

**U.S. Department of Homeland Security  
U.S. Customs and Border Protection  
Office of Air and Marine**



**Statement of Work (SOW)  
for the  
U.S. Customs and Border Protection  
Unmanned Aircraft System (UAS)  
for Contract # HSBP1010C00026  
“QuickBuy”**

**7 December, 2010**

## Change History

Version Number	Date	Description
Version 1.0	21 April 2010	As published as part of Contract #: HSBP1010C00026, 27May 2010
Version 1.1	1 November 2010	Submitted as part of GACP 8101-0006 CBP MARIT, Ver. 3, ECP
Version 1.2	7 December 2010	Modified for terms reached for ECP and the delivery of CBP159

7 December 2010

## **Statement of Work UAS Single Aircraft Procurement**

### **1.0 SCOPE**

This Statement of Work (SOW) describes the Contractor's requirements to produce, test and deliver various components of an Unmanned Aircraft Systems (UAS) in accordance with the United States Customs and Border Protection (CBP) Office of Air and Marine (OAM) UAS Performance Specification. This effort shall include the production, testing and delivery of UAS aircraft, communications systems, mission payloads, support systems, spares and data as detailed in this SOW and as detailed in delivery orders provided hereunder.

### **1.1 BACKGROUND**

CBP OAM has operational requirements for UAS to provide long duration, long range strategic and tactical surveillance and intelligence gathering capability across a broad range of mission scenarios and environments along and across the land and maritime borders of the United States. The UAS will have a mission flexibility provided by a variety of sensors with potential for technological growth. UAS operations are currently for use in surveillance missions to confirm intrusions reported day and night by ground sensors along the Southwest Border. The UAS shall be integrated with the Office of the Border Patrol (OBP) ground responders and CBP OAM air operations units for interdiction and apprehension operations. New operations will include other Department of Homeland Security (DHS) missions to secure our borders against terrorists, means of terrorism, illegal drugs, and other illegal activities to include support for the maritime borders in the North, Southeast and the West, as well as planned support in the source and transit zones. Additionally, UAS shall be used to help locate lost and/or injured personnel and to assist search and rescue teams in recovery operations.

### **1.2 GENERAL DESCRIPTIONS OF THE MAJOR UAS COMPONENTS**

- a) Unmanned Aircraft (UA) - The unmanned aircraft is the airborne element of the UAS and carries the payloads and embedded airborne communication suite.
- b) Payload - The payloads are self-contained elements that are designed to accomplish specific missions. The UA shall simultaneously carry an EO/IR sensor, the airborne communications suite and the synthetic aperture radars (SAR). Alternate or additional payloads may be introduced as the scope of the UAS mission is further refined.
- c) Link Segment - The UAS Link Segment consists of hardware and software necessary to transmit and receive data between the GCS / and the UA. The link segment shall include equipment to transmit and receive data when the aircraft is within LOS and beyond LOS of the controlling GCS.
- d) Ground Control Station (GCS) - contains the hardware and software for the following tasks: mission planning; aircraft & payload command and control; receiving, recording and dissemination of data; and the equipment necessary for required communications.

### 1.3 PURPOSE

Procure a single UAS platform with a complement of sensors to support Customs and Border Protection, Office of Air and Marine as outlined in this SOW.

Per the CBP Contracting Officer notification letter dated 3 December 2010 (see Attachment 1 of this SOW), CBP has accepted a change to the configuration for the unmanned aircraft (UA) delivered under Contract #: HSBP1010C00026. The details of the configuration are contained in the GA-ASI Engineering Change Proposal, GACP 8101-0006 CBP MARIT, Version. 3/4.

### 2.0 APPLICABLE DOCUMENTS

The following documents shall be used as general guides and criteria in the performance of the requirements set forth in this SOW. The applicable issue of the following documents, unless otherwise specified, shall be the version that is in effect on the date of this SOW.

#### 2.1 CBP AIR AND MARINE UAS SPECIFICATION

The specification for the performance of UAS baseline configuration items is Performance Specification for the CBP Air and Marine Unmanned Aircraft System (UAS), Version 2.4 dated March 10, 2010. Any equipment shall provide, as a minimum, the performance specified in this document, as applicable. For the purpose of this SOW, equipment baseline is defined as the configuration in aircraft CBP125 and ground control station CBP3003.

As documented in the Contracting Officer letter in attachment 1 of this SOW, CBP accepts the configuration changes to the UA. Due to the timing of this ECP approval, the Performance Specification (version 2.4) has not been updated to reflect these changes. The UA delivered under this contract will have the new part number UHS97000-7 and be described as a Predator B Guardian Aircraft. The unmanned aircraft configuration as defined in Attachment 1 shall be compatible with the SeaVue radar and MTS-B camera system (SN:1005) currently installed in CBP113.

#### 2.2 INDUSTRY AND MILITARY STANDARDS

Since this SOW does not require strict adherence to federal aviation administration (FAA) regulations or military specifications governing hardware, testing, technical data, handbooks or other practices associated with standard equipment design, the following documents shall be used as general guides in the performance of the requirements set forth herein. The applicable issue of these documents, unless otherwise specified, shall be that version which is in effect on the date of this statement of work.

COTS items shall, at a minimum, comply with the version of commercial industry standard DO160, produced by the Radio Technical Commission for Aeronautics (RTCA) that was current at the time an item was initially produced. For newly developed items, the version current at the time of contract award shall apply. The requirement to comply with RTCA/DO-160 is waived for items qualified in accordance with a comparable MILSPEC or MILSTD.

ASTM F 2411-04      Standard Specification for Design and Performance of an Airborne Sense-and-Avoid System

MIL-STD-461      Electromagnetic Emission and Susceptibility Requirements for the Control of Electromagnetic Interference

MIL-STD-464      Electromagnetic Environmental Effects Requirements for Systems

MIL-STD-882D      DOD, Standard Practice for System Safety (Feb 2000)

MIL-STD-1686C Electrostatic Discharge Control Program for Protection of Electrical and Electronic Parts, Assemblies and Equipment (excluding electrically initiated explosive devices)

MIL-STD-7179 Finishes, Coatings and Sealants for the Protection of Aerospace Weapons Systems

MIL-STD-810F Environmental Engineering Considerations and Laboratory Tests

NATO STANAG 4586 Standard Interfaces of the Unmanned Control System (UCS) for NATO UAV Interoperability

14 CFR SEC 91.215 Pitot Static System, Altitude Reporting Equipment and ATC Transponder use, certification and testing

### **3.0 GENERAL REQUIREMENTS**

The work to be performed is comprised of tasks and subtasks as outlined below necessary to comply with this SOW. No changes to this SOW or cost increases shall be incurred without written prior approval of the Contracting Officer (CO) as coordinated by the Program Manager (PM) for Unmanned Air Systems (UAS) Acquisition and the Contracting Officer's Technical Representative (COTR).

#### **3.1 UNMANNED AIRCRAFT SYSTEM**

The Contractor shall produce a Predator B Guardian Unmanned Aircraft at the Contractor's facility, 14115 Stowe Drive, San Diego, CA 92064, to include unmanned aircraft, communication system, mission payloads, and data as detailed in this SOW. The UAS systems, equipments, subsystems, components and parts shall be designed and developed to meet the requirements of the Performance Specification for the CBP Air and Marine Unmanned Aircraft System (UAS), Version 2.4 dated 10 March 2010.

As documented in the Contracting Officer letter in attachment 1 of this SOW, CBP accepts the configuration change to the UA. Due to the timing of this ECP approval, the Performance Specification (version 2.4) has not been updated to reflect these changes. The unmanned aircraft configuration as defined in Attachment 1 shall be compatible with the SeaVue radar and EO/IR camera system (SN:1005) currently installed in CBP113.

All production and structural modifications and installations shall be accomplished in accordance with the Contractor's technical drawings and documents provided for that purpose.

The Contractor shall be responsible for procuring and safeguarding all material and subassemblies, less the Government Furnished Equipment (GFE) and Government Furnished Property (GFP), necessary to perform the modifications.

The Contractor shall also be responsible for procuring any tooling, test equipment and contractor-furnished equipment (CFE) necessary for ensuring completion as outlined by this SOW. To reduce costs and enhance equipment availability and support, the Contractor shall utilize "commercial-off-the-shelf" equipment to the maximum extent possible.

The Contractor shall also provide additional UAS components, equipments and data as required throughout the contract period.

### 3.2 PROJECT MANAGEMENT, TECHNICAL AND SUPPORT REQUIREMENTS

The Contractor shall provide program, technical, manufacturing, and engineering liaison management. The Contractor shall assign a Program Manager (PM) who will have the authority and responsibility for the overall management, and performance and resource aspects of this contract. The PM shall be the main point of contact (POC) to interface with the Government and associate Contractors.

The Contractor shall effectively and efficiently manage the effort in this contract and associated subcontracts in order for the UAS Program to achieve its objectives and mission requirements on time. The Contractor shall perform program planning and control, manage and track program cost, schedule and overall performance to bring the program to successful completion. The Contractor shall report the current status to include addressing any required actions, issues, risk assessments and associated mitigation plans or recommendations in the UAS Program in the monthly Contract Data Requirements List (CDRL) Program Manager's Report (UAS10001).

The Contractor shall develop and maintain a Master Program Schedule (MPS) CDRL (UAS10002) within 45 days of contract award. The MPS shall include a logical and efficient sequence of events designed to accomplish the tasks described in this contract. The MPS shall include program delivery schedule, milestones and any directed Program Management Reviews or Design Reviews. The MPS shall present a networked schedule with critical paths identified for aircraft, payload, and the following GSE or spares;

- a) Embedded GPS/INS, H-764 8091-186  
Honeywell International P/N SCD00632-6
- b) Interim Modem Assembly (IMA), CL0833901  
L3 Communications West P/N 60043426+000
- c) Propeller Assembly, 3 Blade MN0925301  
McCaughey Propeller Systems P/NSCD00335
- d) Receiver-Transmitter, ARC-210, RT-1851  
Rockwell Collins Inc P/N P0976
- e) Receiver-Transmitter, ARC-210, RT-1851(C)  
Rockwell Collins Inc P/N 822-1707-001
- f) Receiver-Transmitter, Wulfsberg RT-5000  
Wulfsberg P/N P05977
- g) Digital Radar Receiver Transmitter  
Raytheon Company P/N 4079100-0502

The MPS shall be updated to reflect current and true program status and changes shall be incorporated into the monthly Program Manager's Report after initial submittal. In addition, the Contractor shall notify CBP OAM UAS Program Office and Contracting Officer Technical Representative (COTR) of any schedule delays within five (5) working days of determining a delay. The Contractor shall accept contract direction only from the CBP OAM Contracting Officer (CO) or an ACO designated by the CBP CO for specific areas of contract responsibility. Daily technical and programmatic issues shall be coordinated with the UAS Program Office and COTR for resolution or referral to the CO.

### **3.3 PROGRAM MANAGEMENT**

The Contractor shall exercise all technical direction and control of the design, production, integration, engineering, and testing effort required in accomplishing the tasks associated with this SOW. This includes the necessary Project/Program Management and the support and technical efforts directly associated with UAS configuration control, data development, systems engineering, test, and logistical planning requirements.

### **3.4 LIAISON ENGINEERING**

The Contractor shall provide Engineering Liaison with production operations and with subcontractors. This liaison requirement covers those stages of procurement, fabrication, assembly and installation, and testing specified by this SOW.

### **3.5 QUALITY**

The Contractor will maintain a quality system, in accordance with the most current ISO 9001 "Quality Systems - Model for Quality Assurance in Design, Development, Production, Installation, and Servicing", for the general aircraft and for production of electronic systems. All discrepancies reported by the Government shall be corrected prior to Government acceptance.

The kits required for converting a baseline Predator B into a Guardian configuration are not finalized to a production standard. Pre-Production Engineering Build Business Practices are acceptable.

### **3.6 SECURITY**

The Contractor shall be responsible for complying with the security requirements as stipulated by the "Contract Security Classification Specification" (Form DD 254). From time to time, a requirement for additional security clearances or security checks may be placed on the Contractor. CBP shall provide guidance regarding the scope of any such investigation requirement.

The Contractor shall be responsible for compliance by its employees with the security regulations of CBP (and host DOD installations) where work is performed under this contract, including the safekeeping, wearing and visibility of badges if so required.

The Contractor shall be responsible for safeguarding data and protecting against loss or theft of equipment, property, and supplies used in connection with the performance of work under this contract. The fabrication, modification, receipt or storage of classified hardware, data or material require the Contractor to establish and provide an Operations Security (OPSEC) Program as detailed in Department of Homeland Security Management Directive 11060.1, dated 9/25/2006. The OPSEC Program shall demonstrate the Contractor's comprehensive process incorporating the principles and practices of OPSEC into its organization. OPSEC operations require a SECRET Facility Clearance and SECRET Level of Safeguarding Clearance.

The Contractor shall maintain a Communication Security (COMSEC) Account to enable crewmembers to communicate on all civilian and military frequencies in a secure manner by way of applicable encryption processes. COMSEC operations require a SECRET Facility Clearance and SECRET Level of Safeguarding Clearance.

### **3.7 DATA DEVELOPMENT AND DOCUMENTATION SERVICES**

The Contractor shall develop / update data related to the UAS documentation packages as required to reflect any changes made to the equipment (hardware and software) baseline. Documents may include specifications, equipment lists, operator manuals, maintenance publications, drawing packages, and integrated support plans. The Contractor shall update existing documents and/or develop new documents as directed by the COTR. Further guidance is provided in Section 5.2 of this SOW.

### 3.10 PRODUCTION PROGRESS REPORTS

The Contractor shall develop a detailed program schedule identifying production/program progress, including task and milestone accomplishment. Milestone/tasks identified hereunder may be identified as part of the Master Program Schedule (MPS). The Contractor shall submit these monthly production progress reports to the Government as part of the monthly Program Manager's Report (UAS10001). The monthly production progress report shall include a schedule that provides the status of each task and reflects any task that is impacting a critical path.

### 4.0 SAFETY

The Contractor shall implement and identify a system safety and environmental protection program for the UAS and shall ensure that safety and environmental protection considerations are integral parts of the systems engineering, manufacturing and production efforts. Mil-Std 882D shall be used as guidance for the implementation, performance and reporting of the contractor's safety program required hereunder.

### 5.0 DELIVERABLES AND SCHEDULE

#### 5.1 EQUIPMENT

The Contractor shall deliver equipment on or before the outlined timeframes below. The equipment shall be packaged and forward shipped to the destination specified upon contract award.

Nomenclature	Part Number	Quantity	Delivery Date
UAS – Air Vehicle	P/N UHS97000-7	01	8 Months ARO
EO/IR – MTSB	4980990-2	01	16 Months ARO
EO/IR – MTSB	4980990-2	01	18 Months ARO
Synthetic Aperture Radar - Lynx	LNXD 20000-006	01	14 Months ARO
Shipping Container	UHK91100-1	01	4 Months ARO
Shipping Container (Propeller)	UHK91101-1	01	4 Months ARO
Spares	Lot	01	30 DARO-18 MARO
GSE	Lot	01	30 DARO-18 MARO
GSE	Lot	01	30 DARO-18 MARO
Data	Lot	01	TBD

#### 5.1.1 UAS-Air Vehicle

The UA to be delivered, shall be configured as a Predator B Guardian Aircraft (UHS97000-7). The UA shall include the following mod kits to convert the UA from a USAF UHS97000-10:

- a) Centerline Hardpoints Mod Kit (UHK16076-1) to allow for installation of the Radar Pod developed for the Maritime Variant Predator B (Guardian) to support the Raytheon Radar.
- b) Laser Altimeter Mod Kit (UHK16018-1)
- c) Wing Tip Mod Kit, MQ-9 (UHK16033-1)
- d) SeaVue Radar Maritime Mod Kit, MQ-9 (UHK16127-1)
- e) Avionics, Maritime Mod Kit, MQ-9 (UHK16131-1)
- f) Structural, Maritime MQ-9 Mod Kit (UHK16132-1)
- g) Cables, Maritime, MQ-9 Mod Kit (UHK16133-1)
- h) and other parts not specifically listed in these kits that are required to produce a UA with the same operability as CBP113.

readable when installed. Terminal strips shall be readily identified and marked on permanent parts of the equipment.

### **3.9 PROGRAM REVIEWS**

The Contractor shall be responsible for preparing and conducting program reviews as mutually agreed to by the Government and the Contractor. These may include, but are not be limited to Program Management Reviews (PMRs), Design Reviews, Technical Program Reviews (TPR) and other ad hoc meetings. The Contractor shall develop and submit Meeting Agendas proposed agenda for the Contractor's portion of the program reviews at least one week prior to the review (CDRL UAS10003) detailing the topics to be discussed along with the associated schedules and location, the participants and the program status. In addition, the Contractor shall develop and submit Meetings Minutes (CDRL UAS10004) and action items of the Contractor's portion of the program reviews to the CO for approval within two weeks after the review, capturing the discussions, issues, risk assessments, and the action items assigned to the appropriate point of contact. The Program Reviews shall provide the COTR and UAS Program Management with the information necessary to assess the progress and performance of the Contractor with respect to the requirements stated herein. Program reviews are not part of the firm fixed price contract.

#### **3.9.1 Program Management Reviews**

The Contractor shall support Program Management Reviews (PMRs) as directed by the Government. The timing, location and content will be mutually agreed to by the Government and the Contractor. During the PMR, the Contractor shall present the plans for accomplishing program milestones and activities and program status to include production and delivery status, engineering, technical and contractual activities.

The Contractor shall provide the facilities, materials, office equipment, clerical personnel, technical data, and subcontractor participation as applicable, unless otherwise stated. The Contractor shall submit an agenda for each meeting with the concurrence of the Government. The Contractor shall also provide the meeting minutes, a summary of action items and presentation materials. Program Management Reviews are not part of the firm fixed price contract.

#### **3.9.2 Design Reviews**

When a significant update or diversion from the baseline configuration is proposed by the Contractor or the Government for hardware delivered under the contract associated with this SOW; the Contractor may be directed by the Government to support a design review. For the purpose of this section; a significant update or diversion from the baseline (CBP125 and GCS3003) is defined as an alteration to the UAS systems that significantly modifies the propulsion systems, aerodynamic properties, or overall mission capability. The timing, location and content of the design review will be mutually agreed to by the Government and the Contractor. Depending on the complexity of the change, the design review may be scheduled before or after the Government acceptance of the Configuration Change Control Request (CCCR) (CDRL UAS10005). As a minimum, the Contractor shall present the following: technical design concepts, methodology and results for planned or completed testing, expected or known impact / compatibility to hardware or software currently in UAS baseline systems.

The Contractor shall provide a copy of the proposed agenda for the Contractor's portion of the design review at least one week prior to the review. The minutes and action items of the Contractor's portion of the design review to the CO for approval within two weeks after the review. The COTR may determine that the design review can be held electronically/telephonically. In this case, the Contractor shall be prepared to present the design information as directed by the COTR. At the discretion of the Government, additional design reviews may be scheduled if deemed necessary. Design reviews are not part of the firm fixed price contract.

### 5.1.9 Shipping

The contractor shall ship items purchased under this contract to the destination identified in this SOW. However, the contractor shall be flexible to accommodate requests from the COTR to ship items to other destinations due to operational requirements at the time of the intended shipment with a mutually agreed to cost adjustment.

The contractor shall deliver these items as follows:

CLIN 0001 - Predator B Aircraft (UHS97000-7)  
F.O.B. Contractor Facility  
GA-ASI Gray Butte  
25500 East Avenue R-8  
Palmdale, CA 93591

CLIN 0002 - MTS-B (TU 49800990-2 / HD EU 6631302-1)  
Shipping location to be provided. The contractor shall request delivery instructions from the COTR 30 days prior to delivery date.

CLIN 0003 - Lynx SAR Block 20 (LNXD 20000-006)  
Shipping location to be provided. The contractor shall request delivery instructions from the COTR 30 days prior to delivery date.

CLIN 0004 - Aircraft Shipping Container (UHK91100-1)  
F.O.B. Contractor Facility  
GA-ASI Gray Butte  
25500 East Avenue R-8  
Palmdale, CA 93591

CLIN 0005 - Propeller Shipping Container (UHK91101-1)  
F.O.B. Contractor Facility  
GA-ASI Gray Butte  
25500 East Avenue R-8  
Palmdale, CA 93591

CLIN 0006 - Spares (WBS 500)  
Cape Canaveral Air Force Station  
14680 Earth Station Road  
Bldg 1611  
Cocoa Beach, FL 32925

CLIN 0007 - North Dakota Ground Support Equipment (WBS 600)  
CBP OAM UAS Flight Operations Center  
543 Eielson Street Bldg. 541  
Suite 216  
Grand Forks, AFB, ND 58205

Also to be delivered as part of the UA shall be the following critical spares for the Predator B Guardian UA:

Part number	Quantity	Description
P07485	2	Router, Parvus, MAR-1000-03
P07713	1	3.6kVA Static Inverter
UHS13050-1	1	PACM
UHK13380-1	1	2.8kW PSU
P07708	1	AIS Transponder
67600010-1-1	1	Generator Backup 4kw Low Cap Engine (PMA)
UHS13040-1	1	Dual 3-phase Relay Assembly

These spare parts are included in the pricing of the UA. The delivery times of these parts are not specifically tied to the delivery of the UA, but all parts shall be delivered within 12 months after the modification of the contract for the engineering change proposal (ECP).

#### 5.1.2 EO/IR – MTS-B

The MTS-B to be delivered hereunder shall be the advanced CBP Guardian version of the MTS-B with High Definition Electronics Unit Configuration (P/N TU 49800990-2/HD EU 6631302-1).

#### 5.1.3 Synthetic Aperture Radar - Lynx

The Synthetic Aperture Radar/Ground Moving Target Indicator (SAR/GMTI) – Lynx to be provided hereunder shall be a Lynx Block 20 payload system (LNXD 20000-006). This radar shall be capable of operating all the radar modes available in the Block 20 radars currently operated by CBP/OAM for near all-weather, day/night reconnaissance and surveillance.

#### 5.1.4 Aircraft Shipping Container

The Aircraft Shipping Container (UHK91100-1) to be delivered hereunder is Serial #07-0023 which has been used by CBP/OAM on a loaner basis. It shall be modified with a Caster Wheel Modification installed.

#### 5.1.5 Propeller Shipping Container

The Propeller Shipping Container (UHK91101-1) to be delivered hereunder is Serial #0022 which has been used by CBP/OAM on a loaner basis.

#### 5.1.6 Spares

The Spares to be provided hereunder shall be as identified in Work Breakdown Structure (WBS) 500, Spares. These items shall be delivered to the UAS Operation Center at Cape Canaveral AFS, FL.

#### 5.1.7 Ground Support Equipment

The Ground Support Equipment (GSE) to be provided hereunder shall be as identified in Work Breakdown Structure (WBS) 600, North Dakota, GSE. These items shall be delivered to the UAS Operation Center, Grand Forks AFB, ND

#### 5.1.8 Ground Support Equipment

The Ground Support Equipment (GSE) to be provided hereunder shall be as identified in Work Breakdown Structure (WBS) 700, South Eastern Border, Aircraft, GSE and WBS 700, South Eastern Border, GSE, (FHU) Aircraft. These items shall be delivered to the UAS Operation Center at Cape Canaveral AFS, FL.

requirements as stipulated in the referenced UAS Performance Specification. The Test Plan shall be delivered in accordance with CDRL (UAS10006). The Test Report shall be delivered in accordance with CDRL (UAS10007).

#### **7.4 RESPONSIBILITIES FOR ACCEPTANCE TESTING**

The purpose of this section is to delineate the responsibilities of the Contractor and the Government during the acceptance testing of the UAS components delivered under the contract associated with this SOW.

##### **7.4.1 Contractor Requirements Prior to Final Acceptance Testing Procedures (ATP)**

- a) The Contractor should submit the ATP test plan procedures or changes to the existing procedures to the Government thirty (30) days prior to the initiation of the ATP in accordance with CDRL (UAS1006).
- b) Prior to the commencement of the Government witnessed ATP, the Contractor shall perform the types of testing listed below to ensure adherence to applicable specifications and compliance with contractual requirements.
  - i. Suitability of the UAS for flight operations.
  - ii. Maintenance functional/operational flight/systems tests.
  - iii. Communication tests including data transfer functions, both external and internal.
  - iv. Navigation systems tests.
  - v. Autopilot and flight control system tests.
  - vi. EO/IR and radar functional tests.
  - vii. Data handling and display system tests.
- c) When requested by the Government, the Contractor shall make available the results and / or quick-look reports of testing accomplished prior to the ATP. The Government may waive certain procedures from the ATP based on the results of testing accomplished by the Contractor prior to final acceptance testing. The Government reserves the right to witness all Contractor testing and shall make the sole determination of when procedures from the ATP are waived.
- d) The Contractor shall be responsible for preparing UAS components for ground and flight ATP conducted at the Contractor's facility at Gray Butte CA, or at another site specified by the government, with a mutually agreed to cost adjustment.

##### **7.4.2 Contractor Requirements During and After the Final Acceptance Testing**

- a) The Contractor shall perform and complete the ATP in sufficient time to meet the contractual delivery date of the item to the Government.
- b) The Contractor shall perform ATP in accordance with engineering test procedures, maintenance procedures, or published operator checklists.
- c) The Contractor shall provide facilities, testing equipment and required ground support equipment for the ATP conducted at the Contractor facilities. Government owned equipment and / or GFE may be required to accomplish ATP.
- d) The Contractor shall provide test conductors, maintenance personnel, and flight crew to accomplish ATP. If available, Government personnel may supplement Contractor personnel.

CLIN 0008 - Southeastern Border Ground Support Equipment (WBS 700)  
Cape Canaveral Air Force Station  
14680 Earth Station Road  
Bldg 1611  
CCAFS  
Cocoa Beach, FL 32925

CLIN 0010 – Shipping Charges.  
The shipping charges shall not exceed the funding allocated for CLIN 0010.

## **5.2 DOCUMENTATION**

As referenced in Section 3.5, the Contractor shall provide copies of the documents listed below. Copies of the data shall be delivered in accordance with the CDRLs. Contractor documentation submitted to the Government in an electronic format shall be compatible with Adobe Acrobat or Microsoft Office. The documents are deliverables under the contract and shall be delivered as specified in Attachment (A). Updates shall be included as part of the tasking for updated documentation described below:

- a) Monthly Program Managers Report with Master Program Schedule
- b) Meeting Agendas and Minutes (as required)
- c) Test Plans
- d) Test Reports
- e) Configuration Change Control Request and Lists

## **6.0 NOT USED**

N/A

## **7.0 TESTING**

### **7.1 TEST OBJECTIVES**

The purpose of the testing is to evaluate the UAS against the Performance Specification and contractual requirements that address system operation and functionality. The UAS shall be tested in accordance with applicable commercial procedures/practices as normally performed in preparation for, and in the execution of a functional/operational check flight. The ground tests and functional/operational check flight shall include all test procedures required to ensure safety of flight and demonstrate that the system conforms to specifications.

### **7.2 SCOPE OF TESTS**

The testing shall include ground acceptance tests, flight acceptance tests, performance evaluations, and inspections by both the Contractor and the Government. Testing shall be performed on all UAS deliveries to include systems integration and upgrades. The Contractor shall perform sufficient testing to demonstrate proper installation and operation of all air vehicle systems to include external systems and their interfaces. Contractor functional/operational flight/systems testing shall be conducted prior to Government final acceptance at the Contractor's facility or upon delivery as so designated. Contractor tests shall exercise and verify the functionality and operation of individual systems, as well as the total integrated UAS. Contractor testing shall ensure that individual components properly interface with each other to perform the UAS mission as defined in the referenced Performance Specification.

### **7.3 UAS TEST PLANS AND PROCEDURES**

The Contractor shall provide an Acceptance Test Plan for performance determination of all major UAS subcomponents delivered under the contract associated with this SOW. The test plan shall include minimum parameters that are guaranteed by the Contractor in order to meet CBP performance

## **7.6 TEST DATA EVALUATION**

The Government shall have sole responsibility for final evaluation of all test data. The Contractor shall provide clarification assistance relating to test data as requested.

## **8.0 GENERAL INFORMATION**

### **8.1 CONTRACT TYPE**

This contract will be a hybrid of firm fixed price and a time and materials (T&M) contract. The hardware will be manufactured, procured and tested under the firm fixed price for CLINs 0001-0008. Actual shipping and delivery charges shall be reimbursed under the T&M portion of the contract under CLIN 0010.

### **8.2 PERIOD OF PERFORMANCE**

The period of performance for this contract will be twenty-four (24) months from date of award.

### **8.3 PLACE OF PERFORMANCE**

The place of performance shall be at one of the Contractor's facilities.

### **8.4 GOVERNMENT FURNISHED EQUIPMENT / SERVICES**

- a) SAT Tracker
- b) KU Time and Support
- c) MTS-B
- d) Lynx SAR
- e) CBP Compatible GCS for testing
- f) RVT
- g) Raytheon SeaVue Radar
- h) DY4 Redundant Control Module

### **8.5 WARRANTY**

Not applicable.

## **9.0 Special Considerations**

### **9.1 PAYMENT SECTION**

All invoicing by the contractor shall be clearly identified by the related task. Billing for products delivered shall be submitted at the end of each month.

### **9.2 SCOPE CHANGES**

No changes to this SOW or cost increases shall be incurred without written prior approval of the Contracting Officer.

### **9.3 TRAVEL**

Contractor personnel will be required to travel in order to accomplish tasks stipulated in this SOW. The Contractor shall coordinate all travel not included in the firm fixed price with the COTR. Additional travel expenses as a result of Acceptance Testing requiring support at multiple sites is not part of the firm fixed price. Travel will be reimbursed in accordance with the Federal Travel Regulations and the contract associated with this SOW. Travel in support of the contract will be identified in the Program Manager's Report (UAS10001).

- e) The Contractor shall be responsible for identifying any technical testing support required from external suppliers. Technical support may include assistance with the testing and/or include troubleshooting assistance in the event of a discrepancy discovered during testing. Any required technical support from CFE suppliers shall be the responsibility of the Contractor.
- f) The Contractor shall provide the Government copies of all completed ATP paperwork within 30 calendar days after completion of ATP in accordance with CDRL (UAS10007).

#### **7.4.3 Government Test Requirements Prior to Final Acceptance Testing Procedures (ATP)**

- a) The Government should review and approve the Contractor Acceptance Test Plan (ATP) 10 days prior to the commencement of testing for UAS systems or upgrades.
- b) The Government will supply witnesses and observers to support ATP scheduling.
- c) The Government will coordinate availability of GFE for the purpose of completing ATP test requirements.

#### **7.4.4 Government Test Requirements During and After Final Acceptance Testing Procedures (ATP)**

- a) The Government shall perform the following inspections and assessments as a basis for determining satisfactory completion of ATP for UAS components delivered under the contract associated with this SOW:
  - i. Observe and / or review Contractor testing and reports
  - ii. Evaluate results of Contractor tests and identify any deficiencies
  - iii. Assess impact of deficiencies and propose mitigation for completion of ATP
  - iv. Review Contractor production and quality assurance (QA) inspection documentation
  - v. Conduct, observe and document physical inventory of subcomponents
  - vi. Inventory and inspect documentation delivered with subcomponents
  - vii. Inspect and retain UAS logbooks (as applicable)
- b) Certify completed ATP procedures. In the event that the Government is unable to provide the necessary Government Furnished Equipment to perform the complete "Acceptance Test Procedures", an ATP will be conducted to the greatest extent possible. The CBP Contracting Officer shall authorize a conditional acceptance. The Contractor shall warrant the correction of any deficiencies on the components and systems that have not completed testing for up to 90 days after conditional acceptance at no additional charge to the Government. During this conditional period, payments will only be withheld to cover the estimated cost and related profit to correct deficiencies and complete unfinished work identified during completed acceptance testing.
- c) Final acceptance testing will be scheduled as soon as the deficiencies are corrected, unfinished work is completed, and GFE is available.
- d) After determining that UAS components have met all requirements set forth in the contract associated with this SOW, the Government shall certify the DD-250 for the components delivered for each CLIN.

#### **7.5 TEST CRITERIA**

Hardware and software shall be tested to the functional and performance criteria contained in the Performance Specification (Version 2.4 dated 10 March 2010), operation manuals and checklists, and appropriate maintenance manuals.

**9.4 POINTS OF CONTACT**

All contract questions and concerns shall be directed to the point of contact as designated below. The Contracting Officer is the only individual with the authority to amend this contract.

Program Manager for UAS Acquisition:

(b) (6)

Customs and Border Protection  
Office of Air and Marine

(b) (6)

Contracting Officer's Technical Representative (COTR):

(b) (6)

Customs and Border Protection  
Office of Air and Marine

(b) (6)

UAS Chief Engineer

(b) (6)

Customs and Border Protection  
Office of Air and Marine

(b) (6)

Contracting Officer (CO):

(b) (6)

Customs and Border Protection

(b) (6)

**Attachment 1: ECP Negotiation Letter**

U.S. Department of Homeland Security  
Washington, DC 20518



U.S. Customs and  
Border Protection

**(b) (4), (b) (5), (b) (6)**

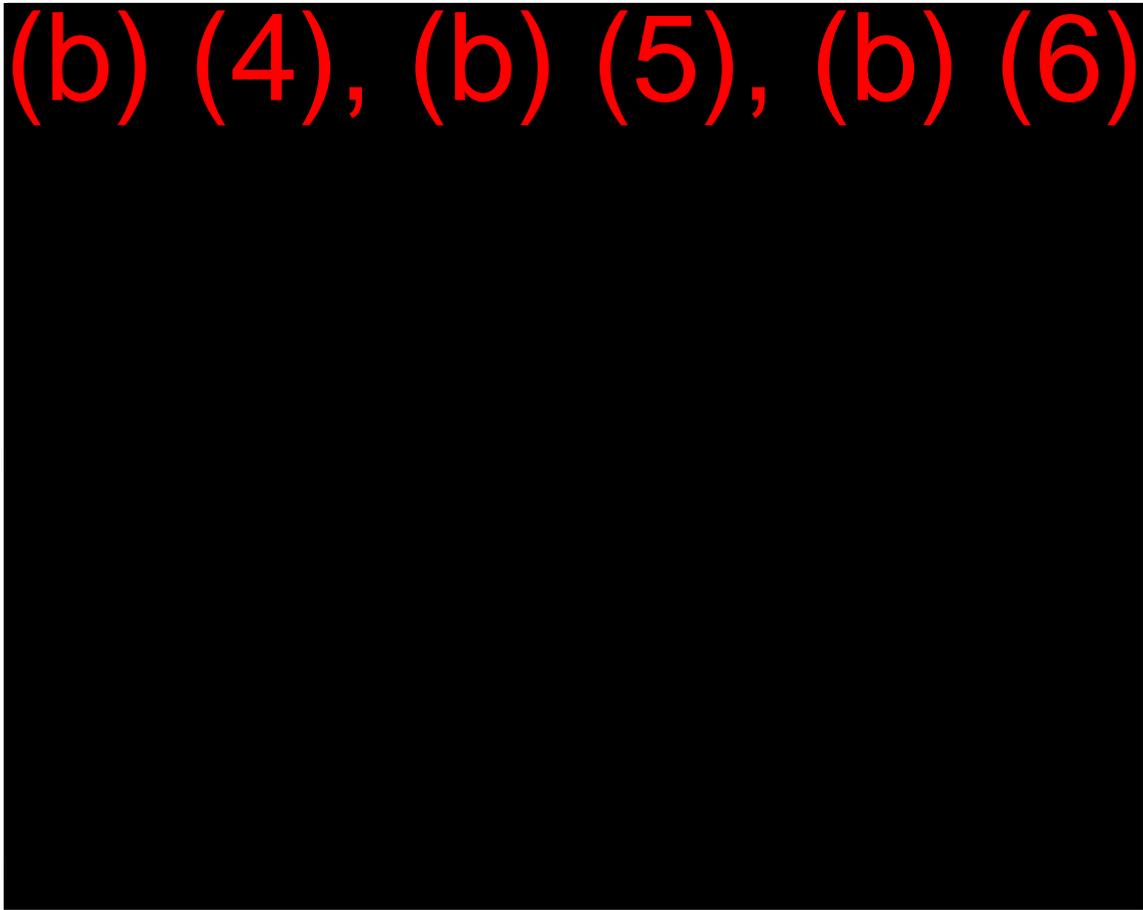


**(b) (4), (b) (5), (b) (6)**



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**(b) (4), (b) (5), (b) (6)**



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7 December 2010

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