

<b>AWARD/CONTRACT</b>		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)		RATING	PAGE OF PAGES 1   60	
2. CONTRACT (Proc. Inst. Ident.) NO. N68936-08-C-0002		3. EFFECTIVE DATE 28 Jan 2008		4. REQUISITION/PURCHASE REQUEST/PROJECT NO. SEE SCHEDULE		
5. ISSUED BY CDR NAWCWD CODE 210000D ATTN: S. LAMBERT (760) 939-7652 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108		CODE N68936	6. ADMINISTERED BY (If other than Item 5) DCMA DCMA INDIANAPOLIS 8869 EAST 56TH STREET INDIANAPOLIS IN 46249-5701		CODE S1501A	SCD: C
7. NAME AND ADDRESS OF CONTRACTOR (No., street, city, county, state and zip code) ENGINE RESEARCH ASSOCIATES INC JEFF ERICKSON 12108 BURNINGTREE RD FORT WAYNE IN 46845-8919			8. DELIVERY [ ] FOB ORIGIN [X] OTHER (See below)		9. DISCOUNT FOR PROMPT PAYMENT	
CODE 0C2H4			FACILITY CODE		10. SUBMIT INVOICES 1 (4 copies unless otherwise specified) TO THE ADDRESS SHOWN IN:	ITEM <b>Section G</b>
11. SHIP TO/MARK FOR COMMANDER, NAWCWD LAWRENCE E. JOHN CODE 476100D 1 ADMINISTRATION CIRCLE CHINA LAKE CA 93555-6100		CODE N60530	12. PAYMENT WILL BE MADE BY DFAS - COLUMBUS CENTER NORTH ENTITLEMENT OPERATIONS PO BOX 182286 COLUMBUS OH 43218-2286		CODE HQ0337	
13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: [ ] 10 U.S.C. 2304(c)( ) [ ] 41 U.S.C. 253(c)( )			14. ACCOUNTING AND APPROPRIATION DATA <b>See Schedule</b>			
15A. ITEM NO.	15B. SUPPLIES/ SERVICES	15C. QUANTITY	15D. UNIT	15E. UNIT PRICE	15F. AMOUNT	
<b>SEE SCHEDULE</b>						
<b>15G. TOTAL AMOUNT OF CONTRACT</b>					<b>\$149,603.00</b>	
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<b>CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE</b>						
17. [X] CONTRACTOR'S NEGOTIATED AGREEMENT Contractor is required to sign this document and return <u>      </u> copies to issuing office. Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)			18. [ ] AWARD (Contractor is not required to sign this document.) Your offer on Solicitation Number <u>      </u> including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) this award/contract. No further contractual document is necessary.			
19A. NAME AND TITLE OF SIGNER (Type or print)			20A. NAME AND TITLE OF CONTRACTING OFFICER COLETTE C NALLEY / PROCURING CONTRACTING OFFICER TEL: (760) 939-2983 EMAIL: colette.nalley@navy.mil			
19B. NAME OF CONTRACTOR BY _____ (Signature of person authorized to sign)		19C. DATE SIGNED	20B. UNITED STATES OF AMERICA BY  (Signature of Contracting Officer)		20C. DATE SIGNED 28-Jan-2008	

Section A - Solicitation/Contract Form

CLAUSES INCORPORATED BY FULL TEXT

**FOR YOUR INFORMATION:**

The following addresses and points of contact are provided:

**CONTRACTING OFFICER:**

Name: Colette Nalley  
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**CONTRACT SPECIALIST:**

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CHINA LAKE, CA 93555-6108

**ATTENTION-IMPORTANT MODIFICATION NUMBERING INFORMATION:**

Bilateral Modifications issued by the Department of Defense agencies are no longer assigned an official "P0000" number until the contracting officer has released/signed the modification. This change is a result of the Defense Finance and Accounting Service (DFAS) Business Management Modernization Program (BMMP) requirement that modifications are to be released in numerical order without skipping any "P0000" numbers.

To accommodate this change the Standard Procurement System (SPS) now assigns a unique Modification Control Number (MCN) to each modification when it is created. The MCN was established for contractors to track the approved version of the modification. This number, unique to the modification, is included on both the draft modification and the released/signed modification. The MCN can be found in Block 14 of all modifications. The use of the MCNs ensures DFAS only receives modifications in numerical order

Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	UE-UAV Heavy Fuel Engine(ERA) - PHASE I CPFF The contractor shall develop the MCC engine and alternator components and perform engine analysis, modeling and preliminary testing on smaller MCC prototypes and production engines in accordance with the Statement of Work contained in Section C. THE CONTRACTOR SHALL NOT PROCEED TO ADDITIONAL PHASES WITHOUT THE WRITTEN AUTHORIZATION OF THE CONTRACTING OFFICER. PURCHASE REQUEST NUMBER: 1300057553		Lot		
				ESTIMATED COST	
				FIXED FEE	
				TOTAL EST COST + FEE	_____ ( ) \$149,603.00

b(4)

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
000101	For Navy Accounting Purposes Only CPFF For Navy Accounting Purposes Only FOB: Destination PURCHASE REQUEST NUMBER: 1300097624		Lite		
	ACRN AA CIN: 130009762400001				\$149,603.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
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0002

Contract Data Requirements Listing

The contractor shall furnish data in accordance with Exhibit A, DD1423.

NSP

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
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0003

EU-UAV Heavy Fuel Engine

CPFF

PHASES 2 and 3 – To be determined by contract modification. The additional phases may require additional CLINs. The contractor shall perform work in accordance with Section C, Statement of Work. **THE CONTRACTOR SHALL NOT PROCEED TO ADDITIONAL PHASES WITHOUT THE WRITTEN AUTHORIZATION OF THE CONTRACTING OFFICER**

FOB: Destination

## Section C - Descriptions and Specifications

STATEMENT OF WORK

This program will be performed under a Cost Plus Fixed Fee contract. Phase 1 will be a four month program, the Phase 2 Option will be a five month program and the Phase 3 Option will be a fifteen month program.

ERA and its subcontractors will perform research and development as described in this SOW to develop a propulsion system capable of efficiently running on heavy fuels. The propulsion system shall be defined as all the components, sub-components and auxiliary equipment necessary to operate the engine except for electrical power conditioning equipment, the fuel, fuel supply reservoir, fuel tubing from the reservoir to the fuel pump or fuel manifold and fuel tank heater. The propulsion system will have the capability to meet the following goals:

1. Provide an engine that is able to run on JP-5, JP-8, and Diesel.
2. Demonstrate a nominal 9.0 ( $\pm 0.5$  shp) maximum shaft horsepower to a propeller at wide-open-throttle at sea level.
3. Demonstrate the ability to continuously provide 5.0 shaft horsepower ( $\pm 0.5$  shp) to a propeller at sea level for simulated cruise conditions. The RPM range will be approximately 1200 to 4500.
4. Demonstrate the ability to continuously provide 0.75kw of AC power during all engine operations. The power generation equipment is part of this program and part of the propulsion system definition; however, the power conditioning equipment is not.
5. Demonstrate a brake specific fuel consumption (BSFC)  $\leq 0.50$  lbm/hour/brake (shaft + electrical generation) horsepower at simulated cruise power.
6. Demonstrate the ability to operate 100 hours without an overhaul using throttle excursions that mimic flight profiles. The throttle profiles will be provided at a later date. Regularly scheduled maintenance will be performed during this test.
7. Demonstrate the ability to start at 0°F and be able to achieve 100% RPM within 3 minutes without stalls or hesitations. An external, portable power unit will be produced and used for operating the fuel and/or engine heaters and starting the engine.
8. Demonstrate a propulsion system weight that is no greater than 20 pounds excluding the propeller.
9. Only utilize materials suitable for the corrosive environment of shipboard operations.
10. Conform to the aircraft interface specifications that will be provided before contract start.
11. Demonstrate operation in flight onboard a government provided UAV that will be provided before contract start that verifies the ground tested performance of Parts 1, 2, 3, 4, 5, and 6.
12. Demonstrate the ability to meet the objectives listed below:
  - a. Low signatures (with propeller operating at cruise RPM):
    - Inaudible to human hearing from 1,500 ft AGL during standard wilderness nighttime background noise level.
    - Exhaust is not to be detectable by normal human sight at all ranges.
  - b. Minimize vibrations to reduce adverse affects on the airframe and sensors.

ERA will develop a plan that shows eventual achievement of the objectives listed below (CDRL A001):

1. Weight  $\leq 20$  lbs for entire propulsion system excluding the propeller.
2. Minimize total ownership cost (purchase + operational [excluding fuel] + maintenance costs) in \$ per run hour.
3. Engine Reliability, Durability, & Life:
  - i. Engine Failure: minimum 5,000 hours mean time between failures (MTBF).
  - ii. Engine Life: minimum 200 hours.
  - iii. Engine Overhaul: minimum 100 hours mean time between overhauls (MTBO).
4. Maximize integrability (i.e., minimize propulsion system volume [excluding propeller], provide for easy installation and removal, provide for easy installation in other platforms)
5. Operability (to be demonstrated in Goals Part 7):
  - i. Ability to launch after starting at 100% RPM within 3 minutes or less.

- ii. No stalls during cold start.
- iii. No stalls during acceleration.
- iv. Cold weather starting aids may be utilized as long as no fuel additives are used.
- 6. Ease of starting (to be demonstrated in Goals Part 7):
  - i. Minimal support or starting equipment.
  - ii. Minimal manpower.
  - iii. Minimal operator procedures.
  - iv. Starting can be accomplished with a power starter or by hand.
  - v. No in-flight restarting will be necessary.
- 7. Conform to the environmental operating conditions as described below:
  - i. Ability to start from 0°F through 120°F. To be demonstrated in Goals Part 7.
  - ii. Ability to operate from -50°F through 130°F.
  - iii. Ability to be corrosion resistant during shipboard operations. To be demonstrated in Goals Part 9.

ERA will subcontract some of the testing and computational work for this program to ( ) ( ) will have an experimental component and a computational component within the scope of work they will be performing. For the experimental component of the work, ERA will provide the engines, and make the modifications required to optimize the engines. The objective of the experimental work is to test the different prototypes of the engine and determine if they meet the specific performance goals of the program. The computational component of the work will be closely coupled with the experimental component. There will be two primary objectives for the computational work. First, the computations will be employed to understand the experimental results and provide insight into the controlling physics in the engines. Second, the computations will be employed to reduce the number of cut-and-try experiments required to optimize the engine. The computations will provide the guidance in selecting designs and operating conditions for experimentation and prototype development.

( ) computational component will employ multidimensional models for the engines, coupled with one-dimensional and zero-dimensional analysis when appropriate. The work during Phase 1 will focus on one-dimensional and zero-dimensional analysis. In Phase 2, a limited number of multidimensional simulations will be performed. In Phase 3, a significant part of the computational effort will involve multidimensional computations. These computations will be of individual components and the whole system. Prior to employing the models for optimization studies, they will be validated through comparisons of computed and measured data from prior tests with the MCC engine. The REC (Reciprocating/Rotary Engine Combustion) code which has been used extensively over a period of twenty years in the optimization and design of rotary, spark-ignition, and diesel engines will be employed for this work. Cold start issues will also be considered as part of the computational study.

The following is a description of the major tasks by phase that will be performed as part of this program. Please refer to the "Project Schedule and Milestones" section for schedule information (CDRL A009).

**Phase I** of this program is planned for four months. A project kick off meeting will be held with the COTR, ERA, ( ) to review Phase 1 goals and finalize the project tasks, schedule and budget. ERA and ( ) will develop the MCC engine and alternator components in parallel. ERA will work with ( ) to perform engine analysis, modeling and preliminary testing on smaller MCC prototypes and production engines. ERA will be using existing MCC engines as a starting point to prove the basic approach and to obtain experimental engine scaling data. This is the least cost and fastest path to completing the required analysis in Phase 1. The following is a break down of the major tasks that will be completed in Phase 1:

#### **Task 1 - MCC Engine Prototype Analysis and Design**

- 1.1 Use existing MCC internal combustion components (Center Power Block, CCM and Orbiting Piston) to perform static thermal heat transfer tests. Determine conductive heat flow in all components and configurations of the present MCC engines to analytically model the new baseline design.
- 1.2 Work with ( ) to perform experimental bench testing on existing MCC prototype to develop accurate data models.

- 1.3 Work with ( ) to perform analytical and computational studies of fuel delivery strategies and chamber designs to optimize the current baseline design. ( ) will use one-dimensional and zero-dimensional analysis in Phase 1.
- 1.4 Use analytic methods to determine the heat mass transfer that will be taking place during the operation of ( ) as well as in the supercharging chamber, primary combustion chamber and secondary expansion chamber. b(4)
- 1.5 Use analytic methods to determine the heat mass transfer that will be taking place in the gases between the primary combustion chamber and secondary expansion chamber during warmed up operation. Use this analysis to maximize BSFC and minimize emission of unburned fuel components.
- 1.6 Scale up existing MCC engine design to a 280 cc displacement (9.0 HP).
- 1.7 Complete design calculations of engine internal stresses and thermal conditions.
- 1.8 Design ( ) for orbiting piston and CCM.
- 1.9 Analyze and determine the optimal amount of internal supercharging.
- 1.10 Analyze and determine the optimal compression ratio to run on JP-5, JP-8 and Diesel.
- 1.11 Prepare and deliver baseline design, preliminary analysis, performance estimates and supporting data (CDRLs A002, A003, A004, A00B, A00C).
- 1.12 End-of-Phase Review (CDRL A00A)

### **Task 2 - Auxiliary MCC Engine Component Design**

- 2.1 Compare benefits and risks of electronically controlled carburetion verses electronic fuel injection for achieving a BSFC  $\leq 0.50$  lbm/hour/brake (CDRL A00D).
- 2.2 Design baseline air/fuel system (carburetor or injector) that will vaporize the heavy fuel sufficiently to allow cold start capabilities.
- 2.3 Design a lightweight and portable power unit for starting the engine. This power pack will be used to ( ) and turn the engine's ( ) Determine the power requirements and batteries that will be used for fuel and/or ( ) alternator. b(4)
- 2.4 Design and integrate ignition and engine timing system.
- 2.5 ( )
- 2.6 Determine cooling requirements and cooling method for the P-SIDE engine in a pusher Application. Pusher applications do not get the cooling effect of the propeller wash when the UAV is at idle or taxiing on the runway. The airflow in flight is from the back of the engine to the front of the engine. The front bearings may need additional cooling or lubrication to insure good durability.

### **Task 3 - ( ) Alternator and Electronic Controls Analysis and Design**

- 3.1 Design and performance model the alternator for minimum weight with maximum fuel economy at cruise while providing 0.75 kW output (A00B).
- 3.2 Trade off the potential weight savings of DC output verses AC output. Work with COTR to select the output type AC or DC and optimum voltage.
- 3.3 ( ) Determine the additional weight required to use the alternator ( )
- 3.4 Develop the proprietary electronic alternator control and interface to the engine control.
- 3.5 Design electronic interface and control for using external power unit for starting the engine using the ( )
- 3.6 Determine the interface requirements to the UAV's power conditioning equipment.
- 3.7 Determine cooling requirements and cooling method for 0.75 kW power system.
- 3.8 Perform bench testing of existing alternator components to confirm design will achieve 0.75 kW and ( )
- 3.9 Prepare and deliver baseline design, preliminary analysis, performance estimates and supporting data.

**Phase 2** is planned for five months. The analysis and testing of existing prototypes will continue in this phase to refine and optimize the design and provide supporting data of our propulsion systems capabilities. The following is a break down of the major tasks that will be completed in the Phase 2 Option:

**Task 4 - Refine MCC Engine Prototype Design (CDRL A00B)**

- b(4)
- 4.1 Update risk mitigation tasks (A00D).
  - 4.2 Work with ( ) to continue experimental bench testing on existing MCC prototype.
  - 4.3 Work with ( ) to continue analytical and computational studies of fuel delivery strategies and chamber designs to refine the baseline design from Phase 1. ( ) will use multidimensional simulations in Phase 2.
  - 4.4 Perform analysis of the supercharging chamber and the primary combustion chamber to determine design variations that would allow operation at higher altitudes.
  - 4.5 Study the lubrication and sealing effect of heavy fuels to determine need for oil injection or sump type lubrication system and design the system if needed. ERA will also determine the best hard coatings for all the wear surfaces.
  - 4.6 The thrust motion from the propeller in pusher type UAV airplanes can cause excess wear on the engine front or rear power blocks. Analysis will be performed to provide the required bearing support to prevent problems due to this thrust motion.
  - 4.7 Design engine and alternator mounting assembly. Provide for easy installation and removal of the propulsion system within the UAV.
  - 4.8 Design engine for operation in adverse environments including rain, dust and salt water spray. Use materials that are suitable for the corrosive environment of shipboard operations.
  - 4.9 Determine the types of sensors required to provide data to the electronic controls. Sensors are needed to monitor: RPM, Temperatures, Pressure, etc.
  - 4.10 Model the heat transfer of the CCM hot connecting bar and CCM to assist with heavy fuel combustion and ensure bar does not overheat and cause thermal damage.
  - 4.11 Complete analysis of operational capabilities from -50° F to 130° F. Determine if exhaust heat or onboard heater could be used to maintain engine block temperature in extremely cold conditions. Determine cooling requirements and methods for operation at 130° F.
  - 4.12 Do final analysis to insure that all components will fit and operate properly, not only dimensionally but from a stress analysis, load-bearing standpoint under static and dynamic conditions.
  - 4.13 Insure the design minimizes vibration, harmonics and mechanical noise to keep operational noise to a minimum.
  - 4.14 Design engine for operation in adverse environments including rain, dust and salt water spray. Use materials that are suitable for the corrosive environment of shipboard operations.
  - 4.15 Perform preliminary testing and determine design issues such as component compatibility problems, performance problems, durability problems and etc. (CDRLs A004, A00C)
  - 4.16 Complete engine testing of smaller units at ( ) to optimize design and obtain baseline performance data.
  - 4.17 Optimize ignition system and port timing.
  - 4.18 Prepare an updated CAD design drawing package of all major components and overall system configuration of the propulsion system (CDRL A003).
  - 4.19 Prepare and deliver updated design, analysis, performance estimates and supporting data (CDRL A002).
  - 4.20 End-of-Phase Review (CDRL A002)
- b(4)

### **Task 5 - Refine Design of ( ) Alternator and Electronic Controls**

- 5.1 Design power system for operation in adverse environments including rain, dust and salt water spray. Use materials that are suitable for the corrosive environment of shipboard operations. Unit needs to be able to operate in 0° to 120° F.
- 5.2 Perform additional bench testing of existing alternator components to confirm design will meet power and weight requirements.
- 5.3 Continue performance modeling of the alternator using the revised MCC engine RPM and power ranges.
- 5.4 Refine the design of the alternator and ( )
- 5.5 Complete baseline design of the proprietary electronic alternator control and interface to the engine control.
- 5.6 Complete the baseline design of the electronic interface and control for using external power unit for starting the engine using the ( ) This control will switch the unit from start mode to generation mode.
- 5.7 Finalize the design for interfacing to the UAV's power conditioning equipment.
- 5.8 Prepare and deliver revised baseline design, preliminary analysis, performance estimates and supporting data.

**Phase 3** is planned for 15 months. Early in this Phase the designs for the Engine, Alternator, electronic controls and all auxiliary components will be finalized and the first prototypes will be fabricated. Once the units are ready for testing they will be tested at ERA. ( ) is a recognized engine testing facility, see more details about ( ) in the "Experience" section of this proposal. The ( ) will be used to supplement the testing done by ( ) ( ) does not have all the testing capabilities that may be required for this program. ( ) also has academic time constraints that could impact the availability of test cells on occasion. All testing will be coordinated by ERA to allow confirmation of results while minimizing duplication of effort. Once the first set of tests are completed on the first prototype propulsion system, then ERA and ( ) will work together to analyze the test results to determine the refinements that are needed in the designs. Once the design is optimized and any major mechanical problems are resolved then two more prototypes will be fabricated. This will provide three prototypes to allow different testing to be performed and to allow different refinements to be made to each engine. Durability testing will also be performed on at least one of the engines. The testing will continue at ( ) in parallel. After each test cycle is completed, analysis of the results will be completed and appropriate modifications will be performed on the prototypes. These testing and refinement cycles will be performed multiple times to optimize the engine as much as possible within the time frame of Phase 3. The best prototype will be selected for ground testing and flight testing towards the end of Phase 3. The following is a break down of the major tasks that will be completed in the Phase 3 Option:

### **Task 6 - Complete Testing and Finalize Designs**

- 6.1 Update risk mitigation tasks (CDRL A00D).
- 6.2 Complete any required testing and analysis that is needed to finalize the engine and alternator prototype designs (CDRLs A002, A004).
- 6.3 Optimize engine design and alternator design to incorporate improvements that were determined from all previous testing and analysis.
- 6.4 Prepare a complete CAD design drawing package of a fully integrated power system. The package will include all the genset components including the alternator, ( ) electronics, frame, MCC engine and unit assembly drawings (CDRLs A00B, A003).
- 6.5 Complete design of electronic control unit for the engine and air/fuel management system. This control will need to interface to the alternator's control and to the UAV. This control will use sensor feedback to automate the engine starting and warm-up process and provide optimized control of the air/fuel system, ignition system and throttle.
- 6.6 Detailed Design Review (CDRL A00E)

**Task 7 - Fabricate Prototype**

- 7.1 Fabricate the P-SIDE MCC engine components.
- 7.2 Fabricate alternator components.
- 7.3 Fabricate electronic controls.
- 7.4 Assemble all sub-assemblies. Integrate engine with alternator and electronic systems and complete preliminary testing.
- 7.5 Fabricate portable power unit for ( ) and starting the engine.

**Task 8 - Lab Testing and Refinements (CDRLs A003, A004, A00C)**

- 8.1 Test starting system and lubrication system.
- 8.2 Test complete propulsion system at ( ) to optimize performance.
- 8.3 Work with ( ) to perform lab testing followed by multidimensional computations. These computations will be of individual components and the whole system. Prior to employing the models for optimization studies, they will be validated through comparisons of computed and measured data from prior tests with the MCC engine.
- 8.4 ( ) will perform experimental and computational analysis on several MCC designs, fuel delivery systems and overall system performance. Heat flux measurements and modeling will also be part of Phase 3. They will also do analysis on cold start issues.
- 8.5 ( ) will perform lab testing on MCC engines as follows:
  - Dynamometer engine tests will be carried out at wide-open throttle conditions with the engine, using JP-5, JP-8 and Diesel fuels. The objective will be to demonstrate a peak nominal output of 9.0 (+/- 0.5) shaft horsepower (SHP).
  - The engine tests with the three fuels will also be carried out to demonstrate 5.0 (+/- 0.5) SHP at cruise conditions in the speed range of 2500-5000 rpm.
  - Fuel flow rates will be measured at all conditions to determine brake specific fuel consumption (BSFC) values. The target BSFC is less than 0.5 lbm/bhp-hr.
  - Analytical and computational studies of fuel delivery strategies and chamber designs with the objective of achieving reliable operation, and maximizing peak and cruise SHP and minimizing BSFC. Studies to optimize port and ignition timing, select the optimum compression ratio, and determine heat fluxes will also be carried out.
  - To access the MCC engine's capability to meet specific operational profiles.
- 8.6 Fabricate additional prototypes and include in testing.
- 8.7 ( ) will perform dynamometer testing, exhaust emissions testing and durability testing.
- 8.8 ( ) will perform engine and alternator testing by performing throttle excursions that mimic flight profiles. This testing will include tests to validate the propulsion system can be started and ready for full power operation in 3 minutes or less.
- 8.9 Determine how to simulate cold starting and operation in extreme temperatures. Perform this simulated testing if it can be accommodated by the ( ).
- 8.10 Evaluate engine for internal wear, galling and signs of over heating problems.
- 8.11 Perform noise level testing and obtain maximum temperature readings of the exhaust and the hottest parts of the engine. Make improvements to minimize induction noise, exhaust suck back noise and mechanical noise in the propulsion system.
- 8.12 After each test cycle is completed, analysis of the results will be completed and appropriate modifications will be completed on the prototype engines and alternators, this process will be repeated as needed to optimize the prototypes.

b(4)

**Task 9 - Final Refinements, Government Testing and Delivery (CDRLs A006, A007)**

- 9.1 Make final improvements to the propulsion system. Prepare the best prototype for government testing.
- 9.2 Work with COTR to prepare for evaluation testing of the flight prototype propulsion system at a Government facility (CDRL A00E).
- 9.3 Test Readiness Review - Ground Testing
- 9.4 Assist with ground testing of the flight prototype propulsion system. This includes travel to the facility for ERA and subcontractor personnel for 3 - 4 days.
- 9.5 Test Results Review - Ground Testing
- 9.6 Install propulsion system in government provided UAV and deliver flight-capable prototype system to the government for testing.
- 9.7 Test Readiness Review - UAV Flight Testing
- 9.8 Assist with completing flight testing in a government provided UAV at government testing facility. This includes travel to the facility for ERA and subcontractor personnel for 4 - 5 days.
- 9.9 Test Results Review - UAV Flight Testing
- 9.10 Determine production components, materials, coatings and create a complete bill of materials list.
- 9.11 Estimate total cost of ownership of complete propulsion system including production costs and maintenance costs (CDRL A005).
- 9.12 Complete initial production fabrication drawings, assembly drawings, operator's guide and maintenance guide.
- 9.13 Create prototype manufacturing plan.
- 9.14 End-of-Phase Review (CDRL A00A)
- 9.15 Create final report CDRL A008).

## Section D - Packaging and Marking

## CLAUSES INCORPORATED BY FULL TEXT

**5252.247-9507 PACKAGING AND MARKING OF REPORTS (NAVAIR) (OCT 2005)**

(a) All unclassified data shall be prepared for shipment in accordance with best commercial practice. Classified reports, data and documentation, if any, shall be prepared for shipment in accordance with the National Industry Security Program Operating Manual, DoD 5220.22-M.

(b) The contractor shall prominently display on the cover of each report the following information:

- (1) Name and business address of contractor.
- (2) Contract Number/Delivery/Task order number.
- (3) Contract/Delivery/Task order dollar amount.
- (4) Whether the contract was competitively or non-competitively awarded.
- (5) Name of sponsoring individual.
- (6) Name and address of requiring activity.

## CLAUSES INCORPORATED BY FULL TEXT

**5252.247-9508 PROHIBITED PACKING MATERIALS (NAVAIR) (JUN 1998)**

The use of asbestos, excelsior, newspaper or shredded paper (all types including waxed paper, computer paper and similar hydroscopic or non-neutral material) is prohibited. In addition, loose fill polystyrene is prohibited for shipboard use.

**5252.247-9514 TECHNICAL DATA PACKING INSTRUCTIONS (NAVAIR) (SEP 1999)**

Technical Data and Information shall be packed and packaged for domestic shipment in accordance with best commercial practices. The package or envelope should be clearly marked with any special markings specified in this contract (or delivery/task order), e.g., Contract Number, CLIN, Device No., and document title must be on the outside of the package. Classified reports, data and documentation, if applicable, shall be prepared for shipment in accordance with Defense Industrial Manual for Safeguarding Classified Information, DoD 5220.22M.

Section E - Inspection and Acceptance

**INSPECTION AND ACCEPTANCE TERMS**

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0001	DESTINATION	GOVERNMENT	DESTINATION	GOVERNMENT
000101	N/A	N/A	N/A	Government
0002	DESTINATION	GOVERNMENT	DESTINATION	GOVERNMENT
0003	DESTINATION	GOVERNMENT	DESTINATION	GOVERNMENT

**CLAUSES INCORPORATED BY REFERENCE**

52.246-8	Inspection Of Research And Development Cost Reimbursement	MAY 2001
252.246-7000	Material Inspection And Receiving Report	MAR 2003

**CLAUSES INCORPORATED BY FULL TEXT**

**5252.246-9514 INSPECTION AND ACCEPTANCE OF TECHNICAL DATA AND INFORMATION (NAVAIR) (FEB 1995)**

Inspection and acceptance of technical data and information will be performed by the Procuring Contracting Officer (PCO) or his duly authorized representative. Inspection of technical data and information will be performed by ensuring successful completion of the requirements set forth in the DD Form 1423, Contract Data Requirements List (CDRL) and incorporation/resolution of Government review comments on the data items. Acceptance will be evidenced by execution of an unconditional DD Form 250, Material Inspection and Receiving Report, as appropriate.

## Section F - Deliveries or Performance

## DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
0001	POP 28-JAN-2008 TO 27-MAY-2008	N/A	COMMANDER, NAWCWD LAWRENCE E. JOHN CODE 476100D 1 ADMINISTRATION CIRCLE CHINA LAKE CA 93555-6100 (760) 939-8202 FOB: Destination	N60530
000101	POP 23-JAN-2008 TO 31-DEC-2008	N/A	N/A FOB: Destination	
0002	N/A	N/A	N/A	N/A
0003	N/A	N/A	N/A	N/A

## CLAUSES INCORPORATED BY REFERENCE

52.242-15 Alt 1	Stop-Work Order (Aug 1989) - Alternate I	APR 1984
52.242-17	Government Delay Of Work	APR 1984
52.247-34	F.O.B. Destination	NOV 1991

## CLAUSES INCORPORATED BY FULL TEXT

**5252.247-9505 TECHNICAL DATA AND INFORMATION (NAVAIR) (FEB 1995)**

Technical Data and Information shall be delivered in accordance with the requirements of the Contract Data Requirements List, DD Form 1423, Exhibit A, attached hereto, and the following:

(a) The contractor shall concurrently deliver technical data and information per DD Form 1423, Blocks 12 and 13 (date of first/subsequent submission) to all activities listed in Block 14 of the DD Form 1423 (distribution and addresses) for each item. Complete addresses for the abbreviations in Block 14 are shown in paragraph (g) below. Additionally, the technical data shall be delivered to the following cognizant codes, who are listed in Block 6 of the DD Form 1423.

- (1) PCO, Code 210000D.
- (2) Technical Point of Contact, Code 476100D.

(b) Partial delivery of data is not acceptable unless specifically authorized on the DD Form 1423, or unless approved in writing by the PCO.

(c) The Government review period provided on the DD Form 1423 for each item commences upon receipt of all required data by the technical activity designated in Block 6.

(d) A copy of all other correspondence addressed to the Contracting Officer relating to data item requirements (i.e., status of delivery) shall also be provided to the codes reflected above and the technical activity responsible for the data item per Block 6, if not one of the activities listed above.

(e) The PCO reserves the right to issue unilateral modifications to change the destination codes and addresses for all technical data and information at no additional cost to the Government.

(f) Unless otherwise specified in writing, rejected data items shall be resubmitted within thirty (30) days after receipt of notice of rejection.

(g) DD Form 1423, Block 14 Mailing Addresses:

**CONTRACTING OFFICER:**

Name: Colette Nalley  
Phone: (760) 939- 2983  
DSN: 437-2983  
FAX: (760) 939- 4241  
Email address: colette.navy@navy.mil

U.S. Postal Service Mailing Address:

COMMANDER  
CODE 210000D (S. LAMBERT – 760-939-7652)  
NAVAIRWARCENWPNDIV  
429 E. BOWEN RD. MAIL STOP 4015  
CHINA LAKE, CA 93555-6108

Direct Delivery Address (UPS, FedEx, etc):

COMMANDER  
CODE 210000D (C. NALLEY)  
NAVAIRWARCENWPNDIV  
BLDG 982, MAIL STOP 4015  
CHINA LAKE, CA 93555-610

**TECHNICAL POINT OF CONTACT:**

Name: Larry John  
Phone: (760) 939-82002  
DSN: 437-8202  
Email address: lawrence.john@navy.mil

U.S. Postal Service Mailing Address:

COMMANDER  
CODE 476100D (L. JOHN – 760-939-8202)  
NAVAIRWARCENWPNDIV  
429 E. BOWEN RD. MAIL STOP 4015  
CHINA LAKE, CA 93555-6108

Direct Delivery Address (UPS, FedEx, etc):

COMMANDER  
CODE 476100D (L. JOHN)  
NAVAIRWARCENWPNDIV  
BLDG 982, MAIL STOP 4015  
CHINA LAKE, CA 93555-610

**F-TXT-07 PLACE OF PERFORMANCE- RESEARCH AND DEVELOPMENT (MAR 2003)**

The research or research and development work under this contract shall be performed in the United States. "United States" means the fifty states, the Territories and possessions of the United States, the Commonwealth of Puerto Rico, the Commonwealth of the northern Mariana Islands, the Trust Territory of the Pacific Islands, and the District of Columbia.

## Section G - Contract Administration Data

## ACCOUNTING AND APPROPRIATION DATA

AA: 97X4930 NH2C 252 77777 0 050120 2F 000000  
COST CODE: WC028PR00381  
AMOUNT: \$149,603.00  
CIN 130009762400001: \$149,603.00

## CLAUSES INCORPORATED BY FULL TEXT

**5252.201-9500 GOVERNMENT POINTS OF CONTACT (NAVAIR)(OCT 2005)**

- (a) The TPOC for this contract is Mr. Larry John at 760-939-8202.
- (b) The TPOC will provide technical direction and discussion, as relating, but not limited to the specification and/or statement of work, and will monitor the progress and quality of contractor performance.
- (c) The TPOC is not an Administrative Contracting Officer and does not have authority to take any action, either directly or indirectly, that would change the pricing, quantity, quality, place of performance, delivery schedule, or any other terms and conditions of the contract (or delivery/task order), or to direct the accomplishment of effort which goes beyond the scope of the statement of work in the contract (or delivery/task order). When, in the opinion of the contractor, the TPOC requests any of the aforementioned changes, the contractor shall promptly notify the Contracting Officer (or ordering officer, for delivery/task orders) in writing. If the contractor believes or interprets any action by the TPOC to be a change to the contract, the contractor will promptly notify the Contracting Officer in writing. Any failure by the contractor to notify the Contracting Officer in writing of any changes is an admission that the contractor is working at its own risk on a voluntary basis. No action shall be taken by the contractor under such direction until the Contracting Officer (or ordering officer) has issued a modification to the contract (or delivery/task order) concerning the subject change(s) or has otherwise resolved the issue.

**5252.201-9502 CONTRACTOR'S AUTHORIZED CONTRACT COORDINATOR AND TECHNICAL LIAISON (NAVAIR)(OCT 2005)**

- (a) The contractor shall state below the name and telephone numbers of the contractor's employees responsible for coordination of contract functions/liaison with the Contracting Officer and/or Contract administrator, and providing technical assistance as required regarding product specifications, functionality, etc.

**CONTRACT COORDINATOR:**

NAME: Jeff Erickson  
PHONE (BUS): 260-338-1010  
EMAIL: jle.erickson@verizon.net

**ALTERNATE:**

NAME: George Lewis  
PHONE (BUS): 260-485-3752  
EMAIL: gslewis@verizon.net

- (b) The contractor shall notify the Contracting Officer and/or Contract Administrator in advance, in writing, of any changes in the above listed personnel.

**5252.204-9503 EXPEDITING CONTRACT CLOSEOUT (NAVAIR) (JAN 2007)**

(a) As part of the negotiated fixed price or total estimated amount of this contract, both the Government and the Contractor have agreed to waive any entitlement that otherwise might accrue to either party in any residual dollar amount of \$1,000 or less at the time of final contract closeout. The term "residual dollar amount" shall include all money that would otherwise be owed to either party at the end of the contract, except that, amounts connected in any way with taxation, allegations of fraud and/or antitrust violations shall be excluded. For purposes of determining residual dollar amounts, offsets of money owed by one party against money that would otherwise be paid by that party might be considered to the extent permitted by law.

(b) This agreement to waive entitlement to residual dollar amounts has been considered by both parties. It is agreed that the administrative costs for either party associated with collecting such small dollar amounts could exceed the amount to be recovered.

**5252.232-9504 SPECIAL PAY INSTRUCTIONS FOR PAYING OFFICE (NAVAIR) (MAY 2006)**

(a) Invoices submitted for payment, which do not contain contract line item number (CLIN) (or subline item number (SLIN), if any) and the accounting classification references number (ACRN) information, will be returned for correction.

(b) The disbursement of funds will be by the CLIN/SLIN/ACRN designation.

(c) If progress payments are authorized, payments will be made against the unliquidated balance of all applicable CLINs/SLINs.

**5252.232-9510 PAYMENT OF FIXED FEE (NAVAIR) (OCT 2005)**

(a) The fixed fee, as specified in Section B of this contract, subject to any adjustment required by other provisions of this contract, will be paid in installments. The fixed fee will be paid not more frequently than monthly based on the allowable cost. The amount of each such installment shall be in the same ratio to the total fixed fee as the related provisional payment on account of allowable cost is to the total estimated cost of the contract. Payment shall be made in accordance with FAR Clauses 52.216-7, "Allowable Cost and Payment", and 52.216-8, "Fixed Fee".

(b) In the event of termination of the work in accordance with the FAR Clause 52.232-22, "Limitation of Funds", the fixed fee shall be redetermined by mutual agreement equitably to reflect the reduction of the work performed. The amount by which such fixed fee is less than or exceeds payments previously made on account of fee, shall be paid to (or repaid by) the contractor.

(c) The balance of the fixed fee shall be payable in accordance with other clauses of this contract.

(d) For indefinite delivery type contracts the terms of this clause apply to each delivery/task order there under.

**5252.232-9511 NOTICE OF REQUIREMENTS FOR PROMPT PAYMENT (NAVAIR) (MAR 2006)**

The Government anticipates that this contract will be distributed to Defense Finance and Accounting Service (DFAS) by the DOD Electronic Document Access (EDA) system. DFAS is responsible for payment of contractor invoices.

(a) In accordance with FAR Clause 52.232-33 "Payment By Electronic Funds Transfer--Central Contractor Registration", the contractor is responsible for providing updated information to the Central Contractor Register (CCR) database. Additionally, the contractor is responsible for maintaining its active status in the CCR database.

(b) If the DUNS, CAGE code, TIN or address set forth in the contract do not match the information in the CCR, then DFAS will return invoices without payment. Therefore, it is imperative that the contractor ensure the DUNS, CAGE code, TIN and contractor address on the contract are accurate and in compliance with the CCR database. Additionally, any changes/updates made to the CCR database should be communicated to the Contracting Officer for the purpose of modifying the contract to reflect the new data.

**5252.232-9513 INVOICING AND PAYMENT (WAWF) INSTRUCTIONS (DEC 2007)**

(a) Invoices for goods received or services rendered under this contract shall be submitted electronically through Wide Area Work Flow -- Receipt and Acceptance (WAWF):

(1) The vendor shall have their cage code activated by calling 866-618-5988. Once activated, the vendor shall self-register at the web site <https://wawf.eb.mil>. Vendor training is available on the Internet at <http://www.wawftraining.com>. Additional support can be obtained by calling the NAVY WAWF Assistance Line: 1-800-559-WAWF (9293).

(2) WAWF Vendor "Quick Reference" Guides are located at the following web site: <http://www.acquisition.navy.mil/navyaos/content/view/full/3521>.

(3) Select the invoice type within WAWF as specified below. Back up documentation (such as timesheets, etc.) can be included and attached to the invoice in WAWF. Attachments created in any Microsoft Office product are attachable to the invoice in WAWF. Total limit for the size of files per invoice is 5 megabytes.

(b) The following information, regarding invoice routing DODAAC's, must be entered for completion of the invoice in WAWF:

WAWF Invoice Type:	If the Paying Office (see below) is <b>N50120</b> : -- Select <b>Combo</b> for Fixed Price Supplies and Services. -- Select <b>Cost Voucher</b> for all Cost or T&M contracts or CLINs. For ALL OTHER Paying Offices: -- Select <b>2-in-1</b> for FFP Services Only. -- Select <b>Combo</b> for Supplies, or Supplies AND FFP Services. -- Select <b>Cost Voucher</b> for all Cost or T&M contracts or CLINs. If none of the above apply, please call 1-800-559-WAWF (9293).
Issuing Office DODAAC	N68936.
Admin Office DODAAC:	S1501A
Inspector DODAAC (usually only used when Inspector & Acceptor are different people):	
Ship To DODAAC (for Combo), Service Acceptor DODAAC (for 2 in 1), Service Approver DODAAC (Cost Voucher)	N68936
DCAA Office DODAAC (Used on Cost Voucher's only):	HAA150
Paying Office DODAAC:	HQ0337

(c) Contractors approved by DCAA for direct billing will not process vouchers through DCAA, but may submit directly to DFAS. Final voucher submission will be approved by the ACO.

(d) For each invoice / cost voucher submitted for payment, the contractor shall also email the WAWF automated invoice notice directly to the following points of contact:

Name	Email	Phone	Role
Larry John	<a href="mailto:Lawrence.john@navy.mil">Lawrence.john@navy.mil</a>	760-939-8202	Technical POC
Shaleen Lambert	<a href="mailto:Shaleen.lambert@navy.mil">Shaleen.lambert@navy.mil</a>	760-939-7652	Contract Specialist

**5252.242-9511 CONTRACT ADMINISTRATION DATA (NAVAIR)(MAR 2007)**

(a) Contract Administration Office.

(1) Contract administration functions (see FAR 42.302 and DFARS 242.302) are assigned to:

See the ADMINISTERED BY Block on the face page of the contract or modification.

(2) Contract administration functions withheld, additional contract administration functions assigned, or special instructions (see FAR 42.202) are: FAR 42.302(a)(3)-(4), (6), (23), (27), (40), (43)-(46), (51), (58)-(59), (62)-(64), (70).

(b) Inquiries regarding payment should be referred to: MyInvoice at <http://www.dod.mil/dfas/contractorpay/myinvoice.html>.

**G-TXT-01 ATTENTION! E-MAIL ADDRESS REQUIRED FOR DISTRIBUTION (APR 2002)**

All Naval Air Warfare Center Weapons Division Contracts/ Purchase Orders and other related documents are now distributed by electronic mail.

Please provide the e-mail address to which distribution of contracts/purchase orders should be made.

E-Mail Address: [jle.erickson@verizon.net](mailto:jle.erickson@verizon.net) , [rhondalgodfrey@verizon.net](mailto:rhondalgodfrey@verizon.net) , and [gslewis@verizon.net](mailto:gslewis@verizon.net) .

**G-TXT-13 COURTESY COPY OF INVOICE/VOUCHER (APR 2002)**

A courtesy copy of each invoice/voucher processed for payment will be sent to:

COMMANDER

CODE J26000D

NAVAIRWARCENWPNDIV

1 ADMINISTRATION CIRCLE

CHINA LAKE CA 93555-6100

## Section H - Special Contract Requirements

## CLAUSES INCORPORATED BY REFERENCE

252.204-7000 Disclosure Of Information DEC 1991

## CLAUSES INCORPORATED BY FULL TEXT

**5252.210-9501 AVAILABILITY OF UNIQUE DATA ITEM DESCRIPTIONS (UDIDs) AND DATA ITEM DESCRIPTIONS (DIDs) (NAVAIR) (OCT 2005)**

Access Procedures for Acquisition Management System and Data Requirements Control List (AMSDL), DoD 5010.12-L, and DIDs listed therein. The AMSDL and all DIDs and UDIDs listed therein are available online via the Acquisition Streamlining and Standardization Information System located at <http://assist.daps.dla.mil>. To access these documents, select the Quick Search link on the site home page.

**5252.211-9502 GOVERNMENT INSTALLATION WORK SCHEDULE (NAVAIR)(OCT 2005) - ALT I (OCT 2005)**

(a) The Holidays applicable to this contract are: New Year's Day, Martin Luther King's Birthday, President's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving Day, and Christmas Day.

(b) In the event that the contractor is prevented from performance as the result of an Executive Order or an administrative leave determination that applies to the using activity, such time may be charged to the contract as a direct cost provided such charges are consistent with the contractor's accounting practices. In the event that any of the above holidays occur on a Saturday or Sunday, or Compressed Work Schedule Alternate Friday, then such holiday shall be observed as they are by the assigned Government employees at the using activity.

(c) The Naval Air Warfare Center Weapons Division works a 4/5/9 work schedule. Therefore alternate Fridays are not a part of the normal workweek for work performed on-site at a Naval Air Warfare Center Weapons Division site. The majority of the Government offices are closed on alternate Fridays.

(d) No deviation in the normal workweek will be permitted without express advance approval by the designated Contracting Officer with coordination of the using departments.

**5252.227-9501 INVENTION DISCLOSURES AND REPORTS (NAVAIR) (MAY 1998)**

(a) In accordance with the requirements of the Patent Rights clause of this contract, the contractor shall submit "Report of Inventions and Subcontracts" (DD Form 882) along with written disclosure of inventions to the designated Contract Administrator.

(b) The Contract Administrator will forward such reports and disclosures directly to the appropriate Patent Counsel, designated below, for review and recommendations, after which the reports will be returned to the Contract Administrator.

Name and address of Patent Counsel:

Office of Counsel, Code K00000D  
Naval Air Warfare Center Weapons Division  
1 Administration Circle, Stop 1009  
China Lake, California 93555-6100

(c) The above designated Patent Counsel will represent the Procurement Contracting Officer with regard to invention reporting matters arising under this contract.

(d) A copy of each report and disclosure shall be forwarded to the Procuring Contracting Officer.

(e) The contractor shall furnish the Contracting Officer a final report within three (3) months after completion of the contracted work listing all subject inventions or certifying that there were no such inventions, and listing all subcontracts at any tier containing a patent rights clause or certifying that there were no such subcontracts.

**5252.227-9507 NOTICE REGARDING THE DISSEMINATION OF EXPORT-CONTROLLED TECHNICAL DATA (NAVAIR) (OCT 2005)**

(a) Export of information contained herein, which includes release to foreign nationals within the United States, without first obtaining approval or license from the Department of State for items controlled by the International Traffic in Arms Regulations (ITARs), or the Department of Commerce for items controlled by the Export Administration Regulations (EAR), may constitute a violation of law.

(b) For violation of export laws, the contractor, its employees, officials or agents are subject to:

- (1) Imprisonment and/or imposition of criminal fines; and
- (2) Suspension or debarment from future Government contracting actions.

(c) The Government shall not be liable for any unauthorized use or release of export-controlled information, technical data or specifications in this contract.

(d) The contractor shall include the provisions or paragraphs (a) through (c) above in any subcontracts awarded under this contract.

**5252.232-9509 REIMBURSEMENT OF TRAVEL, PER DIEM, AND SPECIAL MATERIAL COSTS (NAVAIR)(OCT 2006)**

(a) Area of Travel. Performance under this contract may require travel by contractor personnel. If travel, domestic or overseas, is required, the contractor is responsible for making all necessary arrangements for its personnel. These include but are not limited to: medical examinations, immunizations, passports/visas/etc., and security clearances. All contractor personnel required to perform work on any U.S. Navy vessel shall obtain boarding authorization from the Commanding Officer of the vessel before boarding.

(b) Travel Policy. The Government will reimburse the contractor for allowable travel costs incurred by the contractor in performance of the contract in accordance with FAR Subpart 31.2. Travel required for tasks assigned under this contract shall be governed in accordance with: Federal Travel Regulations, prescribed by the General Services Administration for travel in the conterminous 48 United States, (hereinafter the FTR); Joint Travel Regulation, Volume 2, DoD Civilian Personnel, Appendix A, prescribed by the Department of Defense, for travel in Alaska, Hawaii, The Commonwealth of Puerto Rico, and territories and possessions of the United States (hereinafter JTR); and Standardized Regulations (Government Civilians, Foreign Areas), Section 925, "Maximum Travel Per Diem Allowances for Foreign Areas," prescribed by the Department of State, for travel in areas not covered in the FTR or JTR (hereinafter the SR).

(c) Travel. Travel and subsistence are authorized for travel beyond a fifty-mile radius of the contractor's office whenever a task assignment requires work to be accomplished at a temporary alternate worksite. No travel or subsistence shall be charged for work performed within a fifty-mile radius of the contractor's office. The contractor shall not be paid for travel or subsistence for contractor personnel who reside in the metropolitan area in which the tasks are being performed. Travel performed for personal convenience, in conjunction with personal recreation, or daily travel to and from work at the contractor's facility will not be reimbursed.

(1) For travel costs other than described in paragraph (c) above, the contractor shall be paid on the basis of actual amount paid to the extent that such travel is necessary for the performance of services under the contract and is authorized by the COR in writing.

(2) When transportation by privately owned conveyance is authorized, the contractor shall be paid on a mileage basis not to exceed the applicable Government transportation rate as contained in the FTR, JTR or SR.

Authorization for the use of privately owned conveyance shall be indicated in the basic contract. Distances traveled

between points shall be shown on invoices as listed in standard highway mileage guides. Reimbursement will not exceed the mileage shown in the standard highway mileage guides.

(3) The contractor agrees, in the performance of necessary travel, to use the lowest cost mode commensurate with the requirements of the mission as set forth in the basic contract and in accordance with good traffic management principles. When it is necessary to use air or rail travel, the contractor agrees to use coach, tourist class, or similar accommodations to the extent consistent with the successful and economical accomplishment of the mission for which the travel is being performed.

(4) The contractor's invoices shall include receipts or other evidence substantiating actual costs incurred for authorized travel. In no event will such payments exceed the rates of common carriers.

(d) Vehicle and/or Truck Rentals. The contractor shall be reimbursed for actual rental/lease of special vehicles and/or trucks (i.e., of a type not normally used by the contractor in the conduct of its business) only if authorized in the basic contract or upon approval by the COR. Reimbursement of such rental shall be made based on actual amounts paid by the contractor. Use of rental/lease costs of vehicles and/or trucks that are of a type normally used by the contractor in the conduct of its business are not subject to reimbursement

(e) Car Rental. The contractor shall be reimbursed for car rental, exclusive of mileage charges, as authorized in the basic contract or upon approval by the COR, when the services are required to be performed beyond the normal commuting distance from the contractor's facilities. Car rental for a team on TDY at one site will be allowed for a minimum of four (4) persons per car, provided that such number or greater comprise the TDY team.

(f) Per Diem. The contractor shall not be paid for per diem for contractor personnel who reside in the metropolitan areas in which the tasks are being performed. Per Diem shall not be paid on services performed within a fifty-mile radius of the contractor's home office or the contractor's local office. Per Diem is authorized for contractor personnel beyond a fifty-mile radius of the contractor's home or local offices whenever a task assigned requires work to be done at a temporary alternate worksite. Per Diem shall be paid to the contractor only to the extent that overnight stay is necessary and authorized under this contract. The authorized per diem rate shall be the same as the prevailing per diem in the worksite locality. These rates will be based on rates contained in the FTR, JTR or SR. The applicable rate is authorized at a flat seventy-five (75%) percent on the day of departure from contractor's home or local office, and on the day of return. Reimbursement to the contractor for per diem shall be limited to actual payments to per diem defined herein. The contractor shall provide actual payments of per diem defined herein. The contractor shall provide supporting documentation for per diem expenses as evidence of actual payment.

(g) Shipboard Stays. Whenever work assignments require temporary duty aboard a Government ship, the contractor will be reimbursed at the per diem rates identified in paragraph C8101.2C or C81181.3B(6) of the Department of Defense Joint Travel Regulations, Volume II.

(h) Special Material. "Special material" includes only the costs of material, supplies, or services which is peculiar to the ordered data and which is not suitable for use in the course of the contractor's normal business. It shall be furnished pursuant to specific authorization approved by the COR. The contractor will be required to support all material costs claimed by its costs less any applicable discounts. "Special materials" include, but are not limited to, graphic reproduction expenses, or technical illustrative or design requirements needing special processing.

**5252.232-9516 ALLOTMENT OF FUNDS - INCREMENTALLY FUNDED COST-REIMBURSEMENT  
CONTRACT OTHER THAN COST-SHARING CONTRACT (JUL 1985)**

For the purposes of paragraph (b) of the "Limitation of Funds" clause of this contract-

(a) the amount available for payment and allotted to this incrementally funded contract is \$149,603;

(b) the items covered by such amount are Item 0001; and

(c) the period of performance for which it is estimated the allotted amount will cover is January 28, 2008 through May 27, 2008.

**5252.237-9503 ORDERING PROCEDURES FOR NAVY MARINE CORPS INTRANET (NMCI SERVICES (NAVAIR) (SEP 2000)**

(a) This Support Services contract may require the use of and/or access to Department of Navy (DoN) Information Technology (IT) Resources by contractor personnel for contract performance. Applicable DoN IT Resources for performance of this contract shall be procured from the NMCI Contractor pursuant to the authority of NMCI Contract #N00024-00-D-6000, clause 5.2 "Ordering."

(b) The Support Services contractor shall obtain written authorization from the Contracting Officer executing this contract, prior to ordering directly from the NMCI Contractor. No NMCI Order may be placed without the prior written authorization of the Contracting Officer. Any NMCI Order exceeding the written authorization of the Contracting Officer shall be treated as an unallowable cost pursuant to FAR Part 31.

(c) The Government shall reimburse the contractor for the placement of NMCI Orders including applicable indirect burdens (general & administrative, etc.), excluding profit or fee.

**5252.243-9504 AUTHORIZED CHANGES ONLY BY THE CONTRACTING OFFICER (NAVAIR) (JAN 1992)**

(a) Except as specified in paragraph (b) below, no order, statement, or conduct of Government personnel who visit the contractor's facilities or in any other manner communicates with contractor personnel during the performance of this contract shall constitute a change under the "Changes" clause of this contract.

(b) The contractor shall not comply with any order, direction or request of Government personnel unless it is issued in writing and signed by the Contracting Officer, or is pursuant to specific authority otherwise included as a part of this contract.

(c) The Contracting Officer is the only person authorized to approve changes in any of the requirements of this contract and notwithstanding provisions contained elsewhere in this contract, the said authority remains solely the Contracting Officer's. In the event the contractor effects any change at the direction of any person other than the Contracting Officer, the change will be considered to have been made without authority and no adjustment will be made in the contract price to cover any increase in charges incurred as a result thereof. The address and telephone number of the Contracting Officer is:

Name: Colette Nalley  
Phone: (760) 939- 2983  
DSN: 437-2983  
FAX: (760) 939- 4241  
Email address: colette.navy@navy.mil

## Section I - Contract Clauses

## CLAUSES INCORPORATED BY REFERENCE

52.202-1	Definitions	JUL 2004
52.203-3	Gratuities	APR 1984
52.203-5	Covenant Against Contingent Fees	APR 1984
52.203-6	Restrictions On Subcontractor Sales To The Government	SEP 2006
52.203-7	Anti-Kickback Procedures	JUL 1995
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity	JAN 1997
52.203-10	Price Or Fee Adjustment For Illegal Or Improper Activity	JAN 1997
52.203-11	Certification And Disclosure Regarding Payments To Influence Certain Federal Transactions	SEP 2007
52.203-12	Limitation On Payments To Influence Certain Federal Transactions	SEP 2007
52.204-4	Printed or Copied Double-Sided on Recycled Paper	AUG 2000
52.204-7	Central Contractor Registration	JUL 2006
52.209-6	Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment	SEP 2006
52.211-5	Material Requirements	AUG 2000
52.215-2	Audit and Records--Negotiation	JUN 1999
52.215-8	Order of Precedence--Uniform Contract Format	OCT 1997
52.215-10	Price Reduction for Defective Cost or Pricing Data	OCT 1997
52.215-12	Subcontractor Cost or Pricing Data	OCT 1997
52.215-14	Integrity of Unit Prices	OCT 1997
52.215-15	Pension Adjustments and Asset Reversions	OCT 2004
52.215-17	Waiver of Facilities Capital Cost of Money	OCT 1997
52.215-18	Reversion or Adjustment of Plans for Postretirement Benefits (PRB) Other than Pensions	JUL 2005
52.215-19	Notification of Ownership Changes	OCT 1997
52.215-20	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data	OCT 1997
52.215-21	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data--Modifications	OCT 1997
52.216-8	Fixed Fee	MAR 1997
52.219-4	Notice of Price Evaluation Preference for HUBZone Small Business Concerns	JUL 2005
52.219-8	Utilization of Small Business Concerns	MAY 2004
52.219-9	Small Business Subcontracting Plan	SEP 2007
52.219-16	Liquidated Damages-Subcontracting Plan	JAN 1999
52.222-20	Walsh-Healey Public Contracts Act	DEC 1996
52.222-21	Prohibition Of Segregated Facilities	FEB 1999
52.222-26	Equal Opportunity	MAR 2007
52.222-35	Equal Opportunity For Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans	SEP 2006
52.222-36	Affirmative Action For Workers With Disabilities	JUN 1998
52.222-37	Employment Reports On Special Disabled Veterans, Veterans Of The Vietnam Era, and Other Eligible Veterans	SEP 2006
52.222-39	Notification of Employee Rights Concerning Payment of Union Dues or Fees	DEC 2004
52.223-6	Drug-Free Workplace	MAY 2001

52.223-14	Toxic Chemical Release Reporting	AUG 2003
52.225-13	Restrictions on Certain Foreign Purchases	FEB 2006
52.227-1 Alt I	Authorization And Consent (Jul 1995) - Alternate I	APR 1984
52.227-2	Notice And Assistance Regarding Patent And Copyright Infringement	AUG 1996
52.228-7	Insurance--Liability To Third Persons	MAR 1996
52.230-2	Cost Accounting Standards	APR 1998
52.230-6	Administration of Cost Accounting Standards	APR 2005
52.232-17	Interest	JUN 1996
52.232-20	Limitation Of Cost	APR 1984
52.232-22	Limitation Of Funds	APR 1984
52.232-23	Assignment Of Claims	JAN 1986
52.232-25	Prompt Payment	OCT 2003
52.232-33	Payment by Electronic Funds Transfer--Central Contractor Registration	OCT 2003
52.233-1	Disputes	JUL 2002
52.233-3 Alt I	Protest After Award (Aug 1996) - Alternate I	JUN 1985
52.233-4	Applicable Law for Breach of Contract Claim	OCT 2004
52.242-1	Notice of Intent to Disallow Costs	APR 1984
52.242-3	Penalties for Unallowable Costs	MAY 2001
52.242-4	Certification of Final Indirect Costs	JAN 1997
52.242-13	Bankruptcy	JUL 1995
52.242-15 Alt I	Stop-Work Order (Aug 1989) - Alternate I	APR 1984
52.243-2 Alt V	Changes--Cost-Reimbursement (Aug 1987) - Alternate V	APR 1984
52.244-5	Competition In Subcontracting	DEC 1996
52.244-6	Subcontracts for Commercial Items	MAR 2007
52.245-1	Government Property	JUN 2007
52.245-9	Use And Charges	JUN 2007
52.246-9	Inspection Of Research And Development (Short Form)	APR 1984
52.247-17	Charges	APR 1984
52.249-6	Termination (Cost Reimbursement)	MAY 2004
52.249-14	Excusable Delays	APR 1984
52.253-1	Computer Generated Forms	JAN 1991
252.203-7001	Prohibition On Persons Convicted of Fraud or Other Defense-Contract-Related Felonies	DEC 2004
252.204-7000	Disclosure Of Information	DEC 1991
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.204-7004 Alt A	Central Contractor Registration (52.204-7) Alternate A	SEP 2007
252.204-7006	Billing Instructions	OCT 2005
252.205-7000	Provision Of Information To Cooperative Agreement Holders	DEC 1991
252.209-7001	Disclosure of Ownership or Control by the Government of a Terrorist Country	OCT 2006
252.209-7004	Subcontracting With Firms That Are Owned or Controlled By The Government of a Terrorist Country	DEC 2006
252.215-7000	Pricing Adjustments	DEC 1991
252.215-7002	Cost Estimating System Requirements	DEC 2006
252.219-7003	Small Business Subcontracting Plan (DOD Contracts)	APR 2007
252.223-7004	Drug Free Work Force	SEP 1988
252.225-7001	Buy American Act And Balance Of Payments Program	JUN 2005
252.225-7002	Qualifying Country Sources As Subcontractors	APR 2003
252.225-7012	Preference For Certain Domestic Commodities	JAN 2007
252.225-7016	Restriction On Acquisition Of Ball and Roller Bearings	MAR 2006
252.225-7031	Secondary Arab Boycott Of Israel	JUN 2005

252.226-7001	Utilization of Indian Organizations and Indian-Owned Economic Enterprises, and Native Hawaiian Small Business Concerns	SEP 2004
252.227-7016	Rights in Bid or Proposal Information	JUN 1995
252.227-7019	Validation of Asserted Restrictions--Computer Software	JUN 1995
252.227-7024	Notice and Approval of Restricted Designs	APR 1984
252.227-7028	Technical Data or Computer Software Previously Delivered to the Government	JUN 1995
252.227-7034	Patents--Subcontracts	APR 1984
252.227-7037	Validation of Restrictive Markings on Technical Data	SEP 1999
252.227-7039	Patents--Reporting Of Subject Inventions	APR 1990
252.232-7003	Electronic Submission of Payment Requests	MAR 2007
252.232-7010	Levies on Contract Payments	DEC 2006
252.235-7011	Final Scientific or Technical Report	NOV 2004
252.243-7002	Requests for Equitable Adjustment	MAR 1998
252.244-7000	Subcontracts for Commercial Items and Commercial Components (DoD Contracts)	JAN 2007
252.247-7023	Transportation of Supplies by Sea	MAY 2002

#### CLAUSES INCORPORATED BY FULL TEXT

##### **52.216-7 ALLOWABLE COST AND PAYMENT (DEC 2002)**

###### (a) Invoicing.

(1) The Government will make payments to the Contractor when requested as work progresses, but (except for small business concerns) not more often than once every 2 weeks, in amounts determined to be allowable by the Contracting Officer in accordance with Federal Acquisition Regulation (FAR) Subpart 31.2 in effect on the date of this contract and the terms of this contract. The Contractor may submit to an authorized representative of the Contracting Officer, in such form and reasonable detail as the representative may require, an invoice or voucher supported by a statement of the claimed allowable cost for performing this contract.

(2) Contract financing payments are not subject to the interest penalty provisions of the Prompt Payment Act. Interim payments made prior to the final payment under the contract are contract financing payments, except interim payments if this contract contains Alternate I to the clause at 52.232-25.

(3) The designated payment office will make interim payments for contract financing on the 30<sup>th</sup> day after the designated billing office receives a proper payment request. In the event that the Government requires an audit or other review of a specific payment request to ensure compliance with the terms and conditions of the contract, the designated payment office is not compelled to make payment by the specified due date.

###### (b) Reimbursing costs.

(1) For the purpose of reimbursing allowable costs (except as provided in subparagraph (b)(2) of this section, with respect to pension, deferred profit sharing, and employee stock ownership plan contributions), the term "costs" includes only --

(i) Those recorded costs that, at the time of the request for reimbursement, the Contractor has paid by cash, check, or other form of actual payment for items or services purchased directly for the contract;

(ii) When the Contractor is not delinquent in paying costs of contract performance in the ordinary course of business, costs incurred, but not necessarily paid, for --

(A) Supplies and services purchased directly for the contract and associated financing payments to subcontractors, provided payments determined due will be made-

(1) In accordance with the terms and conditions of a subcontract or invoice; and

(2) Ordinarily within 30 days of the submission of the Contractor's payment request to the Government;

(B) Materials issued from the Contractor's inventory and placed in the production process for use on the contract;

(C) Direct labor;

(D) Direct travel;

(E) Other direct in-house costs; and

(F) Properly allocable and allowable indirect costs, as shown in the records maintained by the Contractor for purposes of obtaining reimbursement under Government contracts; and

(iii) The amount of financing payments that have been paid by cash, check or other form of payment to subcontractors.

(2) Accrued costs of Contractor contributions under employee pension plans shall be excluded until actually paid unless-

(i) The Contractor's practice is to make contributions to the retirement fund quarterly or more frequently; and

(ii) The contribution does not remain unpaid 30 days after the end of the applicable quarter or shorter payment period (any contribution remaining unpaid shall be excluded from the Contractor's indirect costs for payment purposes).

(3) Notwithstanding the audit and adjustment of invoices or vouchers under paragraph (g) of this clause, allowable indirect costs under this contract shall be obtained by applying indirect cost rates established in accordance with paragraph (d) of this clause.

(4) Any statements in specifications or other documents incorporated in this contract by reference designating performance of services or furnishing of materials at the Contractor's expense or at no cost to the Government shall be disregarded for purposes of cost-reimbursement under this clause.

(c) Small business concerns. A small business concern may receive more frequent payments than every 2 weeks

(d) Final indirect cost rates.

(1) Final annual indirect cost rates and the appropriate bases shall be established in accordance with Subpart 42.7 of the Federal Acquisition Regulation (FAR) in effect for the period covered by the indirect cost rate proposal.

(2)(i) The Contractor shall submit an adequate final indirect cost rate proposal to the Contracting Officer (or cognizant Federal agency official) and auditor within the 6-month period following the expiration of each of its fiscal years. Reasonable extensions, for exceptional circumstances only, may be requested in writing by the Contractor and granted in writing by the Contracting Officer. The Contractor shall support its proposal with adequate supporting data.

(ii) The proposed rates shall be based on the Contractor's actual cost experience for that period. The appropriate Government representative and the Contractor shall establish the final indirect cost rates as promptly as practical after receipt of the Contractor's proposal.

(3) The Contractor and the appropriate Government representative shall execute a written understanding setting forth the final indirect cost rates. The understanding shall specify

(i) the agreed-upon final annual indirect cost rates,

(ii) the bases to which the rates apply,

(iii) the periods for which the rates apply,

(iv) any specific indirect cost items treated as direct costs in the settlement, and

(v) the affected contract and/or subcontract, identifying any with advance agreements or special terms and the applicable rates.

The understanding shall not change any monetary ceiling, contract obligation, or specific cost allowance or disallowance provided for in this contract. The understanding is incorporated into this contract upon execution.

(4) Failure by the parties to agree on a final annual indirect cost rate shall be a dispute within the meaning of the Disputes clause.

(5) Within 120 days (or longer period if approved in writing by the Contracting Officer) after settlement of the final annual indirect cost rates for all years of a physically complete contract, Contractor shall submit a completion invoice or voucher to reflect the settled amounts and rates.

(6)(i) If the Contractor fails to submit a completion invoice or voucher within the time specified in paragraph (d)(5) of this clause, the Contracting Officer may--

(A) Determine the amounts due to the Contractor under the contract; and

(B) Record this determination in a unilateral modification to the contract.

(ii) This determination constitutes the final decision of the Contracting Officer in accordance with the Disputes clause.

(e) Billing rates. Until final annual indirect cost rates are established for any period, the Government shall reimburse the Contractor at billing rates established by the Contracting Officer or by an authorized representative (the cognizant auditor), subject to adjustment when the final rates are established. These billing rates --

(1) Shall be the anticipated final rates; and

(2) May be prospectively or retroactively revised by mutual agreement, at either party's request, to prevent substantial overpayment or underpayment.

(f) Quick-closeout procedures. Quick-closeout procedures are applicable when the conditions in FAR 42.708(a) are satisfied.

(g) Audit. At any time or times before final payment, the Contracting Officer may have the Contractor's invoices or vouchers and statements of cost audited. Any payment may be --

(1) Reduced by amounts found by the Contracting Officer not to constitute allowable costs; or

(2) Adjusted for prior overpayments or underpayments.

(h) Final payment.

(1) Upon approval of a completion invoice or voucher submitted by the Contractor in accordance with paragraph (d)(5) of this clause, and upon the Contractor's compliance with all terms of this contract, the Government shall promptly pay any balance of allowable costs and that part of the fee (if any) not previously paid.

(2) The Contractor shall pay to the Government any refunds, rebates, credits, or other amounts (including interest, if any) accruing to or received by the Contractor or any assignee under this contract, to the extent that those amounts are properly allocable to costs for which the Contractor has been reimbursed by the Government.

Reasonable expenses incurred by the Contractor for securing refunds, rebates, credits, or other amounts shall be allowable costs if approved by the Contracting Officer. Before final payment under this contract, the Contractor and each assignee whose assignment is in effect at the time of final payment shall execute and deliver --

(i) An assignment to the Government, in form and substance satisfactory to the Contracting Officer, of refunds, rebates, credits, or other amounts (including interest, if any) properly allocable to costs for which the Contractor has been reimbursed by the Government under this contract; and

(ii) A release discharging the Government, its officers, agents, and employees from all liabilities, obligations, and claims arising out of or under this contract, except --

(A) Specified claims stated in exact amounts, or in estimated amounts when the exact amounts are not known;

(B) Claims (including reasonable incidental expenses) based upon liabilities of the Contractor to third parties arising out of the performance of this contract; provided, that the claims are not known to the Contractor on the date of the execution of the release, and that the Contractor gives notice of the claims in writing to the Contracting Officer within 6 years following the release date or notice of final payment date, whichever is earlier; and

(C) Claims for reimbursement of costs, including reasonable incidental expenses, incurred by the Contractor under the patent clauses of this contract, excluding, however, any expenses arising from the Contractor's indemnification of the Government against patent liability.

#### **52.219-28 POST-AWARD SMALL BUSINESS PROGRAM REREPRESENTATION (JUN 2007)**

(a) Definitions. As used in this clause--

Long-term contract means a contract of more than five years in duration, including options. However, the term does not include contracts that exceed five years in duration because the period of performance has been extended for a cumulative period not to exceed six months under the clause at 52.217-8, Option to Extend Services, or other appropriate authority.

Small business concern means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR part 121 and the size standard in paragraph (c) of this clause.

(b) If the Contractor represented that it was a small business concern prior to award of this contract, the Contractor shall rerepresent its size status according to paragraph (e) of this clause or, if applicable, paragraph (g) of this clause, upon the occurrence of any of the following:

(1) Within 30 days after execution of a novation agreement or within 30 days after modification of the contract to include this clause, if the novation agreement was executed prior to inclusion of this clause in the contract.

(2) Within 30 days after a merger or acquisition that does not require a novation or within 30 days after modification of the contract to include this clause, if the merger or acquisition occurred prior to inclusion of this clause in the contract.

(3) For long-term contracts--

(i) Within 60 to 120 days prior to the end of the fifth year of the contract; and

(ii) Within 60 to 120 days prior to the exercise date specified in the contract for any option thereafter.

(c) The Contractor shall rerepresent its size status in accordance with the size standard in effect at the time of this rerepresentation that corresponds to the North American Industry Classification System (NAICS) code assigned to this contract. The small business size standard corresponding to this NAICS code can be found at <http://www.sba.gov/services/contractingopportunities/sizestandardsttopics/>

(d) The small business size standard for a Contractor providing a product which it does not manufacture itself, for a contract other than a construction or service contract, is 500 employees.

(e) Except as provided in paragraph (g) of this clause, the Contractor shall make the rerepresentation required by paragraph (b) of this clause by validating or updating all its representations in the Online Representations and Certifications Application and its data in the Central Contractor Registration, as necessary, to ensure they reflect current status. The Contractor shall notify the contracting office by e-mail, or otherwise in writing, that the data have been validated or updated, and provide the date of the validation or update.

(f) If the Contractor represented that it was other than a small business concern prior to award of this contract, the Contractor may, but is not required to, take the actions required by paragraphs (e) or (g) of this clause.

(g) If the Contractor does not have representations and certifications in ORCA, or does not have a representation in ORCA for the NAICS code applicable to this contract, the Contractor is required to complete the following rerepresentation and submit it to the contracting office, along with the contract number and the date on which the rerepresentation was completed:

The Contractor represents that it [ X ] is, [ ] is not a small business concern under NAICS Code [541712] assigned to contract number N68936-08-C-0002.

#### **52.222-2 PAYMENT FOR OVERTIME PREMIUMS (JUL 1990)**

(a) The use of overtime is authorized under this contract if the overtime premium cost does not exceed \$0.00 or the overtime premium is paid for work --

(1) Necessary to cope with emergencies such as those resulting from accidents, natural disasters, breakdowns of production equipment, or occasional production bottlenecks of a sporadic nature;

(2) By indirect-labor employees such as those performing duties in connection with administration, protection, transportation, maintenance, standby plant protection, operation of utilities, or accounting;

(3) To perform tests, industrial processes, laboratory procedures, loading or unloading of transportation conveyances, and operations in flight or afloat that are continuous in nature and cannot reasonably be interrupted or completed otherwise; or

(4) That will result in lower overall costs to the Government.

(b) Any request for estimated overtime premiums that exceeds the amount specified above shall include all estimated overtime for contract completion and shall--

(1) Identify the work unit; e.g., department or section in which the requested overtime will be used, together with present workload, staffing, and other data of the affected unit sufficient to permit the Contracting Officer to evaluate the necessity for the overtime;

(2) Demonstrate the effect that denial of the request will have on the contract delivery or performance schedule;

(3) Identify the extent to which approval of overtime would affect the performance or payments in connection with other Government contracts, together with identification of each affected contract; and

(4) Provide reasons why the required work cannot be performed by using multishift operations or by employing additional personnel.

**52.227-11 PATENT RIGHTS--RETENTION BY THE CONTRACTOR (SHORT FORM) (JUN 1997)****(a) Definitions.**

(1) "Invention" means any invention or discovery which is or may be patentable or otherwise protectable under title 35 of the United States Code, or any novel variety of plant which is or may be protected under the Plant Variety Protection Act (7 U.S.C. 2321, et seq.).

(2) "Made" when used in relation to any invention means the conception or first actual reduction to practice of such invention.

(3) "Nonprofit organization" means a university or other institution of higher education or an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c)) and exempt from taxation under section 501(a) of the Internal Revenue Code (26 U.S.C. 501(a)) or any nonprofit scientific or educational organization qualified under a state nonprofit organization statute.

(4) "Practical application" means to manufacture, in the case of a composition of product; to practice, in the case of a process or method, or to operate, in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or Government regulations, available to the public on reasonable terms.

(5) "Small business firm" means a small business concern as defined at section 2 of Pub. L. 85-536 (15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this clause, the size standards for small business concerns involved in Government procurement and subcontracting at 13 CFR 121.3-8 and 13 CFR 121.3-12, respectively, will be used.

(6) "Subject invention" means any invention of the contractor conceived or first actually reduced to practice in the performance of work under this contract, provided that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 2401(d)) must also occur during the period of contract performance.

(b) Allocation of principal rights. The Contractor may retain the entire right, title, and interest throughout the world to each subject invention subject to the provisions of this clause and 35 U.S.C. 203. With respect to any subject invention in which the Contractor retains title, the Federal Government shall have a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject invention throughout the world.

**(c) Invention disclosure, election of title, and filing of patent application by Contractor.**

(1) The Contractor will disclose each subject invention to the Federal agency within 2 months after the inventor discloses it in writing to Contractor personnel responsible for patent matters. The disclosure to the agency shall be in the form of a written report and shall identify the contract under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding to the extent known at the time of the disclosure, of the nature, purpose, operation, and the physical, chemical, biological or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the agency, the Contractor will promptly notify the agency of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the Contractor.

(2) The Contractor will elect in writing whether or not to retain title to any such invention by notifying the Federal agency within 2 years of disclosure to the Federal agency. However, in any case where publication, on sale or public use has initiated the 1-year statutory period wherein valid patent protection can still be obtained in the United States, the period for election of title may be shortened by the agency to a date that is no more than 60 days prior to the end of the statutory period.

(3) The Contractor will file its initial patent application on a subject invention to which it elects to retain title within 1 year after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the United States after a publication, on sale, or public use. The Contractor will file patent applications in additional countries or international patent offices within either 10 months of the corresponding initial patent application or 6 months from the date permission is granted by the Commissioner of Patents and Trademarks to file foreign patent applications where such filing has been prohibited by a Secrecy Order.

(4) Requests for extension of the time for disclosure election, and filing under subparagraphs (c)(1), (2), and (3) of this clause may, at the discretion of the agency, be granted.

(d) Conditions when the Government may obtain title. The Contractor will convey to the Federal agency, upon written request, title to any subject invention--

(1) If the Contractor fails to disclose or elect title to the subject invention within the times specified in paragraph (c) of this clause, or elects not to retain title; provided, that the agency may only request title within 60 days after learning of the failure of the Contractor to disclose or elect within the specified times.

(2) In those countries in which the Contractor fails to file patent applications within the times specified in paragraph (c) of this clause; provided, however, that if the Contractor has filed a patent application in a country after the times specified in paragraph (c) of this clause, but prior to its receipt of the written request of the Federal agency, the Contractor shall continue to retain title in that country.

(3) In any country in which the Contractor decides not to continue the prosecution of any application for, to pay the maintenance fees on, or defend in reexamination or opposition proceeding on, a patent on a subject invention.

(e) Minimum rights to Contractor and protection of the Contractor right to file.

(1) The Contractor will retain a nonexclusive royalty-free license throughout the world in each subject invention to which the Government obtains title, except if the Contractor fails to disclose the invention within the times specified in paragraph (c) of this clause. The Contractor's license extends to its domestic subsidiary and affiliates, if any, within the corporate structure of which the Contractor is a party and includes the right to grant sublicenses of the same scope to the extent the Contractor was legally obligated to do so at the time the contract was awarded. The license is transferable only with the approval of the Federal agency, except when transferred to the successor of that part of the Contractor's business to which the invention pertains.

(2) The Contractor's domestic license may be revoked or modified by the funding Federal agency to the extent necessary to achieve expeditious practical application of subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions at 37 CFR Part 404 and agency licensing regulations (if any). This license will not be revoked in that field of use or the geographical areas in which the Contractor has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of the funding Federal agency to the extent the Contractor, its licensees, or the domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.

(3) Before revocation or modification of the license, the funding Federal agency will furnish the Contractor a written notice of its intention to revoke or modify the license, and the Contractor will be allowed 30 days (or such other time as may be authorized by the funding Federal agency for good cause shown by the Contractor) after the notice to show cause why the license should not be revoked or modified. The Contractor has the right to appeal, in accordance with applicable regulations in 37 CFR Part 404 and agency regulations, if any, concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of the license.

(f) Contractor action to protect the Government's interest.

(1) The Contractor agrees to execute or to have executed and promptly deliver to the Federal agency all instruments necessary to (i) establish or confirm the rights the Government has throughout the world in those subject inventions to which the Contractor elects to retain title, and (ii) convey title to the Federal agency when requested under paragraph (d) of this clause and to enable the Government to obtain patent protection throughout the world in that subject invention.

(2) The Contractor agrees to require, by written agreement, its employees, other than clerical and nontechnical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the Contractor each subject invention made under contract in order that the Contractor can comply with the disclosure provisions of paragraph (c) of this clause, and to execute all papers necessary to file patent applications on subject inventions and to establish the Government's rights in the subject inventions. This disclosure format should require, as a minimum, the information required by subparagraph (c)(1) of this clause. The Contractor shall instruct such employees, through employee agreements or other suitable educational programs, on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.

(3) The Contractor will notify the Federal agency of any decisions not to continue the prosecution of a patent application, pay maintenance fees, or defend in a reexamination or opposition proceeding on a patent, in any country, not less than 30 days before the expiration of the response period required by the relevant patent office.

(4) The Contractor agrees to include, within the specification of any United States patent application and any patent issuing thereon covering a subject invention, the following statement, "This invention was made with Government support under (identify the contract) awarded by (identify the Federal agency). The Government has certain rights in the invention."

(g) Subcontracts.

(1) The Contractor will include this clause, suitably modified to identify the parties, in all subcontracts, regardless of tier, for experimental, developmental, or research work to be performed by a small business firm or domestic nonprofit organization. The subcontractor will retain all rights provided for the Contractor in this clause, and the Contractor will not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractor's subject inventions.

(2) The Contractor will include in all other subcontracts, regardless of tier, for experimental, developmental, or research work the patent rights clause required by Subpart 27.3.

(3) In the case of subcontracts, at any tier, the agency, subcontractor, and the Contractor agree that the mutual obligations of the parties created by this clause constitute a contract between the subcontractor and the Federal agency with respect to the matters covered by the clause; provided, however, that nothing in this paragraph is intended to confer any jurisdiction under the Contract Disputes Act in connection with proceedings under paragraph (j) of this clause.

(h) Reporting on utilization of subject inventions. The Contractor agrees to submit, on request, periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the Contractor or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Contractor, and such other data and information as the agency may reasonably specify. The Contractor also agrees to provide additional reports as may be requested by the agency in connection with any march-in proceeding undertaken by the agency in accordance with paragraph (j) of this clause. As required by 35 U.S.C. 202(c)(5), the agency agrees it will not disclose such information to persons outside the Government without permission of the Contractor.

(i) Preference for United States industry. Notwithstanding any other provision of this clause, the Contractor agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject invention in the United States unless such person agrees that any product embodying the subject invention or produced through the use of the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement for such an agreement may be waived by the Federal agency upon a showing by the Contractor or its assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.

(j) March-in rights. The Contractor agrees that, with respect to any subject invention in which it has acquired title, the Federal agency has the right in accordance with the procedures in 37 CFR 401.6 and any supplemental regulations of the agency to require the Contractor, an assignee or exclusive licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the Contractor, assignee, or exclusive licensee refuses such a request the Federal agency has the right to grant such a license itself if the Federal agency determines that--

(1) Such action is necessary because the Contractor or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use;

(2) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Contractor, assignee, or their licensees;

(3) Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Contractor, assignee, or licensees; or

(4) Such action is necessary because the agreement required by paragraph (i) of this clause has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the United States is in breach of such agreement.

(k) Special provisions for contracts with nonprofit organizations. If the Contractor is a nonprofit organization, it agrees that--

(1) Rights to a subject invention in the United States may not be assigned without the approval of the Federal agency, except where such assignment is made to an organization which has as one of its primary functions the management of inventions; provided, that such assignee will be subject to the same provisions as the Contractor;

(2) The Contractor will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when the agency deems it appropriate) when the subject invention is assigned in accordance with 35 U.S.C. 202(e) and 37 CFR 401.10;

(3) The balance of any royalties or income earned by the Contractor with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions will be utilized for the support of scientific research or education; and

(4) It will make efforts that are reasonable under the circumstances to attract licensees of subject inventions that are small business firms, and that it will give a preference to a small business firm when licensing a subject invention if the Contractor determines that the small business firm has a plan or proposal for marketing the invention which, if executed, is equally as likely to bring the invention to practical application as any plans or proposals from applicants that are not small business firms; provided, that the Contractor is also satisfied that the small business firm has the capability and resources to carry out its plan or proposal. The decision whether to give a preference in any specific case will be at the discretion of the contractor. However, the Contractor agrees that the Secretary of Commerce may review the Contractor's licensing program and decisions regarding small business applicants, and the Contractor will negotiate changes to its licensing policies, procedures, or practices with the Secretary of Commerce when the Secretary's review discloses that the Contractor could take reasonable steps to more effectively implement the requirements of this subparagraph (k)(4).

(l) Communications.

Not Applicable

#### **52.244-2 SUBCONTRACTS (JUN 2007)**

(a) Definitions. As used in this clause--

“Approved purchasing system” means a Contractor's purchasing system that has been reviewed and approved in accordance with Part 44 of the Federal Acquisition Regulation (FAR).

“Consent to subcontract” means the Contracting Officer's written consent for the Contractor to enter into a particular subcontract.

“Subcontract” means any contract, as defined in FAR Subpart 2.1, entered into by a subcontractor to furnish supplies or services for performance of the prime contract or a subcontract. It includes, but is not limited to, purchase orders, and changes and modifications to purchase orders.

(b) When this clause is included in a fixed-price type contract, consent to subcontract is required only on unpriced contract actions (including unpriced modifications or unpriced delivery orders), and only if required in accordance with paragraph (c) or (d) of this clause.

(c) If the Contractor does not have an approved purchasing system, consent to subcontract is required for any subcontract that--

(1) Is of the cost-reimbursement, time-and-materials, or labor- hour type; or

(2) Is fixed-price and exceeds--

(i) For a contract awarded by the Department of Defense, the Coast Guard, or the National Aeronautics and Space Administration, the greater of the simplified acquisition threshold or 5 percent of the total estimated cost of the contract; or

(ii) For a contract awarded by a civilian agency other than the Coast Guard and the National Aeronautics and Space Administration, either the simplified acquisition threshold or 5 percent of the total estimated cost of the contract.

(d) If the Contractor has an approved purchasing system, the Contractor nevertheless shall obtain the Contracting Officer's written consent before placing the following subcontracts:

(e)(1) The Contractor shall notify the Contracting Officer reasonably in advance of placing any subcontract or modification thereof for which consent is required under paragraph (b), (c), or (d) of this clause, including the following information:

(i) A description of the supplies or services to be subcontracted.

(ii) Identification of the type of subcontract to be used.

(iii) Identification of the proposed subcontractor.

(iv) The proposed subcontract price.

(v) The subcontractor's current, complete, and accurate cost or pricing data and Certificate of Current Cost or Pricing Data, if required by other contract provisions.

(vi) The subcontractor's Disclosure Statement or Certificate relating to Cost Accounting Standards when such data are required by other provisions of this contract.

(vii) A negotiation memorandum reflecting--

(A) The principal elements of the subcontract price negotiations;

- (B) The most significant considerations controlling establishment of initial or revised prices;
- (C) The reason cost or pricing data were or were not required;
- (D) The extent, if any, to which the Contractor did not rely on the subcontractor's cost or pricing data in determining the price objective and in negotiating the final price;
- (E) The extent to which it was recognized in the negotiation that the subcontractor's cost or pricing data were not accurate, complete, or current; the action taken by the Contractor and the subcontractor; and the effect of any such defective data on the total price negotiated;
- (F) The reasons for any significant difference between the Contractor's price objective and the price negotiated; and

(G) A complete explanation of the incentive fee or profit plan when incentives are used. The explanation shall identify each critical performance element, management decisions used to quantify each incentive element, reasons for the incentives, and a summary of all trade-off possibilities considered.

(2) The Contractor is not required to notify the Contracting Officer in advance of entering into any subcontract for which consent is not required under paragraph (b), (c), or (d) of this clause.

(f) Unless the consent or approval specifically provides otherwise, neither consent by the Contracting Officer to any subcontract nor approval of the Contractor's purchasing system shall constitute a determination--

- (1) Of the acceptability of any subcontract terms or conditions;
- (2) Of the allowability of any cost under this contract; or
- (3) To relieve the Contractor of any responsibility for performing this contract.

(g) No subcontract or modification thereof placed under this contract shall provide for payment on a cost-plus-a-percentage-of- cost basis, and any fee payable under cost-reimbursement type subcontracts shall not exceed the fee limitations in FAR 15.404- 4(c)(4)(i).

(h) The Contractor shall give the Contracting Officer immediate written notice of any action or suit filed and prompt notice of any claim made against the Contractor by any subcontractor or vendor that, in the opinion of the Contractor, may result in litigation related in any way to this contract, with respect to which the Contractor may be entitled to reimbursement from the Government.

(i) The Government reserves the right to review the Contractor's purchasing system as set forth in FAR Subpart 44.3.

(j) Paragraphs (c) and (e) of this clause do not apply to the following subcontracts, which were evaluated during negotiations:

Phase I:  
( )

b(4)

Phase II:  
TBD

Phase III:  
TBD

**52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)**

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es): <http://www.arnet.gov/far> or <http://farsite.hill.af.mil>.

**252.227-7013 RIGHTS IN TECHNICAL DATA--NONCOMMERCIAL ITEMS (NOV 1995)**

(a) Definitions. As used in this clause:

- (1) "Computer data base" means a collection of data recorded in a form capable of being processed by a computer. The term does not include computer software.
- (2) "Computer program" means a set of instructions, rules, or routines recorded in a form that is capable of causing a computer to perform a specific operation or series of operations.
- (3) "Computer software" means computer programs, source code, source code listings, object code listings, design details, algorithms, processes, flow charts, formulae and related material that would enable the software to be reproduced, recreated, or recompiled. Computer software does not include computer data bases or computer software documentation.
- (4) "Computer software documentation" means owner's manuals, user's manuals, installation instructions, operating instructions, and other similar items, regardless of storage medium, that explain the capabilities of the computer software or provide instructions for using the software.
- (5) "Detailed manufacturing or process data" means technical data that describe the steps, sequences, and conditions of manufacturing, processing or assembly used by the manufacturer to produce an item or component or to perform a process.
- (6) "Developed" means that an item, component, or process exists and is workable. Thus, the item or component must have been constructed or the process practiced. Workability is generally established when the item, component, or process has been analyzed or tested sufficiently to demonstrate to reasonable people skilled in the applicable art that there is a high probability that it will operate as intended. Whether, how much, and what type of analysis or testing is required to establish workability depends on the nature of the item, component, or process, and the state of the art. To be considered "developed," the item, component, or process need not be at the stage where it could be offered for sale or sold on the commercial market, nor must the item, component, or process be actually reduced to practice within the meaning of Title 35 of the United States Code.
- (7) "Developed exclusively at private expense" means development was accomplished entirely with costs charged to indirect cost pools, costs not allocated to a government contract, or any combination thereof.
  - (i) Private expense determinations should be made at the lowest practicable level.
  - (ii) Under fixed-price contracts, when total costs are greater than the firm-fixed-price or ceiling price of the contract, the additional development costs necessary to complete development shall not be considered when determining whether development was at government, private, or mixed expense.
- (8) "Developed exclusively with government funds" means development was not accomplished exclusively or partially at private expense.
- (9) "Developed with mixed funding" means development was accomplished partially with costs charged to indirect cost pools and/or costs not allocated to a government contract, and partially with costs charged directly to a government contract.
- (10) "Form, fit, and function data" means technical data that describes the required overall physical, functional, and performance characteristics (along with the qualification requirements, if applicable) of an item, component, or process to the extent necessary to permit identification of physically and functionally interchangeable items.
- (11) "Government purpose" means any activity in which the United States Government is a party, including cooperative agreements with international or multi-national defense organizations, or sales or transfers by the United States Government to foreign governments or international organizations. Government purposes include competitive procurement, but do not include the rights to use, modify, reproduce, release, perform, display, or disclose technical data for commercial purposes or authorize others to do so.
- (12) "Government purpose rights" means the rights to--
  - (i) Use, modify, reproduce, release, perform, display, or disclose technical data within the Government without restriction; and
  - (ii) Release or disclose technical data outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data for United States government purposes.
- (13) "Limited rights" means the rights to use, modify, reproduce, release, perform, display, or disclose technical data, in whole or in part, within the Government. The Government may not, without the written permission of the party asserting limited rights, release or disclose the technical data outside the Government, use the technical data for manufacture, or authorize the technical data to be used by another party, except that the Government may reproduce,

release or disclose such data or authorize the use or reproduction of the data by persons outside the Government if reproduction, release, disclosure, or use is--

- (i) Necessary for emergency repair and overhaul; or
- (ii) A release or disclosure of technical data (other than detailed manufacturing or process data) to, or use of such data by, a foreign government that is in the interest of the Government and is required for evaluational or informational purposes;
- (iii) Subject to a prohibition on the further reproduction, release, disclosure, or use of the technical data; and
- (iv) The contractor or subcontractor asserting the restriction is notified of such reproduction, release, disclosure, or use.

(14) "Technical data" means recorded information, regardless of the form or method of the recording, of a scientific or technical nature (including computer software documentation). The term does not include computer software or data incidental to contract administration, such as financial and/or management information.

(15) "Unlimited rights" means rights to use, modify, reproduce, perform, display, release, or disclose technical data in whole or in part, in any manner, and for any purpose whatsoever, and to have or authorize others to do so.

(b) Rights in technical data. The Contractor grants or shall obtain for the Government the following royalty free, world-wide, nonexclusive, irrevocable license rights in technical data other than computer software documentation (see the Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation clause of this contract for rights in computer software documentation):

(1) Unlimited rights.

The Government shall have unlimited rights in technical data that are--

- (i) Data pertaining to an item, component, or process which has been or will be developed exclusively with Government funds;
- (ii) Studies, analyses, test data, or similar data produced for this contract, when the study, analysis, test, or similar work was specified as an element of performance;
- (iii) Created exclusively with Government funds in the performance of a contract that does not require the development, manufacture, construction, or production of items, components, or processes;
- (iv) Form, fit, and function data;
- (v) Necessary for installation, operation, maintenance, or training purposes (other than detailed manufacturing or process data);
- (vi) Corrections or changes to technical data furnished to the Contractor by the Government;
- (vii) Otherwise publicly available or have been released or disclosed by the Contractor or subcontractor without restrictions on further use, release or disclosure, other than a release or disclosure resulting from the sale, transfer, or other assignment of interest in the technical data to another party or the sale or transfer of some or all of a business entity or its assets to another party;
- (viii) Data in which the Government has obtained unlimited rights under another Government contract or as a result of negotiations; or
- (ix) Data furnished to the Government, under this or any other Government contract or subcontract thereunder, with--

(A) Government purpose license rights or limited rights and the restrictive condition(s) has/have expired; or

(B) Government purpose rights and the Contractor's exclusive right to use such data for commercial purposes has expired.

(2) Government purpose rights.

(i) The Government shall have government purpose rights for a five-year period, or such other period as may be negotiated, in technical data--

(A) That pertain to items, components, or processes developed with mixed funding except when the Government is entitled to unlimited rights in such data as provided in paragraphs (b)(ii) and (b)(iv) through (b)(ix) of this clause; or

(B) Created with mixed funding in the performance of a contract that does not require the development, manufacture, construction, or production of items, components, or processes.

(ii) The five-year period, or such other period as may have been negotiated, shall commence upon execution of the contract, subcontract, letter contract (or similar contractual instrument), contract modification, or option exercise that required development of the items, components, or processes or creation of the data described in paragraph (b)(2)(i)(B) of this clause. Upon expiration of the five-year or other negotiated period, the Government shall have unlimited rights in the technical data.

(iii) The Government shall not release or disclose technical data in which it has government purpose rights unless--

(A) Prior to release or disclosure, the intended recipient is subject to the non-disclosure agreement at 227.7103-7 of the Defense Federal Acquisition Regulation Supplement (DFARS); or

(B) The recipient is a Government contractor receiving access to the data for performance of a Government contract that contains the clause at DFARS 252.227-7025, Limitations on the Use or Disclosure of Government-Furnished Information Marked with Restrictive Legends.

(iv) The Contractor has the exclusive right, including the right to license others, to use technical data in which the Government has obtained government purpose rights under this contract for any commercial purpose during the time period specified in the government purpose rights legend prescribed in paragraph (f)(2) of this clause.

(3) Limited rights.

(i) Except as provided in paragraphs (b)(1)(ii) and (b)(1)(iv) through (b)(1)(ix) of this clause, the Government shall have limited rights in technical data--

(A) Pertaining to items, components, or processes developed exclusively at private expense and marked with the limited rights legend prescribed in paragraph (f) of this clause; or

(B) Created exclusively at private expense in the performance of a contract that does not require the development, manufacture, construction, or production of items, components, or processes.

(ii) The Government shall require a recipient of limited rights data for emergency repair or overhaul to destroy the data and all copies in its possession promptly following completion of the emergency repair/overhaul and to notify the Contractor that the data have been destroyed.

(iii) The Contractor, its subcontractors, and suppliers are not required to provide the Government additional rights to use, modify, reproduce, release, perform, display, or disclose technical data furnished to the Government with limited rights. However, if the Government desires to obtain additional rights in technical data in which it has limited rights, the Contractor agrees to promptly enter into negotiations with the Contracting Officer to determine whether there are acceptable terms for transferring such rights. All technical data in which the Contractor has granted the Government additional rights shall be listed or described in a license agreement made part of the contract. The license shall enumerate the additional rights granted the Government in such data.

(4) Specifically negotiated license rights.

The standard license rights granted to the Government under paragraphs (b)(1) through (b)(3) of this clause, including the period during which the Government shall have government purpose rights in technical data, may be modified by mutual agreement to provide such rights as the parties consider appropriate but shall not provide the Government lesser rights than are enumerated in paragraph (a)(13) of this clause. Any rights so negotiated shall be identified in a license agreement made part of this contract.

(5) Prior government rights.

Technical data that will be delivered, furnished, or otherwise provided to the Government under this contract, in which the Government has previously obtained rights shall be delivered, furnished, or provided with the pre-existing rights, unless--

(i) The parties have agreed otherwise; or

(ii) Any restrictions on the Government's rights to use, modify, reproduce, release, perform, display, or disclose the data have expired or no longer apply.

(6) Release from liability.

The Contractor agrees to release the Government from liability for any release or disclosure of technical data made in accordance with paragraph (a)(13) or (b)(2)(iii) of this clause, in accordance with the terms of a license negotiated under paragraph (b)(4) of this clause, or by others to whom the recipient has released or disclosed the data and to seek relief solely from the party who has improperly used, modified, reproduced, released, performed, displayed, or disclosed Contractor data marked with restrictive legends.

(c) Contractor rights in technical data. All rights not granted to the Government are retained by the Contractor.

(d) Third party copyrighted data. The Contractor shall not, without the written approval of the Contracting Officer, incorporate any copyrighted data in the technical data to be delivered under this contract unless the Contractor is the copyright owner or has obtained for the Government the license rights necessary to perfect a license or licenses in the

deliverable data of the appropriate scope set forth in paragraph (b) of this clause, and has affixed a statement of the license or licenses obtained on behalf of the Government and other persons to the data transmittal document.

(e) Identification and delivery of data to be furnished with restrictions on use, release, or disclosure. (1) This paragraph does not apply to restrictions based solely on copyright.

(2) Except as provided in paragraph (e)(3) of this clause, technical data that the Contractor asserts should be furnished to the Government with restrictions on use, release, or disclosure are identified in an attachment to this contract (the Attachment). The Contractor shall not deliver any data with restrictive markings unless the data are listed on the Attachment.

(3) In addition to the assertions made in the Attachment, other assertions may be identified after award when based on new information or inadvertent omissions unless the inadvertent omissions would have materially affected the source selection decision. Such identification and assertion shall be submitted to the Contracting Officer as soon as practicable prior to the scheduled date for delivery of the data, in the following format, and signed by an official authorized to contractually obligate the Contractor:

Identification and Assertion of Restrictions on the Government's Use, Release, or Disclosure of Technical Data. The Contractor asserts for itself, or the persons identified below, that the Government's rights to use, release, or disclose the following technical data should be restricted--

Technical data to be furnished with restrictions	Basis for assertion	Asserted rights category	Name of person asserting restrictions
(LIST)	(LIST)	(LIST)	(LIST).....
(1)	(2)	(3)	(4)

(1) If the assertion is applicable to items, components or processes developed at private expense, identify both the data and each such item, component, or process.

(2) Generally, the development of an item, component, or process at private expense, either exclusively or partially, is the only basis for asserting restrictions on the Government's rights to use, release, or disclose technical data pertaining to such items, components, or processes. Indicate whether development was exclusively or partially at private expense. If development was not at private expense, enter the specific reason for asserting that the Government's rights should be restricted.

(3) Enter asserted rights category (e.g., government purpose license rights from a prior contract, rights in SBIR data generated under another contract, limited or government purpose rights under this or a prior contract, or specifically negotiated licenses).

(4) Corporation, individual, or other person, as appropriate.

Date \_\_\_\_\_

Printed Name and Title \_\_\_\_\_

Signature \_\_\_\_\_

(End of identification and assertion)

(4) When requested by the Contracting Officer, the Contractor shall provide sufficient information to enable the Contracting Officer to evaluate the Contractor's assertions. The Contracting Officer reserves the right to add the Contractor's assertions to the Attachment and validate any listed assertion, at a later date, in accordance with the procedures of the Validation of Restrictive Markings on Technical Data clause of this contract.

(f) Marking requirements. The Contractor, and its subcontractors or suppliers, may only assert restrictions on the Government's rights to use, modify, reproduce, release, perform, display, or disclose technical data to be delivered under this contract by marking the deliverable data subject to restriction. Except as provided in paragraph (f)(5) of this clause, only the following legends are authorized under this contract: the government purpose rights legend at paragraph (f)(2) of this clause; the limited rights legend at paragraph (f)(3) of this clause; or the special license rights legend at paragraph (f)(4) of this clause; and/or a notice of copyright as prescribed under 17 U.S.C. 401 or 402.

(1) General marking instructions. The Contractor, or its subcontractors or suppliers, shall conspicuously and legibly mark the appropriate legend on all technical data that qualify for such markings. The authorized legends shall be placed on the transmittal document or storage container and, for printed material, each page of the printed material containing technical data for which restrictions are asserted. When only portions of a page of printed

material are subject to the asserted restrictions, such portions shall be identified by circling, underscoring, with a note, or other appropriate identifier. Technical data transmitted directly from one computer or computer terminal to another shall contain a notice of asserted restrictions. Reproductions of technical data or any portions thereof subject to asserted restrictions shall also reproduce the asserted restrictions.

(2) Government purpose rights markings. Data delivered or otherwise furnished to the Government purpose rights shall be marked as follows:

**Government Purpose Rights**

Contract No. \_\_\_\_\_

Contractor Name \_\_\_\_\_

Contractor Address \_\_\_\_\_

Expiration Date \_\_\_\_\_

The Government's rights to use, modify, reproduce, release, perform, display, or disclose these technical data are restricted by paragraph (b)(2) of the Rights in Technical Data--Noncommercial Items clause contained in the above identified contract. No restrictions apply after the expiration date shown above. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings.

(End of legend)

(3) Limited rights markings. Data delivered or otherwise furnished to the Government with limited rights shall be marked with the following legend:

**Limited Rights** \_\_\_\_\_

Contract No. \_\_\_\_\_

Contractor Name \_\_\_\_\_

Contractor Address \_\_\_\_\_

The Government's rights to use, modify, reproduce, release, perform, display, or disclose these technical data are restricted by paragraph (b)(3) of the Rights in Technical Data--Noncommercial Items clause contained in the above identified contract. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings. Any person, other than the Government, who has been provided access to such data must promptly notify the above named Contractor.

(End of legend)

(4) Special license rights markings.

(i) Data in which the Government's rights stem from a specifically negotiated license shall be marked with the following legend:

**Special License Rights**

The Government's rights to use, modify, reproduce, release, perform, display, or disclose these data are restricted by Contract No. \_\_\_\_\_ (Insert contract number) \_\_\_\_\_, License No. \_\_\_\_\_ (Insert license identifier) \_\_\_\_\_. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings.

(End of legend)

(ii) For purposes of this clause, special licenses do not include government purpose license rights acquired under a prior contract (see paragraph (b)(5) of this clause).

(5) Pre-existing data markings. If the terms of a prior contract or license permitted the Contractor to restrict the Government's rights to use, modify, reproduce, release, perform, display, or disclose technical data deliverable under this contract, and those restrictions are still applicable, the Contractor may mark such data with the appropriate restrictive legend for which the data qualified under the prior contract or license. The marking procedures in paragraph (f)(1) of this clause shall be followed.

(g) Contractor procedures and records. Throughout performance of this contract, the Contractor and its subcontractors or suppliers that will deliver technical data with other than unlimited rights, shall--

(1) Have, maintain, and follow written procedures sufficient to assure that restrictive markings are used only when authorized by the terms of this clause; and

(2) Maintain records sufficient to justify the validity of any restrictive markings on technical data delivered under this contract.

(h) Removal of unjustified and nonconforming markings. (1) Unjustified technical data markings. The rights and obligations of the parties regarding the validation of restrictive markings on technical data furnished or to be furnished under this contract are contained in the Validation of Restrictive Markings on Technical Data clause of this contract. Notwithstanding any provision of this contract concerning inspection and acceptance, the Government may

ignore or, at the Contractor's expense, correct or strike a marking if, in accordance with the procedures in the Validation of Restrictive Markings on Technical Data clause of this contract, a restrictive marking is determined to be unjustified. (2) Nonconforming technical data markings. A nonconforming marking is a marking placed on technical data delivered or otherwise furnished to the Government under this contract that is not in the format authorized by this contract. Correction of nonconforming markings is not subject to the Validation of Restrictive Markings on Technical Data clause of this contract. If the Contracting Officer notifies the Contractor of a nonconforming marking and the Contractor fails to remove or correct such marking within sixty (60) days, the Government may ignore or, at the Contractor's expense, remove or correct any nonconforming marking.

(i) Relation to patents. Nothing contained in this clause shall imply a license to the Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Government under any patent.

(j) Limitation on charges for rights in technical data.

(1) The Contractor shall not charge to this contract any cost, including, but not limited to, license fees, royalties, or similar charges, for rights in technical data to be delivered under this contract when--

- (i) The Government has acquired, by any means, the same or greater rights in the data; or
- (ii) The data are available to the public without restrictions.

(2) The limitation in paragraph (j)(1) of this clause--

- (i) Includes costs charged by a subcontractor or supplier, at any tier, or costs incurred by the Contractor to acquire rights in subcontractor or supplier technical data, if the subcontractor or supplier has been paid for such rights under any other Government contract or under a license conveying the rights to the Government; and
- (ii) Does not include the reasonable costs of reproducing, handling, or mailing the documents or other media in which the technical data will be delivered.

(k) Applicability to subcontractors or suppliers.

(1) The Contractor shall ensure that the rights afforded its subcontractors and suppliers under 10 U.S.C. 2320, 10 U.S.C. 2321, and the identification, assertion, and delivery processes of paragraph (e) of this clause are recognized and protected.

(2) Whenever any technical data for noncommercial items is to be obtained from a subcontractor or supplier for delivery to the Government under this contract, the Contractor shall use this same clause in the subcontract or other contractual instrument, and require its subcontractors or suppliers to do so, without alteration, except to identify the parties. No other clause shall be used to enlarge or diminish the Government's, the Contractor's, or a higher-tier subcontractor's or supplier's rights in a subcontractor's or supplier's technical data.

(3) Technical data required to be delivered by a subcontractor or supplier shall normally be delivered to the next higher-tier contractor, subcontractor, or supplier. However, when there is a requirement in the prime contract for data which may be submitted with other than unlimited rights by a subcontractor or supplier, then said subcontractor or supplier may fulfill its requirement by submitting such data directly to the Government, rather than through a higher-tier contractor, subcontractor, or supplier.

(4) The Contractor and higher-tier subcontractors or suppliers shall not use their power to award contracts as economic leverage to obtain rights in technical data from their subcontractors or suppliers.

(5) In no event shall the Contractor use its obligation to recognize and protect subcontractor or supplier rights in technical data as an excuse for failing to satisfy its contractual obligations to the Government.

#### **252.227-7017 IDENTIFICATION AND ASSERTION OF USE, RELEASE, OR DISCLOSURE RESTRICTIONS (JUN 1995)**

(a) The terms used in this provision are defined in the following clause or clauses contained in this solicitation--

(1) If a successful offeror will be required to deliver technical data, the Rights in Technical Data--Noncommercial Items clause, or, if this solicitation contemplates a contract under the Small Business Innovative Research Program, the Rights in Noncommercial Technical Data and Computer Software--Small Business Innovative Research (SBIR) Program clause.

(2) If a successful offeror will not be required to deliver technical data, the Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation clause, or, if this solicitation contemplates a contract under the Small Business Innovative Research Program, the Rights in Noncommercial Technical Data and Computer Software--Small Business Innovative Research (SBIR) Program clause.

(b) The identification and assertion requirements in this provision apply only to technical data, including computer software documentation, or computer software to be delivered with other than unlimited rights. For contracts to be awarded under the Small Business Innovative Research Program, the notification and identification requirements do not apply to technical data or computer software that will be generated under the resulting contract. Notification and identification is not required for restrictions based solely on copyright.

(c) Offers submitted in response to this solicitation shall identify, to the extent known at the time an offer is submitted to the Government, the technical data or computer software that the Offeror, its subcontractors or suppliers, or potential subcontractors or suppliers, assert should be furnished to the Government with restrictions on use, release, or disclosure.

(d) The Offeror's assertions, including the assertions of its subcontractors or suppliers or potential subcontractors or suppliers, shall be submitted as an attachment to its offer in the following format, dated and signed by an official authorized to contractually obligate the Offeror:

Identification and Assertion of Restrictions on the Government's Use, Release, or Disclosure of Technical Data or Computer Software.

The Offeror asserts for itself, or the persons identified below, that the Government's rights to use, release, or disclose the following technical data or computer software should be restricted:

Technical Data or Computer Software to be Furnished With Restrictions*	Basis for Rights Assertion**	Asserted Name of Person Asserting	Category***	Restrictions****
(LIST*****)	(LIST)	(LIST)	(LIST)	

\* For technical data (other than computer software documentation) pertaining to items, components, or processes developed at private expense, identify both the deliverable technical data and each such item, component, or process. For computer software or computer software documentation identify the software or documentation.

\*\* Generally, development at private expense, either exclusively or partially, is the only basis for asserting restrictions. For technical data, other than computer software documentation, development refers to development of the item, component, or process to which the data pertain. The Government's rights in computer software documentation generally may not be restricted. For computer software, development refers to the software. Indicate whether development was accomplished exclusively or partially at private expense. If development was not accomplished at private expense, or for computer software documentation, enter the specific basis for asserting restrictions.

\*\*\* Enter asserted rights category (e.g., government purpose license rights from a prior contract, rights in SBIR data generated under another contract, limited, restricted, or government purpose rights under this or a prior contract, or specially negotiated licenses).

\*\*\*\* Corporation, individual, or other person, as appropriate.

\*\*\*\*\* Enter "none" when all data or software will be submitted without restrictions.

Date \_\_\_\_\_

Printed Name and Title \_\_\_\_\_

Signature \_\_\_\_\_

(End of identification and assertion)

(e) An offeror's failure to submit, complete, or sign the notification and identification required by paragraph (d) of this provision with its offer may render the offer ineligible for award.

(f) If the Offeror is awarded a contract, the assertions identified in paragraph (d) of this provision shall be listed in an attachment to that contract. Upon request by the Contracting Officer, the Offeror shall provide sufficient information to enable the Contracting Officer to evaluate any listed assertion.

**252.235-7010 ACKNOWLEDGMENT OF SUPPORT AND DISCLAIMER (MAY 1995)**

(a) The Contractor shall include an acknowledgment of the Government's support in the publication of any material based on or developed under this contract, stated in the following terms: This material is based upon work supported by the Navair Warfare Center Weapons Division, China Lake, CA under Contract No. N68936-08-C-0022.

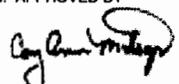
(b) All material, except scientific articles or papers published in scientific journals, must, in addition to any notices or disclaimers by the Contractor, also contain the following disclaimer: Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of Navair Warfare Center Weapons Division, China Lake, CA.

Section J - List of Documents, Exhibits and Other Attachments

Exhibit/Attachment Table of Contents

DOCUMENT TYPE	DESCRIPTION	PAGES	DATE
Exhibit A	Contract Data Requirements Lists	14	1-23-08



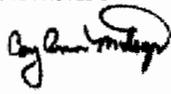
<b>CONTRACT DATA REQUIREMENTS LIST</b> <i>(1 Data Item)</i>					Form Approved OMB No. 0704-0188	
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A. CONTRACT LINE ITEM NO.		B. EXHIBIT	C. CATEGORY: TDP    TM    OTHER: MISC			
D. SYSTEM/ITEM <b>Propulsion System Development</b>		E. CONTRACT/PR NO. <b>N68936-08-C-0002</b>		F. CONTRACTOR <b>ERA</b>		
1. DATA ITEM NO. <b>A002</b>	2. TITLE OF DATA ITEM <b>TECHNICAL REPORT - STUDY/SERVICES</b>			3. SUBTITLE <b>Baseline design, Preliminary Analysis, Performance Estimates and Supporting Data</b>		
4. AUTHORITY (Data Acquisition Document No.) <b>DI-MISC-80508</b>		5. CONTRACT REFERENCE <b>SOW Para. 1.11, 4, 4.19, 6.2</b>		6. REQUIRING OFFICE <b>NAVAIRWD CODE 476100D</b>		
7. DD 250 REQ <b>LT</b>	9. DIST STATEMENT REQUIRED <b>SEE BLK 16</b>	10. FREQUENCY <b>ASREQ</b>	12. DATE OF FIRST SUBMISSION <b>SEE BLK 16</b>	14. DISTRIBUTION		
8. APP CODE <b>A</b>	11. AS OF DATE <b>N/A</b>	13. DATE OF SUBSEQUENT SUBMISSION <b>SEE BLK 16</b>	a. ADDRESSEE	Draft	b. COPIES Final	
<b>Block 16 Remarks</b>					Reg	Repro
			Code 476100D	0	1	0
					LTR	ONLY
			Code 210000D			
<p><b>Block 4: May be in contractor format as long as DID is used for guidance.</b></p> <p><b>Block 9: DISTRIBUTION STATEMENT D. Distribution authorized to the Department of Defense and U.S. DoD contractors only; Critical Technology; 16 January 2008. Other request shall be referred to NAWCWD, Code 476100D, 1 Administration Circle, China Lake, CA 93555-6100</b></p> <p><b>Block 12 &amp; 13: Shall be submitted as data is created.</b></p> <p><b>Block 14: Shall be submitted in an electronic format agreed upon by both Government and contractor prior to 1<sup>st</sup> submittal.</b></p>						
			15. TOTAL	0	1	0
G. PREPARED BY <b>Naval Air Warfare Center, Weapons Division, China Lake, CA 93555-6100</b>		H. DATE <b>080116</b>	I. APPROVED BY  <b>DRRB Chairperson</b>		J. DATE <b>080116</b>	



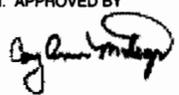






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D. SYSTEM/ITEM <b>Propulsion System Development</b>		E. CONTRACT/PR NO. <b>N68936-08-C-0002</b>		F. CONTRACTOR <b>ERA</b>				
1. DATA ITEM NO. <b>A007</b>	2. TITLE OF DATA ITEM <b>TECHNICAL REPORT - STUDY/SERVICES</b>			3. SUBTITLE <b>Prototype Manufacturing Plan</b>				
4. AUTHORITY (Data Acquisition Document No.) <b>DI-MISC-80508B</b>		5. CONTRACT REFERENCE <b>SOW, Phase III Task 9</b>		6. REQUIRING OFFICE <b>NAVAIRWD CODE 476100D</b>				
7. DD 250 REQ <b>LT</b>	9. DIST STATEMENT REQUIRED <b>SEE BLK 16</b>	10. FREQUENCY <b>ASREQ</b>	12. DATE OF FIRST SUBMISSION <b>SEE BLK 16</b>	14. DISTRIBUTION				
8. APP CODE <b>A</b>		11. AS OF DATE <b>N/A</b>	13. DATE OF SUBSEQUENT SUBMISSION <b>SEE BLK 16</b>	a. ADDRESSEE		b. COPIES		
<b>Block 16 Remarks</b>  <b>Block 4: May be in contractor format as long as DID is used for guidance.</b>  <b>Block 9: DISTRIBUTION STATEMENT D. Distribution authorized to the Department of Defense and U.S. DoD contractors only; Critical Technology; 16 January 2008. Other request shall be referred to NAWCWD, Code 476100D, 1 Administration Circle, China Lake, CA 93555-6100</b>  <b>Block 12 &amp; 13: Shall be submitted at NLT 15 DA completion of task.</b>  <b>Block 14: Shall be submitted in an electronic format agreed upon by both Government and contractor prior to 1<sup>st</sup> submittal.</b>				Draft		Final		
				Code 476100D		0	1	0
				Code 210000D			LTR	ONLY
				15. TOTAL →		0 1 0		
G. PREPARED BY <b>Naval Air Warfare Center, Weapons Division, China Lake, CA 93555-6100</b>		H. DATE <b>080116</b>	I. APPROVED BY  <b>DRRB Chairperson</b>		J. DATE <b>080116</b>			



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1. DATA ITEM NO. <b>A009</b>	2. TITLE OF DATA ITEM <b>TECHNICAL REPORT - STUDY/SERVICES</b>			3. SUBTITLE <b>Detail Schedule</b>																				
4. AUTHORITY (Data Acquisition Document No.) <b>DI-MISC-80508B</b>			5. CONTRACT REFERENCE <b>SOW Introduction</b>		6. REQUIRING OFFICE <b>NAVAIRWD CODE 476100D</b>																			
7. DD 250 REQ <b>LT</b>	9. DIST STATEMENT REQUIRED <b>SEE BLK 16</b>	10. FREQUENCY <b>ASREQ</b>	12. DATE OF FIRST SUBMISSION <b>SEE BLK 16</b>	14. DISTRIBUTION  a. ADDRESSEE  <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2" rowspan="2"></th> <th colspan="2">b. COPIES</th> </tr> <tr> <th>Draft</th> <th>Final</th> </tr> <tr> <td></td> <td></td> <td>Reg</td> <td>Repro</td> </tr> <tr> <td><b>Code 476100D</b></td> <td><b>0</b></td> <td><b>1</b></td> <td><b>0</b></td> </tr> <tr> <td><b>Code 210000D</b></td> <td></td> <td><b>LTR</b></td> <td><b>ONLY</b></td> </tr> </table>					b. COPIES		Draft	Final			Reg	Repro	<b>Code 476100D</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>Code 210000D</b>		<b>LTR</b>	<b>ONLY</b>
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			<b>15. TOTAL</b> →	<b>0</b>	<b>1</b>	<b>0</b>																		
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1. DATA ITEM NO. <b>A00C</b>		2. TITLE OF DATA ITEM <b>TEST PLANS/TEST PROCEDURES</b>			3. SUBTITLE <b>Test Set-Up</b>																					
4. AUTHORITY (Data Acquisition Document No.) <b>DI-SESS-81704</b>			5. CONTRACT REFERENCE <b>SOW Para 1.11, 4.15, 8</b>		6. REQUIRING OFFICE <b>NAVAIRWD CODE 476100D</b>																					
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