

PERFORMANCE WORK STATEMENT

**DOD COUNTER NARCOTERRORISM TECHNOLOGY PROGRAM OFFICE
(CNTPO)**

PROGRAM AND OPERATIONS SUPPORT

TORP 0200, REVISION NUMBER 00

**USNORTHCOM CROSS-BORDER COMMUNICATIONS
PERFORMANCE WORK STATEMENT (PWS)**

8/23/2010

1.0 MISSION OBJECTIVE.

The DoD Counter Narcoterrorism Program Office (CNTPO) was established to create Counter Narcoterrorism Technology (CNT) networks, infrastructure, and capabilities worldwide that are focused on the detection, identification and disruption of narcoterrorist activities and organizations. This task effort will support the warfighter in the combating of narcoterrorism worldwide.

2.0 BACKGROUND.

In an effort to combat drug trafficking activity and enhance communication interoperability between sovereign nations along the southern border of the United States (US), the US Department of Homeland Security (DHS) and the Secretariat of Governance of the United Mexican States have jointly formulated an action plan to facilitate cross border communications and interoperability between first responders from both nations. In support of the approved action plan between the U.S. and Mexico, the High Level Consultative Commission on Telecommunication - Security Communications Task Group (HLCC SCTG) has identified a long-term vision. As a first step toward this vision to provide the necessary communication connections for cross border communications, a cross border microwave link plan is now developed for interconnecting communications centers of the respective domestic security agencies in each country.

3.0 Scope.

3.1 Task Order (T/O) Objective.

The T/O objective is to provide, deliver, assemble/install and provide training for a trans-border microwave communications system (voice, data, and video) for exchange of illicit drug trafficking activity information between federal U.S. and Mexico security agencies. The architecture and topology for this T/O shall be synchronized, interoperable with, and complement the DHS partner network as stated in Attachment 1 - Site Locations and Coordinates, Link Technical Characteristics and Frequencies, and Attachment 2 - DHS Cross Border Microwave Link Equipment.

3.2 Basic Contract References.

This T/O PWS establishes the requirements for the Contractor to provide support in the Basic Contract task area of 4.3.1.3 Installation; 4.3.1.5 Test and Evaluation; 4.3.1.7.1 Product Data; 4.3.1.7.2 Configuration Management; 4.3.2 Training, Operations, and Logistics support; 4.3.2.1 Operation, Maintenance and Repair; 4.3.2.6 Logistics Support Analyses; 4.3.2.7 Logistics Support and Equipment; 4.3.2.9 Training; 4.3.3 Professional and Executive support; 4.3.3.1 Professional, Management, Administrative and Program Support; and 4.3.3.4 Material and Equipment Purchase.

4.0 PERFORMANCE REQUIREMENTS.

The US and Mexico have identified ten (10) US-Mexico city pairs (e.g. [REDACTED] [REDACTED] for the cross-border microwave links with Internet Protocol (IP) network access points and Radio over IP (ROIP) gateways for responder radio bridging at each. The cross-border microwave links, IP network access, and Radio Bridges for the Mexican Side Only shall be provided and installed at the Mexican Center for Command Control Communications and Computation (C4) sites as listed in the following table. For two of the city pairs ([REDACTED]) the contractor shall provide relay capability at existing Mexican communications facilities for connectivity to the C4 site. See Attachment 1 for Site Locations/Coordinates, Technical Characteristics and Frequencies.

Mexico Municipality
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

As a minimum, the microwave links shall have a capacity of OC-3 (155 Mbps) with an objective of expanding to future OC-12 (622 Mbps) capability, shall operate in the 7125-8500 MHz band, shall not exceed 40 MHz RF bandwidth and nominally span a distance between four (4) and ten (10 miles) (between 6.4 kilometers and 16.09 kilometers) from point to point. The equipment shall incorporate Type 3 Advanced Encryption Standard (AES) encryption.

A link analysis shall be completed for each link with the equipment parameters used on each end (US and Mexico) of the link. The threshold acceptance for each link is 10^{-6} , Bit Error Rate (BER).

4.1 Site Survey Requirements.

The Contractor shall conduct site surveys in order to verify equipment/items required to satisfy the requirements for the ten (10) C4 and two (2) microwave relay facilities in Mexico that will correspond to the DHS Customs and Border Patrol (CBP) microwave facilities in the U.S. (see Attachment 1). The Mexico surveys shall include, but are not limited to, specific requirements for the cable hangers, antenna bolts, waveguides, hoisting grips, electrical power supply, uninterruptable power supply, telecommunications support, perimeter security, and maintenance shack.

The Contractor shall interact with other Government of Mexico (GoM) and U.S. Government (USG) Federal agencies, e.g. C4 sites, DHS, CBP, etc., where needed, to perform and complete the required activities listed in this PWS as they apply to equipment installation and optimization in PWS paragraph 6.0 and Attachment 1.

4.2 Site Preparation and Equipment Installation.

The Contractor shall perform all required site preparation identified during any site surveys completed in section 4.1 of the PWS.

4.3 Equipment Installation.

The Contractor shall perform all installation and optimization work in accordance with National Telecommunication and Information Administration (NTIA) Chapter 5 standards, as well as industry standards for microwave radio communications equipment in the 7125-8500MHz band. This shall include, but not limited to, microwave radio equipment, antennas, waveguides, antenna connectors, waveguide pressurization equipment, UPS systems, microwave system management equipment and software, and other equipment as needed.

The Contractor shall comply with relevant sections of Motorola R56 "Standards and Guidelines for Communications Sites" (e.g., internal and external grounding and bonding, power sources, surge protection, minimizing site interference, equipment installation, electromagnetic energy info, etc.), and in accordance with all GoM Federal, State, and local regulations and building codes.

The Contractor shall begin installations at the [REDACTED] border pair. Thereafter, all other Mexico site installations shall be installed following the prioritization provided by the USG Contracting Officer after task order award.

The Contractor shall provide, deliver and install the following Microwave Link Equipment:

- Microwave antennas with associated accessories and cabling
- Microwave radios with associated accessories and racks
- Networking equipment (e.g. IP router and Ethernet switch)
- Radio over IP (ROIP) bridging components

- Uninterruptable Power System (UPS) for a minimum of 30 minutes for all components

Necessary installation supplies, materials, tools and test equipment to complete the successful delivery of an operational system See Attachment 4 – Raytheon Radio Bridge Equipment and Attachment 5 – Aviat Microwave Equipment for a detailed list of Microwave Link Equipment.

The Contractor shall deliver and install all Microwave Link Equipment listed in Attachment 4 and 5 and is responsible for the equipment until the US Government accepts delivery. The contractor shall be responsible for all shipping, delivery and staging of the equipment involved in the project for equipment destined for Mexico.

At the completion of all installations, the Contractor shall provide a System and Network Topology Diagrams and/or Schematics (CDRL A00D) for each site.

The Contractor is responsible for removal of debris resulting from equipment installation.

4.4 Equipment Testing and Optimization.

4.4.1 Integration and Test.

At the conclusion of equipment installation on the existing Mexican Government provided towers and in existing Mexican Government provided facilities identified in this PWS, the Contractor shall conduct verification and validation testing of the completed microwave link equipment configurations with equipment configurations on the corresponding US CBP site Included in this verification is also the IP networking systems as well as the ROIP Radio Bridging systems. Verification and validation includes, but, is not limited to, testing the system to ensure required functionality, coverage, capacity, interoperability, security, and that availability meets the functional requirements and specifications. The contractor shall deliver systems and network topology diagrams and/or schematics depicting every physical or logical connection provided with this (CDRL A00D).

The Contractor shall provide the following testing related documentation to the USG Contracting Officer for review and approval of testing related documentation and the COTR:

- Detailed Independent, Verification and Validation (IV&V) Test Plan (CDRL A00A)
- Verification and Validation Test Procedures (CDRL A00A)
- Final test report and all anomalies found during testing (CDRL A00B)
- Corrective action for each anomaly and regression test results (CDRL A00B)

Each system shall be optimized, as required, to ensure performance in accordance with PWS Paragraph Section 6.0 and Attachment 1 - Site Locations and Coordinates, Link Technical Characteristics and Frequencies.

Test and acceptance shall be witnessed by a Government representative prior to Government acceptance. The Contractor shall coordinate with the COTR at least five business days prior to scheduled system test/acceptance test to permit effective scheduling.

4.5 Microwave and Ancillary Training Requirements.

The Contractor shall develop a tailored technical plan of instruction (POI) (CDRL A00D) for the installed microwave and ancillary station equipment. The Contractor shall provide training to GoM communications equipment technicians who will be required to configure, repair and maintain the microwave radio equipment and antenna systems. Training shall be provided for Level One Equipment Operators and Level Two Equipment and Network Troubleshooting and Maintenance technicians.

At a minimum the Contractor’s POI shall include, but is not limited to the following:

- Instruction on the installed microwave radios and ancillary station equipment
- Instruction on the installed ROIP bridging equipment and networks
- Instruction on the installed IP routing and Ethernet switching equipment and networks
- Instruction on performing preventive maintenance inspections and troubleshooting for the system (end-to-end)
- Quick reference guide for each technician trained

The Contractor shall provide training to the following number of personnel during the periods stated. The precise training time will be commensurate with the Contracting Officer-approved Contractor’s master schedule for system installation.

NUMBER OF PERSONNEL TO BE TRAINED PER MEXICAN STATE AND SSP

State	Base Period			Option Year 1			Option Year 2		
	M/W*	Cisco Equip	ACU 2000	M/W*	Cisco Equip	ACU 2000	M/W*	Cisco Equip	ACU 2000
[REDACTED]	2	2	2	1	1	1	1	1	1
[REDACTED]	2	2	2	1	1	1	1	1	1
[REDACTED]	2	2	2	1	1	1	1	1	1
[REDACTED]	2	2	2	1	1	1	1	1	1
[REDACTED]	2	2	2	1	1	1	1	1	1
[REDACTED]	2	2	2	1	1	1	1	1	1
TOTAL	12	12	12	6	6	6	6	6	6

* M/W = Microwave, antennas, and associated multiplexors, cabling, etc.

The USG requirement is that all Programs of Instruction (POI), quick reference guides (CDRL A00D), and training materials (CDRL A00D) that are to be used for training and operational use are intended as leave behind materials, including any PowerPoint training presentations. This includes vendor manuals that typically come with Commercial-Off-the-Shelf (COTS) purchases, such as 'how to' manuals and configuration guides.

All such documents shall be provided in Latin American Spanish and submitted to the COTR for approval.

The Contractor shall provide on-site training during the installation process, and provide formal classroom training at a Contractor provided training facilities in Mexico City.

The Contractor shall provide instructors who are fluent in Latin American Spanish, or provide interpreters.

4.6 Operations and Maintenance.

The Contractor shall develop and provide a post installation maintenance program plan (CDRL A00D) in Latin American Spanish.

The Contractor shall deliver system manuals (CDRL A00D) and user documentation (CDRL A00D) in Latin American Spanish. Additionally, the Contractor shall develop and deliver in Latin American Spanish a complete Information Guide (CDRL A00D) on how to initiate service requests in accordance with documented maintenance agreements.

The Contractor shall provide a one (1) year maintenance, warranty and licensing agreement on all equipment (hardware and software). Maintenance may include, but is not limited to the following:

- Hardware debug and repair and replacement
- Hardware upgrades
- Software revisions to correct faults, to improve performance or other attributes, or to adapt the product to a modified environment
- Manufacturer recommended maintenance on hardware

The maintenance agreement shall include the expedited shipment of replacement parts (e.g., Return Material Authorization (RMA), Return Item Shipment) as required to maintain the operational status of the communications systems. The Contractor shall manage all items returned for commercial warranty repair/replacement from the GoM. The Contractor shall provide warranty information with the delivered equipment to describe procedures to return an item for repair/replacement to the Contractor.

The Contractor shall pass-through to the GoM existing commercial warranties for parts, subassemblies and software furnished by the Contractor as part of the deliveries. There shall be no separate charge for this warranty. The warranty shall cover a continuous twelve (12) month period starting from the date of acceptance of delivery by the U.S. Government (USG).

All shipping costs from the GoM to the Contractor and, when repaired/replaced, back to the GoM shall be borne by the Contractor. The Contractor shall return to the GoM any items returned to them for repair or replacement within ten (10) business days of receiving of the item.

The Contractor shall pass-through to the GoM existing End User License Agreements (EULAs) or any other related licenses for any software that is a part of the system(s).

The Contractor shall provide a Maintenance Information Guide (CDRL A00D) for the system(s).

The Contractor shall provide 24x7 for 365 days a year access to phone help desk support (Level Three) in Latin American Spanish. The Contractor shall provide Level Four technical dispatch that will be on-site within eight hours to the GOM sites when determined by the GOM that the Level Three help desk support is insufficient.

4.7 Spare Parts Procurement Requirements

The Contractor shall provide and deliver the following spare parts to a site to be determined in Mexico for the microwave links:

ODU 300, 07GHz, T-R 0161MHz, HP, TX LOW	EAH-07-0161-xx1	13
ODU 300, 07GHz, T-R 0161MHz, HP, TX HIGH	EAH-07-0161-xx2	13
ECLIPSE, INTELLIGENT NODE UNIT, 2RU EXT, INCL. IDCE, FAN 2RU, NCCV2	EXX-000-202	13
RAC 4X UP TO 2XSTM-1, 256 QAM + XPIC	EXR-906-001	13
DAC 1X1550, 1XSTM1/OC3, SM OPTICAL	EXD-152-001	13
DAC GE , GIGABIT ETHERNET V3	EXD-181-001	13
NODE PROTECTION CARD	EXS-001	13

4.8 Option Year 1:

4.8.1 Option A: Maintenance and Warranty.

The Contractor shall provide a one (1) year maintenance, warranty and licensing agreement on all equipment (hardware and software). Maintenance may include, but is not limited to the following:

- Hardware debug and repair and replacement
- Hardware upgrades
- Software revisions to correct faults, to improve performance or other attributes, or to adapt the product to a modified environment
- Manufacturer recommended maintenance on hardware

The maintenance agreement shall include the expedited shipment of replacement parts (e.g., Return Material Authorization (RMA), Return Item Shipment) as required to

maintain the operational status of the communications systems. The Contractor shall manage all items returned for commercial warranty repair/replacement from the GoM. The Contractor shall provide warranty information with the delivered equipment to describe procedures to return an item for repair/replacement to the Contractor.

The Contractor shall pass-through to the GoM existing commercial warranties for parts, subassemblies and software furnished by the Contractor as part of the deliveries. There shall be no separate charge for this warranty. The warranty shall cover a continuous twelve (12) month period starting from the date of acceptance of delivery by the U.S. Government (USG).

All shipping costs from the GoM to the Contractor and, when repaired/replaced, back to the GoM shall be borne by the Contractor. The Contractor shall return to the GoM any items returned to them for repair or replacement within ten (10) business days of receiving of the item.

The Contractor shall pass-through to the GoM existing End User License Agreements (EULAs) or any other related licenses for any software that is a part of the system(s).

The Contractor shall provide a Maintenance Information Guide (CDRL A00D) for the system(s).

The Contractor shall provide 24x7 for 365 days a year access to phone help desk support (Level Three) in Latin American Spanish. The Contractor shall provide Level Four technical dispatch that will be on-site within eight hours to the GOM sites when determined by the GOM that the Level Three help desk support is insufficient.

4.8.2 Option B: Training Option.

The Contractor shall provide training to GoM communications equipment technicians who will be required to configure, repair and maintain the microwave radio equipment and antenna systems. Training shall be provided for Level One Equipment Operators and Level Two Equipment and Network Troubleshooting and Maintenance technicians.

At a minimum the Contractor's POI shall include, but is not limited to the following:

- Instruction on the installed microwave radios and ancillary station equipment
- Instruction on the installed ROIP bridging equipment and networks
- Instruction on the installed IP routing and Ethernet switching equipment and networks
- Instruction on performing preventive maintenance inspections and troubleshooting for the system (end-to-end)
- Quick reference guide for each technician trained

The Contractor shall provide training to the following number of personnel during the Option 1 period stated in the below table. The precise training time will be

commensurate with the Contracting Officer-approved Contractor's master schedule for system installation.

State	Option Year 1		
	M/W*	Cisco Equip	ACU 2000
[REDACTED]	1	1	1
[REDACTED]	1	1	1
[REDACTED]	1	1	1
[REDACTED]	1	1	1
[REDACTED]	1	1	1
[REDACTED]	1	1	1
TOTAL	6	6	6

4.9 Option Year 2:

4.9.1 Option A. Maintenance and Warranty.

The Contractor shall provide a one (1) year maintenance, warranty and licensing agreement on all equipment (hardware and software). Maintenance may include, but is not limited to the following:

- Hardware debug and repair and replacement
- Hardware upgrades
- Software revisions to correct faults, to improve performance or other attributes, or to adapt the product to a modified environment
- Manufacturer recommended maintenance on hardware

The maintenance agreement shall include the expedited shipment of replacement parts (e.g., Return Material Authorization (RMA), Return Item Shipment) as required to maintain the operational status of the communications systems. The Contractor shall manage all items returned for commercial warranty repair/replacement from the GoM. The Contractor shall provide warranty information with the delivered equipment to describe procedures to return an item for repair/replacement to the Contractor.

The Contractor shall pass-through to the GoM existing commercial warranties for parts, subassemblies and software furnished by the Contractor as part of the deliveries. There shall be no separate charge for this warranty. The warranty shall cover a continuous twelve (12) month period starting from the date of acceptance of delivery by the U.S. Government (USG).

All shipping costs from the GoM to the Contractor and, when repaired/replaced, back to the GoM shall be borne by the Contractor. The Contractor shall return to the GoM any items returned to them for repair or replacement within ten (10) business days of receiving of the item.

The Contractor shall pass-through to the GoM existing End User License Agreements (EULAs) or any other related licenses for any software that is a part of the system(s).

The Contractor shall provide a Maintenance Information Guide (CDRL A00D) for the system(s).

The Contractor shall provide 24x7 for 365 days a year access to phone help desk support (Level Three) in Latin American Spanish. The Contractor shall provide Level Four technical dispatch that will be on-site within eight hours to the GOM sites when determined by the GOM that the Level Three help desk support is insufficient.

4.9.2 Option B: Training

The Contractor shall provide training to GoM communications equipment technicians who will be required to configure, repair and maintain the microwave radio equipment and antenna systems. Training shall be provided for Level One Equipment Operators and Level Two Equipment and Network Troubleshooting and Maintenance technicians.

At a minimum the Contractor's POI shall include, but is not limited to the following:

- Instruction on the installed microwave radios and ancillary station equipment
- Instruction on the installed ROIP bridging equipment and networks
- Instruction on the installed IP routing and Ethernet switching equipment and networks
- Instruction on performing preventive maintenance inspections and troubleshooting for the system (end-to-end)
- Quick reference guide for each technician trained

The Contractor shall provide training to the following number of personnel during the Option 2 period stated in the below table. The precise training time will be commensurate with the Contracting Officer-approved Contractor's master schedule for system installation.

State	Option Year 2		
	M/W*	Cisco Equip	ACU 2000
[REDACTED]	1	1	1
[REDACTED]	1	1	1
[REDACTED]	1	1	1
[REDACTED]	1	1	1
[REDACTED]	1	1	1
[REDACTED]	1	1	1
TOTAL	6	6	6

5.0 WORK HOURS AND LOCATION.

The principal place of performance for this T/O shall be in [REDACTED]

[REDACTED] and Contractor chosen facilities. The Contractor may be required to provide labor hours in excess of 40 hours per work week to include holiday and weekends, and/or during irregular times and shifts based upon CNTPO operations and exercises.

Note that for T/O performance an average work week in the region requires up to 60 hours per week, which the Contractor shall be responsible for planning, resourcing and executing as directed by the Government.

6.0 TEMPORARY DUTY (TDY) TRAVEL.

The Contractor shall perform TDY non-local travel, as required in the performance of this T/O, as directed by the COTR. The Contractor shall provide the performance of this task order

[X] Outside the Continental United States (OCONUS)

Specific countries may include Mexico. **All travel required and approved under this T/O will be paid IAW the Basic Contract by reimbursement to the Contractor. Only required travel previously approved by the TM will be reimbursed under this T/O.**

7.0 GOVERNMENT FURNISHED EQUIPMENT OR MATERIAL (GFE/GFM).

The GoM shall provide the following list of material in support of this effort:

- Microwave link spectrum of 7125-8500 MHz
- Antenna towers of sufficient height and stability to close the microwave links
- Power, ventilation, and air conditioning (environmental control)
- Back-up power generation capabilities (e.g. generators)
- Facility space for racks
- On-site storage (during site preparation)
- Electrical grounding grid access
- Site security (provided by GoM) for the Contractors while performing installations and training
- Site intrusion and telemetry monitoring of any unmanned site (e.g. San Fernando relay)

The GoM shall provide transportation and life support (meals, lodging, MWR and security) for all students attending Contractor-provided training.

The GoM shall provide Contractors the required access for installation of equipment. The Mexican Federal Police shall provide site security for contractors and equipment during installation and training hours. Contractor’s access may be restricted due to operations requirements of the GOM.

8.0 SECURITY.

All work performed under this T/O shall be unclassified.

The Contractor shall treat the equipment installation locations and capabilities as sensitive information in accordance with the following Article: Protocol Between the Department of State of the United States of America and the Secretariat of Communications and Transportation of the United Mexican States Concerning the Use of Radio Frequencies by Certain Fixed Terrestrial Links Constituting a Cross Border Public Security Communications Networks Along the Common Boarder (Article VII, paragraph 1d.). See Attachment 3 for complete Protocol Agreement.

9.0 TASK ORDER DELIVERABLES.

10.1 Deliverable Table.

The following deliverables are required as set forth in the Basic Contract.

Name	CDRL #	#Copies*	Basic Contract Reference	Electronic Format	Due**
Master Schedule	A001	2	4.2.2	Microsoft Project	45 Days After Award
Contractor’s Progress Report	A002	2	4.2.2	Microsoft Word	Monthly
Management Plan	A00G	2	4.2.2	Microsoft Word	45 Days After Award
T/O Quality Control Plan	A005	2	4.2.2	Microsoft Word	30 Days After Award

*Copies are to be submitted electronically whenever possible. Recipients at a minimum should include the Contracting Officer’s Representative (COR) and Contracting Officer’s Technical Representative (COTR).

**Unless specified otherwise, number of calendar days after the effective date of this T/O.

10.2 The following deliverables are unique to this task order.

Name	CDRL #	#Copies*	Basic Contract	Electronic Format	Due**

			Reference		
Technical Report – Study/Services TO Specific Report Name: Tower Site Surveys	A00E	2	TO PWS Reference: 4.1	Microsoft Word	Due Date: 30 days after award
Test Procedures	A00A	2	4.3.1.5	Microsoft Word	Due Date: 30 days prior to testing start date
IV&V Test Plan	A00A	2	4.3.1.5	Microsoft Word	Due Date: 30 days prior to testing start date
Final Test Report and Anomalies	A00B	2	4.3.1.5	Microsoft Word	Due Date: 10 days after completion of testing
System and Network Topology Diagrams and/or Schematics	A00D	2	4.3.1.1	Microsoft Visio	Due Date: 10 days after completion of testing
Plan of Instruction	A00D	2	4.3.1.1	Microsoft Word	Due Date: 10 days after completion of testing
Quick reference guides	A00D	2	4.3.1.1	Microsoft Word	Due Date: 300 days after award
Post installation maintenance program plan	A00D	2	4.3.1.1	Microsoft Word	Due Date: 300 days after award
System manuals	A00D	2	4.3.1.1	Microsoft Word	Due Date: 300 days after

					award
User documentation	A00D	2	4.3.1.1	Microsoft Word	Due Date: 300 days after award
Information guide	A00D	2	4.3.1.1	Microsoft Word	Due Date: 300 days after award

*Copies are to be submitted electronically whenever possible. Recipients at a minimum should include the Contracting Officer's Representative (COR) and Contracting Officer's Technical Representative (COTR).

**Unless specified otherwise, number of calendar days after the effective date of this task order.

10.0 DATA REQUIREMENTS:

10.1 Tower Site Surveys (CDRL A00E).

The Contractor shall conduct site surveys in order to verify equipment/items required to satisfy the requirements for the ten (10) C4 and two (2) microwave relay facilities in Mexico that will correspond to the DHS Customs and Border Patrol (CBP) microwave facilities in the U.S. (see Attachment 1). The Mexico surveys shall include, but are not limited to, specific requirements for the cable hangers, antenna bolts, waveguides, hoisting grips, electrical power supply, uninterruptable power supply, telecommunications support, perimeter security, and maintenance shack.

10.2 Test Procedures (CDRL A00E).

The Contractor shall provide all Test Procedures for USG approval. The Contractor's test procedures shall cover all phases of testing of all installed equipment at the conclusion of installation and integration.

10.3 IV&V Test Plan (CDRL A00A).

The Contractor shall provide an independent approach to verification and validation testing (IV&V Test Plan) to the USG for approval. The Contractor's IV&V Test Plan shall document the approach and processes that will be used to ensure that an independent approach to the verification and validation is incorporated into the project from the beginning of the development through integration.

10.4 Final Test Report (CDRL A00B).

The Contractor shall provide a Final Test Report to the USG for approval. The Contractor's Final Test Report shall include, but is not limited to, the following information:

- Testing Goals

- Defect status by severity
- Defects per component and cause
- Defects redress/regression test results
- Release advice
- Risk analysis
- Recommendations

The project shall be granted formal completion after the USG-designated representative witnesses satisfactory completion of testing and resolution and successful mitigation of all defects has been accepted by the USG.

10.5 Master Schedule (CDRL A001).

The Contractor shall provide a Master Project Schedule for Government approval. The Contractor shall create, maintain and report the schedule in conjunction with the progress report after initial delivery. The schedule shall cover all phases of the project from kick off to task order close out. The Contractor's Master Schedule shall include; but not be limited to, the following information:

- Timeline for providing proposed staffing
- Timeline for site surveys
- Timeline for procurement of equipment
- Timeline for Installation and Integration
- Timeline for the development of the IV&V Test Plan and test procedures
- Timeline for system test and acceptance
- Timeline for training
- Repair Concept and turn around schedule
- Milestones for T/O deliverables
- Timeline for Full Operational Capability (FOC)

10.6 Contractor's Progress Report (CDRL A002).

A comprehensive progress report shall be delivered monthly to the COTR and COR. The report shall, at a minimum, contain an overall schedule, the current status of funding on the T/O, accomplishments completed, any potential problems, and any lessons learned. These reports shall be delivered in accordance with CDRL A002 Expenditure Report of the Basic Contract. These reports are due ten (10) business days from the end of the previous month.

10.7 Management Plan (CDRL A00G).

The Contractor shall provide a management plan that shall define a management system to plan and control this T/O effort. The management plan must delineate how the Contractor plans to accomplish the effort supporting the specific T/O, to include a breakout of Direct Productive Person Hours (DPPHs), travel, material, ODC, DBA Insurance, a milestone schedule, and a schedule for the planned expenditure of funds.

10.8 T/O Quality Control Plan (CDRL A005).

The Contractor shall provide a draft T/O Quality Control (QC) Plan with its response to the TORP. The final plan shall be provided within thirty 30 days after the date of the T/O award. At a minimum, the T/O QC Plan shall address the following:

- **QC Execution:** The plan shall not be cursory, but discuss specifically how the prime Contractor shall execute its QC responsibilities. The T/O QC Plan shall include a clearly defined QC process, key performance indicators, QC schedules and QC personnel, by name, to include those that will be performing sub-contractor oversight and oversight of activities in-theater. The plan shall address how QC trend analysis and tracking of corrective actions will accomplished. The T/O QC Plan shall discuss the prime's management activity that will provide oversight and involvement in the QC process. QC personnel should not be buried in the organization, but should have a direct line to upper management.
- **Reporting:** Monthly status reports shall specifically discuss QC activities over the reporting period and planned activities for the next period. Information shall specifically address WHO conducted the QC, WHEN was the QC executed, HOW was the QC executed and WHAT the findings and corrective actions were. Trends overtime shall be discussed.
- **Invoice Quality Control and Review:** The Contractor shall discuss how invoice reviews will be conducted, to include discussion on how the primes, sub-contractor and supplier supporting data will be reviewed for consistency with task order requirements and the Contractor's approach to execute the task order.

10.9 System and Network Topology Diagrams and/or Schematics (CDRL A00D).

The Contractor shall provide a System and Network Topology Diagram and Schematics for each installed site to the USG for approval.

10.10 Plan of Instruction (CDRL A00D).

The Contractor shall provide Plans of Instructions in Latin American Spanish to the USG for approval.

10.11 Quick Reference Guides (CDRL A00D).

The Contractor shall provide quick reference guides in Latin American Spanish for all installed microwave link sites to the USG for approval.

10.12 Post Installation Maintenance Program Plan (CDRL A00D).

The Contractor shall provide a Post Installation Maintenance Program Plan for each microwave link site in Latin American Spanish to the USG for approval.

10.13 System Manuals (CDRL A00D).

The Contractor shall provide a Systems Manual for each microwave link site in Latin American Spanish to the USG for approval.

10.14 User Documentation (CDRL A00D).

The Contractor shall provide user documentation for each microwave link site in Latin American Spanish to the USG for approval.

10.15 Information Guide (CDRL A00D).

The Contractor shall provide an Information Guide for each microwave link site in Latin American Spanish to the USG for approval.