STATEMENT OF WORK/PERFORMANCE SPECIFICATION

MOBILE X-RAY INSPECTION VAN
(NII) SYSTEM

STATEMENT OF WORK

1 PURPOSE

The U.S. Customs and Border Protection (CBP) requires Single and Dual View (Side and Top views) mobile x-ray vans to provide CBP officers with a mobile x-ray capability to conduct Non-Intrusive Inspections (NII) of passenger baggage and parcels at U.S. land, air and sea ports of entry (POEs). The officers' mission is to prevent the illegal entry of drugs, currency, weapons, and agricultural products into the United States, while facilitating the flow of legitimate travel and trade. This Statement of Work (SOW) defines the tasks necessary to provide Mobile X-Ray Inspection Vans to include equipment, installation, testing, verification, documentation, and logistics requirements needed to satisfy the procurement and allow CBP to establish the ability to sustain the operational capability of the equipment.

1.1 Background

CBP, an agency of the Department of Homeland Security (DHS), is responsible for the targeting, selecting, and examining of cargo deemed high risk for terrorist-related activity, and identifying trade law violations. CBP is also responsible for facilitating the release of low-risk cargo. CBP has a continuing requirement to interdict incoming contraband such as weapons, explosives, and illegal drugs, as well as to interdict outgoing currency, through examination of break-bulk cargo, passenger baggage, and international mail parcels.

1.2 Scope

The Contractor shall supply turn-key mobile single and dual view x-ray vans to provide CBP officers NII capabilities at U.S. POEs. The vans shall be offered as a Commercial-Off-The-Shelf (COTS) system, however the Government may require modifications to the COTS design to facilitate and support its inspection Concepts of Operation (CONOP). The system must be safe and create exposure rates as low as possible as promulgated by the Nuclear Regulatory Commission (NRC) in 10 C.F.R Part 20, setting the maximum permissible level of radiation dose to the general public at 0.1 Rem (100,000 µR (microrem)) per-year.

1.3 Program Organization

This procurement is under the technical direction of the NII Acquisition Program Management Office (PMO) within the CBP Office of Field Operations (OFO) Cargo and Container Security (CCS). The maintenance, repair, and logistic support will be managed by the CBP Enterprise Networks and Technology Support Directorate (ENTSD), Integrated Logistics Division (ILD). NII Division Small Scale NII Branch represents the business owner and provides functional requirements.

1.4 Government Management Organization

CBP management of this procurement will be accomplished through the CBP NII PMO for system acquisition, delivery, and acceptance. ILD will manage the system(s) during the warranty period and beyond to include any corrective maintenance actions, preventive maintenance activities, and if needed, on-demand services. CBP OTD and OFO/CCS/NII Division Training & Logistics Support Branch (TLSB) will approve training development and coordinate operator training presentations. CBP Human Resources Management (HRM) Radiation Safety Officer (RSO) will approve radiation safety.

1.5 Contractor Management Organization

The Contractor shall provide, for CBP review, a Management Approach, including all major points of contact and the overall management structure. The Management Approach shall be prepared in accordance with Data Item Description (DID) A001. The Contractor shall also prepare Monthly Progress Reports, in accordance with DID A006.

1.6 Subcontracting

If the Contractor wishes to subcontract/outsource this contract or delivery to any outside entity, the Contractor shall communicate that desire to CBP and submit the qualification of such Subcontractor to CBP for approval. CBP may deny such Subcontractor at its sole discretion and without liability.

1.7 Government Furnished Information

The Contractor shall implement and maintain a system for requesting, receiving, reviewing, and storing Government Furnished Information (GFI), including For Official Use Only (FOUO) and/or Law Enforcement Sensitive information. The Contractor shall not further distribute any Government furnished information data that may be provided in support of this effort without Government approval. The Government may provide certain Government information, materials, and forms to the Contractor to support tasks under this SOW. Requests for GFI will be reviewed and granted on a case by case basis. The Government Program Manager identified in this SOW will be the point of contact for identification of any required information to be supplied by the Government. The Contractor shall prepare documentation according to the guidelines provided by the Government or as mutually agreed.

1.8 Government Furnished Materials

The Contractor shall implement and maintain a system for requesting, receiving, reviewing, and storing Government Furnished Material (GFM), including material that is Law Enforcement Sensitive. The Contractor shall not distribute GFM that may be provided in support of this effort without Government approval. The Government may provide certain Government materials to the Contractor to support tasks under this SOW. Requests for GFM will be reviewed and granted

on a case by case basis. The Government Program Manager identified in this SOW will be the point of contact for identification of any required material to be supplied by DHS. The Contractor shall prepare documentation per the guidelines provided by the Government or as mutually agreed.

2 Applicable Documents

Documents cited shall be referenced and used as called for in this Statement of Work/Performance Specification and the Data Item Descriptions.

2.1 Federal Regulations

a. Code of Federal Regulations, 10 CFR 20, Standards for Protection against Radiation, 2012, (NRC).
b. Code of Federal Regulations, 10 CFR 39.35, Leak Testing of Sealed Sources, 2012, (NRC).
c. Code of Federal Regulations, 10 CFR 71, Packaging and Transportation of Radioactive Materials, 2012, (NRC).
d. Code of Federal Regulations, 21 CFR 179, Irradiation in the Production, Processing and Handling of Food, 2012, (FDA).
e. Code of Federal Regulations, 29 CFR 1910, Occupational Safety and Health Standards, 2012, (OSHA).
f. Code of Federal Regulations, 49 CFR 172, Hazardous Materials, Etc., 2012, (DOT).

Note: These regulations can be accessed by going to: http://ecfr.gpoaccess.gov.

2.2 National Standards

a. American National Standards Institute, ANSI/IEEE N42.41, Minimum Performance Criteria for Active Interrogation Systems Used for Homeland Security, 2007.
b. American National Standards Institute, ANSI/IEEE N42.46, Determination of the Imaging Performance of X-Ray and Gamma-Ray Systems for Cargo and Vehicle Security Screening, 2008.
c. American National Standards Institute, ANSI/HPS N43.3, General Radiation Safety - Installations Using Non-Medical X-Ray and Sealed Gamma-Ray Sources, Energies up to 10 MeV, 2008.
d. American National Standards Institute, ANSI/HPS N43.14, Radiation Safety for Active Interrogation Systems for Security Screening of Cargo, Energies up to 100 MeV, 2011.
e. National Fire Protection Association, NFPA 79, Electrical Standards for Industrial Machinery, 2007.
f. National Fire Protection Association, NFPA 70, Recommended Practice for Electrical Equipment Maintenance, 2010.

2.3 DHS/CBP Documents

a. CBP Information Systems Security Policies and Procedures Handbook, HB 1400-05D, 2009.
b. DHS-CBP N.25, Standard Messaging Protocol, Version 1.5.0.6, 2009.
c. CBP Interface Control Document, Version 4, 2010.
d. DHS Sensitive Systems Policy Directive 4300A, Version 13.1, July 27, 2017 (or latest update).
e. Federal Information Processing Standards Publication (FIPS PUB), Number 140-2, Security Requirements for Cryptographic Modules, 2001
f. CBP Training Development Standards, 2008.
g. CBP Instructor-Led Training (ILT) Style Guide, 2009.
h. CBP Instructor-Led Training (ILT) Process Guide, 2008.
i. U.S. Land Port of Entry Design Guide, 2010.
j. Interagency Agreement and Delegation of Authority from the U.S. General Services Administration to the U.S. Department of Homeland Security for the Alteration of Multiple Lands Ports of Entry to Install and Deploy Large Scale Non-Intrusive Inspection Systems; Original 2009, Last Modified February 2012.

2.4 References

a. Occupational Safety and Health Administration (OSHA), Code of Federal Regulations (CFR), Title 29, Section 1910 (2004)
b. Food and Drug Administration (FDA), 21 CFR 1020.40 and 21 CFR 179, “Irradiation in the Production, Processing and Handling of Food,” 1996
c. 49 CFR 172, Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements
d. 49 CFR 571.301, Fuel System Integrity
e. 49 CFR 1544.211 (e)3, Use of X-Ray Systems
f. 6 CFR Part 29, Protected Critical Infrastructure Information
g. 36 CFR 1194.3(e), (b), (f), Electronic and Information Technology Accessibility Standards
h. Federal Aviation Administration (FAA), 49 CFR 1544.211 (e), “Use of X-Ray Systems (Photographic Film Safety)”
i. National Fire Protection Association (NFPA) 79, “Electrical Standards for Industrial Machinery”
j. NFPA 70, “Recommended Practice for Electrical Equipment Maintenance”
k. American Society of Testing Materials (ASTM) E 592-99, ASTM E 747-97, ASTM E 1025-9, and ASTM F 792-01, standards addressing evaluation and testing of image and system performance requirements
l. American National Standard Institute (ANSI) standards
m. DHS and CBP information technology (IT) security policies, including the guidelines and policies stated in DHS Management Directive (MD) 4300.1, “Information Technology Systems Security”; DHS Sensitive Systems Policy Directive 4300A, “Information Technology Security Program”; and DHS 4300A, “Sensitive Systems Handbook”
n. Title 49 , Code of Federal Regulations, Part CFR 1520, as amended, “Policies and Procedures of Safeguarding and Control of S SI,” as amended, and any

supplementary guidance officially communicated by an authorized official of the Department of Homeland Security (including the Assistant Secretary for the Transportation Security Administration or his/her designee)

o. DHS personal identity verification procedures identified in the contract that implements Homeland Security Presidential Directive 12 (HSPD-12), Office of Management and Budget (OMB) guidance M-05-24, and Federal Information Processing Standards Publication (FIPS PUB) 201, “Personal Identity Verification (PIV) of Federal Employees and Contractors”
p. Computer Security Act of 1987 (40 U.S.C. 1441 et seq.); the Government Information Security Reform Act of 2000; and the Federal Information Security Management Act of 2002; and with federal policies and procedures that include, but are not limited to, OMB Circular A-130
q. Homeland Security and CBP Enterprise Architecture documents and reference models
r. FAR 52.227-14, Rights In Data
s. MIL-STD-810F, Part Two, Method 506.4, Procedure I—Blowing Rain
t. Society of Automotive Engineers (SAE) Ground Vehicle Standards (J)
u. TMC RP 803, Pre-Service Vehicle Inspection
v. 552a of Title 5, United States Code (U.S.C.) (the Privacy Act); Critical Infrastructure Information Act of 2002 (Title II, Subtitle B, of the Homeland Security Act, Public Law 107-296, 196 Stat. 2135, as amended, the implementing regulations thereto (Title 6 CFR, Code of Federal Regulations, Part 29); Title 49, Code of Federal Regulations, Part CFR 1520, as amended, “Policies and Procedures of Safeguarding and Control of S SI,”.
w. Homeland Security Presidential Directive-12 (HSPD-12), Office of Management and Budget (OMB) guidance M-05-24, and Federal Information Processing Standards Publication (FIPS PUB) Number 201.
x. Section 508 of the Rehabilitation Act (29 U.S.C. 794d), as amended by the Workforce Investment Act of 1998 (Public Law 105-220), August 7, 1998; and DHS MD 4010.2.
y. FIPS PUB 140-2, “Security Requirements for Cryptographic Modules.”

2.5 Order of Precedence

In the event of a conflict between the text of this SOW and the references cited above, this SOW takes precedence. Nothing in this SOW; however, supersedes applicable federal and state safety laws and regulations and the requirements set forth in the vehicle manufacturer’s body builders and incomplete vehicle manuals.

3 Requirements

The Contractor shall perform all requirements associated within this SOW as specified. The single and dual view x-ray vans shall be delivered to government-specified Continental United States (CONUS) locations. After contract award, CBP will identify delivery locations in each delivery information form.
The Contractor shall be responsible for delivering all mobile x-ray vans to the requiring locations, in accordance with the instructions on each delivery information form. The Contractor shall deliver complete, fully operational mobile

x-ray vans, including ancillary equipment and documentation, to CONUS and OCONUS locations within 180 days after receipt of the delivery order or the delivery information form for the first article vehicles and within 120 days after receipt of the delivery information form for all remaining orders, or as mutually agreed between the Contractor and CBP. The Contractor shall ensure proper testing, inventory, and operation of all items prior to delivery.
The Contractor shall retain ownership of the mobile x-ray vans until the government accepts delivery (FOB Destination). Individual delivery information forms will identify the delivery instructions, required locations, and configuration, as well as the quantity, place, and period of performance.
Tasks for this SOW include system fabrication, integration, assembly, delivery, training development and execution, hardware, documentation, training, and one year warranty, with a ten year expected lifecycle. Specific technical and operational requirements are detailed below.

3.1 General Requirements

The Contractor shall perform all work necessary to fabricate, assemble, deliver, and provide logistics support (initial training and one year warranty, with a ten year lifecycle), as specified, for the x-ray vans. CBP's intention at project completion is for the x-ray vans to be a turnkey operation.

3.1.1 Technical Requirements

Van Technical Requirements

1. Gross Vehicle Weight Rating: Not to exceed 9,500 lbs.
2. Engine: Automatic overdrive transmission with a steering column shifter
3. Gauges: Standard from manufacturer
4. Separate battery to operate the generator and any low voltage circuits added to the coach, charged by alternator and generator
5. X-ray equipment power input: Separate inputs, generator supplied and shore power at 120 volt, 20 amp.
6. Amphenol plugs and sockets, or equivalent
7. Dual heavy-duty batteries (2)
8. Paint Schematic: OEM White: Base Coat/Clear Coat
9. Fuel tank filler neck cap: Secured to the filler neck to protect against loss, with permanently attached (with screws or rivets) embossed plate affixed next to the tank filler opening in the body, identifying the type of fuel
10. Fuel type: Gasoline
11. Fuel system for the vehicle engine and generator: Conform to all requirements (49 CFR 571.301), and utilize the chassis manufacturer's furnished auxiliary connections according to manufacturer's technical requirements for the connection of the generator fuel lines. Generator fuel pick-up line should not allow drainage of vehicle fuel to where the vehicle could be stated and driven 39 miles to be re-fueled.
12. Electronics units: Line replaceable units easily removed and connected by cables with plugs and sockets

13. Maximum vehicle dimensions in an over-the-road driving configuration: Length 250”, width 96” without mirrors, height 98” (including auxiliary climate control system if roof-mounted)
14. Maximum vehicle dimensions while deployed for inspection: Length 250”, width 176” (with no awnings extended), height 98”
15. Retractable awning: Installed on each side of the vehicle to shade entire inspection area.
16. Tunnel specification: Capable of scanning objects at a maximum of 39.4“ (1m) wide by 39.4” (1m) high
17. Auxiliary climate control system: Low profile if roof mounted (vehicle height not to exceed 96”), capable of cooling/heating, the x-ray unit, and other sensitive components during operation as required.
18. Side and rear windows (if installed): Dark tinted with the exception of the driver’s and front passenger windows.
19. Back-up features: Rear View (back-up) Camera system with a wide angle and monitor for use by the driver and audible when the vehicle is backing up.
20. Emergency lighting: Whelen 400 Series Single Level Linear-Super LED light (Blue) or equivalent; mounted on the roof top of vehicle, front grill, and rear body panel; power-supplied control-mounted unit with a status display in the driver compartment; installed in full compliance with manufacturer’s guidelines. Law enforcement blue light package shall be visible 360 degrees around vehicle when viewed at 50” from ground (approximate average eye level).
21. Exterior Lighting: The vehicle shall be equipped with at least three (3) fixed scene lights, both sides and on the rear of the service body. Each shall be LED flood lamps to provide high-intensity scene lighting around the vehicle for illumination of the workspace. Lamps shall be weatherproof sealed fixtures.
22. Safety items: First aid kit capable of supporting two personnel and two fire extinguishers (2.5 lbs. each). Fire Extinguisher labels on exterior of vehicle shall indicate location of the passenger compartment and rear compartment equipment.
23. Two rear overhead 12v DC lights over the inspection tunnel and one over electronics for maintenance
24. Security alarm with two remotes (anti-theft)
25. Hand-held rechargeable L.E.D. flashlight shall be charged by vehicle electrical system to ensure light is available. Shall be capable of being unplugged for long term system storage.
26. Safety hazard kit (including triangles and flares)
27. Full size spare tire
28. Two 25-foot external power cords with proper size wire gauge to prevent line loss and ancillary connectors for U.S. power system to operate the HVAC and x-ray system.
29. Operator Computer: Computer for analysis of radiographic images
30. Branding: System should come standard with the US Customs and Border Protection seal on the driver’s side door, in accordance with the Department of Homeland Security Vehicle Guidance, dated 2005.

3.1.2 Drivability and Handling

The X-ray van must meet all load bearing and operating standards for the class

of vehicle supplied, including load leveling and anti-sway package.

3.2 X-Ray Technical Requirements

3.2.1 X-Ray Source

Power Requirements: Dual/Single 140 kV to 180 kV showing a vertical and horizontal (DV) or vertical (SV) image views

3.2.2 Imaging Capabilities

1. Single and Dual View System variants imaging meeting ASTM 792-08 standard
2. Psuedo-Z color pallet support, e.g. “orange” for organic and “blue” for metallic materials
3. Organic stripping mode
4. Metallic stripping mode
5. Black and white/color modes
6. Enhanced penetration mode
7. Automatic edge enhancement imaging
8. Image review–last 25 images
9. Automatic image archiving/retrieval (10,000 images)
10. Enhancement of image contrast with lock capability
11. Digital zoom with lock capability
12. Reverse polarity of image contrast
13. Capable of discriminating, at minimum, metallic and nonmetallic objects.

3.2.3 X-Ray System Performance

1. Wire resolution: Minimum 36 AWG (American Wire Gauge)
2. Minimum penetration: Equivalent to 24 mm or 0.94” steel minimum
3. The system shall meet as a minimum the CPB criteria for ASTM 792-08

3.2.4 Conveyor System

1. Features: Auto-stop, auto-return, emergency stop switches (at each tunnel opening and on operator’s workstation) and a continuous mode (forward and reverse)
2. Conveyor belt minimum dimensions should match tunnel width 38”
3. Conveyor weight capacity: Objects through 300 lbs.
4. Conveyor belt height dimensions: Height from ground level 36” (±4”)
5. Parcel passage (minimum): Length unlimited, width 38”, height 38”
6. Minimum conveyor speed: 0.20 m/sec (40 ft/min +-2ft/min)
7. Input/exit Roller Tables: Able to withstand a maximum impact/shock weight of 600 lbs.
8. Roller table width to match tunnel width dimension

9. Image counter to indicate system usage/total numbers of scanned items

3.2.5 Computer Operator's Station

1. Operating System: Computers are to be equipped with Linux, RHEL 6 or 7, or Windows 10 64bit; capable of upgrade to latest version. Maintainable meeting DHS Sensitive Systems Policy Directive 4300A, Version 13.0 and CBP Information Systems Security Policies and Procedures Handbook, HB 1400-05D, Version 7.0

2. Hard disk drive: Sized to store 50,000 images (100% growth)

3. Flat panel: High-resolution, not be less than 4.5 lines per mm, non-interlaced, non-flicker, color monitors (minimum 17")

4. Image format: Nonproprietary such as, Unified File Format (UFF), Joint Photographic Expert Group (JPEG) or Bitmap (bmp), allows saving with discrete file names Adjustable viewing angle for monitors
5. Installed monitor sunshade for direct sun viewing without awnings deployed. Exterior only controls and monitor(s) for X-ray system to include left and right positions, can be one set of controls that move from side to side without detaching them from the van.

6. Operator's station must be configurable for right hand or left hand operations.

7. Ability to download selected images to DHS approved secure USB drive at least one operator station

3.2.6 Operational Environment

1. Operating temperature (ambient temperature, not equipment temperature): 32°F to 120° (Optional Cold Weather package to operate to 10°F)
2. Storage ambient temperature: −0°F to 140°F
3. Relative humidity: 10% to 90% (noncondensing)
4. Duration of operation: Continuous for a maximum of 16 hours per day

See DID A003

3.2.7 Electrical/Generator Power

1. External Power: Dual 20 A standard outlets
2. 120V AC ±10%, single phase
3. 60 Hz

Auxiliary power unit (generator):

1. Contained within the vehicle and accessible from the outside mounted to the transporter complying with all safety specifications mandated by applicable government publications
2. Remote start switch in the generator compartment, start switch on the generator unit and near the X-Ray control workstations.
3. Fuel drawn from transport fuel tank (gasoline)
4. 2 - 20A external power outlets available on Generator of External Power
5. Capable of operating on external or generator power
6. Fuel feed installed so that it cannot empty the main vehicle fuel tank
7. Enough capacity to run all systems on the vehicle, including climate control and x-ray units.

3.3 Health and Safety

Radiation dose rate: Less than 0.5 mR/hour at 2” from the cabinet surface (must fully comply with all current and any new applicable federal health and safety regulations published during the life of this contract, including 21 CFR 1020.40; 49 CFR 1544.211 (e)3; and CFR, Title 29, Section 1910 (2004).

3.4 Delivery

CONUS equipment delivery shall be Free On Board (FOB) Destination. Deliveries shall be 180 days after receipt of Delivery Order or as specified in the Delivery Order and/or after final delivery of any previous orders. Subsequent deliveries for each order shall be scheduled based on approximately two system deployments per month. Additionally, Delivery Orders placed by CBP throughout the performance of this contract shall have mutually agreed upon delivery schedules prior to order placement.

3.4.1 Imaging System Equipment and Equipment Installation

In accordance with this Statement of Work, the Contractor shall deliver NII Systems incorporating radiographic measurement technology designed and built implementing best commercial practices. However, at no time, shall safety, quality, or performance of equipment be compromised or sacrificed.

3.4.2 Sources & Detectors

The Contractor shall deliver an imaging source or sources, which may incorporate standard transmission x-ray with or without reflective measurement technology.
As part of the NII system, the Contractor shall deliver an array of detectors that are capable of meeting the Performance Specifications as described in this SOW.

3.4.3 Computers

1. As part of the SS-NII system, the Contractor shall provide computers and server(s) with enough memory and speed to meet all the requirements of this SOW. Computers are to be equipped with Linux, RHEL 6 or 7, or Windows 10 64bit; capable of upgrade to latest version
2. N.25 - Shall be in compliance with DHS-CBP N.25 Version 1.5.0.6 and Interface Control Document (ICD) Version 4 or the latest version available at the time of award. Compliance shall only extend to the ability to transmit N.25 messages and be compatible with the external system interface described in the CBP ICD. The system shall also have an ON/Off switch to enable or disable this feature.
3. Ability for remote diagnostics, remote system performance and statistics retrieval is also desired, but not required. This capability must be able to be disabled as needed.

3.4.4 Computer Security

All SS-NII System computers and software programs that allow a User to analyze, enhance and store an image Data Set and the Data Base computers and programs that store the Data Set shall have the following security features incorporated.

1. **Levels of Access** - Three levels of CBP User access (Operator Level 3, Supervisor Level 2, and Administrator Level 1 shall be provided. Operator Level 3 shall be able to perform all system functions except copying and deleting images or Data Sets. Operator Level 3 shall not have access to User Accounts. Supervisor Level 2 shall be able to perform all Operator functions plus be able to create Operator Level 3 accounts and be able to copy and delete images or Data Sets. Supervisor Level 2 shall have access to Operator Level 3 Accounts. The Administrator shall be able to perform all Operator Level 1 and Supervisor Level 2 functions plus have access to all Accounts. The Administrator shall be able to create, edit, and/or delete ALL Level Accounts. The Contractor shall create a simplified procedure for the Administrator and Supervisor to use in order to create, edit, and delete User Accounts.

2. **Login** - The system shall be configured to deactivate any user session immediately and automatically following 20 minutes of inactivity, in such a way that will require the user to re-authenticate their identity before resuming interaction with the system. The session is not terminated, but the user will need to log in again in order to activate the session. Others should not be able to view the on-screen information during the lockout period nor should another member be able to log in and make changes to the session in progress. Sessions shall automatically be terminated after 60 minutes of inactivity.

3. User Name and Password - Each User shall be required to have a unique User Name and Password. Passwords shall meet the requirements of Password Management of the DHS 4300A Sensitive Systems Handbook Version 13.1, dated July 27, 2017 or the latest version at the time of award. Expired Password must be resettable by the user regardless of the expiration period.

I.e., the user shall not ever be fully locked out of the system.

4. User Tracking - Each system shall have the capability to tag each scan with the User Name and the User Name shall be displayed with the image and the Data Set

3.5 Systems Integration

Integration of the Baggage Scanner NII inspection system equipment and its supporting Subsystems shall be the responsibility of the NII systems Contractor, as follows.

3.5.1 Workstation Integration and Interface

The Contractor shall deliver Workstations and Interface Operating systems, which are to include an Operator Console, computers and computer software and the controls and displays to scan a conveyance, analyze the image, make a Suspect or Non-suspect decision and store all the items that make up that Data Set. The Workstation shall be configurable for right hand or left hand operations.

3.5.2 Integrated Image Capture

Baggage Scanner SS-NII Systems shall be capable of capturing and displaying all of the items that make up a Data Set. This shall include the radiographic image, date, time, and title.

3.5.3 Integrated Image Storage

These SS-NII Systems shall be capable of storing a complete Data Set for a period of 30 – 60 days. It is required that when the system reaches its maximum storage capacity, a warning shall be provided and the system will begin deleting the oldest images as needed to continue functioning.

3.5.4 Integrated Image Download

All CBP data stored on removable or transportable media/devices shall be encrypted using CBP or other approved encryption method (such as an Aegis type device) prior to leaving CBP-controlled environments. Data owners are responsible for determining the security category, handling, and markings for their data. Where additional caveats are required, they may be added to the markings on the media. For example, media labeled For Official Use Only may further specify “Favorably Adjudicated BI Required” to limit access to the data contained in such media.

3.6 Safety Interlocks

The Contractor shall provide safety interlocks such as operator proximity/presence sensors and/or “dead man switches” for all systems for the protection of pedestrian traffic and untrained personnel.
The Contractor shall provide Emergency Stop Switches for all systems which will allow an operator to manually interrupt the scanning process thereby closing the shutter, or disabling the transmission of X-Rays, in an emergency or when there is an unauthorized entry inside the systems safety Radiation Control Area. Emergency Stops shall be strategically located dependent on each system configuration but shall be installed at the control station, on the opposite side, and rear of the system where applicable.

4 System Sustainment and Service

Each NII system is expected to have the highest reliability, availability, and maintainability achievable for this type of technology. The following are our minimum expectations for the mobile x-ray vans.

4.1 Basic Reliability Quantitative Requirements

This NII overall system shall possess a mean time between failure (MTBF) of no less than 1000 hours or 8000 scans. The operating life of the NII system shall be no less than 10 years. The NII system shall normally operate 16 hours a day, 6 days a week, 52 weeks a year during an operating life of 10 years but it shall be capable of surge operating 24 hours a day, 7 days a week for 2 weeks (336 hours).

4.1.1 Reliability Predictions

The Contractor shall perform reliability predictions for the NII equipment. The prediction shall assume a constant failure rate for parts. For parts where no failure rate is available, a failure rate shall be estimated and the basis for the estimation shall be stated. The external ambient temperatures utilized in the reliability prediction shall be based upon the upper and lower operating temperatures of the NII system. The Contractor shall ensure these Reliability Predictions will match the Measured Reliability during the Warranty Period.

4.1.2 Reliability Predictions Report

The Contractor shall submit a reliability prediction report as part of their proposal and shall be prepared in accordance with Data Item Description number A002. The Contractor shall identify reliability critical items.

4.1.3 Classification of Reliability Critical Items

A Critical Item is an identified weak link in a system that has an adverse impact on or contributes to failures of the system performing its mission. Furthermore, any major component that creates a potential safety problem, or contributes to other areas of high risk to overall system reliability, should be classified as a critical item. The Contractor shall classify all NII items as critical if one or more of the following conditions are satisfied:
Item represents a significant new development or application.
Item has critical failure modes.
Item has history indicating need for improvement. A Preplanned Product Improvement Plan (PPIP) shall be developed and provided by the Contractor for any item with a history of needing improvement.
Item has known operating life, limited shelf life, or environmental sensitivity (e.g., vibration, thermal, etc.) that warrants controlled surveillance.
Item whose failure can result in the failure of the system and which is not compensated by redundancy or alternate operational procedures.

4.1.4 Control of Reliability Critical Items

The Contractor shall be responsible for the control and Quality Control (QC) (address in **Data Item Description number A012** Quality Control Plan) of critical items, which shall include as a minimum:

- Procedures for the procurement of, and availability of, spares of critical items.
- Criteria and procedures for the design and redesign of critical items
- Procedures for controlling and monitoring of critical items after manufacture (e.g., date coding, traceability, assembly techniques, test requirements, acceptance test requirements, control of Subontractors' and manufacturers' controls, in-process controls, special handling, and storage requirements).

4.1.5 Reliability Review

The Contractor shall identify and discuss all aspects of the Baggage Scanner's reliability features and characteristics, or how the system is designed to improve reliability.

4.2 Basic Reliability Quantitative Requirements

The NII overall system shall possess a mean time between failure (MTBF) of no less than 1000 hours or 8000 scans. The operating life of the NII system shall be no less than 10 years. The NII system shall normally operate 16 hours a day, 6 days a week, 52 weeks a year during an operating life of 10 years but it shall be capable of surge operating 24 hours a day, 7 days a week for 2 weeks (336 hours).

4.3 Control of Reliability Critical Items

The Contractor shall be responsible for the control and Quality Control (Contractor shall address in **DID A012** Quality Assurance Plan) of critical items, which shall include as a minimum:

1. Procedures for the procurement of, and availability of, spares of critical items.
2. Criteria and procedures for the design and redesign of critical items
3. Procedures for controlling and monitoring of critical items after manufacture (e.g., date coding, traceability, assembly techniques, test requirements, acceptance test requirements, control of Subontractors' and manufacturers' controls, in-process controls, special handling and storage requirements).

4.4 Operational Availability

The Vendor shall provide all the required support services, repair parts, hardware, software, firmware, test equipment, and supplies to maintain the system, to meet the target performance metrics for the operational needs of CBP. It includes logistics time, diagnostic time, fault isolation, waiting or administrative downtime, and corrective maintenance downtime. This measure extends the definition of availability to elements controlled by the logisticians and mission planners such as quantity and proximity of spares, tools, and manpower. Operational availability (Ao) is defined as the percentage of time during the reporting period that the system is available to support the operations for which it was designed. The average operational availability for service support excludes preventive maintenance, accidents, or incidents produced by other than normal manufacturer defects. The operational availability will be derived by calculating the total uptime hours (total hours in the period minus the down time hours), divided by the total hours in the period. The Vendor shall meet or exceed these performance standards while complying with all applicable State and Federal regulations.

An average Ao for service support, by each serialize system, shall be calculated using data from Work Orders (WOs) completed during the monthly 720-hour reporting period by using the following formula:

$$\text{Monthly Ao} = 100\ (x)\ \frac{720\ \text{Hours} - \text{Downtime Hours of Failures}}{720\ \text{Hours}}$$

The minimum Ao requirement for the system is**: 95%.**

Customer Wait Time (CWT)

The assigned service provider shall travel to the affected site if the problem cannot be resolved over the phone. The assigned service provider will respond on-site and restore down system to a satisfactory equipment operational status within the required Customer Wait Time (CWT). If unable to meet the CWT, the assigned service provider will provide the justification and a time estimate for effecting repairs to the NII Maintenance Dispatch Center (MDC). The assigned service provider shall notify the Maintenance Dispatch Center and provide the date and time of system operational status changes, Estimated Time of Arrival (ETA) for parts, and technical support scheduled arrival at site. The assigned service provider shall coordinate site visits with the CBP ports, as required.

Customer Wait Time (CWT) is defined as the time from the initial trouble call is reported to the assigned service provider, until the time that the affected individual serialized system is fully or conditionally operational.

The minimum CWT requirement for the service is**: 24 Hours.**

4.5 Service Calls and Work Orders

All service calls and work orders apply to warranty, corrective maintenance, and preventative maintenance. The Integrated Logistics Division (ILD) - manages an NII Maintenance Dispatch Center (MDC) for maintenance, repair call activities, and incident management that operates 24/7/365. The NII Maintenance Dispatch Center responds to service calls from the numerous CBP locations to intake and track the calls for service in the CBP databases. The NII Maintenance Dispatch Center staff issues requests for repair or maintenance services to the Vendor in the form of a work order (WO) that initiates the maintenance request.
Work Completion Form:
The WCF is a form unique to a specific maintenance event. The WCF is typically the standard Vendor's Work Form, but shall include the WO number assigned by the Government; a description of the maintenance action performed; identify the failure cause/part or symptom; a list of replaced parts; any additional work performed not covered under the initial work order; and name and email address of the CBP representative that verified completion and completion date/time.
The Vendor shall forward the completed WCF and maintenance documentation (if applicable) to the NII Maintenance Center via email upon the completion of the maintenance action. If requested, the Vendor shall also provide one (1) copy of the completed WCF to the site CBP representative for their local records.
The Vendor shall e-mail a copy of the WCF to the site supervisor and the NII Maintenance Dispatch Center (MDC) within 24 hours of completion of each required site visit.
Work Site Cleanliness – The Contractor shall properly dispose of all damaged parts; components; assemblies; subassemblies; consumables; and Petroleum, Oil, and Lubricants (POL), unless otherwise directed to retain for failure item analysis or other reasons. The Contractor shall remove all work-related used parts, waste, and debris from the CBP site upon job completion, unless directed otherwise.

4.5.1 Preventive Maintenance

Preventive Maintenance is defined as any scheduled and planned maintenance actions performed to retain the target Operational Availability (Ao). Preventive maintenance includes periodic inspections, calibration, condition monitoring, critical item replacement, and servicing requirements. Necessary repair actions discovered during the performance of a preventive maintenance action require separate corrective WO's from the Operations Center. To the widest extent possible, all preventive maintenance shall be scheduled around port operational activities to prevent disruption to daily operations.

The Contractor shall schedule and perform preventive maintenance for X-ray NII equipment listed in individual task orders in accordance with recommended preventive maintenance for each equipment make, model, and type. The Contractor shall perform scheduled and planned equipment services to maintain equipment functionality and identify necessary repair actions. The Contractor shall provide all services, travel, supplies, packaging, transportation, and shipment of items necessary to check the operation and complete the scheduled maintenance tasks for each piece of equipment. The Contractor shall complete scheduled maintenance within 30 calendar days of WO issuance and/or up to 30 calendar days in advance of the scheduled maintenance to combine the preventive maintenance visit with a corrective maintenance visit to reduce overall customer downtime.

NII Monthly Preventive Maintenance Schedule – The Vendor shall provide a schedule of planned preventive maintenance actions organized by equipment to the NII Maintenance Dispatch Center five (5) business days prior to the beginning of each planned period of preventive maintenance.

4.5.2 Corrective Maintenance

Corrective maintenance actions include those required to diagnose and correct system, booth, and shelter malfunctions or failures that have occurred or are actively occurring. This may consist of repair, restoration, or replacement of components and necessary software upgrades or fixes to improve system performance. Corrective maintenance is an unscheduled maintenance activity caused by a unit or component failure and includes tests, measurements, and adjustments

The Vendor shall make contact with the site requiring assistance, to troubleshoot each problem by telephone or remote maintenance, within one (1) hour of the receipt of a WO. The Vendor shall respond to the WO by contacting the site POC provided by the NII Maintenance Dispatch Center. The Vendor shall report the date/time of the contact to the NII Maintenance Dispatch Center immediately after contacting the site POC.

If the problem cannot be resolved by telephone or remote maintenance, the Vendor shall respond on-site and restore down systems to a satisfactory equipment operational status. If unable to meet the CWT, the Vendor shall provide the justification and a time estimate for effecting repairs to the NII Maintenance Dispatch Center. The Vendor shall notify the NII Maintenance Dispatch Center and provide the date and time of system operational status

changes, estimated time of arrival (ETA) for parts, and Vendor support personnel scheduled arrival at site. The Vendor shall coordinate site visits with the CBP port representative.
The Vendor shall provide labor, services, parts, equipment, software, firmware, hardware, supplies, packaging, transportation, shipment, and materials necessary to diagnose and correct malfunctions or failures of equipment to return the system to an 'operational' equipment operational status to achieve the CWT in accordance with the target standards.

4.5.3 Conditional but Operational Status

There may be circumstances that allow the system to be restored to a 'conditional but operational' status prior to reaching full 'operational' status. The conditional but operational' status applies when a deficiency exists, but the system is available to support the operations for which it was designed, to include safety considerations. The Contractor may restore systems reported in a 'non-operational' status to a classification of a 'conditional but operational' status as determined by CBP, coordinated by the NII Maintenance Dispatch Center or by a Government maintenance manager.

The Contractor shall restore systems in a 'conditional but operational' status to 'operational' within 10 business days of the first notification of the outage.

4.5.4 Remote Maintenance Monitoring

The system shall have the capability for remote maintenance monitoring (objective). The health status of system components, shall be viewable remotely (potentially at the manufacturer or a CBP location) in order to obtain system statistics, guide preventative maintenance actions, and diagnose system issues. The remote repair of system computer shall also be considered.

4.5.5 Corrosion Control

The Contractor shall apply corrosion control techniques and measures to mitigate and correct corrosion of the X-ray NII equipment listed in individual task orders. The Contractor shall visually inspect the equipment for signs of corrosion. The Contractor shall apply best practices to remove corrosion or replace parent material, properly treat and prepare surfaces for painting, and apply a color-matched finish.

4.5.6 Mean Time between Failures

The time between failures (TBF) is the time duration from the start of when the system is placed into an 'operational' status (Priority level 3) until suffering a failure (Priority level 1). A failure is defined as a malfunction that degrades performance or operational capability, which cannot be tolerated for even a brief period before correction (Priority level 1 work order). The total time between failures (TTBF) is the sum of all TBFs for the reporting period. The mean time between failures (MTBF) is calculated as the TTBF divided by the total number of failures for that reporting period. The Government will calculate the MTBF on an annual basis.
The MTBF for each serialized system shall be calculated annually using a 365-day (8760 hours) reporting period by using the following:

$$\text{MTBF} = \frac{\text{Total Time Between Failures (TTBF)}}{\text{Total Number of Failure Incidents}}$$

The minimum MTBF requirement for the system is: 1,000 Hours.

4.5.7 Mean Time to Repair

The time to repair (TTR) is the time duration from the start of a repair activity to correct a failure until the system is returned to full performance and capability. The total time to repair (TTTR) is the sum of all TTRs for the reporting period. The mean time to repair (MTTR) is calculated as the TTTR divided by the total number of repair activities for that reporting period. The overall system shall be designed to possess a MTTR. The Government will calculate the MTTR on an annual basis.

The MTTR for each serialized system shall be calculated annually using a 365 day (8760 hours) reporting period by using the following:

$$\text{Annual MTTR} = \frac{\text{Total Time to Repair (TTTR)}}{\text{Total Number of Repairs}}$$

The minimum MTTR requirement for the system is 24 hours

4.5.8 On-Demand (Other Maintenance and Support Services)

The Government anticipates requiring other requested services, separate from those outlined above, as needs arise during the course of this contract. The Government reserves the right to set and escalate priorities for these services to allow for expediting as urgent needs arise. This work is priced as Firm Fixed Price (FFP) or Time and Material (T&M) based on product reconditioning, technical refresh services, maintaining spares stock/repair kits, integrated

logistics services, severe corrosion restoration, refurbishment services, engineering services, installation, relocation services, disposal, site services/surveys, maintenance training, , retrofit, emergency services, and special event services.

FFP and T&M price quotes including travel for the following services may be requested as periodic needs arise.

4.5.9 Configuration Report

The Configuration Report shall include the following: equipment model, equipment serial number, location, current software version with any software upgrade history/retrofits for the control console and programmable logic controllers (PLCs); hardware design and changes; and control vehicle configuration. The Contractor shall submit a baseline configuration report within 30 days after award of contract and an annual configuration report thereafter to the COR. CMII-100E, CMII Standard for Enterprise Configuration Management, is cited as a guidance document.

4.5.10 Engineering Services

Upon written request, the Contractor shall provide engineering services to the equipment identified in individual task orders. Engineering services include failure analysis, root cause analysis, system operation anomaly analysis, and evaluation of potential or perceived safety hazards to personnel.

4.5.11 Ad Hoc Reports

Upon written request, the Contractor shall provide data that would enable Government performance analysis, economic trade-off studies, budget impact analysis, etc.

4.5.12 Provisional Support

Upon written request, the Contractor shall provide provisioning technical data for the equipment listed in individual task orders. The Contractor shall provide provisioning technical data traceable to the Original Equipment Manufacturer (OEM) supportability analysis, tailored to satisfy the level of repair and sustainment period identified in the request. The provisioning technical data shall identify major repairable parts, smaller non-repairable components used to effect repairs, consumable lubricants, piece parts used in assembly, criticality of items, acquisition lead times, and vendor identification information.

4.5.13 Retrofit Support

Upon written request, the Contractor shall perform retrofit functions to address approved Engineering Change Proposals (ECPs), enhancements, Service Life Extension Programs (SLEPs), and technical refresh activities for the equipment listed in individual task orders.

4.5.14 Relocation Services

Upon written request, the Contractor shall provide emergent need relocation services for the equipment listed in individual task orders. The Contractor shall disassemble, transport, and reassemble the components of the system at the new location. The Contractor shall perform post-assembly functional testing of the relocated system and familiarize operators with configuration and operational changes brought about by the relocation. The Contractor shall coordinate re-commissioning and/or recalibration activities, as required.

4.5.15 Site Work

Upon written request, the Contractor shall provide minor repair or electrical work external to the equipment unit in the performance of a relocation or corrective maintenance action resulting from an accident or incident.

4.5.16 Disposal

Upon written request, the Contractor shall provide disposal services for the equipment listed in individual task orders. The Contractor shall disassemble, transport, and properly dispose of designated systems and/or components after decommissioning.

4.5.17 Emergency Services

Upon written request, the Contractor shall provide emergency services in response to various emergency situations and natural disasters. The Contractor shall provide the labor, services, parts, equipment, supplies, packaging, transport, shipment, and materials necessary to support emergency service requirements.

4.5.18 Special Events

Upon written request, the Contractor shall provide services to special events (i.e., major sporting events and conventions). The Contractor shall provide the labor, services, parts, equipment, supplies, packaging, transport, shipment, and

materials necessary to support special event service requirements.

4.6 On-Demand Training

Upon written request, the Contractor shall provide additional, on-demand training services such as: training development, operator training, train-the-trainer training, training laptops and training material as described in Section 5.1 of this SOW.

4.7 Safety

The Contractor for LS-NII Systems shall maintain a system safety program that continually identifies all hazards and provides a methodology to either eliminate or control these identified hazards.
All products, designs and specifications provided and all construction and installation activities conducted shall comply with all OSHA, GSA and NRC regulations, as well as any other appropriate laws, regulations, standards, codes and health and safety guidelines.

4.8 Hazardous Materials Considerations

The Contractor shall identify all Hazardous Materials. The list shall include the material description, quantity of the material, disposal instructions, exposure risks, symptoms and treatments. The list shall be prepared in accordance with **DID A004** and be maintained in the Technical Documentation Package throughout the life of the NII system. The list shall be derived for the Hazardous materials identified in the Code of Federal Regulations, 49 CFR 172, Subpart B (Hazardous Materials Table, etc.).

5 System Support Requirements

The following identifies the programmatic and logistical requirements for Mobile X-Ray Van Systems. The Contractor shall prepare Monthly Progress Reports in accordance with the attached **DID A006**.

5.1 System Training

The length of the training course will be determined based on content, CBP projects four (4) hours of instruction plus four hours of hands-on training on the equipment and the software. Contractor may be contracted with to provide training to personnel at the various installation locations. Vendors shall include this in their response based on two instructors per location. The Contractor will meet initially with CBP (specifically Office of Training Development OTD, Office Field Operations OFO-NII Program Office, and the Technology Training and Support Branch TTSB) at a CONUS location to discuss the training format, content, and expected duration.
The maximum class size shall be twelve (12) students.
This course shall be a combination of lecture and hands-on exercises. The training shall include classroom training on the x-ray system components,

operation, image enhancement and image analysis. The Vendor shall develop hands-on training using the system in the operational environment as well as the use of the software to analyze and interpret the images. The image portion will require a way for students to practice using the software outside of the operational environment.
CBP requires a module on WME specific to the system, including images of mock WME devices. The Contractor shall work with CBP on the development of this module and the capturing of the images.
For WME awareness, CBP will assist with the development but this module should include images and information on finding threats specific to the system.
Radiation Awareness training is a CBP provided VLC course that must be completed by all students prior to attending the course.
CBP will provide the Core Messages module and NII reporting.
The maintenance portion of the training shall include information on the role of TTSB and ILD. CBP will assist the vendor with this content.
The Vendor shall provide the training and all training equipment (including computers, software, and images), supplies, and materials necessary to fulfill this requirement and deliver training to up to three concurrent classes of twelve students plus one CBP instructor. The computers, software and any related specialty equipment (for example a dongle to activate the software) shall be provided and ownership transferred to the Government in significant quantities to conduct three concurrent classes plus three spare items of each type provided to allow for maintenance and repair/replacement without impact to the class delivery. The Vendor shall submit a copy of the software for CBP to review as part of a CBP internal Technology Insertion Request (TIR) to allow the software to operate on any CBP owned computer. If the software fails the TIR review, the Vendor shall make appropriate changes to allow the software to pass the TIR review. The Vendor shall maintain the capability to provide CBP with additional copies of the TIR approved software for the life of the system.
One complete set of thirteen (13) computers, software and any related specialty equipment (for example a dongle to activate the software) will be provided and ownership transferred to TTSB at the beginning of the first class.
All NII images, all GFI, and other CBP-specific materials remain the property of CBP and may not be used by the Vendor for any purpose other than CBP training.

5.2 Operator Training

Develop Systems Operator Training for CBP personnel, in accordance with course outline (3.9.1.4).

5.3 Delivery Plans for Operator Training

The Contractor shall provide one instructor per course as specified in the table below. Sessions to be delivered:

Course	*Vendor Role*	*Sessions*	*Time Frame*	*Seats*
Kickoff meeting	*Participant*			
Design Document	*Lead*			

Beta	*Lead Instructor*	*1*	*Schedule in DID 007*	*12 max (12 Officers plus CBP instructors and HQ representatives as observers)*
Pilot	*Lead Instructor*	*1*	*Schedule in DID 007*	*12 max 12 Officers plus CBP instructors and HQ representatives as observers)*
Train The Trainer	*Lead Instructor*	*1*	*Schedule in DID 007*	*12 max (CBP/FOA-NII PMO/TT&SP instructors)*
Team Teach	*Support*	*1*		*12 officers, 4 instructors to demonstrate ability to instruct the materials*

For the sake of clarity, these delivery options (and related terms) are described in Appendix 1: Development Process.

5.4 Training Materials

All deliverables developed under this contract shall conform to the requirements of the Office of Training and Development (OTD) based on models provided. A master copy, reproducible for all components, will be kept and updated by the Contractor until the contract has ended, at which time they will be transferred to the Government, which will then have total control over all said materials. Materials will be delivered in an editable format for CBP, specifically using Microsoft office products.
Materials shall specifically include:

- Participant Guide
- Instructor Guide
- Job Aids (specific step-by-step guides to be used by the officers to operate the system and to use a reference)
- Personal Qualification Standard (a checklist to ensure the transfer of learning – used during hands-on portion of the training)
- Posters or other aids to assist in learning
- Presentation materials
- Any software viewer necessary to deliver the training

5.4.1 Course Outline

The following course outline is to be followed for all classroom and hands-on activities. Bolded items will be provided by CBP. The Contractor shall have close interaction with CBP for developing the course content.

I. Introduction

II. *Technology Training and Support Branch (TTSB)*
III. *Core Messages (this may be a video)*
IV. *Radiation Awareness (This is a CBP VLC course required prior to attending the training.)*
V. *X-ray Theory*
VI. *System Description (Components and Detailed Functions)*
VII. *System Operation*
- *Startup (Pre-op check and switching on)*
- *User Set-up Parameters*
- *Inspection Process*
  - *Loading and Unloading*
  - *Control Panel operation*
  - *Scanning*
- *Shutdown*

VIII. *Image Analysis (Not threat image projection)*
- *Image Enhancement Keys*
- *Soft Keys*
- *Touch Pad Mouse*
- *WME Awareness*
- *Image Analysis*
- *Image Archiving (Manual and Auto) and Retrieval*

IX. *Maintenance*
X. *NII Reporting*
XI. *Hands On Activities (using the software in the classroom to enable practice on the actual system)*
- *Component Location/Safety*
- *Startup*
- *Demonstration of Inspection Process*
- *Demonstration of Enhancement Keys*
- *Demonstration of Manual Archive*
- *Students Scan a Package and Use Enhancement Keys*
- *Demonstrate Access to Operator Training Mode*
- *Shutdown*

XII. *Student Personnel Qualification Standards (PQS) and Standard Questions*
XIII. *Course Evaluation*

5.4.2 Course Timing

The Contractor shall have close interaction with CBP for developing the course content.
As a means of articulating CBP's vision, the following table straw mans the rough timing sequence. This course shall not exceed an eight-hour day with one hour forty minutes set aside for breaks during the curriculum.

Subject	Duration			
Classroom Training	165	Minutes	2.79	Hours
Hands-On 1st four students	240	Minutes	4.0	Hours
Hands-On 2nd four students	240	Minutes	4.0	Hours
Hands-On 3rd four students	240	Minutes	4.0	Hours
WME Awareness	15	Minutes	0.25	Hours
Core Messages	10	Minutes	0.16	Hours
Lunch	30	Minutes	0.5	Hours
Breaks	20	Minutes	0.3	Hours
Total	960		16.0	Hours

5.4.3 Instructor Guide

Develop and provide an Instructor Guide for Operator Training that contains the detailed technical data and information to be imparted by the Instructor to the students.
The Instructor Guide shall conform to the model provided by CBP, including that it shall be provided in a format editable by CBP.
The Instructor Guide shall be comprised of the following minimum elements and include specific information to supplement the presentations, guide question and answer sessions, and provide instructor guidance and cues.

5.4.4 Lesson Objectives

Stated lesson objectives that support Enabling Objectives (EO) and the Terminal Learning Objectives (TLO).

5.4.5 Time

Time allotted to complete each segment of the course.

5.4.6 Audiovisual Aids

List of audiovisual aids and devices necessary to conduct the lesson.

5.4.7 Subject Matter

Lesson subject matter shall be in sufficient detail to ensure thorough and

complete coverage of each topic such that the guide can be used as the Instructor's primary teaching document. All diagrams, text material, posters, audiovisual aides and any other materials to be used in the presentation shall be identified adjacent to each point where they are to be utilized, for each time their use is required.

5.4.8 Instructional Exercises

Instructional exercises require a student to use the information provided in the lesson to solve one or more realistic problems either through mental or physical activity.

5.4.9 Training Aids

Any physical objects to be employed by the instructor to demonstrate concepts or operations.

5.4.10 Lesson Summaries

Summary of key points at the end of each lesson.

5.4.11 Student Manual

Develop and distribute electronically (soft copy) a Student Manual to each student, and to TTSB and OTD, with clear, concise study materials necessary to attain the learning objectives in the minimum time at least one week before the scheduled class. Students will be responsible for printing and bringing the manual to class.
The Student Manual shall conform to the model provided by CBP, including that it shall be provided in a format editable by CBP. The Student Manual shall correlate with the Course Outline and the Instructor Guide and provide information specific to the needs of the student that are not in the presentation and shall consist of the following minimum elements:

5.4.12 Visual Aids

A reproduction of each visual aid used by the Instructor during the course shall be included in the Student Manual (excluding any motion videos [tape, CD, DVD] or computer-based training or testing).

5.4.13 Job Aids (Handouts)

Job Aids shall consist of lists of process steps, check lists, diagrams, sketches,

charts, graphs, pictures or other visual matter necessary for student reference to support the information presented in the course and the operation of the equipment.

5.4.14 Audiovisual Aids

Any audiovisual aids provided to complement the instruction. The use of screen shots, slides, wall charts, actual size or half scale photographs, motion videos [tape, CD, DVD], computer-based training, etc. or for training or testing may be used.

5.4.15 Course Development Review

CBP shall conduct reviews of the course and course materials prior to presentation of the initial (pilot) presentations, as described in 3.9.5.4. This shall serve to review the training materials for course composition, structure, and relevance.

5.5 Deliverables

The listed deliverables are customized training materials that are the product of a fee for services ordered. Accordingly, the deliverables listed below shall be conveyed to the Government free of Trade Mark or proprietary claim by the Contractor, and with the unlimited right of alteration, reproduction and/or distribution within the Government. Manuscript covers shall bear only markings to identify the course title, course code, and contract number. The Contractor is restricted from use of these products for any purpose other than training for CBP without the expressed written permission of the Contracting Officer.
Deliverables created through the use of word processing and graphic software programs shall utilize programs that are directly compatible with hardware and software used by CBP, e.g., Microsoft Office, Microsoft Operating System that will run on computers utilizing the above software or compatible systems.
All training materials (Instructor Guide, Student Manual, presentation(s), job aids, handout(s) shall conform to the visual and electronic templates supplied by CBP.
Where noticeable differences among the referenced systems exist, the training shall make reference to them and point out any implications (if any) for proper operation or image analysis.

5.6 Operator Training Instructor Guide

For use by Vendor instructors and subsequently by CBP/TTSB Instructors to train students.
Final documents shall be revised to incorporate CBP review comments during course evaluation review and initial (pilot) class.

5.7 Operator Training Student Manual

Final documents shall be revised to incorporate CBP review comments during course evaluation review and initial (pilot) class.

5.8 Audiovisual Aids

Final documents shall be revised to incorporate CBP review comments during course evaluation review and initial (pilot) class.

5.9 Operator Training Presentation Set

Presentation Set shall be delivered to the Government for review and acceptance after completion of the initial (pilot) course. The Contractor shall provide three (3) copies of the Presentation Set upon CBP acceptance. The following items comprise the set.

5.10 Camera Ready Training Materials

8 ½ X 11", non-glossy, 24 lb. camera-ready unbound paper copy of the following training materials.

- Instructor Guide
- Student Manual
- Contractor shall include the number of copies of materials required to support the pilot, beta, and individual training events. For example, likely will need 5 instructor guides at pilot and 18 student manuals.

5.11 Training Materials in Electronic Form

Electronic copy of the following training materials, if used by the vendor, delivered on CD-ROM media:

- Instructor Guide (MS Word)
- Student Manual (MS Word)
- Power Point presentations (MS PowerPoint)
- Job aids (MS PowerPoint or MS Word)
- Posters (in an editable format mutually agreed upon)
- Screenshots (in an editable format mutually agreed upon)
- Photographs (in an editable format mutually agreed upon)
- Artist's renditions (in an editable format mutually agreed upon)

5.12 Training Materials in Motion Video

If utilized, a copy of any motion video in digital format on CD/DVD ROM media and two (2) copies in Super VHS format shall be delivered to the Government.

6 Course Deliverables and Schedule

6.1 Operator Training First Draft Materials Review

The Contractor shall be in regular informal communication with CBP (OTD) through the CO or COR as the courseware is developed, starting with an initial meeting to review the requirements of this contract and to transmit models or

templates of the required materials. The Contractor shall meet with CBP at a CBP facility for the first review of the training materials in accordance with the schedule below.
A first draft of materials for the Operator Training will be delivered to CBP (OTD, TTSB, and OFO-NII Program Office) for formal review as stated in the project plan.

6.2 Operator Training Formal Materials Review

An in-person meeting to formally review training materials (including WME portion) for the Operator Training shall take place at a CBP facility. This second review will identify the necessary changes to be made prior to the Beta class performance.

6.3 Operator Training Beta with Contractor Instructors

The initial performance of the eight (8) hour class (approximately) shall convene at the CBP facility. This Beta session will offer the opportunity for the OTD and TTSB training experts to provide feedback to the Contractor for continued development and corrections to the course curriculum and structure. This session may also include Government authorized trainers to solicit their input.

6.4 Contractor Taught Pilot Class for Field Personnel in OFO or OBP

Once the final comments have been incorporated into the curriculum from the Beta class, the Contractor shall deliver the pilot class at a location to be designated at least thirty (30) days in advance by the CO or COR... This class shall consist of no more than twelve 12 students and Government-training representatives as observers.

6.5 Operator Training Train the Trainer (T3) with Instructors

This class shall instruct up to twelve (12) FOA TTSB instructors on the necessary information required to become CBP trainers. This course shall be conducted in the CBP facility. Final student course materials shall be delivered at this session.

6.6 Train the Trainer

This session will provide verification of CBP instructor’s capability. This use of teach-backs, with the Contractor’s instructor(s) present, will ensure CBP instructors are prepared to train the field. Teach back validation shall occur at the first eight locations where CBP officer training is conducted by each of the newly trained CBP instructors. The Contractor’s Instructor plus FOA OIT/TTSB observers/auditors shall be present to validate the instructor’s ability to facilitate the teaching of the finalized curriculum.

6.7 Schedule

Contractor shall submit a project plan to TTSB for the following milestones for the training creation. This plan shall accomplish the following tasks 180 calendar days from the Signing of the contract.

Task	By	Completion Date
Deliver design document	Contractor	
Provide feedback on course objectives and module objectives (CBP/TTSB and OTD)	CBP TTSB and OTD within 10 days	
Provide final course design document	Contractor	
Collect images for training including WME	Contractor with assistance from CBP as requested	
Deliver first draft of all lessons	Contractor	
Provide feedback on first draft of all lessons	CBP TTSB and OTD within 10 days	
Deliver second draft of all lessons	Contractor	
Provide feedback on second draft of all lessons	CBP TTSB and OTD within 10 days	
Provide final draft of all lessons	Contractor	
Conduct Beta test of entire course	Contractor	
Provide feedback on Beta test	CBP TTSB and OTD within 10 days	
Conduct complete courseware review	CBP TTSB and OTD as agreed between government and Contractor	
Deliver Train The Trainer to TTSB instructors	Contractor	
Deliver first (pilot) session of course to Customs Officer/Operators	Contractor	
Provide final version of the entire course	Contractor	

6.8 Technical Manuals

The Contractor shall provide a System's User Manual, Maintenance/Service Manual and Technical Documentation prepared in accordance with the attached **Data Item Descriptions (DIDs A008, A009)**. Use commercial-off-the-shelf manuals when feasible. Deliver all manuals in the interactive electronic format.

6.8.1 Operator's Manual

An Operator's Manual is required for each unit developed or produced under this contract and delivered with the unit, one per unit. The Operator's Manual shall contain a description of the NII device and its operation. System limitations, safety information, and other important information shall be highlighted. The Operator's Manual shall contain a detailed explanation of every task required during the operation of the NII system **See DID A008**. All operator-level warranty/maintenance tasks shall be fully explained in the Operator's Manual.

6.8.2 Operational/Storage Checklist

A laminated Operators Checklist shall be provided on a single sheet, listing each step in the procedure required: (1) for operating the NII system, (2) for preparing an operational system for short or long-term storage, and (3) for preparing a stored NII system for operation. The checklist shall only list the sequential steps. Each step shall be described in detail in the Operator's Manual and each step shall reference an Operator's Manual page number. The checklist shall be attached to the NII system near the operator's station.

6.8.3 Warranty/Maintenance Manual

Operator Corrective and Preventive Warranty/maintenance actions and procedures shall be documented in a Warranty/maintenance Manual. A Warranty/Maintenance Manual is required for each production lot of Baggage Scanner NII systems developed or produced under this contract. A single Warranty/Maintenance Manual may apply to more than one (1) NII system provided the systems are similar or a revision of an existing system. Identification of NII model number and/or revision number shall be clearly explained in the Warranty/maintenance Manual. The Warranty/maintenance Manual shall contain a description of the NII device and its operation. System limitations, safety information, electrical and hydraulic schematics and other important information shall be highlighted in **DID A009.**

6.9 Technical Reviews

The Contractor shall host, at his facility, a contract kick-off meeting, System Review (SR), a Final Configuration Review (FCR) and a Factory Acceptance Test meeting. Quarterly reviews will be held at a Government site or the

Contractor's facility, or by teleconference, and may be combined with major program reviews. The Contractor shall document and prepare for CBP approval all meeting and review minutes. The contract kick-off meeting shall be within 30 days after contract award. The SR shall be 60 days and the FCR 120 days after contract award. All meeting dates and locations shall be mutually agreed upon.

6.10 Other Reviews

The Contractor shall hold additional reviews as deemed necessary by CBP not to exceed four (4) per year.

7 Warranty

The Contractor shall provide a minimum of one-year Failure Free total system warranty for Baggage Scanner NII systems including conveyance for mobile equipment as described in this section
The warranty period shall begin on the date of the signing of the Site Acceptance Test (SAT) of that equipment. The Contractor shall provide Warranty certificate(s) and documentation in Contractor format in accordance with the attached **DID A018.** The Contractor shall provide documented warranty terms for the primary individual system to include, but not limited to the Baggage Scanner NII X-Ray Imaging System, associated generators, accessories, air conditioners, compressors, computers, controls, lights, cameras, tracks, electrical boxes, housings, batteries, chargers, power conditioners, etc.
Warranties shall include parts, labor, consumables associated with maintenance, technician travel, shipping and transportation of equipment or systems required to maintain operational availability and designed performance as defined herein.
Warranties shall include a replacement provision for units found to exhibit persistent systemic failures/to meet operational availability and designed performance as defined herein.

7.1 Lifecycle Operations and Warranty/Maintenance Cost Plan

The Contractor shall provide a Lifecycle Operations and Warranty/maintenance Cost Plan Data Item **DID A020**, sufficient to allow planning for budget and resource allocations throughout the systems' planned lifecycles. This plan shall include acquisition costs that include first year and four (4) one-year option warranty costs; predicted operations and warranty/maintenance costs for years two (2) through ten (10) categorized in accordance with **DID A020**, as well as disposal costs for systems to include hazardous materials.

8 Quality Control and Testing

The Contractor shall perform inspections and tests necessary to ensure that NII Inspection Systems conform to CBP approved technical documentation and configuration.

8.1 Quality Control

The Contractor shall provide for Government review a quality control plan prepared in accordance with **DID A012** as it pertains to the production and manufacturing of NII Inspection Systems.
The Contractor shall provide for Government review a plan for measuring Quality Control during the warranty period. CBP technical team members shall observe and evaluate the Contractor's Factory Acceptance Test program on an "as required" basis for Quality Control adherence.

8.1.1 Contractor Testing

The Contractor shall be responsible for the preparation of and submission to CBP for approval, an Acceptance Test Plan (ATP), in accordance with the attached **DID A013**. Using the approved ATP, the Contractor shall perform the tests necessary to ensure that the system meets the performance requirements of this SOW and that it can be operated as specified in the system's User Manual **DID A008**.

8.2 System Installation

Each system shall be installed at each specified location in accordance with the system installation specifications and Delivery Information Transmittal. Upon successful installation and integration of all equipment, the Contractor shall conduct a "burn-in" test of the system followed by the CBP Site Acceptance Testing as prescribed in **DID A013**. All applicable radiological measurements shall be accomplished to ensure that the system is safe and operational in accordance with the manufacturer's specifications and the approved CBP Radiation limits. CBP will then conduct a Site Acceptance Test, and upon successful completion, will accept the system onsite.

8.2.1.1 CBP First Article Testing

A CBP First Article Test (FAT) of the first units may be conducted at the Contractor's facility to verify that the unit meets contractual requirements and is suitable for shipment to its intended POE at CBP's discretion. The FAT shall be conducted in accordance with a CBP FAT Plan for that system. The Contractor shall provide the appropriate test articles for the CBP team to test the technical performance in accordance with the ANSI N42.46-2008 standards.

8.2.2 CBP Factory Testing

A CBP Factory Test (FT) of all units may be conducted at the Contractor's facility to verify that the unit is suitable for shipment to its intended POE at CBP's discretion. The FT shall be conducted in accordance with a CBP FT Plan for that system. The Contractor shall provide the appropriate test articles for the CBP team to test the technical performance in accordance with the ANSI N42.46-2008

standards.

8.2.3 CBP Site Acceptance Testing

A CBP Site Acceptance Test (SAT) shall be conducted for each unit at its designated location. The CBP SAT shall be conducted in accordance with a CBP SAT Plan (SATP) for that system. The CBP SAT shall consist of a review of the Contractor's pre-SAT documentation and Radiation Survey Test Report **DID A015,** plus an inventory and physical inspection of the system, system component operations, and tests of the total integrated system against actual targets. The Contractor may be required to provide a portion of the test articles for the site acceptance testing (SAT) as determined by the SAT Plan or the Test Director. This allows for CBP to verify that the system performance has not deviated during transit. The SAT is conducted at the site of delivery and consists of inspection for proper set-up, installation, and operability, as well as ensuring SOW compliance for safety, radiation tests, and damage.

8.2.4 Quality Assurance Plan

During the warranty period the Contractor shall develop and execute a Quality Assurance Plan (QAP) to verify that the ILS requirements of the Statement of Work are met. The QAP shall define and measure figures of merit, including, MTBF, MTTR and Operational Availability.

9 Radiation Safety Design Review

The Contractor is required to demonstrate the construction techniques, practices, and design of the protective shielding/cabinet interfaces (corner joints, collimator joints, imaging source housing, etc.) and shall be in compliance with ANSI N 43.3 standards for their system.
The Contractor shall ensure that any movement or shifting that may be associated with a mobile system cannot produce or lead to emission leaks from cracks, stress, or misalignment of the structures and shielding devices that are either associated with the primary beam containment or scatter containment scheme.

9.1 Safety

The Contractor for NII Inspection Systems shall maintain a system safety program that continually identifies all hazards and provides a methodology to either eliminate or control these identified hazards.
All products, designs, and specifications provided and all construction and installation activities conducted shall comply with all OSHA and NRC regulations, as well as any other appropriate laws, regulations, standards, codes and health and safety guidelines.

9.2 Radiological Survey and Report

The Contractor for NII Inspection Systems shall be required to conduct a radiological survey to ensure that radiation emissions are within specified limits. Each system delivered shall be accompanied with a report of the radiological survey performed on the SS-NII unit, signed by the Radiation Safety Officer of the company. This survey will address both the radiation levels that NII Inspection System operators will be exposed to while at their workstations, and the level of radiation that is transmitted to the environment as a result of system leakage. The report shall show that by means of an outline drawing the levels of emission/scatter radiation measured, the operating conditions (worst case) and the measurement equipment used. The Contractor shall provide a radiological survey report and a Radiation Survey Report Test Report as applicable in accordance with the attached **DID A015** for each system delivered.

9.3 Radiation Survey and Report

The Contractor shall perform Radiation Surveys prior to site acceptance and annually thereafter for the systems that contain radiation emitting devices (X-Ray systems). The X-Ray systems shall be in compliance with CFR 21 Part 1020.40 of U.S. Food and Drug Administration: Performance Standards for Ionizing Radiation Emitting Products - Cabinet X-ray Systems. The Contractor shall provide a radiation survey report to the ILD Operations Center within 48 hours of completion.

10 Information Technology Security

10.1 Basic Requirements

The Contractor shall adhere to all DHS and CBP IT security policies listed in the applicable documents section, including the guidelines and policies stated in the DHS Sensitive Systems Policy Directive 4300A, chapters 4 and 5, or any subsequent, replacement or revised publication. This policy mandates DHS organizational elements, including Contractors, follow guidelines outlined in the DHS MD 4300A, DHS Sensitive Systems Handbook, Information Technology Security Program, version 12, 11/15/15 with attachments or any subsequent, replacement or revised publication.
DHS Directive 4300A, Section 3.2., Basic Requirements outlines the management, operational and technical baseline security requirements (BLSR) for DHS Components to ensure confidentiality, integrity, availability, authenticity and non-repudiation of sensitive information systems. The 4300A Handbook provides greater detail of the BLSRs, including the roles and responsibilities associated with each.
CBP will provide personnel with the appropriate clearance levels to support the security certification/accreditation processes under this Agreement in accordance with DHS MD 4300A, DHS Sensitive Systems Policy and Handbook, paragraph 4.1.1.d. During all systems development life cycle (SDLC) phases of CBP systems, CBP personnel will develop documentation and provide any required information for all levels of classification in support of the

certification/accreditation process. In addition, all security certification/accreditation will be performed using the DHS certification/accreditation process, methodology and tools.

10.2 Security Authorization

A Security Authorization of any infrastructure directly in support of the DHS information system shall be performed at a general support system (GSS) prior to DHS occupancy to characterize the network, identify threats, identify vulnerabilities, analyze existing and planned security controls, determine likelihood of threat, analyze impact, determine risk, recommend controls, perform remediation on identified deficiencies, and document the results. The Security Authorization shall be performed in accordance with the DHS Security Policy and the controls provided by the hosting provider shall be equal to or stronger than the FIPS 199 security categorization of the DHS information system.

At the beginning of the contract, and annually thereafter, the Contractor shall provide the results of an independent assessment and verification of security controls. The independent assessment and verification shall apply the same standards that DHS applies in the Security Authorization Process of its information systems. Any deficiencies noted during this assessment shall be provided to the COR for entry into the DHS Plan of Action and Milestone (POA&M) Management Process. The Contractor shall use the DHS' POA&M process to document planned remedial actions to address any deficiencies in information security policies, procedures, and practices, along with the completion of those activities. Security deficiencies shall be corrected within the timeframes dictated by the DHS POA&M Management Process. Contractor procedures shall be subject to periodic, unannounced assessments by DHS officials. The physical aspects associated with Contractor activities shall also be subject to such assessments.

On a periodic basis, the DHS and its Components, including the DHS Office of Inspector General, may choose to evaluate any or all of the security controls implemented by the Contractor under these clauses. Evaluation could include, but is not limited to vulnerability scanning. The DHS and its Components reserve the right to conduct audits at their discretion. With ten working days' notice, at the request of the Government, the Contractor shall fully cooperate and facilitate in a Government-sponsored security control assessment at each location wherein DHS information is processed or stored, or information systems are developed, operated, maintained, or used on behalf of DHS, including those initiated by the Office of the Inspector General. The government may conduct a security control assessment on shorter notice (to include unannounced assessments) determined by DHS in the event of a security incident.

10.3 Compliance with DHS Security Policy

All hardware, software, and services provided under this task order must be compliant with DHS 4300A DHS Sensitive System Policy and the DHS 4300A Sensitive Systems Handbook.

Encryption Compliance:

All systems drives provided under this task must be DHS encryption compliant. The following methods are acceptable for encrypting sensitive information:
1. FIPS 197 (Advanced Encryption Standard (AES)) 256 algorithm and cryptographic modules that have been validated under FIPS 140-2.
2. National Security Agency (NSA) Type 2 or Type 1 encryption.
3. Public Key Infrastructure (PKI) (see paragraph 5.5.2.1 of the Department of Homeland Security (DHS) IT Security Program Handbook (DHS Management Directive (MD) 4300A) for Sensitive Systems).

10.4 Security Review and Reporting

The Contractor shall include security as an integral element in the management of this contract. The Contractor shall conduct reviews and report the status of the implementation and enforcement of the security requirements contained in this contract and identified references.

The Government may elect to conduct periodic reviews to ensure that the security requirements contained in this contract are being implemented and enforced. The Contractor shall afford DHS including the organization of the DHS Office of the Chief Information Officer, Office of Inspector General, the CBP Chief Information Security Officer, authorized Contracting Officer's Representative (COR), and other Government oversight organizations, access to the Contractor's and Subcontractors' facilities, installations, operations, documentation, databases, and personnel used in the performance of this contract. The Contractor will contact the DHS Chief Information Security Officer to coordinate and participate in the review and inspection activity of Government oversight organizations external to the DHS. Access shall be provided to the extent necessary for the Government to carry out a program of inspection, investigation, and audit to safeguard against threats and hazards to the integrity, availability, and confidentiality of DHS/CBP data or the function of computer systems operated on behalf of DHS/CBP, and to preserve evidence of computer crime.

10.5 Access to Unclassified Facilities, Information Technology Resources, and Sensitive Information

The assurance of the security of unclassified facilities, Information Technology (IT) resources, and sensitive information during the acquisition process and contract performance are essential to the DHS mission. DHS Management Directive (MD) 11042.1 *Safeguarding Sensitive but Unclassified (For Official Use Only) Information*, describes how contractors must handle sensitive but unclassified information. DHS MD 4300.1 *Information Technology Systems Security* and the *DHS Sensitive Systems Handbook* prescribe policies and procedures on security for IT resources. Contractors shall comply with these policies and procedures, any replacement publications, or any other current or future DHS policies and procedures covering contractors specifically for all Task Orders that require access to DHS facilities, IT resources or sensitive information. Contractors shall not use or redistribute any DHS information processed, stored, or transmitted by the Contractor except as specified in the task order.

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In acquiring information technology, agencies shall include the appropriate information technology security policies and requirements, including use of common security configurations available from the National Institute of Standards and Technology’s website at http://checklists.nist.gov. Agency contracting officers should consult with the requiring official to ensure the appropriate Security Requirements for Unclassified Information Technology Resources

10.6 Security Requirements for Unclassified Information Technology Resources

(a) The Contractor shall be responsible for Information Technology (IT) security for all systems connected to a DHS network or operated by the Contractor for DHS, regardless of location. This clause applies to all or any part of the contract that includes information technology resources or services for which the Contractor must have physical or electronic access to sensitive information contained in DHS unclassified systems that directly support the agency's mission.

(b) The Contractor shall provide, implement, and maintain an IT Security Plan. This plan shall describe the processes and procedures that will be followed to ensure appropriate security of IT resources that are developed, processed, or used under this contract.
(b.1) Within 30 days after contract award, the Contractor shall submit for approval its IT Security Plan, which shall be consistent with and further detail the approach contained in the offering party’s proposal. The plan, as approved by the Contracting Officer, shall be incorporated into the contract as a compliance document.
(b.2) The Contractor's IT Security Plan shall comply with Federal laws that include, but are not limited to, the Computer Security Act of 1987 (40 U.S.C. 1441 et seq.); the Government Information Security Reform Act of 2000; and the Federal Information Security Management Act of 2002; and with Federal policies and procedures that include, but are not limited to, OMB Circular A-130.
(b.3) The security plan shall specifically include instructions regarding handling and protecting sensitive information at the Contractor's site (including any information stored, processed, or transmitted using the Contractor's computer systems), and the secure management, operation, maintenance, programming, and system administration of computer systems, networks, and telecommunications systems.

(c) Examples of tasks that require security provisions include--
(c.1) Acquisition, transmission or analysis of data owned by DHS with significant replacement cost should the Contractor's copy be corrupted; and
(c.2) Access to DHS networks or computers at a level beyond that granted the general public (e.g., such as bypassing a firewall).

(d) At the expiration of the contract, the Contractor shall return all sensitive DHS information and IT resources provided to the Contractor during the contract, and certify that all non-public DHS information has been purged from any contractor-

owned system. Components shall conduct reviews to ensure that the security requirements in the contract are implemented and enforced.

(e) Within 6 months after contract award, the Contractor shall submit written proof of IT Security accreditation to DHS for approval by the DHS Contracting Officer. Accreditation will proceed according to the criteria of the DHS Sensitive System Policy Publication, 4300A (Version 8, 3/14/11) or any replacement publication, which the Contracting Officer will provide upon request. This accreditation will include a final security plan, risk assessment, security test and evaluation, and disaster recovery plan/continuity of operations plan. This accreditation, when accepted by the Contracting Officer, shall be incorporated into the contract as a compliance document. The Contractor shall comply with the approved accreditation documentation.

10.7 CONTRACTOR EMPLOYEE ACCESS (JUN 2006)

(a) Sensitive Information, as used in this Chapter, means any information, the loss, misuse, disclosure, or unauthorized access to or modification of which could adversely affect the national or homeland security interest, or the conduct of Federal programs, or the privacy to which individuals are entitled under section 552a of title 5, United States Code (the Privacy Act), but which has not been specifically authorized under criteria established by an Executive Order or an Act of Congress to be kept secret in the interest of national defense, homeland security or foreign policy. This definition includes the following categories of information:
(a.1) Protected Critical Infrastructure Information (PCII) as set out in the Critical Infrastructure Information Act of 2002 (Title II, Subtitle B, of the Homeland Security Act, Public Law 107-296, 196 Stat. 2135), as amended, the implementing regulations thereto (Title 6, Code of Federal Regulations, Part 29) as amended, the applicable PCII Procedures Manual, as amended, and any supplementary guidance officially communicated by an authorized official of the Department of Homeland Security (including the PCII Program Manager or his/her designee);
(a.2) Sensitive Security Information (SSI), as defined in Title 49, Code of Federal Regulations, Part 1520, as amended, “Policies and Procedures of Safeguarding and Control of SSI,” as amended, and any supplementary guidance officially communicated by an authorized official of the Department of Homeland Security (including the Assistant Secretary for the Transportation Security Administration or his/her designee);
(a.3) Information designated as “For Official Use Only,” which is unclassified information of a sensitive nature and the unauthorized disclosure of which could adversely impact a person’s privacy or welfare, the conduct of Federal programs, or other programs or operations essential to the national or homeland security interest; and,
(a.4) Any information that is designated “sensitive” or subject to other controls, safeguards or protections in accordance with subsequently adopted homeland security information handling procedures.

(b) “Information Technology Resources” include, but are not limited to, computer equipment, networking equipment, telecommunications equipment, cabling, network drives, computer drives, network software, computer software, software programs, intranet sites, and internet sites.

(c) Contractor employees working on this contract must complete such forms as may be necessary for security or other reasons, including the conduct of background investigations to determine suitability. Completed forms shall be submitted as directed by the Contracting Officer. Upon the Contracting Officer's request, the Contractor's employees shall be fingerprinted, or subject to other investigations as required. All contractor employees requiring recurring access to Government facilities or access to sensitive information or IT resources are required to have a favorably adjudicated background investigation prior to commencing work on this contract unless this requirement is waived under Departmental procedures.

(d) The Contracting Officer may require the Contractor to prohibit individuals from working on the contract if the Government deems their initial or continued employment contrary to the public interest for any reason, including, but not limited to carelessness, insubordination, incompetence, or security concerns.

(e) Work under this contract may involve access to sensitive information. Therefore, the Contractor shall not disclose, orally or in writing, any sensitive information to any person unless authorized in writing by the Contracting Officer. For those contractor employees authorized access to sensitive information, the Contractor shall ensure that these persons receive training concerning the protection and disclosure of sensitive information both during and after contract performance.

(f) The Contractor shall include the substance of this clause in all subcontracts at any tier where the Subcontractor may have access to Government facilities, sensitive information, or resources.

(g) Before receiving access to IT resources under this contract, the individual must receive a security briefing, which the Contracting Officer’s Representative (COR) will arrange, and complete any nondisclosure agreement furnished by DHS.

(h) The Contractor shall have access only to those areas of DHS information technology resources explicitly stated in this contract or approved by the COR in writing as necessary for performance of the work under this contract. Any attempts by contractor personnel to gain access to any information technology resources not expressly authorized by the statement of work, other terms and conditions in this contract, or as approved in writing by the COR, is strictly prohibited. In the event of violation of this provision, DHS will take appropriate actions with regard to the contract and the individual(s) involved.

(i) Contractor access to DHS networks from a remote location is a temporary privilege for mutual convenience while the Contractor performs business for the

DHS Component. It is not a right, a guarantee of access, a condition of the contract, or Government Furnished Equipment (GFE).

(j) Contractor access will be terminated for unauthorized use. The Contractor agrees to hold and save DHS harmless from any unauthorized use and agrees not to request additional time or money under the Contract for any delays resulting from unauthorized use or access.

(k) Non-U.S. citizens shall not be authorized to access or assist in the development, operation, management or maintenance of Department IT systems under the contract, unless a waiver has been granted by the Head of the Component or designee, with the concurrence of both the Department's Chief Security Officer (CSO) and the Chief Information Officer (CIO) or their designees. Within DHS Headquarters, the waiver may be granted only with the approval of both the CSO and the CIO or their designees. In order for a waiver to be granted:
(k.1) The individual must be a legal permanent resident of the U.S. or a citizen of Ireland, Israel, the Republic of the Philippines, or any nation on the Allied Nations List maintained by the Department of State;
(k.2) There must be a compelling reason for using this individual as opposed to a U.S. citizen; and
(k.3) The waiver must be in the best interest of the Government.

(l) Contractors shall identify in their proposals the names and citizenship of all non-U.S. citizens proposed to work under the contract. Any additions or deletions of non-U.S. citizens after contract award shall also be reported to the contracting officer.

(g) Each individual employed under the contract shall be a citizen of the United States of America, or an alien who has been lawfully admitted for permanent residence as evidenced by a Permanent Resident Card (USCIS I-551). Any exceptions must be approved by the Department's Chief Security Officer or designee.

(h) Contractors shall identify in their proposals the names and citizenship of all non-U.S. citizens proposed to work under the contract. Any additions or deletions of non-U.S. citizens after contract award shall also be reported to the contracting officer.

10.8 Interconnection Security Agreements

Interconnections between DHS and non-DHS IT systems shall be established through controlled interfaces and via approved service providers. The controlled interfaces shall be accredited at the highest security level of information on the network. Connections with other Federal agencies shall be documented based on interagency agreements; memoranda of understanding, service level agreements or interconnect service agreements. Components shall document interconnections with other external networks with an Interconnection Security Agreement (ISA). Interconnections between DHS Components shall require an ISA when there is a difference in the security categorizations for confidentiality,

integrity, and availability for the two networks. ISAs shall be signed by both Designated Approval Authority (DAAs) or by the official designated by the DAA to have signatory authority.

10.9 Enterprise Architecture (EA) Compliance

The Offering Party shall ensure that the design conforms to the Department of Homeland Security (DHS) and Customs and Border Protection (CBP) Enterprise Architecture (EA), the DHS and CBP Technical Reference Models (TRM), and all DHS and CBP policies and guidelines (such as the CBP Information Technology Enterprise Principles and the DHS Service Oriented Architecture - Technical Framework), as promulgated by the DHS and CBP Chief Information Officers (CIO), Chief Technology Officers (CTO) and Chief Architects (CA).

The Offering Party shall conform to the Federal Enterprise Architecture (FEA) model and the DHS and CBP versions of the FEA model, as described in their respective EAs. All models will be submitted using Business Process Modeling Notation (BPMN 1.1 or BPMN 2.0 when available) and the CBP Architectural Modeling Standards. Universal Modeling Language (UML2) may be used for infrastructure only. Data semantics shall be in conformance with the National Information Exchange Model (NIEM). Development solutions will also ensure compliance with the current version of the DHS and CBP architectures.

Where possible, the Offering Party shall use DHS/CBP approved products, standards, services, and profiles, as reflected by the hardware, software, application, and infrastructure components of the DHS/CBP TRM/standards profile. If new hardware, software, or infrastructure components are required to develop, test, or implement the program, these products will be coordinated through the DHS and CBP formal Technology Insertion (TI) process (to include a trade study with no less than four alternatives, one of which reflecting the status quo and another reflecting multi-agency collaboration). The DHS/CBP TRM/standards profile will be updated as TIs are resolved.

All developed solutions shall be compliant with the Homeland Security (HLS) EA.

All IT hardware and software shall be compliant with the HLS EA.

Compliance with the HLS EA shall be derived from and aligned with the CBP EA.

Description information for all data assets, information exchanges and data standards, whether adopted or developed, shall be submitted to the Enterprise Data Management Office (EDMO) for review, approval, and insertion into the DHS Data Reference Model and Enterprise Architecture Information Repository.

Development of data assets, information exchanges, and data standards will comply with the DHS Data Management Policy MD 103-01. All data-related artifacts will be developed and validated according to DHS Data Management Architectural Guidelines.

Applicability of Internet Protocol version 6 (IPv6) to DHS-related components (networks, infrastructure, and applications) specific to individual acquisitions shall be in accordance with the DHS EA (per OMB Memorandum M-05-22, August 2, 2005), regardless of whether the acquisition is for modification, upgrade, or replacement. All EA related component acquisitions shall be IPv6 compliant, as defined in the USGv6 Profile (NIST Special Publication 500-267) and the corresponding declarations of conformance, defined in the USGv6 Test Program.

10.10 IPv6

In compliance with OMB mandates, all network hardware provided under the scope of this Statement of Work and associated Task Orders shall be IPv6 compatible without modification, upgrade, or replacement.

10.11 DHS Information Technology Portfolio Alignment

The SS-NII technologies align with the DHS IT Portfolio below:
Screening/Watch List/Credentialing - Includes all activities that support the tracking and monitoring of travelers, conveyances and cargo crossing U.S. borders, and traffic pattern analysis, database (Federal, State, and Local) linking and querying, and managing status verification and tracking systems. Different investments and systems may support distinct screening and watch list activities for people, cargo, and tangible goods. Credentialing encompasses all activities that determine a person's eligibility for a particular license, privilege, or status, from application for the credential through issuance, use, and potential revocation of the issued credential.

10.12 Accessibility Requirements (Section 508 Compliance)

Section 508 of the Rehabilitation Act, as amended by the Workforce Investment Act of 1998 (P.L. 105-220) requires that when Federal agencies develop, procure, maintain, or use electronic and information technology (EIT), they must ensure that it is accessible to people with disabilities. Federal employees and members of the public who have disabilities must have equal access to and use of information and data that is comparable to that enjoyed by non-disabled Federal employees and members of the public.
All EIT deliverables within this work statement shall comply with the applicable technical and functional performance criteria of Section 508 unless exempt. Specifically, the following applicable EIT accessibility standards have been identified:
Section 508 Applicable EIT Accessibility Standards
36 CFR 1194.21 Software Applications and Operating Systems, applies to all EIT software applications and operating systems procured or developed under this work statement including but not limited to GOTS and COTS software. In addition, this standard is to be applied to Web-based applications when needed to fulfill the functional performance criteria. This standard also applies to some Web-based applications as described within 36 CFR 1194.22.
36 CFR 1194.22 Web-based Intranet and Internet Information and Applications, applies to all web-based deliverables, including documentation and reports procured or developed under this work statement. When any Web application

uses a dynamic (non-static) interface, embeds custom user control(s), embeds video or multimedia, uses proprietary or technical approaches such as, but not limited to, Flash or Asynchronous JavaScript and XML (AJAX) then 1194.21 Software standards also apply to fulfill functional performance criteria.
36 CFR 1194.31 Functional Performance Criteria, applies to all EIT deliverables regardless of delivery method. All EIT deliverable shall use technical standards, regardless of technology, to fulfill the functional performance criteria.
36 CFR 1194.41 Information Documentation and Support, applies to all documents, reports, as well as help and support services. To ensure that documents and reports fulfill the required 1194.31 Functional Performance Criteria, they shall comply with the technical standard associated with Web-based Intranet and Internet Information and Applications at a minimum. In addition, any help or support provided in this work statement that offers telephone support, including, but not limited to, a help desk, shall have the ability to transmit and receive messages using TTY.
Section 508 Applicable Exceptions
Exceptions for this work statement have been determined by DHS and only the exceptions described herein may be applied. Any request for additional exceptions shall be sent to the COR and determination will be made in accordance with DHS MD 4010.2. DHS has identified the following exceptions that may apply: 36 CFR 1194.3(b) Incidental to Contract, all EIT that is exclusively owned and used by the Contractor to fulfill this work statement does not require compliance with Section 508. This exception does not apply to any EIT deliverable, service or item that will be used by any Federal employee(s) or member(s) of the public. This exception only applies to those Contractors assigned to fulfill the obligations of this work statement and for the purposes of this requirement, are not considered members of the public.
DHS has reviewed this acquisition request and has determined that a Fundamental Alteration exception for the purposes of Section 508 applies and is thereby authorized. Fundamental Alteration Exception #CBP20111116 001 has been attached and included in the contract file.

10.13 Section 508 Compliance Requirements

36 CFR 1194.2(b) (COTS/GOTS products), When procuring a product, each agency shall procure products which comply with the provisions in this part when such products are available in the commercial marketplace or when such products are developed in response to a Government solicitation. Agencies cannot claim a product in its entirety, is not commercially available because no product in the marketplace meets all the standards. If products are commercially available that meet some but not all of the standards, the agency must procure the product that best meets the standards. When applying this standard, all procurements of EIT shall have documentation of market research that identifies a list of products or services that first meet the agency business needs, and from that list of products or services, an analysis that the selected product met more of the accessibility requirements than the non-selected products as required by FAR 39.2. Any selection of a product or service that meets less accessibility standards due to a significant difficulty or expense shall only be permitted under an undue burden claim and requires authorization from the DHS Office of

Accessible Systems and Technology (OAST) in accordance with DHS MD 4010.2.
All tasks for testing of functional and/or technical requirements must include specific testing for Section 508 compliance, and must use DHS Office of Accessible Systems and Technology approved testing methods and tools. For information about approved testing methods and tools send an email to accessibility@dhs.gov.

11 INTEGRATED LOGISTICS SUPPORT FOR SMALL SCALE NII SYSTEMS

The CBP Integrated Logistics Division (ILD) will manage the life-cycle requirements (i.e., maintenance, property management, etc.) after the NII unit is accepted. The CBP Technology Training and Support Branch will manage the life-cycle training requirements in coordination with the Office of Training and Development and the Office of Field Operations NII Program Office.

11.1 Configuration Management

The Contractor shall implement the Configuration Management Plan with the establishment of a Configuration Control Board (CCB). The Contractor shall provide an as-built Configuration Baseline as identified in the attached DID A016 with the delivery of each NII configuration. All configuration changes require prior approval of ILD's CCB. Hardware changes beyond Final Configuration Review (FCR) will require prior CBP approval. The Contractor shall establish software and CCB will review software changes until the delivery of the first NII system. CCB approval shall be required for changes to the software baseline and after the first delivery of a NII system.

11.2 Technical Documentation

The Technical Documentation shall consist of all documentation used by the Contractor and all Subcontractors in the production of the NII system and any follow-on production or modification. This shall include the Configuration List and any background or supporting documentation used to make design or production decisions. The Technical Documentation Package shall be prepared in accordance with **DID A017**. The manufacturer shall maintain this documentation past the planned life of the NII system. The Government shall have unlimited data rights (FAR 52.227-14) to all data in the Technical Documentation file for the purposes of maintaining the NII system and training NII system operators and Warranty/maintenance Technicians. Data initially produced under this contract shall be conveyed to Government free of proprietary claim. Data produced prior to this contract shall be conveyed, assigned to the Government, and its agent given the right to use and copy the material solely for the purpose of repair warranty/ maintenance and training.

11.3 Configuration Baseline

The Configuration Baseline is:

- An agreed-to description of the attributes of a product, at a point in time, which serves as a basis for defining change.
- An approved and released document or set of documents, each of a specific revision; the purpose of which is to provide a defined basis for managing change.
- The currently approved and released configuration documentation.
- A released set of files comprising a software version and associated configuration documentation.

A Configuration Baseline shall be established and maintained for the NII system by the Contractor. All NII units delivered within a production lot shall be identical and conform to the Configuration Baseline. The Configuration Baseline shall be incorporated into the Technical Documentation and maintained by the Contractor during the term of the contract. The Government shall have unlimited data rights (FAR 52.227-14) to all Configuration Baseline documentation for the purposes of maintaining the NII system. Data initially produced under this contract shall be conveyed to Government free of proprietary claim. Data produced prior to this contract shall be conveyed assigning to the Government and its agent the right to use and copy the material solely for the purpose of repair warranty/maintenance and training.

11.4 Management of the Technical Documentation

The Contractor shall maintain a Technical Documentation file at the Contractor's point of manufacture, which contains all relevant data for the design and production of the NII system produced under this contract. Management of this data shall be in accordance with the CBP Configuration Management Plan.

11.5 Engineering Change Proposals (ECPs)

The Contractor is encouraged to pursue continuous improvements to the delivered product, particularly in the areas of enhancements, cost and reliability. Engineering Change Proposals (ECPs) are provided for within this contract and their use is strongly supported. ECPs are proposals to enhance the value of the finished goods or services to the Government or reduce the cost of the good or services. All ECPs submitted shall be incorporated into the Technical Documentation package. ECPs that are approved shall be incorporated into the Configuration Baseline. All ECPs shall be submitted in accordance with the Engineering Changes clause of this contract. ECPs will be processed in accordance with CBP's Configuration Management Plan.

11.6 Accessibility

All systems or components that are serviced as part of periodic warranty/maintenance shall be readily accessible for service and inspection. To the greatest extent practicable, the removal or the physical movement of components unrelated to the specific warranty/maintenance and/or repair tasks involved shall be minimized. The measured time that is required to gain access to a component shall be inversely proportional to the frequency of the warranty/maintenance and repair of that component.

11.7 Parts Management

The Contractor shall establish and maintain a Parts Management Program that will ensure the use of parts that meet contractual requirements, reduce proliferation of parts through standardization and enhance equipment reliability and supportability, and proactively manage obsolescence. Within 30 days after contract award, the Contractor's plan for managing System parts shall be provided to the Government. The plan shall identify System parts and their current status as part of the Contractors Line of Balance (LOB) and shall identify which parts currently possess CBP approval requirements. The Government may perform audits, verification, inspection or evaluation to ascertain program conformance and adequacy of the implementing procedures. The procedures, planning and other documentation media and data that define the Parts Management Program and the parts selected for use shall be made available to the Government for their review and use.

12 DOCUMENTATION DELIVERABLES (Data Item Description (DID))

DIDs are provided for all documentation deliverables as an attachment. All materials prepared for this SOW shall be in accordance with CBP approved Contractor format. Any changes or updates to previously provided data, if required, shall be delivered as "change pages" to existing documents. The Contractor as required shall provide the following documentation and/or documentation updates:

DID	TITLE
A001	Management Approach
A002	Predictive Reliability Report
A003	Extreme Environment Warranty/Maintenance
A004	Hazardous Materials List
A005	Equipment Installation Data Package
A006	Monthly Progress Report
A007	Operators Training Material
A008	System User's Manual
A009	Maintenance/Service Manual
A010	N/A
A011	Failure and Error Report
A012	Quality Control Plan
A013	Acceptance Test Plan
A014	N/A
A015	Radiological Survey, Radiation Survey and Test Reports
A016	Configuration List
A017	Technical Documentation Package

A018	Warranty
A019	N/A
A020	Lifecycle Operations and Warranty/maintenance Cost Plan

DATA ITEM DESCRIPTION

1. TITLE: **MANAGEMENT APPROACH**	**2. IDENTIFICATION NO(s):** A001
3. DESCRIPTION/PURPOSE: To provide details of the Contractor's project management organizational structure and to identify project management systems, responsibilities and authority of senior management staff.	4. **APPROVAL DATE:**
	5. OFFICE OF PRIMARY RESPONSIBILITY: NII PMO
	6. OFFICE OF COLLATERAL RESPONSIBILITY:
7.APPLICATION/ INTERRELATIONSHIP:	**8. APPROVAL LIMITATIONS:**
	9. REFERENCES (MANDATORY AS CITED IN BLOCK 10)

10. PREPARATION INSTRUCTIONS: The following information shall be provided in Contractor format:

a. Organizational charts depicting the role and relationships of senior project management staff
b. Duty statements for senior program management staff identifying project responsibilities and authority
c. Identification of project manager for this effort
d. Milestone schedule highlighting all design, manufacturing, installation, testing, and training requirements as they affect the Contractor's ability to complete the project

The Project Management Plan shall be delivered as part of the Contractor's proposal. The Project Management Plan shall be updated, annually or more often if required, during the course of the contract.
Deliverables: 1. First submission - with proposal 2. Updates - Required whenever information contained in the Management Approach changes or annually

DATA ITEM DESCRIPTION

1. TITLE: RELIABILITY PREDICTION REPORT	**2. IDENTIFICATION NO(s):** A002
3. DESCRIPTION/PURPOSE: The Contractor shall perform reliability predictions for the NII equipment. The prediction shall assume a constant failure rate for parts. For parts where no failure rate is available, a failure rate shall be estimated and the basis for the estimation shall be stated. The environmental factors shall be for fixed and mobile ground equipment. The external ambient temperatures utilized in the reliability prediction shall be based upon the upper and lower operating temperatures of the NII system.	**4. APPROVAL DATE:** **5. OFFICE OF PRIMARY RESPONSIBILITY:** NII PMO **6. OFFICE OF COLLATERAL RESPONSIBILITY:**
7. APPLICATION/INTERRELATIONSHIP: These Reliability Predictions will be matched to Measured Reliability during the Warranty Period.	**8. APPROVAL LIMITATIONS:** **9. REFERENCES (MANDATORY AS CITED IN BLOCK 10)**

10. PREPARATION INSTRUCTIONS: The following information shall be provided in Contractor format:

The Contractor shall submit a reliability prediction report. The Contractor shall identify the reliability of critical items. A Critical Item is an identified weak link in a system, has an adverse impact on failures of the system performing its mission, creates potential safety problems, or contributes to other areas of high risk to overall system reliability. The Contractor shall classify all NII items as critical if one or more of the following conditions are satisfied:

1. Item represents a significant new development or application.
2. Item has critical failure modes.
3. Item has history indicating need for improvement. A Preplanned Product Improvement Plan (PPIP) shall be developed and provided by the Contractor for any item with a history of needing improvement.
4. Item has known operating life, limited shelf life, or environmental sensitivity (e.g., vibration, thermal, etc.) that warrants controlled surveillance.
5. Item whose failure can result in the failure of the system and which is not compensated by redundancy or alternate operational procedures.

The Contractor shall provide information on critical items, which shall include as a minimum:

1. Procedures for the procurement of critical items.
2. Criteria and procedures for the design and redesign of critical items
3. Procedures for controlling and monitoring of critical items after manufacture (e.g., date coding, traceability, assembly techniques, test requirements, acceptance test requirements, control of Subcontractors' and manufacturers' controls, in-process controls, special handling, and storage requirements).

The Contractor shall identify and discuss all aspects of the prime item's reliability features and characteristics.

Deliverables:

1. First submission – Included with proposal.
2. Review – Government has 120 days to review and comment.
3. Final - Due 60 days after receipt of comments.
4. Updates - shall be provided as changes are made to the design/configuration affecting system operation.
5. 7 copies to be delivered:

   1 electronic copy to NII PMO, USCBP, Washington, DC

   3 to NII PMO, USCBP, Washington, DC

   3 to ILD, USCBP, Lorton, VA

DATA ITEM DESCRIPTION

1. TITLE: **EXTREME ENVIRONMENT WARRANTY/MAINTENANCE**	**2. IDENTIFICATION NO(s):** A003
3. DESCRIPTION/PURPOSE: This data item shall describe any changes to operation, storage and/or warranty/maintenance required by extremely hot or cold temperatures. Operating and storage temperature ranges shall be provided “as delivered”. Operating and storage temperature ranges shall be provided for all known special handling and/or materials, such as fluids.	**4. APPROVAL DATE:** **5. OFFICE OF PRIMARY RESPONSIBILITY:** NII PMO **6. OFFICE OF COLLATERAL RESPONSIBILITY:**
7. APPLICATION/ INTERRELATIONSHIP: This data will describe how the NII is stored, operated and/or maintained in extreme climates.	**8. APPROVAL LIMITATIONS:** **9. REFERENCES (MANDATORY AS CITED IN BLOCK 10)**
10. PREPARATION INSTRUCTIONS: The following information shall be provided in Contractor format: The Contractor shall identify all environmental conditions within the required operating environment considered extreme. The Contractor shall identify all extreme environmental warranty/maintenance tasks required for the operation of the NII systems in extreme environments. The list of tasks shall include MTTR, parts, components, procedures and systems, and they shall be provided in the Warranty/maintenance Manual. The list shall be maintained in the Documentation Package for the NII device throughout its life.	
Deliverables: 1. First submission - 30 days prior to first acceptance test. 2. Review – Government has 120 days to review and comment. 3. Final - Due 60 days after receipt of comments. 4. Updates - Shall be provided as changes are made to the	

design/configuration affecting system operation.
5. 3 copies to be delivered:
1 electronic copy to NII PMO, USCBP, Washington, DC
1 Hard Copies to NII PMO, USCBP, Washington, DC
1 Hard Copies to ILD, USCBP, Lorton, VA

DATA ITEM DESCRIPTION

1. TITLE: **HAZARDOUS MATERIALS LIST**	**2. IDENTIFICATION NO(s):** A004
3. DESCRIPTION/PURPOSE: Provides a list of all hazardous materials that may be encountered during the storage, operation and/or warranty/maintenance of the NII.	**4. APPROVAL DATE:**
	5. OFFICE OF PRIMARY RESPONSIBILITY: NII PMO
	6. OFFICE OF COLLATERAL RESPONSIBILITY: ILD
7. APPLICATION/ INTERRELATIONSHIP: The Hazardous Materials List is used to identify special handling requirements of materials that may be encountered during the storage, operation and/or warranty/maintenance of the NII.	**8. APPROVAL LIMITATIONS:**
	9. REFERENCES (MANDATORY AS CITED IN BLOCK 10)

10. PREPARATION INSTRUCTIONS: The following information shall be provided in Contractor format:

The Contractor shall identify all Hazardous Materials in all warranty/maintenance tasks in the Warranty/maintenance Manual. The list shall include the material description, quantity of the material, disposal instructions, exposure risks, symptoms, and treatments. The list shall be maintained in the Documentation Package for the NII device throughout its life.

Deliverables:

1. First submission - 30 days prior to first acceptance test.
2. Review – Government has 120 days to review and comment.
3. Final - Due 60 days after receipt of comments.
4. Updates - shall be provided as changes are made to the design/configuration affecting system operation.
5. 3 copies to be delivered:
   1 electronic copy to NII PMO, USCBP, Washington, DC
   1 Hard Copies to NII PMO, USCBP, Washington, DC

1 Hard Copies to ILD, USCBP, Lorton, VA

DATA ITEM DESCRIPTION	
1. TITLE: **EQUIPMENT INSTALLATION DATA PACKAGE**	**2. IDENTIFICATION NO(s):** A005
3. DESCRIPTION/PURPOSE: To provide design criteria required to install and use the equipment, temporarily or permanently, in existing or planned facilities. Data includes servicing (utilities), space, mounting, environmental, special facility, and safety requirements relating to a typical system installation.	**4. APPROVAL DATE:**
	5. OFFICE OF PRIMARY RESPONSIBILITY: NII PMO
	6. OFFICE OF COLLATERAL RESPONSIBILITY:
7. APPLICATION/ INTERRELATIONSHIP: The Equipment Installation Data establishes the basic design criteria required to modify/design facilities to accommodate the new equipment. It is used during site surveys as the baseline with which unique site conditions are identified which may alter the basic design criteria.	**8. APPROVAL LIMITATIONS:**
	9. REFERENCES (MANDATORY AS CITED IN BLOCK 10)

10. PREPARATION INSTRUCTIONS:

The following information shall be provided in drawing format with dimensions shown on the drawing and other information provided in a table format and shall become the property of the USCBP. As a minimum, the data shall contain and be shown under the following headings:

a. Physical Properties: Dimensions for storage and operating conditions (length, width, height, position of article under test to equipment, etc.), weight (total and footprint), approximate center of gravity, turning diagrams (45, 90 and 100 degree turns) with shield up and down, pavement loading profile from surface to sub-grade, surface slopes (longitudinal and lateral) and roughness.

b. Space Demands: Operator, maintenance, access, peculiar to the article under test, relation to other stations or associated equipment, minimum and maximum separation permitted between related stations, storage for ancillary equipment or hazardous material, and hazard zones (noise, radiation, etc.).

c. Mounting Details: Plates, hole sizes, locating dimensions, fastener sizes and types, welding, foundations (vibration, isolation, etc.), sequence of installation, grounding, special tools, one-time use equipment (if required), interface mountings and mating information.

d. Servicing Needs: Hydraulic (fluid type, pressure, flow rate, temperature, hoses and fittings), water (pressure, flow, volume, temperature, purity and fittings), steam (pressure, flow, volume and temperature), air/vacuum (pressure, flow, volume, temperature, purity, and vapor limitations), gas (pressure, flow, volume and temperature), fuel (type and per hour usage), electric - a.c. (voltage, frequency, phase, KVA or volt amperes, 3/4 wire Y/delta connection, steady state voltage, transient voltage limitations, voltage modulation, wattage, power factor, cable length limitations,): electric - d.c. (voltage, voltage limits, amperage), communications (type - telephone (land or cellular), number of circuits, number of dedicated circuits, etc.

e. Heat dissipation of equipment.

f. Special facility requirements: example: material security safes/vaults, radiation shields, sound attenuation, hazardous material storage, etc.)

g. Installation wiring diagram (if applicable).

h. Environmental conditions: (examples: HVAC requirements, computer cooling during winter heating, etc.).

i. Safety provisions: provisions and equipment necessary to protect personnel and equipment during operations and maintenance.

j. Safety provisions: provisions and equipment necessary to protect personnel and equipment during operations and maintenance.

Deliverables:

1. First submission - The Contractor shall deliver one set of drawings and tables not later than 30 days after award of the contract.
2. Review - USCBP has 45 days to review and comment.
3. Final - 45 days after receipt of comments.
4. Updates - Contractor shall provide new drawings and tables if any changes are made to the system design/configuration, which changes the equipment installation criteria.
5. (2) Sets of reproducible drawings and tables (size not to exceed 11"x17") and 2 copies in electronic media (mutually agreed format) to NII, USCBP, Washington, D.C.

(1) set of reproducible drawings and tables (size not to exceed 11"x17") and 1 copy in electronic media (mutually agreed format) to ILD, USCBP, Lorton, VA

DATA ITEM DESCRIPTION

1. TITLE: **MONTHLY PROGRESS REPORT**	**2. IDENTIFICATION NO(s):** A006
3. DESCRIPTION/PURPOSE: To apprise the CBP NII PMO of progress to date, planned activities, DID submittal status, funds expended, program hazards and action items pending.	**4. APPROVAL DATE:**
	5. OFFICE OF PRIMARY RESPONSIBILITY: NII PMO
	6. OFFICE OF COLLATERAL RESPONSIBILITY:
7. APPLICATION/ INTERRELATIONSHIP:	**8. APPROVAL LIMITATIONS:**
	9. REFERENCES (MANDATORY AS CITED IN BLOCK 10)

10. PREPARATION INSTRUCTIONS:

The Contractor shall prepare and submit monthly progress reports detailing efforts completed during the reporting period (previous calendar month), percent of overall completion, estimated schedule to completion, and problems encountered with associated risk. The report period closes on the last calendar day of the month and is due on the 10th working day of the succeeding month. As a minimum, the report shall contain the following:

- Progress to Date
- Planned Activities
- DID Submittal Status

- Funds Expended
- Program Hazards
- Open Action Item

This report shall be prepared in a narrative format suitable for reproduction.

Deliverables:

1. First submission - 10th working day of the month after Kick-Off Meeting is held.
2. USCBP has 30 days to approve format.
3. Updates - Every month on the 10th working day.
4. 2 copies to be delivered:
   1 electronic copy to NII PMO, USCBP, Washington, DC
   1 to ILD, USCBP, Lorton, VA

DATA ITEM DESCRIPTION

1. TITLE: **OPERATORS TRAINING MATERIALS**	**2. IDENTIFICATION NO(s):** A007
3. DESCRIPTION/PURPOSE: The Training materials shall be designed to administer operator training to facilitate system operation and care. An operator training video shall augment operator training. In addition, a Train-the-Trainer program shall be delivered to CBP TTSB trainers that will certify them as qualified to instruct on the piece of equipment.	**4. APPROVAL DATE:**
	5. OFFICE OF PRIMARY RESPONSIBILITY: NII PMO
	6. OFFICE OF COLLATERAL RESPONSIBILITY: TT&SB/OTD
7. APPLICATION/INTERRELATIONSHIP: Any and all Training materials will be used for initial training as well as for follow-on performance and future new operator (attrition) training.	**8. APPROVAL LIMITATIONS:**
	9. REFERENCES (MANDATORY AS CITED IN BLOCK 10)

10. PREPARATION INSTRUCTIONS:

1. The training deliverables and material shall include, but not be limited to the following items: Weekly Status Report, Management Plan, Training Design Plan, Instructor Guide, Student Guide, Image Analysis Exercises and Manual, Image Interpretation Software, Contractor supplied laptops with images and software loaded for image exercises, Operator Training Video, Train the Trainer. The Training Design Plan shall be prepared in a Government approved narrative format suitable for reproduction. The laptops will transfer to the Government as part of the training equipment and materials provided by the Contractor.

The operator training materials shall address familiarization with the equipment overall, operation and care of the system, system and radiation

safety, normal and emergency systems operation, transporter handling, routine servicing, operator console operations with display recognition as well as image manipulation, interpretation and saving.

- Weekly Status Reports: The Contractor shall develop weekly status reports and e-mail these to the CBP COR by COB Eastern Time each Friday for the duration of the project.
- Management Plan: The management plan shall include the following components:
  - Introduction
  - Project Assumptions
  - Project Summary Chart
  - Technical Approach and Methodology
  - Task Detail
  - Time Schedule
  - Itemized list of deliverables and the formats in which they shall be developed and submitted
  - Administrative Information
- Training Design Plan The design plan shall, at a minimum, include the following components:
  1. Background or Introduction
  2. Project Description
  3. Course map indicating any prerequisites, placement within a curriculum, and existing or proposed training for which this course will be considered a prerequisite
  4. Target Audience, Estimated Contact Time, and Prerequisites (if applicable)
  5. Course Structure and Outline
  6. Performance Objectives
  7. Images required for the development of the training
  8. OJT plan (if applicable)
  9. Instructional Strategies (ISD approach) including Assessment Approach and grading criteria to include three unique versions of each written assessment.

  Instructor Guide shall provide detailed course technical data and information to assist the instructor in the presentation of each individual lesson included in the course and be formatted in such a manner that the Student Guide is derived from this document. The guide is used to organize the instructor's presentation and to ensure that all required topics, subtopics and related reference materials are included in the presentation of the course. The guide

shall contain the following items:

- Time allotted for completion of the individual lessons in hours for classroom and practical application.
- List of all Instructional Aids (equipment and audio visual aids) necessary to conduct the lesson.
- Objective describing the behavioral actions desired, the performance conditions, and the attainment standard expected of the student upon completion of the each lesson.
- Instruction covering the planned lesson discussion content in sufficient detail to be used as the instructor's primary teaching document. The lesson material shall be presented in sufficient detail to ensure thorough and complete coverage of the objective. All diagrams, text materials, audio visual aids, and other materials to be used in the presentation shall be identified adjacent to each point where they are to be utilized, for each time their utilization is planned.
- Applications causing each student to apply the lesson information to solve one or more realistic problems. This may require either mental or physical student activity; however, effort shall be made to provide for physical activity.
- A Learning Measurement Tool shall be designed to check student progress and determine the extent to which the student has accomplished the objectives. This shall be done by a list of thought-provoking questions or tasks with answers covering the objectives.
- A List of Instructor Activity shall be structured to enable the instructor to maintain maximum student interest and participation, adequately measure student comprehension of the subject, and provide planned summaries at strategic points within the presentation.

  Student Guide is composed of a series of instruction sheets which collectively provide the student with the objectives and self-help materials such as reading assignments, study questions, problems, practical application job steps, self-test items, diagram sheets and other supplementary information to assist in achieving the objectives of the course. This shall be derived from the Instructor's Guide. The guide shall correlate with the training course/curriculum outlines and related instructor's guide.
- Information Sheets shall consist of narrative descriptions, diagrams, sketches, charts, graphs, pictures and other audiovisual material as necessary for student reference to support the information presented in the course. They may be excerpts from other documents not readily available to the students or original material prepared by the Contractor. However, system technical manual information shall not be extracted unless changes are required in the material to make it more readily adaptable to the course presentation. Pictures that show previous development configurations, installations or operation and warranty/maintenance practices that are not readily demonstrated in the classroom or training area may be prepared as student information sheets when

necessary to enhance the course presentations. A paper reproduction of each audiovisual aid used in the course shall be included in the student information sheets regardless of their inclusion in other documentation.

- Assignment Sheets shall contain the following parts:
    - Introduction includes statement of purpose and scope of assignment.
    - Objective to be accomplished by the student through completion of the assignment.
    - Study assignment includes specific study instructions, identifying paragraphs, pages, and publications. If there is a best sequence to study scattered portions of the text, this sequence shall be provided.
    - Study questions are thought-provoking questions relative to the assignments. Questions should require mental decisions similar to those the student would make while working with the equipment.
- Job Aids shall contain the following:
    - Introduction – a brief statement of purpose, scope, and value of the job sheet, and suggested completion time.
    - Objective
    - References
    - Equipment and materials listing
    - Job steps detailing procedures for performing assigned tasks on the system/ equipment. If the job steps contained in the technical documentation are sufficiently detailed, reference shall be made to the applicable section/page.
    - Precautions for personnel or equipment safety or misleading conclusions.
    - Self-evaluation items including thought-provoking questions on the performance of the job sheets. These items are to be designed as thought-provoking questions relative to the assignments.
        - Student Workbook shall provide the student a means of applying principles learned during classroom instruction without requiring the use of actual equipment. It shall be capable of being separately bound. All activity types shall be represented at least once in the workbook.
    - Diagram Sheets may range from full-blown foldout schematics and block diagrams, or flowcharts, to simple sketches or graphs. These sheets are for use during class and for follow-up review and study. These sheets shall record information such as waveforms, adjustments, purpose and function.
        - These handbooks, documentation, manuals, etc. shall become delivered to the student electronically at least one week prior to the class so they may print them out and bring them to the class. These items become the property of the individual student for further on-the-job skill development after the training program.

Training Model:

Day One		
Lesson	Topic	Duration (minutes)
1	Introduction	5
2	Core Messages	10
3	Radiation Awareness	15
4	Weapons of Mass Effect and Analyzing Strategy	15
5	System Overview	10
6	System Safety	10
7	System Operation	20
8	Image Processing and Options	30
Break		10
9	Threat Awareness and Analysis I	60
10	NII Reporting	10
Student PQS and Standards Questions		10
Summary and Closing		5
Hands On Training Group 1*		240
Total		480
Day Two		
Topic		Duration (minutes)
Hands On Training Group 2*		240
Hands On Training Group 3*		240
Total		480
*Note: Divide into three groups of four students. Students not on system may practice on Simulator or return to regular duties per the request of the host agency.		

Deliverables:

Products developed shall be written to conform to the requirements of the

CBP Office of Training and Development standards.
All deliverables shall be conveyed free of trademark and proprietary claim by the Contractor, and with the unlimited right of alteration, reproduction and/or distribution within the Government.

Deliverables created through the use of word processing and graphic software programs comparable to Microsoft Office, Adobe, and Macromedia products.

Legitimate copies of the system viewer tool to be available in quantities sufficient to support the training of three concurrent classes plus three spare tools for use during repair of broken equipment. The image viewer software shall present the operator with responses to inputs identical to the responses provided by the operational system. Image viewer software shall operate when loaded on workstation or laptops presently in use by CBP.

Notification of Version changes to hardware or software shall be presented as updates to the training materials at least 30 days prior to actual equipment updates to CBP.

Training Materials Delivery Schedule:

1a. First submission of training materials - 60 days ARO

1b. First submission of operator training video and script - Script 30 days ARO; Video 60 days ARO

2a. Review of all training materials– Government has 10 days to review and comment on all reviews

2.a.1 BETA - 60 Days prior to delivery of first system

2.a.2 Pilot - at delivery of first system

2.a.3 Production 30 days after Pilot

2.a.4 Final - training materials and associated documentation due 90 days after Pilot.

2.a.5 T- 3 Course – NLT 90 days after Pilot

3. Updates - Shall be provided whenever system design changes affect training as part of an Engineering Change Procedure as required under the

instant contract.

4a. Electronic and 3 hard copies of training materials and associated documentation to be delivered
1 to NII PMO, USCBP, Washington, DC
1 to OTD, USCBP, Washington, DC
1 to ILD, USCBP, Lorton, VA

4b. (10) DVD copies and (2) master DVDs.
1 DVD copy to be included with each hard copy delivery at the conclusion of operator training. Remaining copies, and master copy, (after all planned training is complete) to be sent to OIT/TTSB, CBP, Lorton, VA and OTD/HQ, Washington, DC.

DATA ITEM DESCRIPTION

1. TITLE: **SYSTEM USER'S MANUAL**	**2. IDENTIFICATION NO(s):** A008
3. DESCRIPTION/PURPOSE: The System User's Manual shall contain an overview of the system and step-by-step procedures for all normal and emergency procedures. The manual will be used to provide CBP Operators a detailed understanding of equipment operation.	**4. APPROVAL DATE:**
	5. OFFICE OF PRIMARY RESPONSIBILITY: NII PMO
	6. OFFICE OF COLLATERAL RESPONSIBILITY:
7. APPLICATION /INTERRELATIONSHIP: The manual will be used as the primary reference guide for CBP Operators.	**8. APPROVAL LIMITATIONS:**
	9. REFERENCES (MANDATORY AS CITED IN BLOCK 10)

10. PREPARATION INSTRUCTIONS: The Contractor shall provide a System User's Manual. The System User's Manual shall be separated into an Operator's Manual and a Software User Guide. In addition, an Addendum shall be provided for the Administrator to use in creating, editing, and deleting User Accounts.

The Operator's Manual shall contain the following:

- Safety Precautions
- Duties and responsibilities of personnel required to operate the system.
- Concept of Operations.
- System description at both the component and system level.
- System Operating Procedures to include Start Up, Scanning, Image Analysis, and Shut Down.
- Required Daily, Weekly, and Monthly inspections.

- Troubleshooting procedures.

  The Software User's Guide shall provide a detailed description of the screen display and all of the menu items, icons, and hot keys used to operate the system.
  Drawings or diagrams shall be included to demonstrate instructions and to show where items are located as necessary. All instructions shall be written so a non-technically trained person can clearly understand the material.

Deliverables:

1. First submission - 60 days prior to first acceptance test.
2. Review – Government has 60 days to review and comment.
3. Final - Due 30 days after receipt of comments.
4. Updates - Shall be provided as changes are made to the design/configuration affecting system operation.
5. 3 copies to be delivered:
   1 electronic copy to NII PMO, USCBP, Washington, DC
   1 to NII PMO, USCBP, Washington, DC
   1 to ILD, USCBP, Lorton, VA

DATA ITEM DESCRIPTION

1. TITLE: **MAINTENANCE/SERVICE MANUAL**	**2. IDENTIFICATION NO(s):** A009
3. DESCRIPTION/PURPOSE: The manual shall contain the procedures and steps necessary for an experienced technician with journeyman level skills to maintain the NII System and the Contractor provided system and sub-system equipment.	**4. APPROVAL DATE:**
	5. OFFICE OF PRIMARY RESPONSIBILITY: NII PMO
	6. OFFICE OF COLLATERAL RESPONSIBILITY:
7. APPLICATION/ INTERRELATIONSHIP: The manual will be used as the primary reference for system warranty/maintenance technicians.	**8. APPROVAL LIMITATIONS:**
	9. REFERENCES (MANDATORY AS CITED IN BLOCK 10)

10. PREPARATION INSTRUCTIONS: The Contractor shall provide a Maintenance/Service Manual or Manuals containing the following:

- Illustrated Parts Breakdown
- Routine Warranty/maintenance Check Lists
- Service Requirements
- Periodic Warranty/maintenance Schedule
- Alignment Procedures
- Troubleshooting and Fault Isolation Procedures down to the component, module, or lowest replaceable piece part as determined by warranty/maintenance planning analysis
- Removal and Replacement down to the level as determined by warranty/maintenance planning analysis
- Safety Precautions
- Calibration Requirements and Procedures
- Tools and Test Equipment Lists – include specification sheets on equipment
- Tools and Test Equipment List for the Support Equipment - include Specification Sheets on the equipment

The manual shall include exploded or other appropriate drawings so that the Contractor's numbering can identify parts. Unmodified Contractor parts shall also list the Contractor and original vendor's part number.
Deliverables: 1. First submission – 90 days prior to expiration of first system warranty. 2. Review – Government has 120 days to review and comment. 3. Final - Due 45 days after receipt of comments. 4. Updates - Shall be provided as changes are made to the design/configuration affecting system maintenance. 5. 3 copies to be delivered: 1 electronic copy to NII PMO, USCBP, Washington, DC 1 Hard Copies to NII PMO, USCBP, Washington, DC 1 Hard Copies to ILD, USCBP, Lorton, VA

DATA ITEM DESCRIPTION

1. TITLE: **FAILURE AND ERROR REPORT**	**2. IDENTIFICATION NO(s):** A011
3. DESCRIPTION/PURPOSE: This report shall describe the warranty/maintenance actions performed on each NII imaging System and its associated support systems throughout the warranty period.	**4. APPROVAL DATE:**
	5. OFFICE OF PRIMARY RESPONSIBILITY: NII PMO
	6. OFFICE OF COLLATERAL RESPONSIBILITY:
7. APPLICATION/ INTERRELATIONSHIP: This failure information will be used to update failure forecasting considered in the analytical support of the warranty/maintenance planning effort.	**8. APPROVAL LIMITATIONS:**
	9. REFERENCES (MANDATORY AS CITED IN BLOCK 10)

10. PREPARATION INSTRUCTIONS: This report shall be prepared in a USCBP NII PMO approved Contractor's narrative format. The Contractor shall prepare and submit failure and error reports summarizing all warranty/maintenance actions (corrective and scheduled) listed by NII system serial number occurring during system warranties. Each entry shall be complete with: narrative description of operational activities prior to failure or failure indication with the date and recounting of the observed failure, shutdown cause if shutdown; corrective action/actions taken; serial and part numbers of items repaired or replaced plus costs (parts and labor costing separately); hour meter reading; date repairs were completed; the NII systems homeport, and actual warranty/maintenance (hands on) time the repair action required. The report shall be compiled and submitted on a monthly basis to include each system after system acceptance during its warranty period. See SOW Section 4.1.6, 4.1.7 and 4.1.8

Deliverables:

1. First submissions - Shall be monthly by the 10th working day of the month.
2. Review – Government has 30 days to review and comment on format.
3. Updates - Shall be provided monthly until all warranties have expired.
4. 3 copies to be delivered:

1 electronic copy to NII PMO, USCBP, Washington, DC
1 to NII PMO, USCBP, Washington, DC
1 to ILD, USCBP, Lorton, VA

DATA ITEM DESCRIPTION

1. TITLE: **QUALITY CONTROL PLAN**	**2. IDENTIFICATION NO(s):** A012
3. DESCRIPTION/PURPOSE: To provide details of the Contractor's Quality Control Plan.	**4. APPROVAL DATE:**
	5. OFFICE OF PRIMARY RESPONSIBILITY: OIT/ILD OIT/TTSB
	6. OFFICE OF COLLATERAL RESPONSIBILITY:
7. APPLICATION/ INTERRELATIONSHIP: The Quality Control Plan describes how quality is maintained.	**8. APPROVAL LIMITATIONS:**
	9. REFERENCES (MANDATORY AS CITED IN BLOCK 10)

10. PREPARATION INSTRUCTIONS: The following information shall be provided in Contractor format:

a. Organizational charts depicting the role and relationships of QC staff
b. Test procedures used in the QC process
c. Identify acceptable range for data collected from testing
d. Identify procedures to correct QC problems
e. The Quality Control Plan shall be delivered as part of the Contractor's proposal. The Quality Control Plan shall be updated, annually or more often if required, during the course of the contract.

Deliverables:

1. First submission - with proposal
2. Updates - Required whenever information contained in the Project

Management Plan changes or annually

DATA ITEM DESCRIPTION

1. TITLE: **ACCEPTANCE TEST PLAN (ATP)**	**2. IDENTIFICATION NO(s):** A013
3. DESCRIPTION/PURPOSE: The ATP details the required tests that the Contractor shall be required to perform to successfully complete the production and quality assurance phases of development and production. It shall be written in sufficient detail so that the Government can be assured that when the system is ready for Government acceptance testing, it has in fact met all SOW and contract delivery requirements.	**4. APPROVAL DATE:** **5. OFFICE OF PRIMARY RESPONSIBILITY:** NII PMO **6. OFFICE OF COLLATERAL RESPONSIBILITY:**
7. APPLICATION/ INTERRELATIONSHIP: The ATP will be utilized to establish testing guidelines and support requirements needed for the conduct of the test program.	**8. APPROVAL LIMITATIONS:** **9. REFERENCES (MANDATORY AS CITED IN BLOCK 10)**

10. PREPARATION INSTRUCTIONS: The ATP shall include the following.

- Personnel and materials needed to successfully complete the Contractor's final Factory Acceptance Test.
- An inventory of all required documents and major components including software. This is to include the serial numbers of hardware items and the software version numbers.
- The results of supporting tests such as the ANSI N42.46 Performance Test, Material Discrimination Test, and Radiation Survey.
- All normal and emergency system operations of a fully integrated system. This shall include start up, safety checks, scanning, image analysis, image and Data Set operations (printing, exporting, copying, and deleting), and shut down.
- Those additional tests to verify that the system meets all contract SOW

requirements.

Deliverables:

1. First submission - 60 days prior to any testing.
2. Review - USCBP has 30 days to review and comment.
3. Final - 5 working days prior to start of testing.
4. Updates - Required whenever changes are necessary.
5. 3 copies to be delivered:

1 electronic copy to NII PMO, USCBP, Washington, DC
1 to NII PMO, USCBP, Washington, DC
1 to ILD, USCBP, Lorton, VA

DATA ITEM DESCRIPTION

1. TITLE: **RADIOLOGICAL SURVEY, RADIATION SURVEY TEST REPORTS**	**2. IDENTIFICATION NO(s):** A015
3. DESCRIPTION/PURPOSE: To apprise the USCBP NII PMO of the radiological survey results associated with all installations. To provide initial and annual Radiation Survey results for X-Ray Systems	**4. APPROVAL DATE:**
	5. OFFICE OF PRIMARY RESPONSIBILITY: NII PMO
	6. OFFICE OF COLLATERAL RESPONSIBILITY: ILD
7. APPLICATION/ INTERRELATIONSHIP:	**8. APPROVAL LIMITATIONS:**
	9. REFERENCES (MANDATORY AS CITED IN BLOCK 10)

10. PREPARATION INSTRUCTIONS:

These reports shall be prepared in a Government approved Contractor's format. The reports shall include a letter certifying the system meets filing criteria. Final reports of initial surveys and/or tests are due at acceptance of system. Subsequent Radiation Survey Test Reports are due annually.
One copy to be delivered to NII PMO, USCBP, Washington, DC.
One copy to be delivered to ILD Field Technician Support Center within 48 hours of completion.

DATA ITEM DESCRIPTION	
1. TITLE: **CONFIGURATION LIST**	**2. IDENTIFICATION NO(s):** A016
3. DESCRIPTION/PURPOSE: Listing of all equipment replaceable components delivered in accordance with the Statement of Work.	**4. APPROVAL DATE:**
	5. OFFICE OF PRIMARY RESPONSIBILITY: NII PMO
	6. OFFICE OF COLLATERAL RESPONSIBILITY: ILD
7. APPLICATION/ INTERRELATIONSHIP:	**8. APPROVAL LIMITATIONS:**
	9. REFERENCES (MANDATORY AS CITED IN BLOCK 10)

10. PREPARATION INSTRUCTIONS: Prepare in USCBP NII PMO approved Contractor's format. The Contractor shall prepare an updated "as built" equipment/configuration list for each delivery. The list shall detail any equipment differences between operating systems. The following information shall be provided for all equipment:

- Item Description
- Contractor and original Contractor model numbers
- Contractor and original Contractor part numbers
- Name of Manufacturer (If Contractor item)
    - Address
    - Telephone Number
    - Warranty Date

Provide original suitable for reproduction and 2 copies at system acceptance. Delivery shall be concurrent with system delivery and quarterly for the first year of operation. Provide one final electronic copy at the end of one year to NII PMO, USCBP, Washington DC.

DATA ITEM DESCRIPTION

1. TITLE: **TECHNICAL DOCUMENTATION PACKAGE**	**2. IDENTIFICATION NO(s):** A017
3. DESCRIPTION/PURPOSE: The Technical Documentation shall consist of all documentation used by the Contractor and all Subcontractor's in the production of the NII system and any follow-on production or modification. This shall include the Configuration List and any background or supporting documentation used to make design or production decisions.	**4. APPROVAL DATE:** **5. OFFICE OF PRIMARY RESPONSIBILITY:** NII PMO **6. OFFICE OF COLLATERAL RESPONSIBILITY:**
7 .APPLICATION/ INTERRELATIONSHIP: Data delivered to the Government will be used solely for the purpose of operation, repair, warranty/maintenance and training.	**8. APPROVAL LIMITATIONS:** **9. REFERENCES (MANDATORY AS CITED IN BLOCK 10)**

10. PREPARATION INSTRUCTIONS: The following information shall be provided in Contractor format:

The Configuration Baseline is:

1. An agreed-to description of the attributes of a product, at a point in time, which serves as a basis for defining change.
2. An approved and released document or a set of documents, each of a specific revision, the purpose of which is to provide a defined basis for managing change.
3. The currently approved and released configuration documentation.
4. A released set of files comprising of a software version and associated configuration documentation.

A Configuration Baseline shall be established and maintained for the NII system by the Contractor. All NII units delivered within a production lot shall

be identical and conform to the Configuration Baseline. The Configuration Baseline shall be incorporated into the Technical Documentation and maintained by the Contractor beyond the specified life of the NII system. The Government shall have full access to all Configuration Baseline documentation for the purposes of maintaining and upgrading the NII system. Data initially produced under this contract shall be conveyed to Government free of proprietary claim. Data produced prior to this contract shall be conveyed assigning to the Government and its agent the right to use and copy the material solely for the purpose of repair warranty/maintenance and training.

Management of Technical Documentation

The Contractor shall maintain a Technical Documentation file at the Contractor's point of manufacture, which contains all relevant data for the design and production of the NII system produced under this contract. Management of this data shall be in accordance with the CBP Configuration Management Plan.

Engineering Change Proposals (ECPs)

The Contractor is encouraged to pursue continuous improvement to the delivered product, particularly in the areas of cost and reliability. Engineering Change Proposals (ECPs) are provided for within this contract and their use is strongly supported. ECPs are proposals that enhance the value of the finished goods or services to the Government or reduce the cost of the good or services. All ECPs submitted shall be incorporated into the Technical Documentation package. ECPs that are approved shall be incorporated into the Configuration Baseline. All ECPs shall be submitted in accordance with the Engineering Changes clause of this contract. ECPs will be processed in accordance with CBP's Configuration Management Plan.

Deliverables:

1. First submission - 60 days prior to any testing.
2. Review - USCBP has 30 days to review and comment.
3. Final - 5 working days prior to start of testing.
4. Updates - Required whenever changes are necessary.
5. 5 copies to be delivered:

1 electronic copy to NII PMO, USCBP, Washington, DC
1 to NII PMO, USCBP, Washington, DC
1 to ILD, USCBP, Lorton, VA
1 hard and 1 electronic copy to TTSB, USCBP, Lorton, VA

DATA ITEM DESCRIPTION

1. TITLE: **WARRANTY**	**2. IDENTIFICATION NO(s):** A018
3. DESCRIPTION/PURPOSE: The Contractor shall provide a minimum of one-year Failure Free total system warranty for NII X-Ray Systems, associated accessories, and conveyance, where applicable.	**4. APPROVAL DATE:**
	5. OFFICE OF PRIMARY RESPONSIBILITY: NII PMO
	6. OFFICE OF COLLATERAL RESPONSIBILITY:ILD
7. APPLICATION/ INTERRELATIONSHIP: The Contractor shall involve and integrate ILD into the warranty/maintenance process during the Warranty Period to ensure a smooth transition once all warranties have expired.	**8. APPROVAL LIMITATIONS:**
	9. REFERENCES (MANDATORY AS CITED IN BLOCK 10)

10. PREPARATION INSTRUCTIONS:

1. Warranty certificate(s) and documentation shall be provided in Contractor format:
2.The Contractor shall provide documented warranty terms for the primary individual system to include, but not limited to, the NII X-Ray Imaging System, associated generators, accessories, air conditioners, compressors, computers, controls, lights, cameras, tracks, electrical boxes, housings, batteries, chargers, power conditioners, etc. as described in the SOW.
3. Warranties shall include parts, labor, consumables associated with maintenance, technician travel, shipping and transportation of parts, supplies, and systems as required to maintain operational availability and intended performance. Warranties shall include a replacement provision for units found to exhibit persistent systemic failures.

Deliverables:
1. First submission - Shall be 30 days prior to site acceptance of the first

system.
2. Review – Government has 30 days to review and comment.
3. Updates - Shall be provided monthly until all warranties have expired.
4. 3 copies to be delivered:
1 electronic copy to NII PMO, USCBP, Washington, DC
1 to NII PMO, USCBP, Washington, DC
1 to ILD, USCBP, Lorton, VA

DATA ITEM DESCRIPTION

1. TITLE: **LIFECYCLE OPERATIONS AND WARRANTY/MAINTENANCE COST PLAN**	**2. IDENTIFICATION NO(s):** A020
3. DESCRIPTION/PURPOSE: The Contractor shall provide anticipated operations and warranty/maintenance costs over the lifecycle of the system assuming a ten year lifecycle. These costs should be based on reliability predictions (DID A002), system part and component costs, planned preventive warranty/maintenance schedules, and anticipated/predicted corrective maintenance, and requirements defined in the SOW "Maintainability". Lifecycle costs should also include disposal costs for the systems as well as any hazardous material used on/in the system.	**4. APPROVAL DATE:** **5. OFFICE OF PRIMARY RESPONSIBILITY**: NII PMO **6. OFFICE OF COLLATERAL RESPONSIBILITY:** ILD
7. APPLICATION/ INTERRELATIONSHIP: The lifecycle operations and warranty/maintenance costs will allow CBP to adequately plan and prepare budget and resources to provide, or contract to provide, post-warranty warranty/maintenance throughout the system lifecycle.	**8. APPROVAL LIMITATIONS:** **9. REFERENCES (MANDATORY AS CITED IN BLOCK 10)**
10. PREPARATION INSTRUCTIONS: The Contractor shall prepare a Lifecycle Operations and	

Warranty/maintenance Cost Plan containing the following:

1) Total system acquisition cost to include first year and four (4) option year warranty costs

2) Predicted operations and warranty/maintenance costs for year two (2) through four (4) of the system lifecycle. These costs should be categorized by:

a. Operations
   i. Energy
   ii. Utilities
   iii. Fuel
   iv. Facilities
   v. Operator Training

b. Maintenance
   i. Help Desk
   ii. Field Warranty/maintenance and Repair
   iii. Factory Maintenance
   iv. Corrosion Control
   v. General Purpose Test Equipment
   vi. Special Tools and Test Equipment

c. Supply Support
   i. Spare(s) (i.e. repairable components)
   ii. Parts (i.e. components to effect repairs)
   iii. Inventory Management
   iv. Lubricants
   v. Consumable Items
   vi. Shipping
   vii. Warehousing

d. Technical Data
   i. Warranty/maintenance Manuals
   ii. Part(s) Manuals
   iii. Training Manuals
   iv. Schematics and Drawings
   v. Configuration Items List

3) All disposal costs for radioactive and/or hazardous material used by the system

Deliverables:

1. First submission – Included with proposal.
2. Review – Government has 120 days to review and comment.
3. Final - Due 60 days after receipt of comments.
4. Updates - Shall be provided as changes are made to the

design/configuration affecting system operation.
5. 3 copies to be delivered:
1 electronic copy to NII PMO, USCBP, Washington, DC
1 Hard Copies to NII PMO, USCBP, Washington, DC
1 Hard Copies to ILD, USCBP, Lorton, VA

13 APPENDIX 1: Development and Review Process

Beta: The Contractor shall deliver the course, based on the draft courseware, to an audience of TTSB trainers (possibly including one or two CBP Officers with knowledge level similar to typical OFO audiences). This will result in a written critique/mark-up of the courseware being delivered to the Contractor. The scope and sequence have already been determined, and the Contractor knows the technology and the product, so massive changes requiring extensive effort are unlikely to be required.
Once the re-write has been finished (final draft), the Contractor shall transmit the revised courseware to TTSB to verify that the required changes were made and to take one more look at the finished product. If additional changes are called for, this cycle will repeat until TTSB is satisfied that the product is ready for delivery to its intended audience (final).
Train the Trainer: The Contractor shall deliver the course to an audience of TTSB trainers. It is planned that these TTSB trainers will all have attended the Beta training session. This session of the course will cover not only what will be presented to the intended audience of CBP Officers, but also provide guidance to the TTSB instructors-to-be on matters that they need to be aware of to deliver the course properly. Such things would include: problems that might arise in presenting images, efforts to get software to work properly, tips to getting students to understand equipment features, etc. Given the intensity of the work prior to this, it is not expected that this will result in wholesale changes to the courseware, although minor changes (phraseology, word choice, fonts, and the like) are to be expected.
Pilot: The first delivery of the course, based on the final courseware, to a typical audience of CBP Officers, under the observation of TTSB and OTD personnel at CBP's option. The need for further, minor changes may arise. This presentation of the course will be by Contractor (OEM) trainers, with a trainer from the Contractor organization standing by to assist/advise as necessary. Any such advice or assistance will be noted as possibly indicating a need for further documentation, specifically in the Instructor Guide.

Operational Delivery: Routine delivery of the course will be by TTSB trainers to the intended target audience.

14 Acronyms and Glossary of Terms:

Acronyms

a. AAR - Association of American Railroads
b. CBP - Customs and Border Protection
c. CLIN - Contract Line Item Number
d. CMRR - Calibration Warranty/maintenance Requirement Report
e. COR - Contracting Officer Representative
f. DID - Data Item Description
g. FT – Factory Test
h. GSA – General Services Administration
i. LSS - Laboratories and Scientific Services Division
j. NII - Non Intrusive Inspection
k. NII PMO – Non-Intrusive Program Management Office
l. OBP – Office of Border Patrol
m. OSHA – Occupational Safety Health Administration
n. PE Stamp – Professional Engineer Stamp (certification)
o. POE - Ports of Entry
p. POV - Privately Owned Vehicles
q. PTZ - Pan Tilt Zoom
r. QAP – Quality Assurance Surveillance Plan
s. RCA - Radiation Control Area
t. SAT – Site Acceptance Test
u. SDLC – System Development Life Cycle
v. TSD - Technology Service Desk
w. WMD/WME - Weapons of Mass Destruction/Weapons of Mass Effect

15 Acronyms and Glossary of Terms:

Glossary of Terms

a. Advanced “smart” signal processing – Automatically identifies threats in an image without any Operator action.
b. ARO – After Receipt of Order.
c. Controlled Environment - Any personnel, systems, networks, vehicles or facilities that are under direct operations and security of CBP personnel.
d. Data Item Description - A completed document that defines the data required of the Contractor.
e. Image Data Set – All elements of a scanned image to include the radiographic image, snapshots, data sheets or scanned manifests, notes, and the release/hold resolution.
f. Footprint – Actual area occupied by the NII unit, length, width and height.
g. Government Furnished Information - Data and information in the possession of or acquired by the Government and made available to the Contractor for use in this contract
h. Small Scale - Equipment capable of scanning small cargo to include packages, baggage, pallets, and similar items.
i. Maximum Controlled Operating Area – Area defined by this document in which specified equipment must be able to operate.
j. Mobile Type Systems – Imaging systems which are mounted on a self-powered vehicle and capable of being driven on public roads.
k. Non-Intrusive Inspection - Non-destructive methods of inspecting and identifying goods in transportation systems.
l. Objective – All items marked “Objective” are not necessary for a system to qualify for the IDIQ, but may increase the score for any subsequent Request For Quote (RFQ) actions.
m. Radiation Control Area - An area to which access is managed to protect individuals from exposure to radiation and/or radioactive material.
n. Radiographic Image- An image produced by a panel of solid state detectors after the radiation from a source has passed through the object being imaged or has been reflected back by it.
o. Required – All items marked “required” are necessary for a system to qualify for the IDIQ, and for any subsequent Request For Quote (RFQ) actions.
p. Threshold – The minimum level of operational performance that the Government is willing to accept is considered a *threshold* value.
q. Throughput – Number of scans of objects within a defined time.
r. Video Image Capture “snapshot” - Capturing a snapshot or still image of an area or object on a video screen.