractor (for example, notifications of the web site being down for maintenance, etc.);
l. Other data as mutually agreed to by the Government and the Contractor;
m. Passive RFID EPC device drivers;
n. Monthly Equipment and Service Report, Status Report, and Warranty Status Report;
o. List of products that fully comply with Section 508 of the Rehabilitation Act.

The Contractor shall ensure that all device drivers required to operate pRFID 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 60 calendar days after the Contract effective date specified in the Notice to Proceed. New and updated drivers shall be posted to the web site no later than 48 hours of the COR's approval. In the event that drivers are updated, the original version shall also be maintained on the web site.

9 WARRANTY.

The Contractor shall provide a minimum of a three-year warranty, including all parts, labor, and transportation costs for all Passive RFID EPC components provided under this Contract. The Contractor shall provide a minimum of a three-year warranty for all software products. The Contractor shall repair or replace all failed Passive RFID EPC components covered under warranty in this Contract in accordance with the procedures outlined below. All warranties shall be included in the purchase price of the component, and not priced separately. The Contractor shall immediately notify the ordering Contracting Officer and order Point of Contact (POC) regarding equipment requiring repair or replacement due to apparent User abuse, negligence, or missing significant parts, such as circuit cards or boards.

9.1 WARRANTY SUPPORT.

The warranty shall not apply if damage to the equipment is occasioned by fault or negligence of the Government. During the equipment warranty period, the Contractor shall implement changes to correct equipment malfunctions in accordance with best commercial practices. The implementation shall be in accordance with 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 be in accordance with the paragraph entitled "Governmentwide Commercial Purchase Card" in Part C-1-1. The warranty shall include mail-in procedures and on-call procedures as specified below.

9.2 WARRANTY MAIL-IN PROCEDURES.

The requirement for warranty mail-in service, including commercial carriers, is that the Contractor shall bear all shipping costs, both from and back to Government sites. 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 Passive RFID EPC components. If the User requires the same serial number equipment, the Contractor shall restore all malfunctioning equipment covered under warranty to a fully operational condition and ship the equipment back to the User no later than ten 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 workdays after receipt of the component at the Contractor's facility. The Government User will provide the Contractor with disposition instructions for un-repairable Passive RFID EPC components.

9.3 COMPONENT RETURN AND TRACKING.

The Contractor shall provide a method to enable the Government User and the Contractor to quickly identify and track Passive RFID EPC components that have been sent to a Contractor RC for warranty service. The Contractor shall assign a RMA number and inform the User of the RMA number as the tracking number, and serial number for each Passive RFID EPC component returned to the Contractor for warranty service.

9.4 WARRANTY REPLACEMENT PARTS.

The requirement for Contractor Warranty service is that only new parts, or parts warranted as new by the OEM, shall be used for repairs of failed Government Passive RFID EPC 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.

9.5 WARRANTY ON-CALL PROCEDURES.

The Contractor shall provide on-call warranty service for Passive RFID EPC Multi-Protocol Fixed Readers in both CONUS and OCONUS. The requirement for CONUS locations, is that the Contractor shall provide on-call repair no later than five workdays of notification. The requirement for OCONUS locations is that the Contractor shall provide on-call repair no later than seven workdays of 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 a fully operational status no later than five 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 fully operational status no later than seven calendar days of notification. The Contractor shall provide On-call Warranty service support to repair the item on-site.

10 MAINTENANCE.

Upon expiration of the warranty, the Contractor shall provide worldwide maintenance to repair or replace Passive RFID EPC components and provide updates and changes to software covered under maintenance. Maintenance prices shall include all parts, labor, and transportation back to the User.

10.1 MAINTENANCE TURN-AROUND TIME.

The repaired Passive RFID EPC component shall be returned and received by the User no later than ten workdays after receipt at the Contractor's facility. In the event the Passive RFID EPC component cannot be repaired, the Contractor shall notify the Government User no later than three workdays after receipt of the component at the Contractor's facility. The Government User will provide the Contractor with disposition instructions for un-repairable RFID components.

10.1.1 Passive RFID EPC Component Return and Tracking.

The Contractor shall provide a method to enable the Government User and the Contractor to quickly identify and track Passive RFID EPC components sent to a Contractor RC for Maintenance. The Contractor shall assign a RMA number and inform the User of the RMA number as the tracking number and serial number for each RFID component returned.

10.1.2 Mail-In Maintenance.

The Contractor shall provide Mail-in Maintenance to include parts and labor on a Monthly and Per-incident basis for Passive RFID EPC Multi-Protocol Fixed Readers, Hand Held Readers, and Printers. In accordance with Transportation paragraph in this section, the Contractor shall be responsible for transportation back to the User for all mail-in items.

10.1.3 On-Call Maintenance.

The Contractor shall provide worldwide On-call Maintenance for Passive RFID EPC Multi-Protocol Fixed Readers, Hand Held Readers and Printers. When maintenance service is ordered in CONUS locations, the Contractor shall replace or return the equipment to a fully operational status no later than five workdays 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 fully operational status no later than seven workdays of notification.

The Contractor shall provide on-call maintenance outside the official hours of operation when required by the using activity. When maintenance outside the official hours of operation is ordered for CONUS locations, the Contractor shall replace or return the equipment to a fully operational status no later than three workdays days from the time the Contractor is notified of a failure. When maintenance outside the official hours of operation is ordered for OCONUS locations, the Contractor shall replace or return the equipment to fully operational status no later than five calendar days of notification. The Contractor shall provide the required maintenance service in accordance with the Task Order issued for the instant requirement; or in accordance with a Task Order for monthly maintenance; or in accordance with a Task

Order issued pursuant to the subparagraph entitled “Special Funding of Per Incident Maintenance” in Part C-1-1.

10.1.4 Monthly Maintenance.

The Government may, at its sole discretion, order monthly maintenance to be effective immediately upon the expiration of the warranty and continuously thereafter for any item for which monthly maintenance is provided. If the Government orders monthly maintenance after a lapse in coverage due to the expiration of the warranty or a lapse in monthly maintenance, then the Contractor may subject such items to inspection to assure the item is in proper working order. If any such item requires repair, the Government must order per incident maintenance for that item before the Contractor is required to accept that item under monthly maintenance. The Contractor shall then accept for monthly maintenance any item that it has inspected and found to be in working order, any item for which inspection is not requested no later than seven calendar days after receipt of order for monthly maintenance or any item after completion of per incident maintenance.

10.1.5 Maintenance Procedures.

The Contractor shall replace or return equipment to a fully operational status and ship the equipment back to the User no later than ten workdays after receipt of the failed equipment (CONUS and OCONUS). Transportation arrangements shall be in accordance with the provisions of the paragraph entitled “Transportation” in this Part. In the event a Passive RFID EPC component cannot be repaired or if any discrepancy is noted between the equipment received and the Task Order, the Contractor shall notify the Government User no later than three workdays after receipt of the component at the Contractor’s facility. The Government User will provide the Contractor with disposition instructions for un-repairable Passive RFID EPC components.

10.1.6 Maintenance Replacement Parts.

Contractor Maintenance support shall utilize only new parts, or parts warranted as new by the Original Equipment Manufacturer, that shall be used for repairs of failed Government Passive RFID EPC components. Additionally, all replacement parts shall be equal to or better than the replaced parts in terms of quality and performance. 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 to be destroyed or retained by the Government. The effective warranty for all replacement items installed during the maintenance period shall be a minimum of 90 calendar days.

10.1.7 Software Maintenance.

Software maintenance shall be provided for all commercial software provided under this Contract in accordance with customary commercial software maintenance terms and conditions offered to the general public to include all fixes, updates and changes necessary to maintain the software in an operational state.

10.2 PREVENTIVE MAINTENANCE.

Preventive maintenance includes all actions performed in an attempt to retain an item in a specified condition by providing systematic inspection, detection, and prevention of incipient failures. Unless otherwise specified, Government personnel will perform all preventive maintenance for items acquired under this Contract. The Contractor shall provide to the Government, in detail, all requirements and procedures for preventive maintenance and troubleshooting-level diagnostics, in documentation and User Manuals. The Contractor shall provide Material Safety Data Sheets to the Contracting officer, COR and all users as specified in the individual order in accordance with FAR Clause 52.223-3 in Part C-1-1. The Contractor shall provide documentation for each appropriate hardware CLIN that shall include preventive

maintenance checks, service schedules, and troubleshooting-level diagnostics. The Contractor shall be responsible for all other maintenance and support.

10.3 TRANSPORTATION.

Transportation of Passive RFID EPC components shipped to the Contractor for Maintenance will be arranged and paid for by the Government. Return transportation of repaired or replaced components shipped to the User shall be arranged and paid for by the Contractor. The Contractor shall use a return shipping method equal to or better than the User's method of shipment to the Contractor. The Government will provide the Contractor with any unusual transportation instructions for return shipment after repair.

11 TECHNICAL ENGINEERING SERVICES.

11.1 GENERAL.

The Contractor shall provide TES on-site at Government sites and at the Contractor's facility as specified in the Task Order. TES shall include those services required for RFID turnkey 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, System Design and systems integration to include middleware integration to enterprise systems. Any cables or adapters not listed in this Contract, middleware or other items and materials required for installation of Contractor-provided Passive RFID EPC components, may be ordered through this Contract in accordance with the provision entitled "Incidental Materials" in Part C-1-1. TES shall be ordered by a Task Order only.

11.1.1 Proposal Request for TES.

The Government will issue proposal requests for TES in accordance with Part C-1-1, paragraphs , Ordering Procedures for Orders Exceeding $3,000, and Task Order – Technical Engineering Services (TES). The Contractor is encouraged to respond to all proposal requests by the specified submission dates. Proposals submitted in response to a proposal request shall comply with the requirements of the referenced Part C-1-1 paragraphs.

11.1.2 Travel.

Prices for Contractor personnel travel and per diem to perform TES shall be in accordance with the requirements set forth in "Task Orders – Technical Engineering Services" in Part C-1-1.

11.1.3 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 workdays after the completion of each trip made for TES. The trip report shall be in the Contractor's format and shall contain as a minimum:

Report Date;
Customer Name, address, POC and telephone number;
Project Name;
Time arrived, time departed;
Any recommended or provided Incidental Material description;
Contractor's summary of work completed;
Contractor POC name and signature.

11.1.4 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.

11.1.5 Software Development Services.

Software Development Services (SDS) shall be limited to development incidental to the pRFID-related mission that utilizes equipment acquired under this Contract. The pRFID SDS shall be limited to the development work required to implement, modify, interface, and integrate Passive RFID EPC application(s) to an existing Government application(s) and database(s) e.g., SARSS, 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.

11.2 INSTALLATION / DE-INSTALLATION / RELOCATION.

11.2.1 Installation/De-installation/Relocation.

The Contractor shall conduct Installation/De-installation/Relocation services as specified in the Task Order for each location requiring the services. The ordering contracting officer will issue proposal requests with schematic drawings of the Government site. Additionally, pRFID Contractors submitting TES proposals may conduct site surveys at their own expense or at pRFID Contractor's own discretion rely solely on the Government-furnished site information when formulating their proposals. The Government does not guarantee accuracy and completeness of the Government-furnished site information.

11.2.2 Installation/De-installation.

The Contractor shall install and de-install Passive RFID EPC configurations as specified in the Task Order. The Contractor shall provide all necessary installation support equipment, cables for the interface of the various components forming an installation, including the Passive RFID EPC devices, servers, peripheral devices, and power sources as required. Upon receipt of a Task Order requiring installation/de-installation, and in accordance with the schedule contained therein, the Contractor shall install/de-install Passive RFID EPC equipment in accordance with the approved Installation Plan. In instances where work to be performed by the Contractor requires interaction with existing facilities and equipment, the Contractor shall be responsible for any damage to existing facilities or equipment. After installation is completed, the Contractor shall remove all packing, shipping, and storage materials left over from the installation.

11.2.3 Relocation of Passive RFID EPC Components.

Upon receipt of a Task Order requiring relocation of Passive RFID EPC equipment, and in accordance with the schedule contained therein, the Contractor shall install Passive RFID EPC equipment in accordance with the approved Installation Plan. The extent of the services performed by the Contractor shall be specified in the Task Order and may vary from minimal involvement to total responsibility for the relocation.

11.2.4 Installation Plans.

The Contractor shall submit an Installation Plan with supporting documentation and attachments for evaluation as a part of its proposal for TES. The Installation Plan shall include, but is not limited to, the following items:

a. Specific details of the methodology for the installation and the resources required;
b. Detailed description, by major subheadings, of all installation work to be accomplished by the Contractor at the site to include scheduling and dependency of the various tasks;
c. Site layout plan including detailed drawings of all Passive RFID EPC components, such as racks, cabinets, or consoles;
d. General component specifications including equipment, physical specifications, templates, manufacturer's specific machine configuration and space requirements, special operational line-of-sight requirements between various components, lighting requirements, site construction requirements, power requirements, cabling requirements, network connections, communication lines including satellite

communications, cooling requirements, shipping requirements, and all special requirements that do not fall under normal operating conditions;
e. Description of any actions, such as site modifications, which the Government will complete prior to installation of the Passive RFID EPC equipment, in sufficient detail to facilitate successful installation of the equipment.

11.3 CONTRACT SUPPORT PERSONNEL.

The Contractor shall provide all technical labor categories described in Attachment (2). The Government will issue proposal requests for specific tasks to be performed under Task Orders. Personnel performing TES and training under this Contract shall posses the qualifications that the Contractor requires for, and be part of the same work force, providing such services to the general public. The Contractor shall provide labor categories that represent a blend of demonstrated technical, supervisory and managerial expertise, analytical skills and knowledge to provide specific tasks, using efficient and state-of-the-art processes, made up of functions including, but not limited to, the following:

a. Passive RFID EPC component integration;
b. Installation and de-installation;
c. User unique training, on-site or classroom;
d. Systems integration;
e. Complex programming support;
f. Designing, developing, and troubleshooting complex applications;
g. Modeling simulation;
h. Analysis in designing operating systems utilities;
i. Troubleshooting, following established testing procedures to ensure equipment is operating properly;
j. Development and revision of technical documentation for software, hardware, and systems;
k. Testing online documents for correct operation, content and usability;
l. Analyzing systems to identify project objectives and data elements;
m. Preparing high level flow-charts and diagrams from which detailed program designs may be further developed;
n. Database management, associated data analysis and design, and data dictionary tools, as well as distributed systems, and data base development methods and techniques;
o. Total system development and integration efforts, including all equipment, software, telecommunications, and networks, based on expert knowledge of automatic identification and data capture fields;
p. Outlining problems, and providing solutions to data communication projects and problems based on expert knowledge of modern data transfer methods and networks;
q. Technical problem analysis and resolution based on expert knowledge of RF equipment and systems, wireless technologies, and wireless test procedures requirement analysis.

12 DOCUMENTATION REQUIREMENTS.

12.1 GOVERNMENT RIGHTS.

The Government shall have full and unrestricted rights, in accordance with copyright laws and regulations, to use and reproduce for its own use, all documentation provided under this Contract. The Contractor shall provide the RFID user community with online access to, including the capability 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.

12.2 COMMERCIAL USER MANUALS.

The Contractor shall provide commercial User Manuals for each piece of equipment that provide step-by-step procedures for each function performed by the equipment. These User manuals shall identify all preventive maintenance tasks and troubleshooting procedures. The commercial User Manuals shall be included with each delivered piece of equipment and shall not be separately priced.

12.3 SOFTWARE REFERENCE DOCUMENTATION.

The Contractor shall provide software reference documentation for use by software developers creating Passive RFID EPC applications for all software offered in hard copy and for online access. The documentation shall contain specific details for the integration of Passive RFID EPC 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.

13 TRAINING.

13.1 WEB BASED AND CD-ROM TRAINING.

The Contractor shall provide multimedia training as specified herein. Training shall be provided on CD-ROM and via the internet on a trusted web site. The Web Based training shall allow users to train from the web site and have the ability to download a version of the training for execution on a stand alone windows based computer. The training shall instruct the students how to operate, maintain, and repair the equipment, and develop unique application software programs for Passive RFID equipment acquired under this Contract. The Contractor shall provide a web-based and CD-ROM training package with updates for the base period of the Contract. Training updates may include the addition of new or modified products and other types of training updates as necessary.

13.1.1 Target Audiences and Areas.

Target audiences utilizing the pRFID training will include technically skilled specialists responsible for supporting and implementing the use of Passive RFID EPC components and end Users responsible for operating the Contractor-provided hardware and software. The pRFID Configuration Training shall encompass an overview of instruction in the following areas:

a. pRFID Configuration Overview (hardware, software, communications). Hardware characteristics and principles of operation, pRFID Configuration hierarchy and software components (including the Operating System communication software interfaces), data structures, queues, and internal tables of the Operating System;
b. Hardware and Software Architecture. Communications processing (including protocols), software designs, interfaces, and assembly (Operating System development) language.
c. Operating System commands;
d. Operating System tailoring and generation, method for the distribution of fixes, problem resolution, and implementation of new software releases;
e. Operations of equipment to include, but not limited to: configuring Reader(s), collecting information, reading and writing information, searching data to identify priorities and finding specific items, creating prioritized lists of containers to be unloaded, and locating specific containers based on container number or content data;
f. Diagnostics to include, but not limited to: problem definition and resolution, and diagnostic software utilization;
g. Security features (including management considerations, controls, procedures, and software design);and

h. Hardware maintenance and support. Preventive maintenance checks and services, and user-level repair operations.

13.1.2 Multimedia Training

The Contractor shall provide both Web Based and CD-ROM training as a Multimedia Training package (MMTP). This MMTP shall provide information in the areas of hardware and software installation, addressing initial problem diagnostics, performance measurements, diagnostic software, and basic component operations. The MMTP shall be developed for the specific target audiences and areas identified in the paragraph entitled "Target Audiences and Areas" in this Part. The MMTP shall be a stand-alone software training package providing menu-driven selection of hardware introduction or specific operational task selection using loaded data to simulate real-time scenarios. The MMTP shall be of a type to allow the Government to copy and paste selected information from the CD-ROM into other Government applications. The Contractor shall provide the Government all necessary documentation to enable the Government to perform modifications to the CD-ROM, and the Government shall have the right to modify, copy, and distribute the MMTP as required for its own use within the U.S. Government. Any software license or notice that is embedded in, or otherwise accompanies, the MMTP shall in no way supersede or limit the Government's rights under this Contract or Federal law. Each training module within the MMTP shall be no longer than 50 minutes in length.

13.1.3 Draft MMTP

The Contractor shall provide PM J-AIT draft storyboards and graphics materials no later than 60 calendar days after the date of the first Task Order for the Web-Based or CD-ROM training. The PM J-AIT will review and approve the drafts and provide comments to the Contractor. The Contractor shall amend or edit the draft MMTP based on the Government's comments and resubmit a revised draft no later than 14 calendar days after receipt of the Government's comments. The Contractor shall provide the final MMTP no later than 30 calendar days after receipt of PM J-AIT's final approval of the draft MMTP materials. The Contractor shall at the Government's discretion attend a minimum of two meetings at PM J-AIT designated facilities to provide for Government review and input into the MMTP prior to PM J-AIT final approval of the draft MMTP materials. The Contractor shall provide PM J-AIT draft storyboards, scripts, and graphics materials ten workdays prior to each meeting. The Contractor shall also provide an agenda at least ten workdays prior to each meeting, and shall provide meeting minutes no later than ten workdays after the conclusion of each meeting.

13.1.4 Training Deliverables.

If ordered, the Contractor shall provide the following items in accordance with the approved MMTP within 45 days after approval of the MMTP or within 45 days after the date of the order, whichever is later:

a. Web-based training

b. One (1) Master CD-ROM to be used by the Government for reproduction and distribution purposes. This Master CD-ROM, along with a one (1) copy of the CD-ROM, shall be delivered to the COR.

13.1.5 Training Package Updates.

Prior to implementing updates to the training package, the Contractor shall submit the updates to the COR for approval.

14 CERTIFICATION.

14.1 PASSIVE RFID EPC CERTIFICATIONS.

14.1.1 Energy Star.

Equipment meeting the specifications defined in PB 95-250304 shall be certified by the Contractor and properly labeled as meeting the Environmental Protection Agency requirements.

14.1.2 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 in the National Electrical Code.

14.1.3 Product Safety Certification.

Equipment shall be certified by an authorized, Nationally Recognized Testing Laboratory to ANSI/UL1950-1997.

14.1.4 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, FCC Part 15, regulations for Government operations and, International Standards. In order to certify the use of commercial Passive RFID equipment in these environments, the Government may subject representative categories of equipment to radiated emission and susceptibility tests (See MIL-STD 461D: Requirements for the Control of Electromagnetic Interference Emissions and Susceptibility, and MIL-STD-462D: Measurement of Electromagnetic Interference Characteristics). The applicable equipment shall remain unchanged after installation of Contractor-provided internal devices. All applicable equipment for CONUS shall meet the International Special Committee on Radio Interference (CISPR) 22, Class A (International) standards for Radio Frequency Interference/Electromagnetic Interference, and be Underwriters and European Community certified. .

14.1.5 Self-Certification.

The Contractor's self-certification of standards (e.g., ISO 9075) and JTA 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 in accordance with ANSI Z-34.2-1987, American National Standard for Certification — Self-Certification by Producer or Supplier.

15 **Background Investigations for Contractor Personnel**

15.1 BACKGROUND.

If applicable, Contractor personnel performing services under this Contract, or Task Order shall be required to undergo a background investigation. Task Orders may require Contractor personnel to have access to Unclassified Sensitive information in accordance with DoDD 8500.1, DoDI 8500.2, AR-25, and the Privacy Act of 1974 (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) 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

15.2 NAC/SECRET CLEARANCE RECORDS.

a. The Contractor shall take the necessary steps to ensure the ability to timely respond to the Task Orders stating a requirement for a NAC or DoD Secret Clearance. If a Task Order specifically addresses a requirement for a NAC, the Contractor personnel assigned to this effort shall complete a Standard Form 85 or 85P. If a Task Order specifically addresses a requirement for 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 of completeness. 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.

c. If required by a Task Order, the Contractor shall safeguard classified materials and documents in accordance with the DD Form 254, Department of Defense Contract Security Classification and Specification, Attachment (1), attached to this Part D. The highest security level required by this Contract is SECRET. All Contractor personnel assigned to a Task Order that requires access to, and handling of, classified materials and documents shall have a security clearance at the level of safeguarding required by the DD Form 254 in the individual Task Order.

EXHIBIT-A

SAFE SEPARATION DISTANCE BETWEEN AN RF
SOURCE AND UNSHIELDED MUNITIONS CONTAINING
10 mA NO-FIRE CURRENT ELECTRO-EXPLOSIVE DEVICES
(EEDs)

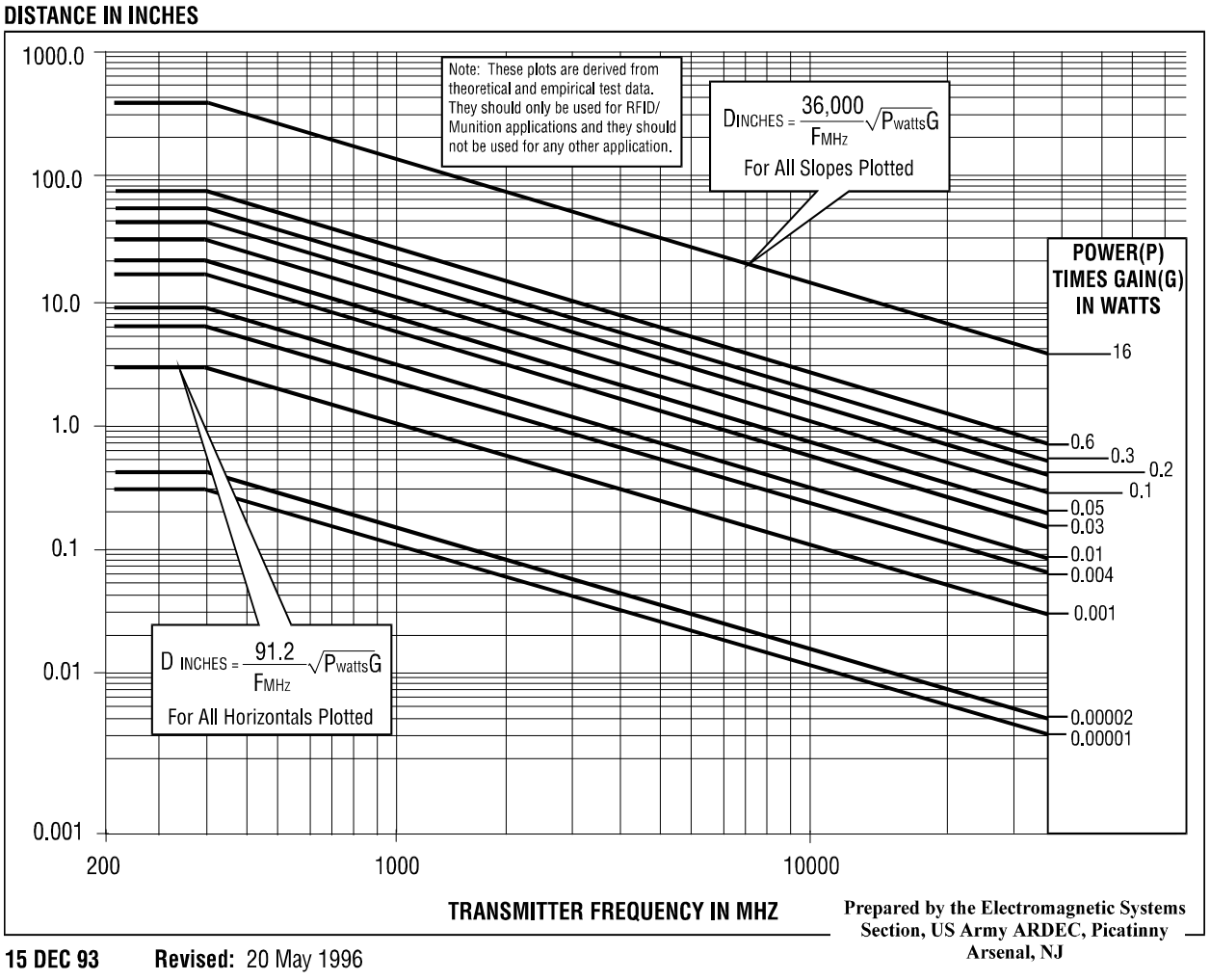

EXHIBIT-B

pRFID Contract Status Report

			[Month-Year]		Year-to-date		Contract-to-date	
CLIN	Description	Service	Quantity	Total Amt	Quantity	Total Amt	Quantity	Total Amt
0001AA	RFID EPC Gen 2 Fixed Reader	Army	5	$5	10	$10	30	$30
		AF	1	$1	3	$3	30	$30
		Navy	10	$10	30	$30	50	$50
		Marine	0	$0	5	$5	10	$10
		Coast Grd	0	$0	5	$5	10	$10
		DLA/Other	4	$4	5	$5	10	$10
	TOTALS		20	$20	58	$58	140	$140
0002BA	4” Wide Resin Ribbon	Army	10	$50	20	$100	50	$250
		AF	0	$0	3	$15	10	$50
		Navy	5	$25	10	$50	20	$100
		Marine	0	$0	0	$0	2	$10
		Coast Grd	0	$0	0	$0	0	$0
		DLA/Other	0	$0	5	$25	10	$50
	TOTALS		15	$75	38	$190	92	$460

Note: The CLINs, Description, 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.

ATTACHMENT (1)

DD 254 DEPARTMENT OF DEFENSE CONTRACT SECURITY CLASSIFICATION AND SPECIFICATION

(Separate document)

ATTACHMENT (2)

LABOR CATEGORIES
DESCRIPTIONS

Project Manager: The Contractor's pRFID Project Manager shall serve as primary manager of large projects and shall be responsible for management, performance, and completion of major projects, as defined by the individual Task Order. The Project Manager shall be responsible for formulating and enforcing work standards, assigning schedules, and reviewing work performed for Task Orders.

Senior Information Systems Engineer: Applies business process improvement practices to reengineer methodologies/principles and business process modernization projects. Applies, as appropriate, activity and data modeling, transaction flow analysis, internal control and risk analysis and modern business methods and performance measurement techniques. Assist in establishing standards for information systems procedures. Develops and applies organization-wide information models for use in designing and building integrated, shared software and database management systems. Constructs sound, logical business improvement opportunities consistent with corporate Information Management guiding principles, cost savings, and open system architecture objectives. Provides daily supervision and direction to staff.

Senior Programmer: Analyzes functional business applications and design specifications for functional activities. Develops block diagrams and logic flow charts. Translates detailed design into computer software. Tests, debugs and refines the computer software to produce the required product. Prepares required documentation, including both program-level and user-level documentation. Enhances software to reduce operating time or improve efficiency. Provides technical direction to programmers to ensure program deadlines are met.

Systems Analyst: Analyzes and develops computer software possessing a wide range of capabilities, including numerous engineering, business and records management functions. Develops plans for automated information systems from project inception to conclusion. Analyzes user interfaces, maintain hardware and software performance tuning, analyze workload and computer usage, maintain interfaces with outside systems, analyze downtimes, analyze proposed system modifications, upgrades and new COTS. Analyzes the problem and the information to be processed. Defines the problem, and develops system requirements and program specifications, from which programmers prepare detailed flow charts, programs, and tests. Coordinates closely with programmers to ensure proper implementation of program and system specifications. Develops, in conjunction with functional users, system alternative solutions.

Software Systems Designer: Works from specifications to develop or modify operating systems applications. Designer assists with design, coding, benchmark testing, debugging and documentation of programs. Designer works with applications generally dealing with utility programs, job control language, macros, subroutines and other control modules. Works on most phases of software systems programming applications, and may require instruction and guidance in other phases.

Programmer / Analyst: Analyzes functional business applications and design specifications for functional activities. Develops block diagrams and logic flow charts. Translates detailed design into computer software. Tests, debugs and refines the computer software to produce the required product. Prepares required documentation, including both program-level and user-level documentation. Enhances software to reduce operating time or improve efficiency. Provides technical direction to programmers to ensure program deadlines are met.

Junior Programmer: Participates in the design of software tools and subsystems to support reuse and domain analysis. Assists Applications Engineer and Applications Programmer to interpret software requirements and design specifications to code and integrate and test software components.

Systems Engineer: Analyzes and studies complex system requirements. Designs software tools and subsystems to support software reuse and domain analyses and manages their implementation. Manages software development and support using formal specifications, data flow diagrams, other accepted design techniques and Computer-Aided Software Engineering (CASE) tools. Estimates software development costs and schedule. Reviews existing programs and assists in making refinements, reducing operating time and improving current techniques. Supervises software configuration management.

Data Comm / Network Specialist: Analyzes network characteristics (e.g., traffic, connect time, transmission speeds, packet sizes and throughput) and recommends procurement, removals and modifications to network components. Designs and optimizes network topologies and site configurations. Plans installations, transitions and cut-overs of network components and capabilities. Coordinates requirements with users and suppliers.

RF Technical Radio Specialist: Focuses on the design and implementation of pRFID system. The individual will organize and configure the installation of pRFID site. This includes the proper RF installation of pRFID readers, antennas, and printers. Identifies the proper location for the readers at the prescribed distances along the supply chain; on conveyors, at loading dock portals, near palletizers, and mounted on vehicles. Also properly deploy hand-held readers for use in warehouses, distribution centers, and field environments. Be able to identify the physical and RF environments, as well as throughput, speed and accuracy requirements. Required to be able to analyze the RF environment to identify any RF interference and take proper measures to avoid RF interference.

Senior Systems Engineer: Applies an enterprise-wide set of disciplines for the planning, analysis, design and construction of information systems on an enterprise-wide basis or across a major sector of the enterprise. Develops analytical and computational techniques and methodology for problem solutions. Performs enterprise wide strategic systems planning, business information planning, business and analysis. Performs process and data modeling in support of the planning and analysis efforts using both manual and automated tools; such as Integrated Computer-Aided Software Engineering (I-CASE) tools. Applies reverse engineering and re-engineering disciplines to develop migration strategic and planning documents. Has experience with such methodologies as IDEF 0 process modeling and IDEF 1x data modeling. Provides technical guidance in software engineering techniques and automated support tools.

Senior Software Systems Engineer: Formulates and defines specifications for operating system applications or modifies and maintains existing applications using engineering releases and utilities from the manufacturer. Responsible for program design, coding, testing, debugging and documentation. Responsible for applications dealing with the overall operating system, such as sophisticated file maintenance routines, large telecommunications networks, computer accounting and advanced mathematical/scientific software packages. Instructs, directs, and checks the work of other task personnel. Responsible for quality assurance review and the evaluation of existing and new software products.

Senior Field Engineer: Organizes and directs network installations on site surveys. Assesses and documents current site network configuration and user requirements. Designs and optimizes network topologies. Directs and leads preparation of engineering plans and site installation Technical Design Packages. Develops installation schedules. Mobilizes network installation team. Directs and leads preparation of drawings documenting configuration changes at each site. Prepares site installation and test reports. Coordinates post installation operations and maintenance support.

Technical Writer: Assists in collecting and organizing information required for preparation of user's manuals, training materials, installation guides, proposals, and reports. Edits functional descriptions, system specifications, user's manuals, special reports, or any other customer deliverables and documents.