

**SOLICITATION, OFFER AND AWARD**

1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)

RATING

D0C9

PAGE OF

1 | 24 PAGES

2. CONTRACT NO.

3. SOLICITATION NO.

N00173-01-R-DL05

4. TYPE OF SOLICITATION

- SEALED BID (IFB)  
 NEGOTIATED (RFP)

5. DATE ISSUED

21 NOV 2000

6. REQUISITION/PURCHASE NO.

7. ISSUED BY  
**CONTRACTING OFFICER**  
**NAVAL RESEARCH LABORATORY**  
**ATTN: CODE 3220.DL**  
**WASHINGTON DC 20375-5326**

CODE

8. ADDRESS OFFER TO (If other than Item 7)

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

**SOLICITATION**

9. Sealed offers in original and 4 copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if handcarried, in the depository located in Building 222, Room 115 until 4:00 local time 22 DEC 2000  
(Hour) (Date)

CAUTION - LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-10. All offers are subject to all terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL:

A. NAME

Dian Lockamy

B. TELEPHONE NO. (Include area code) (NO COLLECT CALLS)

(202) 767-3782

**11. TABLE OF CONTENTS**

(✓)	SEC.	DESCRIPTION	PAGE(S)	(✓)	SEC.	DESCRIPTION	PAGE(S)
PART I - THE SCHEDULE				PART II - CONTRACT CLAUSES			
X	A	SOLICITATION/CONTRACT FORM	1	X	I	CONTRACT CLAUSES	12-17
X	B	SUPPLIES OR SERVICES AND PRICES/COSTS	2-3	PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACH.			
X	C	DESCRIPTION/SPECS./WORK STATEMENT	3-4	X	J	LIST OF ATTACHMENTS	17
X	D	PACKAGING AND MARKING	4	PART IV - REPRESENTATIONS AND INSTRUCTIONS			
X	E	INSPECTION AND ACCEPTANCE	4	X	K	REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS	17
X	F	DELIVERIES OR PERFORMANCE	4-5	X	L	INSTRS., CONDS., AND NOTICES TO OFFERORS	18-13
X	G	CONTRACT ADMINISTRATION DATA	5-8	X	M	EVALUATION FACTORS FOR AWARD	23-24
X	H	SPECIAL CONTRACT REQUIREMENTS	8-12				

**OFFER (Must be fully completed by offeror)**

NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.

12. In compliance with the above, the undersigned agrees, if this offer is accepted within \_\_\_\_\_ calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52-232-8)

10 CALENDAR DAYS	%	20 CALENDAR DAYS	%	30 CALENDAR DAYS	%	CALENDAR DAYS	%
------------------	---	------------------	---	------------------	---	---------------	---

14. ACKNOWLEDGMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated:

AMENDMENT NO.	DATE	AMENDMENT NO.	DATE

15A. NAME AND ADDRESS OF OFFEROR

CODE \_\_\_\_\_ FACILITY \_\_\_\_\_

16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)

15B. TELEPHONE NO. (Include area code)

15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE.

17. SIGNATURE

18. OFFER DATE

**AWARD (To be completed by Government)**

19. ACCEPTED AS TO ITEMS NUMBERED

20. AMOUNT

21. ACCOUNTING AND APPROPRIATION

22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION:

10 U.S.C. 2304(c) ( )  41 U.S.C. 253(c) ( )

23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)

ITEM

24. ADMINISTERED BY (If other than Item 7) CODE \_\_\_\_\_

25. PAYMENT WILL BE MADE BY CODE \_\_\_\_\_

26. NAME OF CONTRACTING OFFICER (Type or print)

27. UNITED STATES OF AMERICA

(Signature of Contracting Officer)

28. AWARD DATE

IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.

**PART I - THE SCHEDULE  
SECTION B  
SUPPLIES OR SERVICES AND PRICES/COSTS**

**B-1 SUPPLIES/SERVICES AND COSTS**

<b>ITEM NUMBER</b>	<b>SUPPLIES/SERVICES</b>	<b>ESTIMATED COST</b>	<b>FIXED FEE</b>	<b>ESTIMATED COST PLUS FIXED FEE</b>
<b>Base Year</b>				
0001	The Contractor shall provide engineering and technical support for Electronic Warfare Support Systems in accordance with Section C	\$	\$	\$
0002	Data in accordance with Exhibit A (DD 1423)	* NSP	* NSP	* NSP
<b>TOTAL EST. COST PLUS FIXED FEE</b>		\$	\$	\$
• <i>Not Separately Priced</i>				
<b>Option I</b>				
0003	The Contractor shall provide engineering and technical support for Electronic Warfare Support Systems in accordance with Section C	\$	\$	\$
0004	Data in accordance with Exhibit A (DD 1423)	* NSP	* NSP	* NSP
<b>TOTAL EST. COST PLUS FIXED FEE</b>		\$	\$	\$
• <i>Not Separately Priced</i>				
<b>Option II</b>				
0005	The Contractor shall provide engineering and technical support for Electronic Warfare Support Systems in accordance with Section C	\$	\$	\$
0006	Data in accordance with Exhibit A (DD 1423)	* NSP	* NSP	* NSP

**TOTAL EST. COST PLUS FIXED FEE**      \$                      \$                      \$  
     • *Not Separately Priced*

**Option III**

0007      The Contractor shall      \$                      \$                      \$  
             provide engineering and  
             technical support for Electronic  
             Warfare Support Systems in  
             accordance with Section C

0008      Data in accordance with      \* NSP                      \* NSP                      \* NSP  
             Exhibit A (DD 1423)

**TOTAL EST. COST PLUS FIXED FEE**      \$                      \$                      \$  
     • *Not Separately Priced*

**Option IV**

0009      The Contractor shall      \$                      \$                      \$  
             provide engineering and  
             technical support for Electronic  
             Warfare Support Systems in  
             accordance with Section C

0010      Data in accordance with      \* NSP                      \* NSP                      \* NSP  
             Exhibit A (DD 1423)

**TOTAL EST. COST PLUS FIXED FEE**      \$                      \$                      \$  
     • *Not Separately Priced*

**SECTION C  
DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK**

**C-1 STATEMENT OF WORK**

The work and services to be performed hereunder shall be subject to the requirements and standards contained in Attachment (1), Statement of Work, with Exhibit A, Contract Data Requirements List, and all other Attachments cited in Section J, which are incorporated by reference into Section C.

**C-2 REQUIREMENTS FOR ON-SITE CONTRACTORS**

For those portions of the work under this contract performed at any NRL site, the contractor shall comply with the Requirements for On-Site Contractors dated 11 April 2000 which are hereby incorporated by reference. The full text is available at <http://heron.nrl.navy.mil/contracts/home.htm>.

**C-3 SUBCONTRACTING PLAN**

Subcontracting Plan \* dated is hereby incorporated by reference.

*(\*this provision will be included and completed at time of award, if applicable)*

**SECTION D  
PACKAGING AND MARKING**

**D-1 PACKAGING AND MARKING**

Preservation, packaging, packing and marking of all deliverable contract line items must conform to normal commercial packing standards to assure safe delivery at destination.

**SECTION E  
INSPECTION AND ACCEPTANCE**

**E-1 INSPECTION AND ACCEPTANCE CLAUSES INCORPORATED BY REFERENCE****FAR CLAUSE    TITLE**

- |          |   |  |
|----------|---|--|
| 52.246-8 | - | Inspection Of Research And Development - Cost Reimbursement (APR 1984) |
| 52.246-9 | - | Inspection Of Research And Development (Short Form) (APR 1984)         |

**DFARS CLAUSE    TITLE****E-2 INSPECTION AND ACCEPTANCE**

Inspection and acceptance of the final delivery will be accomplished by the Technical Manager (TM) or Contracting Officer Representative (COR) designated in Section G of this contract. Inspection and acceptance will be performed at the Naval Research Laboratory, Washington DC 20375-5320.

**SECTION F  
DELIVERIES OR PERFORMANCE**

**F-1 DELIVERIES OR PERFORMANCE CLAUSES INCORPORATED BY REFERENCE:****FAR CLAUSE    TITLE**

- |           |   |   |
|-----------|---|---|
| 52.242-15 | - | Stop-Work Order (AUG 1989) - Alternate I (APR 1984) |
| 52.247-34 | - | F.O.B. Destination (NOV 1991)                       |

**F-2 PERIOD AND PLACE OF PERFORMANCE**

- (a) The term of this contract is from date of contract award through 12 months thereafter, with four (4) options that will extend the period of performance for an additional 12 months each, if exercised.
- (b) The principal place of performance of this contract shall be at the Naval Research Laboratory, Wahsington DC.

**SECTION G  
CONTRACT ADMINISTRATION DATA****G-1 PROCURING OFFICE REPRESENTATIVE**

In order to expedite administration of the contract, the Administrative Contracting Officer (ACO) will direct inquiries to the appropriate office listed below. Please do not direct routine inquiries to the person listed in Item 20A on Standard Form 26.

Contract Matters- \*

Security Matters- \*

Safety Matters- \*

Patent Matters- \*

Release of Data- \*

The ACO will forward invention disclosures and reports directly to the Associate Counsel for Patents, Code 1008.2, Naval Research Laboratory, Washington DC 20375-5320. The Associate Counsel for Patents will return the reports along with a recommendation to the Administrative Contracting Officer. The Associate Counsel for Patents will represent the Contracting Officer with regard to invention reporting matters arising under this contract.

( \* To be completed at time of award )

**G-2 CONTRACTING OFFICER'S REPRESENTATIVE (COR) - FUNCTIONS AND LIMITATIONS**

\* is hereby designated the cognizant COR who will represent the Contracting Officer in the administration of technical details within the scope of this contract and inspection and acceptance. The COR is not otherwise authorized to make any representations or commitments of any kind on behalf of the Contracting Officer or the Government. The COR does not have the authority to alter the Contractor's obligations or change the specifications in the contract. If, as a result of technical discussions, it is desirable to alter contract obligations or statements of work, a modification must be issued in writing and signed by the Contracting Officer. The COR is responsible for reviewing the bills and charges submitted by the Contractor and informing the ACO of areas where exceptions are to be taken.

( \* To be completed at time of award )

**G-3 TECHNICAL DIRECTION MEMORANDUM (TDM)**

- (a) For the purposes of this clause, technical direction includes the following:
- (1) Direction to the Contractor which shifts work emphasis between work areas or tasks, requires pursuit of certain lines of inquiry, fills in details or otherwise describes work which will accomplish the objectives described in the statement of work;
  - (2) Guidelines to the Contractor which assist in interpretation of drawings, specifications or technical portions of work description.
- (b) Technical instructions must be within the scope of work stated in the contract. Technical instructions may not be used to:
- (1) Assign additional work under the contract;
  - (2) Direct a change as defined in the contract clause entitled "Changes";
  - (3) Increase or decrease the estimated contract cost, the fixed fee, or the time required for contract performance; or
  - (4) Change any of the terms, conditions or specifications of the contract
- (c) The TDM shall be written by the Contracting Officer's Representative (COR), with the original given to the Contractor and a copy retained in the CORs file. Technical direction may be issued orally only in emergency situations. If technical direction is issued orally, a TDM must follow within two (2) working days from the date of the oral direction. Amendments, corrections, or changes to TDMs shall also be in written format and shall include all the information set forth in paragraph (e) below.
- (d) A TDM shall be considered issued when the Government deposits it in the mail, or if transmitted by other means, when it is physically delivered to the contractor.
- (e) TDMs shall include, but not be limited to, the following information:
- (1) Date of TDM,
  - (2) Contract Number,
  - (3) Reference to the relevant portion or item in the Statement of Work,
  - (4) The specific technical direction or clarification, and
  - (5) The signature of the COR.
- (f) CORs shall retain all files containing TDMs for a period of two (2) years after the final contract completion date.
- (g) The only individual authorized in any way to amend or modify any of the terms of this contract shall be the Contracting Officer. When, in the opinion of the Contractor, any technical direction calls for effort outside the scope of the contract or inconsistent with this special provision, the Contractor shall notify the Contracting Officer in writing within ten (10) working days after its receipt.

**G-4 SUBCONTRACTORS/CONSULTANTS**

- (a) Advance notification or requests for consent pursuant to the contract clause entitled "Subcontracts" (FAR 52.244-2) shall be directed to the cognizant administrative contracting officer (ACO).
- (b) The following subcontractors/consultants have been identified in the Contractor's proposal as necessary for performance of this contract:

Subcontractor/Consultant Name

Estimated Cost

*(Paragraph (b) will be included and filled in at time of award if subcontractor/consultants are proposed by the successful offeror)*

**G-5 NAPS 5252.232-9001 - SUBMISSION OF INVOICES (COST-REIMBURSEMENT, TIME-AND-MATERIALS, LABOR-HOUR, OR FIXED PRICE INCENTIVE (JUL 1992)**

(a) "Invoice" as used in this clause includes contractor requests for interim payments using public vouchers (SF 1034) but does not include contractor requests for progress payments under fixed price incentive contracts.

(b) The Contractor shall submit invoices and any necessary supporting documentation, in an original and 4 copies, to the contract auditor at the following address:

*(To be completed at time of award)*

unless delivery orders are applicable, in which case invoices will be segregated by individual order and submitted to the address specified in the order. In addition, an information copy shall be submitted to [See Section G for designated COR]. Following verification, the contract auditor will forward the invoice to the designated payment office for payment in the amount determined to be owing, in accordance with the applicable payment (and fee) clause(s) of this contract.

(c) Invoices requesting interim payments shall be submitted no more than once every two weeks, unless another time period is specified in the Payments clause of this contract. For indefinite delivery type contracts, interim payment invoices shall be submitted no more than once every two weeks for each delivery orders. There shall be a lapse of no more than 30 calendar days between performance and submission of an interim payment invoice.

(d) In addition to the information identified in the Prompt Payment clause herein, each invoice shall contain the following information, as applicable:

- (1) Contract line item number (CLIN)
- (2) Subline item number (SLIN)
- (3) Accounting Classification Reference Number(ACRN)
- (4) Payment terms
- (5) Procuring activity
- (6) Date supplies provided or services performed
- (7) Costs incurred and allowable under the contract
- (8) Vessel (e.g., ship, submarine or other craft) or system for which supply/service is provided

(e) A DD Form 250, "Material Inspection and Receiving Report",

- is required with each invoice submittal.
- is required only with the final invoice.
- is not required.

(f) A Certificate of Performance

- shall be provided with each invoice submittal.
- is not required.

(g) The Contractor's final invoice shall be identified as such, and shall list all other invoices (if any) previously tendered under this contract.

(h) Cost of performance shall be segregated, accumulated and invoiced to the appropriate ACRN

categories to the extent possible. When such segregation of costs by ACRN is not possible for invoices submitted with CLIN/SLINS with more than one ACRN, an allocation ratio shall be established in the same ratio as the obligations cited in the accounting data so that costs are allocated on a proportional basis.

#### **G-6 INCREMENTAL FUNDING**

Pursuant to the Limitation of Funds clause (FAR 52.232-22), the total amount allotted to this contract is \$\* and it is estimated that this amount is sufficient for contract performance through \* .

*(\*this provision will be included and completed at time of award, if applicable)*

#### **G-7 PAYMENT INSTRUCTIONS FOR MULTIPLE ACCOUNTING CLASSIFICATION CITATIONS (COST-REIMBURSEMENT)**

The purpose of these instructions is to permit the paying office to charge the accounting classification citations in the contract in a manner that reflects the performance of the contract. These instructions do not create any obligation on the part of the Government or the contractor nor do they in any way alter any obligation created by any other provision of the contract. Invoices should be paid from available ACRNs in the following order:

- (a) ACRNs cited on the contractor's invoice.
- (b) On a proportional basis from any ACRNs assigned to funds which will cancel at the end of the current fiscal year.
- (c) The ACRN assigned to the following line of accounting:  
97X4930.NH4A 000 77777 0 000173 2F 000000 N00173Z45000.
- (d) If funds appropriated in more than one fiscal year are allotted to the contract, the ACRN assigned to the oldest allotment of funds.
- (e) On a proportional basis from all ACRNs assigned to allotments of funds appropriated in a single fiscal year.

### **SECTION H SPECIAL CONTRACT REQUIREMENTS**

#### **H-1 TYPE OF CONTRACT**

This is a \*

*(\*To be completed at time of award)*

#### **H-2 ONR 5252.237-9705 - KEY PERSONNEL (DEC 88)**

- (a) The Contractor agrees to assign to the contract tasks those persons whose resumes were submitted with its proposal and who are necessary to fulfill the requirements of the contract as "key personnel". No substitutions may be made except in accordance with this clause.
- (b) The Contractor understands that during the first ninety (90) days of the contract performance

period, no personnel substitutions will be permitted unless these substitutions are unavoidable because of the incumbent's sudden illness, death or termination of employment. In any of these events, the Contractor shall promptly notify the Contracting Officer and provide the information described in paragraph (c) below. After the initial ninety (90) day period the Contractor must submit to the Contracting Officer all proposed substitutions, in writing, at least fifteen (15) days in advance (thirty (30) days if security clearance must be obtained) of any proposed substitution and provide the information required by paragraph (c) below.

(c) Any request for substitution must include a detailed explanation of the circumstances necessitating the proposed substitution, a resume for the proposed substitute, and any other information requested by the Contracting Officer. Any proposed substitute must have qualifications equal to or superior to the qualifications of the incumbent. The Contracting Officer or his/her authorized representative will evaluate such requests and promptly notify the Contractor of his/her approval or disapproval thereof.

(d) In the event that any of the identified key personnel cease to perform under the contract and the substitute is disapproved, the contract may be immediately terminated in accordance with the Termination clause of the contract.

The following are identified as key personnel: \*

*(\*To be completed at time of award)*

### **H-3 ONR 5252.216-9706 - LEVEL OF EFFORT (DEC 88)**

(a) The Contractor agrees to provide the total level of effort specified in the next sentence in performance of the work described in this contract. The total level of effort for performance of this contract shall be 16,470 total hours of direct labor for the basic award, and 16,470 total hours for each option period, if exercised, including subcontractor direct labor for those subcontractors specifically identified in the Contractor's proposal as having hours included in the proposed level of effort. A breakdown of labor categories and hours is set forth in paragraph (k) below.

(b) The level of effort for this contract shall be expended at an average rate of 1,372 hours per month. It is understood and agreed that the rate of hours per month may fluctuate in pursuit of the technical objective, provided such fluctuation does not result in the use of the total hours of effort prior to the expiration of the term of the contract.

(c) The Contractor is required to notify the Contracting Officer when any of the following situations occur, or are anticipated to occur: If during any three consecutive months the monthly average is exceeded by 25% or, if at any time it is forecast that during the last three months of the contract less than 50% of the monthly average will be used during any given month; or, when 85% of the total level of effort has been expended.

(d) If, during the term of the contract, the Contractor finds it necessary to accelerate the expenditure of direct labor to such an extent that the total hours of effort specified would be used prior to the expiration of the term, the Contractor shall notify the Contracting Officer in writing, setting forth the acceleration required, the probable benefits which would result, and an offer to undertake the acceleration at no increase in the estimated cost or fixed fee together with an offer setting forth a proposed level of effort, cost breakdown, and proposed fixed fee for continuation of the work until expiration of the term hereof. The offer shall provide that the work proposed will be subject to the terms and conditions of this contract and any additions or changes required by then current law, regulations, or directives, and that the offer, with a written notice of acceptance by the Contracting Officer, shall constitute a binding contract. The Contractor shall not accelerate any effort until receipt

of such written approval by the Contracting Officer. Any agreement to accelerate will be formalized by contract modification.

(e) The Contracting Officer may, by written order, direct the Contractor to accelerate the expenditure of direct labor such that the total hours of effort specified in paragraph (a) above would be used prior to the expiration of the term. This order shall specify the acceleration required and the resulting revised term. The Contractor shall acknowledge this order within five days of receipt.

(f) If the total level of effort specified in paragraph (a) above is not provided by the Contractor during the term of this contract, the Contracting Officer shall either (i) reduce the fixed fee of this contract as follows:

$$\text{Fee Reduction} = \text{Fixed Fee} \times \frac{(\text{Required LOE Hours} - \text{Expended LOE Hours})}{\text{Required LOE Hours}}$$

or (ii) subject to the provisions of the clause of this contract entitled "Limitation of Cost," require the Contractor to continue to perform the work until the total number of hours of direct labor specified in paragraph (a) shall have been expended, at no increase in the fixed fee of this contract.

(g) In the event the government fails to fully fund the contract in a timely manner, the term of the contract may be extended accordingly with no change to cost or fee. If the government fails to fully fund the contract, the fee will be adjusted in direct proportion to that effort which was performed.

(h) Notwithstanding any of the provisions in the above paragraphs, the Contractor may furnish hours up to five percent in excess of the total hours specified in paragraph (a) above, provided that the additional effort is furnished within the term hereof, and provided further that no increase in the estimated cost or fixed fee is required, and no adjustment in the fixed fee shall be made provided that the Contractor has delivered at least 95% of the level of effort required in paragraph (a) above.

(i) It is understood that the mix of labor categories provided by the Contractor under the contract, as well as the distribution of effort among those categories, may vary considerably from the initial mix and distribution of effort which was estimated by the government or proposed by the Contractor.

(j) Nothing herein shall be construed to alter or waive any of the rights or obligations of either party pursuant to the Clause entitled "Limitation of Costs" or "Limitation of Funds," either of which clauses as incorporated herein applies to this contract.

(k) The anticipated breakdown by labor category of the total level of effort is as follows:

Labor Category	Base Year	Option I	Option II	Option III	Option IV
Senior Microwave/RF Design Engineer	1,040	1,040	1,040	1,040	1,040
Microwave/RF Design Engineer	1,040	1,040	1,040	1,040	1,040
Digital Design Engineer	1,040	1,040	1,040	1,040	1,040
Mechanical Design Engineer	1,040	1,040	1,040	1,040	1,040
Microwave Technician	1,040	1,040	1,040	1,040	1,040
Microwave/RF Design Engineer	174	174	174	174	174
Microwave Technician	696	696	696	696	696
Field Test Engineer	4,160	4,160	4,160	4,160	4,160
Mechanical Engineer	2,080	2,080	2,080	2,080	2,080
Digital Design Engineer	2,080	2,080	2,080	2,080	2,080
Senior Systems Analyst	2,080	2,080	2,080	2,080	2,080

#### H-4 ONR 5252.235-9714 - REPORT PREPARATION (FEB 97)

Scientific or technical reports prepared by the Contractor and deliverable under the terms of this contract will be prepared in accordance with format requirements contained in ANSI/NISO Z39.18-1995, "Scientific and Technical Reports: Elements, Organization, and Design." [NOTE: ANSI Z39.18 may be obtained from NISO Press Fulfillment Center, P. O. Box 338, Oxon Hill, MD. 20750-0338. Telephone 1-800-282-6476]

#### H-5 OPTION TO EXTEND TERM

This contract shall be renewable at the unilateral option of the Government by the Contracting Officer's notice of renewal to the Contractor within the existing term of the contract.

#### H-6 ON-SITE USE OF GOVERNMENT PROPERTY

Government facilities and equipment specified or approved for use in the performance of any portion of the contract at the U.S. Naval Research Laboratory (NRL) or any of its field sites may be used by the contractor's personnel on a rent free basis. All such property shall be considered to remain in the

possession and control of the NRL for property responsibility and accountability purposes.

#### **H-7 YEAR 2000 COMPLIANT INFORMATION TECHNOLOGY**

This requirement applies to information technology (IT) that processes date-related information. All such IT delivered under this contract shall be Year 2000 compliant as defined at FAR 39.002.

#### **H-8 REPRESENTATIONS AND CERTIFICATIONS**

The Contractor's completed Representations, Certifications, and Other Statements of Offerors or Respondents is incorporated herein by reference in any resultant award.

#### **H-9 SUBCONTRACTING PLAN**

The contractor's Comprehensive Small Business Subcontracting Plan is incorporated into this contract in accordance with DFARS SUBPART 219.7 *Test Program for Negotiation of Comprehensive Small Business Subcontracting Plans*.

## **PART II - CONTRACT CLAUSES SECTION I CONTRACT CLAUSES**

#### **I-1 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>

<http://heron.nrl.navy.mil/contracts/home.htm>

#### **a. FEDERAL ACQUISITION REGULATION CLAUSES**

<b>FAR CLAUSE</b>	<b>TITLE</b>
52.202-1	- Definitions (OCT 1995)
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 (JUL 1995)
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)
52.203-12	- Limitation On Payments To Influence Certain Federal Transactions (JUN 1997)
52.204-2	- Security Requirements (AUG 1996)
52.204-4	- Printed Or Copied Double-Sided On Recycled Paper (AUG 2000)
52.209-6	- Protecting The Government's Interest When Subcontracting With Contractors

- 52.211-15 - Debarred, Suspended, Or Proposed For Debarment (JUL 1995)
- 52.215-2 - Defense Priority And Allocation Requirements (SEP 1990)
- 52.215-8 - Audit And Records-Negotiation (JUNE 1999)
- 52.215-11 - Order Of Precedence - Uniform Contract Format (OCT 1997)
- 52.215-13 - Price Reduction For Defective Cost Or Pricing Data - Modifications (OCT 1997)
- 52.215-14 - Subcontractor Cost Or Pricing Data Modifications (OCT 1997)
- 52.215-15 - Integrity Of Unit Prices (OCT 1997)
- 52.215-17 - Pension Adjustments And Asset Reversions (DEC 1998)
- 52.215-17 - Waiver Of Facilities Capital Cost Of Money (OCT 1997)  
( will be included if the successful offeror does not propose facilities capital cost of money)
- 52.215-18 - Reversion Or Adjustment Of Plans For Post-Retirement Benefits (PRB) Other Than Pensions (OCT 1997)
- 52.215-19 - Notification Of Ownership Changes (OCT 1997)
- 52.215-21 - Requirements For Cost Or Pricing Data Or Information Other Than Cost Or Pricing Data-Modifications (OCT 1997) - Alternate IV (OCT 1997)
- 52.216-7 - Allowable Cost And Payment (MAR 2000)
- 52.216-8 - Fixed-Fee (MAR 1997)
- 52.219-4 - Notice Of Price Evaluation Preference For HUBZone Small Business Concerns (JAN 1999)  Offeror elects to waive the evaluation preference.
- 52.219-8 - Utilization Of Small Business Concerns (OCT 2000)
- 52.219-9 - Small Business Subcontracting Plan (OCT 2000) - Alternate II (JAN 1999)
- 52.219-16 - Liquidated Damages-Subcontracting Plan (JAN 1999)
- 52.219-25 - Small Disadvantaged Business Participation Program-Disadvantaged Status And Reporting (OCT 1999)
- 52.222-1 - Notice To The Government Of Labor Disputes (FEB 1997)
- 52.222-2 - Payment For Overtime Premiums (JUL 1990) -The Use Of Overtime Is Authorized Under This Contract If The Overtime Premium Does Not Exceed "0"
- 52.222-3 - Convict Labor (AUG 1996)
- 52.222-21 - Prohibition of Segregated Facilities (FEB 1999)
- 52.222-26 - Equal Opportunity (FEB 1999)
- 52.222-35 - Affirmative Action For Disabled Veterans And Veterans Of The Vietnam Era (APR 1998)
- 52.222-36 - Affirmative Action For Workers With Disabilities (JUN 1998)
- 52.222-37 - Employment Reports On Disabled Veterans And Veterans Of The Vietnam Era (APR 1998)
- 52.223-3 - Hazardous Material Identification And Material Safety Data (JAN 1997)
- 52.223-5 - Pollution Prevention And Right-To-Know Information (APR 1998)
- 52.223-6 - Drug-Free Workplace (JAN 1997)
- 52.223-10 - Waste Reduction Program (AUG 2000)
- 52.223-14 - Toxic Chemical Release Reporting (OCT 2000)
- 52.225-13 - Restrictions On Certain Foreign Purchases (JUL 2000)
- 52.226-1 - Utilization Of Indian Organizations And Indian-Owned Economic Enterprises (JUN 2000)
- 52.227-1 - Authorization And Consent (JUL 1995)- Alternate I (APR 1984)
- 52.227-2 - Notice And Assistance Regarding Patent And Copyright Infringement (AUG 1996)

- 52.227-11 - Patent Rights - Retention By The Contractor (Short Form) (JUN 1997)  
*(will be included if the successful offeror is a small business or a non-profit organization)*
- 52.227-12 - Patent Rights - Retention By The Contractor (Long Form) (JAN 1997)  
*(will be included if the successful offeror is not a small business or a non-profit organization)*
- 52.228-7 - Insurance - Liability To Third Persons (MAR 1996)
- 52.230-2 - Cost Accounting Standards (APR 1998)
- 52.230-3 - Disclosure And Consistency Of Cost Accounting Practices (APR 1998)
- 52.230-6 - Administration Of Cost Accounting Standards (NOV 1999)
- 52.232-17 - Interest (JUN 1996)
- 52.232-18 - Availability of Funds (APR 1984)
- 52.232-20 - Limitation Of Cost (APR 1984) *(Applicable when the contract or task order is fully funded)*
- 52.232-22 - Limitation Of Funds (APR 1984) *(Applicable when the contract or task order is not fully funded)*
- 52.232-23 - Assignment Of Claims (JAN 1986) Alternate I (APR 1984)
- 52.232-25 - Prompt Payment (JUN 1997)
- 52.232-33 - Payment By Electronic Funds Transfer-Central Contractor Registration (MAY 1999)
- 52.233-1 - Disputes (DEC 1998)
- 52.233-3 - Protest After Award (AUG 1996) - Alternate I (JUN 1985)
- 52.237-2 - Protection Of Government Buildings, Equipment And Vegetation (APR 1984)
- 52.237-10 - Identification of Uncompensated Overtime (OCT 1997)
- 52.242-1 - Notice Of Intent To Disallow Costs (APR 1984)
- 52.242-3 - Penalties For Unallowable Costs (OCT 1995)
- 52.242-4 - Certification of Final Indirect Costs (JAN 1997)
- 52.242-13 - Bankruptcy (JUL 1995)
- 52.243-2 - Changes - Cost-Reimbursement (AUG 1987) - Alternate V (APR 1984)
- 52.244-2 - Subcontracts (AUG 1998) - Alternate I (AUG 1998)
- 52.244-5 - Competition In Subcontracting (DEC 1996)
- 52.244-6 - Subcontracts For Commercial Items And Commercial Components (OCT 1998)
- 52.245-5 - Government Property (Cost-Reimbursement, Time-And-Material, Or Labor-Hour Contracts) (JAN 1986) (DEVIATION)
- 52.246-23 - Limitation Of Liability (FEB 1997)
- 52.246-25 - Limitation Of Liability - Services (FEB 1997)
- 52.247-1 - Commercial Bill Of Lading Notations (APR 1984)
- 52.247-63 - Preference For U. S. Flag Carriers (JAN 1997)
- 52.249-5 - Termination For Convenience Of The Government (Educational And Other Non-Profit Institutions) (SEP 1996)
- 52.249-6 - Termination (Cost-Reimbursement) (SEP 1996)
- 52.249-14 - Excusable Delays (APR 1984)
- 52.251-1 - Government Supply Sources (APR 1984)
- 52.252-6 - Authorized Deviations in Clauses (APR 1984) ( fill in Defense Federal Acquisition Regulation Supplement (48 CFR Chapter 2))
- 52.253-1 - Computer Generated Forms (JAN 1991)

- 52.211-15 - Debarred, Suspended, Or Proposed For Debarment (JUL 1995)
- 52.215-2 - Defense Priority And Allocation Requirements (SEP 1990)
- 52.215-8 - Audit And Records-Negotiation (JUNE 1999)
- 52.215-11 - Order Of Precedence - Uniform Contract Format (OCT 1997)
- 52.215-13 - Price Reduction For Defective Cost Or Pricing Data - Modifications (OCT 1997)
- 52.215-14 - Subcontractor Cost Or Pricing Data Modifications (OCT 1997)
- 52.215-15 - Integrity Of Unit Prices (OCT 1997)
- 52.215-17 - Pension Adjustments And Asset Reversions (DEC 1998)
- 52.215-17 - Waiver Of Facilities Capital Cost Of Money (OCT 1997)  
( will be included if the successful offeror does not propose facilities capital cost of money)
- 52.215-18 - Reversion Or Adjustment Of Plans For Post-Retirement Benefits (PRB) Other Than Pensions (OCT 1997)
- 52.215-19 - Notification Of Ownership Changes (OCT 1997)
- 52.215-21 - Requirements For Cost Or Pricing Data Or Information Other Than Cost Or Pricing Data-Modifications (OCT 1997) - Alternate IV (OCT 1997)
- 52.216-7 - Allowable Cost And Payment (MAR 2000) *(If the contract is with an educational institution, modify the clause by deleting from paragraph (a) "Subpart 31.2" and substitute "Subpart 31.3". If the contract is with a state or local government, delete from paragraph (a) "Subpart 31.2" and substitute "Subpart 31.6". If the contract is with a nonprofit other than an educational institution, a state or local government, or a nonprofit organization exempted under OMB Circular A-122, modify the clause by deleting from paragraph (a) "Subpart 31.2" and substituting "Subpart 31.7".)*
- 52.216-8 - Fixed-Fee (MAR 1997)
- 52.219-4 - Notice Of Price Evaluation Preference For HUBZone Small Business Concerns (JAN 1999)  Offeror elects to waive the evaluation preference.
- 52.219-8 - Utilization Of Small Business Concerns (OCT 2000)
- 52.219-9 - Small Business Subcontracting Plan (OCT 2000) - Alternate II (JAN 1999)
- 52.219-16 - Liquidated Damages-Subcontracting Plan (JAN 1999)
- 52.219-25 - Small Disadvantaged Business Participation Program-Disadvantaged Status And Reporting (OCT 1999)
- 52.222-1 - Notice To The Government Of Labor Disputes (FEB 1997)
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- 52.237-2 - Protection Of Government Buildings, Equipment And Vegetation (APR 1984)
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- 52.245-5 - Government Property (Cost-Reimbursement, Time-And-Material, Or Labor-Hour Contracts) (JAN 1986) (DEVIATION)
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- 52.246-25 - Limitation Of Liability - Services (FEB 1997)
- 52.247-1 - Commercial Bill Of Lading Notations (APR 1984)
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- 52.249-5 - Termination For Convenience Of The Government (Educational And Other Non-Profit Institutions) (SEP 1996)
- 52.249-6 - Termination (Cost-Reimbursement) (SEP 1996)

- 52.249-14 - Excusable Delays (APR 1984)
- 52.251-1 - Government Supply Sources (APR 1984)
- 52.252-6 - Authorized Deviations in Clauses (APR 1984)( fill in Defense Federal Acquisition Regulation Supplement (48 CFR Chapter 2))
- 52.253-1 - Computer Generated Forms (JAN 1991)

**b. DEPARTMENT OF DEFENSE FEDERAL ACQUISITION REGULATION CLAUSES**

**DFARS CLAUSE    TITLE**

- 252.201-7000 - Contracting Officer's Representative (DEC 1991)
- 252.203-7001 - Prohibition On Persons Convicted Of Fraud Or Other Defense Contract Related Felonies (MAR 1999)
- 252.203-7002 - Display Of DoD Hotline Poster (DEC 1991)
- 252.204-7000 - Disclosure Of Information (DEC 1991)
- 252.204-7003 - Control Of Government Personnel Work Product (APR 1992)
- 252.204-7004 - Required Central Contractor Registration (MAR 2000)
- 252.204-7005 - Oral Attestation Of Security Responsibilities (AUG 1999)
- 252.205-7000 - Provision Of Information To Cooperative Agreement Holders (DEC 1991)
- 252.209-7000 - Acquisition From Subcontractors Subject To On-Site Inspection Under The Intermediate-Range Nuclear Forces (INF) Treaty (NOV 1995)
- 252.209-7004 - Subcontracting With Firms That Are Owned Or Controlled By The Government Of A Terrorist Country (MAR 1998)
- 252.215-7000 - Pricing Adjustments (DEC 1991)
- 252.219-7003 - Small Business And Small Disadvantaged Business Subcontracting Plan (DoD Contracts) (APR 1996)
- 252.219-7004 - Small, Small Disadvantaged And Women-Owned Small Business Subcontracting Plan (Test Program) (JUN 1997)
- 252.223-7004 - Drug-Free Work Force (SEP 1988)
- 252.223-7006 - Prohibition On Storage And Disposal Of Toxic And Hazardous Materials (APR 1993)
- 252.225-7012 - Preference For Certain Domestic Commodities (AUG 2000)
- 252.225-7026 - Reporting Of Contract Performance Outside The United States (JUN 2000)
- 252.225-7031 - Secondary Arab Boycott Of Israel (JUN 1992)
- 252.225-7043 - Antiterrorism/Force Protection Policy For Defense Contractors Outside The United States (JUN 1998) (fill in: Naval Criminal Investigative Service (NCIS), Code 24, telephone, DSN 228-9113 or commercial (202) 433-9113)
- 252.227-7000 - Non Estoppel (OCT 1966)
- 252.227-7001 - Release of Past Infringement (AUG 1984)
- 252.227-7013 - Rights In Technical Data -- Noncommercial Items (NOV 1995)
- 252.227-7014 - Rights In Noncommercial Computer Software And Noncommercial Computer Software Documentation (JUN 1995)
- 252.227-7016 - Rights In Bid Or Proposal Information (JUN 1995)
- 252.227-7019 - Validation Of Asserted Restrictions--Computer Software (JUN 1995)
- 252.227-7025 - Limitations On The Use Or Disclosure Of Government-Furnished Information Marked With Restrictive Legends (JUN 1995)
- 252.227-7030 - Technical Data--Withholding Of Payment (MAR 2000)

- 252.227-7034 - Patents--Subcontracts (APR 1984)
  - 252.227-7036 - Declaration Of Technical Data Conformity (JAN 1997)
  - 252.227-7037 - Validation Of Restrictive Markings On Technical Data (SEP 1999)
  - 252.227-7039 - Patents--Reporting Of Subject Inventions (APR 1990)
  - 252.231-7000 - Supplemental Cost Principles (DEC 1991)
  - 252.235-7010 - Acknowledgment Of Support And Disclaimer (MAY 1995)
  - 252.235-7011 - Final Scientific Or Technical Report (SEP 1999)
  - 252.242-7000 - Post Award Conference (DEC 1991)
  - 252.242-7004 - Material Management And Accounting System (SEP 1996)
  - 252.243-7002 - Requests For Equitable Adjustment (MAR 1998)
  - 252.244-7000 - Subcontracts For Commercial Items And Commercial Components (DOD Contracts) (MAR 2000)
  - 252.245-7001 - Reports Of Government Property (MAY 1994)
  - 252.246-7001 - Warranty Of Data (DEC 1991)
  - 252.247-7023 - Transportation Of Supplies By Sea (MAR 2000)
  - 252.247-7024 - Notification Of Transportation Of Supplies By Sea (MAR 2000)  
*(will be included if the successful offeror made a negative response to the inquiry at DFARS 252.247-7022)*
  - 252.251-7000 - Ordering From Government Supply Sources (MAY 1995)
- I-2 FAR 52.223-11 - OZONE-DEPLETING SUBSTANCES (JUN 1996)**

(a) Definitions.

"Ozone-depleting substance", as used in this clause, means any substance designated as Class I by the Environmental Protection Agency (EPA) (40 CFR Part 82), including but not limited to chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or any substance designated as Class II by EPA (40 CFR Part 82), including but not limited to hydrochlorofluorocarbons.

(b) The Contractor shall label products which contain or are manufactured with ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j (b), (c), and (d) and 40 CFR Part 82, Subpart E, as follows:

"WARNING: Contains (or manufactured with, if applicable) \_\_\_\_\_, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere."

\* The Contractor shall insert the name of the substance(s).

**I-3 DFARS 252.225-7008 - SUPPLIES TO BE ACCORDED DUTY- FREE ENTRY (MAR 1998)**

In accordance with paragraph (b) of the Duty-Free Entry clause of this contract, in addition to duty-free entry for all qualifying country supplies (end products and components) and all eligible end products subject to applicable trade agreements (if this contract contains the Buy American Act - Trade Agreements - Balance of Payments Program clause or the Buy American Act - North American

Free Trade Agreement Implementation Act - Balance of Payments Program clause ), the following foreign end products that are neither qualifying country end products nor eligible end products under a trade agreement, and the following nonqualifying country components, are accorded duty free entry.

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**PART III - LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS**  
**SECTION J**  
**LIST OF ATTACHMENTS**

- J-1** Attachment (1) - Statement Of Work - 8 Pages, With Exhibit A - DD Form 1423, Contract Data Requirements List, 6 Pages.
- J-2** Attachment (2 ) - DD Form 254, Contract Security Classification Specification, Ser 043-00 Dated 10/16/2000 w/Attachments 2 Pages.
- J-3** Attachment (3 ) - Personnel Qualifications, 9 Pages.
- J-4** Attachment ( 4) - Accounting and Appropriation Data- 1 page. \*
- (\* To be included at time of award)

**PART IV - REPRESENTATIONS AND INSTRUCTIONS**  
**SECTION - K**  
**REPRESENTATIONS, CERTIFICATIONS**  
**AND OTHER STATEMENTS OF OFFERORS OR RESPONDENTS**

**K-1 Representations, Certifications, and Other Statements of Offerors or Respondents**

Each Offeror must submit a completed Representations, Certifications, and Other Statements Of Offerors or Respondents with its proposal which is available electronically in full text at <http://heron.nrl.navy.mil/contracts/rep&certs.htm>

**K-2 FILL IN FOR FAR 52.219-1 - SMALL BUSINESS PROGRAM REPRESENTATIONS (MAY 1999)**

The fill in information is as follows:

The standard industrial classification (SIC) code for this acquisition is 54171.

The small business size standard is 500.

**SECTION L  
INSTRUCTIONS CONDITIONS AND NOTICES  
TO OFFERORS OR RESPONDENTS**

**L-1 52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)**

This solicitation incorporates one or more solicitation provisions 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. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

<http://www.arnet.gov/far>  
<http://heron.nrl.navy.mil/contracts/home.htm>

<b>FAR CLAUSE</b>	<b>TITLE</b>
52.204-6	- Data Universal Numbering System (DUNS) Number (JUNE 1999)
52.215-1	- Instructions To Offerors- Competitive Acquisition (FEB 2000) Alternate I (OCT 1997)
52.215-1	- Instructions To Offerors- Competitive Acquisition (FEB 2000) Alternate II (OCT 1997)
52.215-16	- Facilities Capital Cost Of Money (OCT 1997)
52.219-24	- Small Disadvantaged Business Participation Program - Targets (JAN 1999)
52.222-24	- Preaward On-Site Equal Opportunity Compliance Evaluation (FEB 1999)
52.237-1	- Site Visit (APR 1984)
252.204-7001	- Commercial And Government Entity (CAGE) Code Reporting (AUG 1999)

**L-2 FAR 52.211-14 - NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE USE (SEP 1990)**

Any contract awarded as a result of this solicitation will be a  DX rated order;  DO rated order certified for national use under the Defense Priorities and Allocations system (DPAS) (15 CFR 700), and the Contractor will be required to follow all of the requirements of this regulation.

**L-3 FAR 52.215-20 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA (OCT 1997)ALTERNATE IV (OCT 1997)**

- (a) Submission of cost or pricing data is not required.  
(b) Provide information described below. See L-12, Volume II – Business Proposal.

**L-4 FAR 52.216-1 - TYPE OF CONTRACT (APR 1984)**

The Government contemplates award of a Cost Plus Fixed Fee Term contract resulting from this solicitation.

**L-5 FAR 52.233-2 - SERVICE OF PROTEST (AUG 1996)**

(a) Protests, as defined in Section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO) shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from the Control Desk, Code 3200, Bldg. 222, Rm. 115, Naval Research Laboratory, 4555 Overlook Ave., S.W., Washington DC 20375-5326.

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

**L-6 DFARS 252.227-7017 - IDENTIFICATION AND ASSERTION OF USE, RELEASE, OR DISCLOSURE RESTRICTIONS (JUN 1995)**

- (a) The terms used in this provision are defined in 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 documents, 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 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 Assertion**	Asserted Rights Category***	Name of Person Asserting Restrictions****
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(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 items, 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.

**L-7 DFARS 252.227-7028 - TECHNICAL DATA OR COMPUTER SOFTWARE PREVIOUSLY DELIVERED TO THE GOVERNMENT (JUN 1995)**

The Offeror shall attach to its offer an identification of all documents or other media incorporating technical data or computer software it intends to deliver under this contract with other than unlimited rights that are identical or substantially similar to documents or other media that the Offeror has produced for, delivered to, or is obligated to deliver to the Government under any contract or subcontract. The attachment shall identify - -

- (a) The contract number under which the data or software were produced;
- (b) The contract number under which, and the name and address of the organization to whom, the data or software were most recently delivered or will be delivered; and

- (c) Any limitations on the Government's rights to use or disclose the data or software, including, when applicable, identification of the earliest date the limitations expire.

#### **L-8 GOVERNMENT-FURNISHED PROPERTY**

No material, labor, or facilities will be furnished by the Government unless provided for in the solicitation.

#### **L-9 INQUIRIES CONCERNING THE RFP**

Any questions concerning the RFP must be submitted in writing to the Contracting Officer at the location noted in blocks 7 and 9 of the Standard Form 33, "Solicitation, Offer and Award," no less than fifteen (15) days before closing. The Government will not consider questions received after this date. Offerors are cautioned against directing any questions concerning this RFP to technical personnel at the Naval Research Laboratory.

#### **L-10 INSTRUCTIONS FOR SUBMISSION AND INFORMATION REQUIRED TO EVALUATE PROPOSALS**

(1) Information for the technical/management proposal shall be placed in Volume I and be completely separate from the business proposal (Volume II).

(2) Proposal Identification/Mailing - The proposal should be packaged for delivery so as to permit safe and timely arrival at destination. The proposal package should be sent to the address shown in Block 7 of the RFP face page and marked:

**Solicitation No. N00173-01-R-DL05**

**Closing Date:(As specified in Block 9, RFP face page)**

**Attn: Code 3220.DL**

(3) Proposal Format and Length - No attempt is made to restrict the proposal format and style. However, the proposal should be written and organized so as to be compatible with the RFP, the Statement of Work, company's organization and accounting structure, and proposed cost estimate. Offerors are encouraged to use recycled paper and maximize the use of double sided copying when preparing responses to solicitations.

#### **L-11 VOLUME I - TECHNICAL/MANAGEMENT PROPOSAL**

REQUIRED COPIES: 1 ORIGINAL AND 4 COPIES .

##### **A. PERSONNEL QUALIFICATIONS**

Identify the key and supporting personnel to be assigned to this program and describe their previous research and accomplishments on similar or closely related projects.

Indicate that the personnel proposed have the required security clearances, pertinent experience,

educational background, and past accomplishments as set forth in Attachment (3), Personnel Qualifications.

**B. TECHNICAL PLAN**

Demonstrate a complete understanding of the technical requirements of the statement of work and a sound approach by a feasible and workable program for each task response. Clearly identify the offeror's intent to satisfy the "deliverables" reporting requirements in the statement of work. Demonstrate performance criteria for Task 1 showing the ability to develop high performance ES receiver components. Clearly demonstrate the offeror's ability to provide adequate clean-room facilities for the assembly of MMIC and hybrid microwave receiver subassemblies.

**C. MANAGEMENT PLAN**

Demonstrate the offeror's capability to oversee and schedule required task demands. Identify the overall soundness of the Offeror's effective management control; simplicity and low cost. Demonstrate corporate project experience in performing related projects.

**L-12 VOLUME II - BUSINESS PROPOSAL**

**REQUIRED COPIES: 1 ORIGINAL AND 4 COPIES**

**(1) COST PROPOSAL**

The offeror shall submit a cost proposal that includes a cost proposal with supporting information for each cost element consistent with offeror's cost accounting system. The supporting breakdown should include such elements as materials, direct labor, indirect cost, and other costs such as travel. The offeror shall provide exhibits as necessary to substantiate each cost element. Should rates be used in the proposal which are not DCAA approved, the offeror shall provide complete documentation and the rationale for their use at time of proposal submission. However, offerors are advised to use actual labor rates of proposed personnel as the basis for estimating labor costs when practicable.

**(2) SMALL BUSINESS PARTICIPATION**

(a) In addition to complying with the clause at FAR 52.219-9, Small Business Subcontracting Plan (Jan 1999) with its Alternate II, proposals must include information to permit evaluation of the extent of participation of small businesses and historical black colleges or universities and minority institutions in performance of the contract. Participation to be identified may be in the form of a joint venture, teaming arrangement, or subcontract. Small business concerns that are not required by FAR 52.219-9 to submit a subcontracting plan must indicate the extent to which proposed joint ventures, teaming arrangements, or subcontracts are with historically black colleges or universities and minority institutions. Information provided should include the extent of participation of such firms in terms of the value of the total acquisition and the complexity and variety of the work such firms are to perform.

(b) Proposals must also include information to permit evaluation of the extent of participation of small disadvantaged business concerns in performance of the contract. See the provision at FAR 52.219-

24, Small Disadvantaged Business Participation Program--Targets (Jan 1999), and the clause at 52.219-25, Small Disadvantaged Business Participation Program--Disadvantaged Status and Reporting (Jan 1999). Any targets will be incorporated into and become part of any resulting contract. Information provided should include the extent of participation of such firms in terms of the value of the total acquisition and the complexity and variety of the work such firms are to perform.

### **L-13 TRAVEL AND MATERIAL ESTIMATES AND OTHER DIRECT COSTS (FOR EVALUATION PURPOSES ONLY)**

The travel and material estimates and other direct costs set forth must be included in each offeror's cost proposal for evaluation purposes only. During the term of this contract, the contractor will be reimbursed actual and allowable travel, material, and other direct expenses.

The Government estimates the travel costs for this effort to be \$40,000.00 for the basic award and \$40,000.00 per each option period, if exercised.

The Government estimates the material costs for this effort to be \$530,000.00 for the basic award and \$530,000.00 per each option period, if exercised.

These estimates are direct costs, and the offeror should add any applicable indirect costs.

## **SECTION M EVALUATION FACTORS FOR AWARD**

### **M-1 EVALUATION**

Award will be made to that offeror whose proposal is determined to be the best value to the Government, proposed cost and other factors considered. The Government reserves the right to make award to other than the low offeror. Although technical considerations are more important than the cost factor, the closer the technical scores of the various proposals are to one another, the more important the business considerations become.

### **M-2 EVALUATION FACTORS FOR AWARD**

Proposals will be evaluated in accordance with the following criteria. The technical factor is more important than the cost factor. Technical subfactors are listed in descending order of importance.

#### **M-2-1. TECHNICAL/MANAGEMENT**

##### **(1) PERSONNEL QUALIFICATIONS**

The proposed personnel will be evaluated on the experience and qualifications of the proposed personnel relevant to the proposed task.; the quantity and quality of the Offeror's corporate

experience relevant to the proposed task; and the previous experience of the key personnel including the degree to which they meet the requirements set forth in the Personnel Qualifications.

## (2) TECHNICAL PLAN

Evaluation will be based on the degree to which the offeror demonstrates a complete understanding of the technical requirements of the statement of work, the offeror's intent to satisfy the deliverables required in the statement of work and the offeror's ability to meet the requirements of a clean-room facility for the assembly of MMIC and hybrid microwave receiver subassemblies. The offeror's ability to demonstrate performance criteria for Task 1 showing the ability to develop high performance ES receiver components.

## (3) MANAGEMENT PLAN

Management Plan will be evaluated on offeror's capability to oversee and schedule required task demands. The overall soundness of effective management control, simplicity and low cost. The corporate project experience in performing related projects.

### M-2-2 COST TO THE GOVERNMENT

Proposed estimated cost to the Government. The Government may adjust the proposed cost for purposes of evaluation based upon an evaluation of cost realism. Cost Realism means that the costs in an offeror's proposal are realistic for the work to be performed; reflect a clear understanding of the requirements; and are consistent with the various elements of the offeror's technical proposal. The cost realism evaluation includes an analysis of the adequacy of the hours, labor mix, and other direct costs to perform the work as proposed in the technical proposal as well as the proposed labor and indirect rates. It also includes evaluation of the likelihood that the risks inherent in the offeror's technical approach will result in higher actual costs than anticipated.

### M-2-3 SMALL BUSINESS PARTICIPATION

- (a) The extent of participation of small businesses and historically black colleges or universities and minority institutions in performance of the contract will be evaluated on the basis of the proposed extent of participation of such firms in terms of the value of the total acquisition and the complexity and variety of the work such firms are to perform.
- (b) The extent of participation of small disadvantaged business concerns in performance of the contract will be evaluated on the basis of the proposed extent of participation of such firms in terms of the value of the total acquisition and the complexity and variety of the work such firms are to perform.

### **M-3 FAR 52.217-5 - EVALUATION OF OPTIONS (JUL 1990)**

Except when it is determined in accordance with FAR 17.206(b) not to be in the Government's best interests, the Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. Evaluation of options will not obligate the Government to exercise the option(s).

STATEMENT OF WORK  
ESM Engineering and Support Services

1.0 INTRODUCTION

This Statement of Work describes the engineering and technical support services to be provided to the Tactical Electronic Warfare Division (TEWD) of the Naval Research Laboratory (NRL), Washington, D.C.

2.0 BACKGROUND

The current and projected emitter environment has focused research emphasis on advanced Electronic Warfare Support (ES) systems that can simultaneously detect and process a large number of emitters. Components or systems that will utilize various architectures capable of coping with increasingly dense emitter environments, and with emitters utilizing unusual and varied forms of RF modulation will be developed in support of ES systems development. Areas of new development and investigation include the miniaturization of microwave receivers, digital signal processing and digital receiver technologies.

2.0 SCOPE

The required services include a number of interrelated tasks that vary in both their technical dimensions and deliverable product. A high degree of inter-task coordination is a requirement of this specification. These tasks include systems engineering (hardware and software), systems analysis (hardware and software), and data collection and analysis. The uniqueness of data availability, availability of necessary processing equipment, and security requirements dictates that a major portion of the tasks will be performed at NRL. Tasks to be completed under this contract are as follows:

2.1 TASKS:

- 2.1.1 TASK I ES Receiver Design And Fabrication Support.
- 2.1.2 TASK II ES Receiver Repair
- 2.1.3 TASK III ES Data Collection And Analysis Support.
- 2.1.4 TASK IV Mechanical Design Support.
- 2.1.5 TASK V ES Digital Receiver Development Support.
- 2.1.6 TASK VI ES System Architecture Development And Assessment.

2.2 All work, travel and material purchases associated with these tasks are subject to prior written COR approval. Work under the tasks shall be proposed in writing for COR approval showing estimated time to complete as well as

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2.2 All work, travel and material purchases associated with these tasks are subject to prior written Contracting Officer Representative (COR) approval. Work under the tasks shall be proposed in writing for COR approval showing estimated

time to complete as well as estimated labor and material costs. Prior to any travel, contractor shall submit a travel plan showing itinerary, estimated travel costs and estimated material purchase costs.

### 3.0 DEFINITIONS:

Electronic Warfare: Any military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy. The three major subdivisions within electronic warfare are electronic attack, electronic protection and electronic warfare support.

Electronic Warfare Support: That division of electronic warfare involving actions tasked by, or under direct control of, an operational commander to search for, intercept, identify and locate sources of intentional and unintentional radiated electromagnetic energy for the purpose of immediate threat recognition. Thus, electronic warfare support provides information required for immediate decisions involving electronic warfare operations, threat avoidance, targeting and other tactical actions. Also called ES.

Electronic Warfare Support Measures: That division of electronic warfare involving actions taken under direct control of an operational commander to search for, intercept, identify and locate sources of radiated electromagnetic energy for the purpose of immediate threat recognition. Thus, electronic warfare support measures provide a source of information required for immediate decisions involving ECM, ECCM, avoidance, targeting and other tactical employment of forces. Also called ESM.

RF: Radio Frequency. In this context, RF is loosely defined as electromagnetic energy having a frequency anywhere from 400 Mhz up through 110 GHz.

IF: Intermediate Frequency. In this context, IF is loosely defined as electromagnetic energy having a frequency anywhere from 20 Mhz up through 2 GHz.

Emitter: Source of RF emissions. In the context of this document, an emitter is typically a radar system.

SEI: Specific Emitter Identification – technology developed by NRL that is capable of identifying individual radar emitters. The AN/UYX-3 is the NRL developed SEI processor.

MMIC: Monolithic Microwave Integrated Circuit

Software: Definition encompasses traditional software running on general purpose and digital signal processors as well as programming for programmable logic such as FPGAs, PALs, etc.

Monthly Reporting Period: 1<sup>st</sup> of month to last day of month.

Major Sub-Task: Any task requiring a total of greater than 400 man-hours or any task designated by the COR as requiring reporting.

COR: Contracting Officer's Representative

#### 4.0 WORK REQUIREMENTS

#### 4.1 TECHNICAL REQUIREMENTS

##### 4.1.1 TASK I ES RECEIVER DESIGN and FABRICATION

The contractor shall investigate, under NRL direction, ES receiver component designs and fabricate demonstration models. Critical receiver components shall be developed for a variety of ES receiver architectures such as; channelized, superheterodyne, homodyne, FMCW, microscan and digital receiver. Receiver components developed under this task shall be suitable for application in shipboard and/or airborne ES systems.

A high level of NRL involvement can be expected from the concept stage through design to fabrication. NRL will provide general guidance as to the components to be developed. The contractor shall propose a plan for the component development. Development plan shall consist of cost, schedule and risk analysis. Execution of development plan is subject to COR approval.

The receivers shall be developed for ES systems and sub-systems demonstrating an advanced capability. Special emphasis shall be placed on high performance operability over a broad range of emitter frequencies in dense and highly diverse emitter environments. The receivers shall be extremely light in weight, low in power consumption, be suitable for use in adverse military environments, and have a high mean-time-between-failure (MTBF). The contractor shall design, develop, and test components and sub-assemblies necessary for the fabrication of the designated receivers. When needed to meet receiver design requirements, the contractor shall fabricate hybrid integrated components necessary for the construction of a complete receiver system. All components developed under this task shall be designed to be consistent with current manufacturing practices and be readily commercially reproducible.

Execution of this task will require clean-room microelectronic assembly capability consistent with that needed for the assembly of components based on currently available microwave circuit technologies. This task shall be performed at the contractor facility. Demonstrated Monolithic Microwave Integrated Circuit (MMIC) assembly capability is required.

All work performed under this task shall be fully documented. A required deliverable for this task will be a detailed document set describing the work performed. Document set to include, but not limited to, hardware design

documentation and software design documentation, and performance analysis reports. Additional deliverables for this task will be technical reports, trip reports, monthly progress reports and monthly fiscal reports.

Estimated level of effort per year for this task will be; six (6) man-months senior microwave/RF design engineer, six (6) man-months microwave/RF design engineer, six (6) man-months digital design engineer, six (6) man-months mechanical design engineer, and six (6) man-months microwave technician.

#### 4.1.2 TASK II ES RECEIVER REPAIR

Over the past four (4) years NRL in conjunction with ITT Sciences has developed a compact EW receiver based on MMIC technology (ITT Model: R-300A). Forty (40) of these MMIC receivers are currently deployed in a variety of locations throughout the world. This task is for the maintenance and repair of the receivers.

Contractor shall be responsible for the repair of the NRL MMIC receivers on an as needed basis. Typical rate of receiver failure is two per month. Estimated average receiver repair costs per receiver repair are thirty (30) man-hours of microwave technician and eight (8) man-hours of microwave/RF design engineer plus material and machining costs of \$3K.

NRL will serve as the collection and distribution point for the repair activity. The receivers to be repaired will be returned to NRL from the end-user sites. NRL will perform preliminary receiver testing to validate need for repair. Receivers will then be shipped to the contractor repair facility for repair.

The contractor shall be responsible for the repair of the defective within fifteen (15) working days from receipt. If multiple receivers are in need of repair, the time allowed for repair, in working days, will be:  $15 + (n-1) \times 10$ , where  $n$  = number of receivers in need of repair.

Contractor shall perform functional testing on each repaired receiver prior to return to NRL. Functional testing will consist of those tests needed to verify proper receiver operation and will include, but not be limited to, the measurement of receiver gain, sensitivity, spur level, power supply current and RS-232 communication. Thermal cycling of the operating receiver will be conducted to screen for thermally induced failures prior to final functional testing. Thermal screening will be conducted by thermally cycling of the operating receiver over the specified operating temperature range as well as a subsequent 24 hr. burn in of an operating receiver at a base-plate temperature of 45 deg. C. Final functional testing will be conducted at the conclusion of the environmental testing.

Deliverables for this task will consist of the repaired receiver with a failure report on the receiver failure and test data showing that the receiver has been repaired. Additional required deliverables are monthly progress reports and monthly fiscal reports.

All receiver repair is subject to written COR approval prior to the initiation of any work.

Estimated level of effort per year for this task will be; one (1) man-month microwave/RF design engineer and four (4) man-months microwave technician.

#### 4.1.3 TASK III ES DATA COLLECTION AND ANALYSIS SUPPORT.

The contractor shall support NRL and other US Government personnel in ES and Specific Emitter Identification (SEI) data collection experiments within the continental United States (CONUS) and/or at locations overseas.

The contractor shall operate and maintain limited production ES systems developed by NRL. A detailed knowledge of the operation of the NRL developed ES system and sub-system hardware and software is required.

The contractor shall train civilian and military personnel in the operation and maintenance of ES/SEI systems developed by NRL. This training will typically require periods of one or two weeks and may be conducted within CONUS or at overseas location.

The contractor personnel shall communicate the results of their work clearly in writing. The contractor personnel shall completely document their efforts, both in the operation and maintenance of the ES/SEI equipment and in the training of military and civilian government field personnel.

Deliverables for this task will be project documentation such as technical reports, trip reports, monthly progress reports and monthly fiscal reports.

Estimated support level per year for this task is two (2) man-years.

#### 4.1.4 TASK IV MECHANICAL DESIGN SUPPORT

The contractor shall provide engineering and technical support for a number of NRL projects. The contractor shall specify, design, assemble, and test mechanical components and sub-assemblies. The contractor shall maintain detailed records of design data and test results.

The contractor shall provide mechanical design and development in support of microwave receiver projects. The contractor shall assume responsibility for the mechanical design, structural and thermal analysis, layout and fabrication. Since much of the work is on programs that extend the state-of-the art, the contractor shall possess the ability to improvise and have the capability for precision fabrication and assembly techniques. The contractor shall assist in the field installation of the systems he fabricates for both aircraft and ship platforms, which will require occasional travel.

Due to the high degree of interaction required between the government and contractor personnel, performance of this task will primarily be executed on-

site at NRL.

All work performed under this task shall be fully documented. A required deliverable for this task shall be a detailed document set describing the work performed. Document set to include, but not limited to, hardware design documentation and software design documentation, and performance analysis reports. Additional deliverables for this task will be technical reports, trip reports, monthly progress reports and monthly fiscal reports.

Estimated support level per year for this task is one (1) man-year.

#### 4.1.5 TASK V ES DIGITAL RECEIVER DEVELOPMENT SUPPORT.

NRL is currently investigating the integration of digital receiver technology into new, developmental ES receiver systems. These systems will incorporate direct IF sampling and digital signal processing techniques. Emphasis will be on the integration of current, state-of-the-art digital technologies to the highest degree possible.

In support of this task, the Contractor shall provide engineering support for the development of digital receivers to be developed for ES applications. Technologies to be investigated include high-speed analog-to-digital conversion (ADC) and digital signal processing (DSP). The contractor shall provide support for the development of digital hardware and software.

The contractor shall provide engineering designs (both hardware and software) for ES digital receiver acquisition and processing functions.

Due to the high degree of interaction required between the government and contractor personnel, performance of this task will primarily be executed on-site at NRL.

All work performed under this task shall be fully documented. A required deliverable for this task shall be a detailed document set describing the work performed. Document set to include, but not limited to, hardware design documentation and software design documentation, and performance analysis reports. Additional deliverables for this task will be technical reports, trip reports, monthly progress reports and monthly fiscal reports.

Estimated support level per year for this task is one (1) man-year.

#### 4.1.6 TASK VI ESM SYSTEM ARCHITECTURE DEVELOPMENT AND ASSESSMENT

The Contractor shall provide system engineering and analysis in support of the development of ESM Receiver/Processor System Architecture(s) required to perform designated ESM projects. The contractor shall support:

(a) Analysis of ESM mission requirements, including consideration of

current and projected threat emitter signal environments.

- (b) Evaluation of signal parameter measurement precision over a range of threat signal environments and conditions.
- (c) Evaluation of signal parameter correlations and impact of tolerances, signal-to-noise ratios, emitter densities and distributions, etc.
- (d) Consideration of platform physical constraints such as space, weight, power, ship and aircraft platform structures, and physical environment factors, etc.
- (e) Development of ESM receiver/processor system technical requirements for parameter measurement precision, signal densities, command, control, and reporting requirements, etc.
- (f) Development of ESM System architecture(s) required to satisfy the technical requirements derived in the above requirements.
- (g) Specification of sub-system technical and physical requirements, and definition of interfaces needed to satisfy the ESM System architectures.
- (h) Evaluation and optimization of ESM architecture selected for implementation.
- (i) Development of ESM System functional configuration and estimate of ESM System performance vice mission technical requirements.

In addition, the contractor shall define and specify interfaces within the system and with the operator personnel.

The contractor shall support test and evaluation in the field as well as at NRL.

Due to the high degree of interaction required between the government and contractor personnel, performance of this task will primarily be executed on-site at NRL.

All work performed under this task shall be fully documented. A required deliverable for this task will be a detailed document set describing the work performed. Document set to include, but not limited to, hardware design documentation and software design documentation, and performance analysis reports. Additional deliverables for this task will be technical reports, trip reports, monthly progress reports and monthly fiscal reports.

Estimated support level per year for this task is one (1) man-year.

#### 4.2 REPORTS, DATA AND OTHER DELIVERABLES

SOLICITATION NUMBER :N00173-01-R-DL05  
ATTACHMENT (1)

Deliverables will be included in the Contract Data Requirements List (CDRL) DD Form 1423. The general requirements for these items are listed on the individual 1423.



# CONTRACT DATA REQUIREMENTS LIST

(2 Data Items)

Form Approved  
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0701-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

<b>A. CONTRACT LINE ITEM NO.</b> 0002/0004/0006/0008/0010		<b>B. EXHIBIT</b> "A"		<b>C. CATEGORY:</b> TDP _____ TM _____ OTHER _____				
<b>D. SYSTEM / ITEM</b>			<b>E. CONTRACT / PR NO.</b> N00173-01-R-DL05		<b>F. CONTRACTOR</b>			
<b>1. DATA ITEM NO.</b> A002	<b>2. TITLE OF DATA ITEM</b> Trip Reports		<b>3. SUBTITLE</b>					
<b>4. AUTHORITY (Data Acquisition Document No.)</b>			<b>5. CONTRACT REFERENCE</b> SOW 4.1.1, 4.1.2, 4.1.4, 4.1.5, 4.1.6		<b>6. REQUIRING OFFICE</b> NRL Code 5726			
<b>7. DD 250 REQ</b> LT	<b>9. DIST STATEMENT REQUIRED</b>	<b>10. FREQUENCY</b> ASREQ	<b>12. DATE OF FIRST SUBMISSION</b> 10 DAT*		<b>14. DISTRIBUTION</b>			
<b>8. APP CODE</b>	<b>11. AS OF DATE</b>	<b>13. DATE OF SUBSEQUENT SUBMISSION</b> 10 DAT*		<b>a. ADDRESSEE</b>				
<b>16. REMARKS</b>					<b>b. COPIES</b>			
<p>*The contractor shall prepare a trip report at the conclusion of any travel associated with this contract. Trip reports shall include but not be limited to:</p> <p>a) Objective / goal of trip. State reason for travel. Provide a detailed description of mission objectives.</p> <p>b) Contract task that the trip supports.</p> <p>c) Navy program that the trip supports.</p> <p>d) Itinerary. List work performance locations only.</p> <p>e) Degree of success. Describe the level to which the stated objectives are met.</p> <p>f) Describe technical issues encountered. Provide an estimate of the cause of the technical issue as well as a proposed solution.</p> <p>g) Contacts made. List and describe relevant contacts made with other government personnel, contractors and foreign nationals encountered.</p>			NRL Code 5726		Draft	Final		
			NRL Code 5720		1	1	Reg	Repro
			<b>15. TOTAL</b>					2

<b>1. DATA ITEM NO.</b> A003		<b>2. TITLE OF DATA ITEM</b> Monthly Fiscal Status Reports		<b>3. SUBTITLE</b>				
<b>4. AUTHORITY (Data Acquisition Document No.)</b> 0002/0004/0006/0008/0010			<b>5. CONTRACT REFERENCE</b> SOW 4.1.1,4.1.2,4.1.3,4.1.4,4.1.5,4.1.6		<b>6. REQUIRING OFFICE</b> NRL Code 5726			
<b>7. DD 250 REQ</b> LT	<b>9. DIST STATEMENT REQUIRED</b>	<b>10. FREQUENCY</b> MTHLY	<b>12. DATE OF FIRST SUBMISSION</b> *		<b>14. DISTRIBUTION</b>			
<b>8. APP CODE</b>	<b>11. AS OF DATE</b>	<b>13. DATE OF SUBSEQUENT SUBMISSION</b> 10 EOM		<b>a. ADDRESSEE</b>				
<b>16. REMARKS</b>					<b>b. COPIES</b>			
<p>*Prepare a report for each task that must include but not be limited to:</p> <p>a) Reporting period.</p> <p>b) Total contract value.</p> <p>c) Amount of funds currently received on the contract.</p> <p>d) Expenditures and commitments to date.</p> <p>e) Completed month's expenditures for labor, travel, and material. All expenditures will be listed with associated contract task.</p> <p>f) Estimated funds required for the current fiscal year. Funding requirements will be broken out by contract task.</p> <p>g) Estimated funds required for the current fiscal year. Funding requirements will be broken out by contract task.</p>			NRL Code 5726		Draft	Final		
			NRL Code 5720.BO		1	1	Reg	Repro
			NRL Code 5720		1			
<b>15. TOTAL</b>					3			

<b>G. PREPARED BY</b> NRL Code 5726		<b>H. DATE</b> 10/23/2000	<b>I. APPROVED BY</b>	<b>J. DATE</b>
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<b>17. PRICE GROUP</b>
<b>18. ESTIMATED</b>

<b>17. PRICE GROUP</b>
<b>18. ESTIMATED</b>

# CONTRACT DATA REQUIREMENTS LIST

(2 Data Items)

Form Approved  
OMB No. 0704-0188

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<b>A. CONTRACT LINE ITEM NO.</b> 0002/0004/0006/0008/0010			<b>B. EXHIBIT</b> "A"			<b>C. CATEGORY:</b> TDP _____ TM _____ OTHER _____			
<b>D. SYSTEM / ITEM</b>				<b>E. CONTRACT / PR NO.</b> N00173-01-R-DL05		<b>F. CONTRACTOR</b>			
<b>1. DATA ITEM NO.</b> A004		<b>2. TITLE OF DATA ITEM</b> Receiver Failure / Repair Reports				<b>3. SUBTITLE</b>			
<b>4. AUTHORITY (Data Acquisition Document No.)</b>			<b>5. CONTRACT REFERENCE</b> SOW 4.1.2			<b>6. REQUIRING OFFICE</b> NRL Code 5726			
<b>7. DD 250 REQ</b> LT		<b>9. DIST STATEMENT REQUIRED</b>		<b>10. FREQUENCY</b> ASREQ		<b>12. DATE OF FIRST SUBMISSION</b> *		<b>14. DISTRIBUTION</b>	
<b>8. APP CODE</b>		<b>11. AS OF DATE</b>		<b>13. DATE OF SUBSEQUENT SUBMISSION</b> ASREQ		<b>a. ADDRESSEE</b>		<b>b. COPIES</b>	
								Draft	Final
							Reg		Repro
<b>16. REMARKS</b> The contractor shall prepare a receiver failure/repair report at the conclusion of any receiver repair associated with task II of this contract. Receiver failure/repair reports shall include but not be limited to: a) Description of receiver failure. b) Estimated cause of failure. c) Description of repairs conducted on receiver. d) Repair costs. List both parts and labor required for repair. e) Report of repaired receiver performance. Report to include, but not be limited to the following measured performance parameters: receiver gain, sensitivity, spurious response, power supply current and RS-232 communication validation.						NRL Code 5726		1	
						NRL Code 5720		1	
						NRLCode 5720.BO		1	
						<b>15. TOTAL</b> →		3	
<b>1. DATA ITEM NO.</b> A005		<b>2. TITLE OF DATA ITEM</b> Interim Technical Reports				<b>3. SUBTITLE</b>			
<b>4. AUTHORITY (Data Acquisition Document No.)</b>			<b>5. CONTRACT REFERENCE</b> SOW 4.1.1,4.1.2,4.4.4,4.1.5,4.1.6			<b>6. REQUIRING OFFICE</b> NRL Code 5726			
<b>7. DD 250 REQ</b> LT		<b>9. DIST STATEMENT REQUIRED</b>		<b>10. FREQUENCY</b> QTRLY		<b>12. DATE OF FIRST SUBMISSION</b> *		<b>14. DISTRIBUTION</b>	
<b>8. APP CODE</b>		<b>11. AS OF DATE</b>		<b>13. DATE OF SUBSEQUENT SUBMISSION</b>		<b>a. ADDRESSEE</b>		<b>b. COPIES</b>	
								Draft	Final
							Reg		Repro
<b>16. REMARKS</b> The contractor shall prepare a interim technical report 3 months after the start of any major sub-task. The report shall include but not be limited to: a) Discussion of sub-task or task objectives. b) Discussion of technical requirements. c) Technical results. d) Conclusions and recommendations for further research. e) Description of significant hardware and/or software developments as appropriate.						NRL Code 5726		1	
						NRL Code 5720		1	
						<b>15. TOTAL</b> →		2	
<b>G. PREPARED BY</b> NRL Code 5726			<b>H. DATE</b> 10/23/2000		<b>I. APPROVED BY</b>			<b>J. DATE</b>	

<b>17. PRICE GROUP</b>
<b>18. ESTIMATED</b>

<b>17. PRICE GROUP</b>
<b>18. ESTIMATED TOTAL PRICE</b>

# CONTRACT DATA REQUIREMENTS LIST

(2 Data Items)

*Form Approved*  
**OMB No. 0704-0188**

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0701-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

<b>A. CONTRACT LINE ITEM NO.</b> 0002/0004/0006/0008/0010			<b>B. EXHIBIT</b> "A"		<b>C. CATEGORY:</b> TDP _____ TM- _____ OTHER _____			
<b>D. SYSTEM / ITEM</b>				<b>E. CONTRACT / PR NO.</b> N00173-01-R-DL05		<b>F. CONTRACTOR</b>		
<b>1. DATA ITEM NO.</b> A006		<b>2. TITLE OF DATA ITEM</b> Final Technical Report			<b>3. SUBTITLE</b>			
<b>4. AUTHORITY (Data Acquisition Document No.)</b>			<b>5. CONTRACT REFERENCE</b> SOW 4.1.1,4.1.2,4.1.5,4.1.6			<b>6. REQUIRING OFFICE</b> NRL Code 5726		
<b>7. DD 250 REQ</b> LT	<b>9. DIST STATEMENT REQUIRED</b>	<b>10. FREQUENCY</b>		<b>12. DATE OF FIRST SUBMISSION</b> *		<b>14. DISTRIBUTION</b>		
<b>8. APP CODE</b> 30 DAC		<b>11. AS OF DATE</b>		<b>13. DATE OF SUBSEQUENT SUBMISSION</b>		<b>a. ADDRESSEE</b>	<b>b. COPIES</b>	
							Draft	Final Reg    Repro
<b>16. REMARKS</b> The contractor shall prepare interim technical report for each task 30 days after completion of any major subtask. That must include but not be limited to: a) Discussion of sub-task or task objectives. b) Discussion of technical requirements. c) Technical results. d) Conclusions and recommendations for further research. e) Description of significant hardware and/or software developments as appropriate.						NRL Code 5726	1	
						NRL Code 5720	1	
						DTIC	1	
						<b>15. TOTAL</b> →	3	
<b>1. DATA ITEM NO.</b> A007		<b>2. TITLE OF DATA ITEM</b> Contractor On-Site Labor Report			<b>3. SUBTITLE</b>			
<b>4. AUTHORITY (Data Acquisition Document No.)</b>			<b>5. CONTRACT REFERENCE</b>			<b>6. REQUIRING OFFICE</b>		
<b>7. DD 250 REQ</b> LT	<b>9. DIST STATEMENT REQUIRED</b>	<b>10. FREQUENCY</b> MTHLY		<b>12. DATE OF FIRST SUBMISSION</b> 30 DAC		<b>14. DISTRIBUTION</b>		
<b>8. APP CODE</b> 30 DAC		<b>11. AS OF DATE</b>		<b>13. DATE OF SUBSEQUENT SUBMISSION</b>		<b>a. ADDRESSEE</b>	<b>b. COPIES</b>	
							Draft	Final Reg    Repro
<b>16. REMARKS</b> The Contractor shall deliver the On-Site Labor Report no later than five (5) days after the end of each reporting month. The report must include as a minimum the following data: Reporting Period: Contract Number (and Order Number, if applicable): Contract Value: Current Funding: Amount Expended in Current Period: Total Expended to Date: Date Submitted: Labor (including subcontractors) - Show employee name, number of hours, and total amount billed for contractor employees working on-site at NRL. If the contractor employees worked on multiple tasks (as defined by the COR), the numbers of hours worked on each task must be shown separately.						NRL Code 5726	1	
						NRL Code 5720	1	
						NRL Code 5702		
						<b>15. TOTAL</b> →	2	
<b>G. PREPARED BY</b> NRL Code 5726			<b>H. DATE</b> 10/23/2000		<b>I. APPROVED BY</b>		<b>J. DATE</b>	

<b>17. PRICE GROUP</b>
<b>18. ESTIMATED TOTAL PRICE</b>

<b>17. PRICE GROUP</b>
<b>18. ESTIMATED TOTAL PRICE</b>

# CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Form Approved  
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0701-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

<b>A. CONTRACT LINE ITEM NO.</b> 0002/0004/0006/0008/0010	<b>B. EXHIBIT</b> "A"	<b>C. CATEGORY:</b> TDP _____ TM _____ OTHER _____
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<b>D. SYSTEM / ITEM</b>	<b>E. CONTRACT / PR NO.</b> N00173-01-R-DL05	<b>F. CONTRACTOR</b>
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<b>1. DATA ITEM NO.</b> A008	<b>2. TITLE OF DATA ITEM</b> Hardware Design Documentation	<b>3. SUBTITLE</b>
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<b>4. AUTHORITY (Data Acquisition Document No.)</b>	<b>5. CONTRACT REFERENCE</b> SOW 4.1.1,4.1.4,4.1.5,4.1.6	<b>6. REQUIRING OFFICE</b> NRL Code 5726
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<b>7. DD 250 REQ</b> LT	<b>9. DIST STATEMENT REQUIRED</b>	<b>10. FREQUENCY</b> ASREQ	<b>12. DATE OF FIRST SUBMISSION</b> *	<b>14. DISTRIBUTION</b>		
<b>8. APP CODE</b>	<b>11. AS OF DATE</b>	<b>13. DATE OF SUBSEQUENT SUBMISSION</b>		<b>a. ADDRESSEE</b> NRL Code 5726	<b>b. COPIES</b>	
					<b>Draft</b>	<b>Final</b>
					<b>Reg</b>	<b>Repro</b>

<b>16. REMARKS</b> *The contractor shall deliver a hardware design document at the conclusion of any new hardware development or existing hardware modifications conducted under any of the contract tasks. This requirement applies to all new or modified hardware delivered under this contract. The contractor shall document all hardware designs and/or modifications under this contract as follows:  (a) Functional description and theory of operation. (b) Detailed schematic diagrams, wiring diagrams, printed circuit board layouts, mechanical drawings and parts lists. (c) All applicable computer generated computer aided design (CAD) and computer aided manufacture (CAM) files. (d) Contents of programmable devices such as programmable read only memories (PROMS), programmable logic devices (PLDS), etc. (e) Computer and operator interface definitions and specifications. (f) Line power requirements including but not limited to permitted line frequency range, and operating and surge voltage and current requirements. (g) Environmental requirements including but not limited to vibration and shock, heating and cooling, and humidity requirements. (h) Detailed operating instructions were applicable. Instructions will be sufficiently detailed so that a qualified individual will be able to operate the component, sub-system or system with minimal assistance. (i) Maintenance and test instructions including troubleshooting guides where appropriate. (j) Any addition technical data that would be required to successfully replicate a functional component, sub-assembly, sub-system or system. (k) Where modifications to existing designs are required, the documentation format shall be consistent with existing documentation and implemented as replacements or additions to existing documentation, where feasible.						
				<b>15. TOTAL</b>	→	2

<b>G. PREPARED BY</b> NRL Code 5726	<b>H. DATE</b> 10/23/2000	<b>I. APPROVED BY</b>	<b>J. DATE</b>
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<b>17. PRICE GROUP</b>
<b>18. ESTIMATED</b>



DEPARTMENT OF DEFENSE CONTRACT SECURITY CLASSIFICATION SPECIFICATION <i>(The requirements of the DoD Industrial Security Manual apply to all security aspects of this effort.)</i>				1. CLEARANCE AND SAFEGUARDING SER: 043-00			
				a. FACILITY CLEARANCE REQUIRED <b>SECRET</b>			
				b. LEVEL OF SAFEGUARDING REQUIRED <b>SECRET</b>			
2. THIS SPECIFICATION IS FOR: <i>(X and complete as applicable)</i>			3. THIS SPECIFICATION IS: <i>(X and complete as applicable)</i>				
a. PRIME CONTRACT NUMBER				X a. ORIGINAL <i>(Complete date in all cases)</i> DATE (YYYYMMDD) 2000/10/16			
b. SUBCONTRACT NUMBER				b. REVISED <i>(Supersedes all previous specs)</i> REVISION NO. DATE (YYYYMMDD)			
X c. SOLICITATION OR OTHER NUMBER 57-2350-00		DUE DATE (YYYYMMDD)		c. FINAL <i>(Complete item 5 in all cases)</i> DATE (YYYYMMDD)			
4. IS THIS A FOLLOW-ON CONTRACT? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO. If Yes, complete the following: Classified material received or generated _____ <i>(Preceding Contract Number)</i> is transferred to this follow-on contract.							
5. IS THIS A FINAL DD FORM 254? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO. If Yes, complete the following: In response to the contractor's request _____, retention of the classified material is authorized for the period of _____							
6. CONTRACTOR <i>(Include Commercial and Government Entity (CAGE) Code)</i>							
a. NAME, ADDRESS, AND ZIP CODE  FOR RFP PURPOSES ONLY, NOT VALID FOR ACTUAL CONTRACT AWARD		b. CAGE CODE	c. COGNIZANT SECURITY OFFICE <i>(Name, Address, and Zip Code)</i>				
7. SUBCONTRACTOR							
a. NAME, ADDRESS, AND ZIP CODE  N/A		b. CAGE CODE	c. COGNIZANT SECURITY OFFICE <i>(Name, Address, and Zip Code)</i>  N/A				
8. ACTUAL PERFORMANCE							
a. LOCATION  N/A		b. CAGE CODE	c. COGNIZANT SECURITY OFFICE <i>(Name, Address, and Zip Code)</i>  N/A				
9. GENERAL IDENTIFICATION OF THIS PROCUREMENT  ESM ENGINEERING AND SUPPORT SERVICES							
10. CONTRACTOR WILL REQUIRE ACCESS TO:		YES	NO	11. IN PERFORMING THIS CONTRACT, THE CONTRACTOR WILL:		YES	NO
a. COMMUNICATIONS SECURITY (COMSEC) INFORMATION			X	e. HAVE ACCESS TO CLASSIFIED INFORMATION ONLY AT ANOTHER CONTRACTOR'S FACILITY OR A GOVERNMENT ACTIVITY			X
b. RESTRICTED DATA			X	b. RECEIVE CLASSIFIED DOCUMENTS ONLY			X
c. CRITICAL NUCLEAR WEAPON DESIGN INFORMATION			X	c. RECEIVE AND GENERATE CLASSIFIED MATERIAL		X	
d. FORMERLY RESTRICTED DATA			X	d. FABRICATE, MODIFY, OR STORE CLASSIFIED HARDWARE			X
e. INTELLIGENCE INFORMATION			X	e. PERFORM SERVICES ONLY			X
(1) Sensitive Compartmented Information (SCI)			X	f. HAVE ACCESS TO U.S. CLASSIFIED INFORMATION OUTSIDE THE U.S., PUERTO RICO, U.S. POSSESSIONS AND TRUST TERRITORIES			X
(2) Non-SCI			X	g. BE AUTHORIZED TO USE THE SERVICES OF DEFENSE TECHNICAL INFORMATION CENTER (DTIC) OR OTHER SECONDARY DISTRIBUTION CENTER		X	
f. SPECIAL ACCESS INFORMATION			X	h. REQUIRE A COMSEC ACCOUNT			X
g. NATO INFORMATION			X	i. HAVE TEMPEST REQUIREMENTS			X
h. FOREIGN GOVERNMENT INFORMATION			X	j. HAVE OPERATIONS SECURITY (OPSEC) REQUIREMENTS			X
i. LIMITED DISSEMINATION INFORMATION			X	k. BE AUTHORIZED TO USE THE DEFENSE COURIER SERVICE			X
j. FOR OFFICIAL USE ONLY INFORMATION		X		l. OTHER <i>(Specify)</i>			
k. OTHER <i>(Specify)</i>							

**12. PUBLIC RELEASE.** Any information (*classified or unclassified*) pertaining to this contract shall not be released for public dissemination except as provided by the Industrial Security Manual or unless it has been approved for public release by appropriate U.S. Government authority. Proposed public releases shall

Direct  Through (*Specify*)

Commanding Officer, Naval Research Laboratory, Washington, DC 20375-5320, Code 5726.

to the Directorate for Freedom of Information and Security Review, Office of the Assistant Secretary of Defense (Public Affairs)\* for review.  
 \*In the case of non-DoD User Agencies, requests for disclosure shall be submitted to that agency.

**13. SECURITY GUIDANCE.** The security classification guidance needed for this classified effort is identified below. If any difficulty is encountered in applying this guidance or if any other contributing factor indicates a need for changes in this guidance, the contractor is authorized and encouraged to provide recommended changes; to challenge the guidance or the classification assigned to any information or material furnished or generated under this contract; and to submit any questions for interpretation of this guidance to the official identified below. Pending final decision, the information involved shall be handled and protected at the highest level of classification assigned or recommended. (*Fill in as appropriate for the classified effort. Attach, or forward under*

Access to classified information is not required for the purpose of submitting a bid/proposal for this statement of work. However, prior to award of contract, the successful contractor will be required to have a SECRET facility clearance, SECRET storage capabilities, and personnel available with DoD granted personnel security clearances commensurate with level of access required for performance of contract.

MIL CONTRACTS  
 OCT 19 P 12:28  
 DIVISION

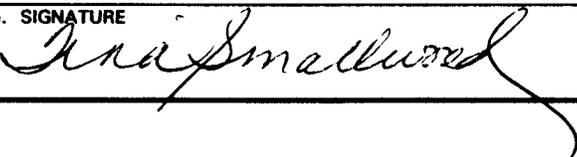
**14. ADDITIONAL SECURITY REQUIREMENTS.** Requirements, in addition to ISM requirements, are established for this contract.  Yes  No  
 (*If Yes, identify the pertinent contractual clauses in the contract document itself, or provide an appropriate statement which identifies the additional requirements. Provide a copy of the requirements to the cognizant security office. Use Item 13 if additional space is needed.*)

**15. INSPECTIONS.** Elements of this contract are outside the inspection responsibility of the cognizant security office.  Yes  No  
 (*If Yes, explain and identify specific areas or elements carved out and the activity responsible for inspections. Use Item 13 if additional space is needed.*)

**16. CERTIFICATION AND SIGNATURE.** Security requirements stated herein are complete and adequate for safeguarding the classified information to be released or generated under this classified effort. All questions shall be referred to the official named below.

a. TYPED NAME OF CERTIFYING OFFICIAL TINA SMALLWOOD	b. TITLE CONTRACTING OFFICER, SECURITY	c. TELEPHONE ( <i>Include Area Code</i> ) (202)767-2240/2521
--	---	---

d. ADDRESS (*Include Zip Code*)  
 NAVAL RESEARCH LABORATORY  
 4555 OVERLOOK AVE, SW  
 WASHINGTON, DC 20375-5320

e. SIGNATURE  


**17. REQUIRED DISTRIBUTION**

<input checked="" type="checkbox"/>	a. CONTRACTOR
<input checked="" type="checkbox"/>	b. SUBCONTRACTOR
<input type="checkbox"/>	c. COGNIZANT SECURITY OFFICE FOR PRIME AND SUBCONTRACTOR
<input type="checkbox"/>	d. U.S. ACTIVITY RESPONSIBLE FOR OVERSEAS SECURITY ADMINISTRATION
<input type="checkbox"/>	e. ADMINISTRATIVE CONTRACTING OFFICER
<input checked="" type="checkbox"/>	f. OTHERS AS NECESSARY 1221.11, 5726, 5702

## PERSONNEL QUALIFICATIONS

### ESM Engineering and Support Services

#### 1.0 INTRODUCTION

The following are the minimum requirements necessary to perform the tasks set forth in the Statement of Work:

#### 2.0 LABOR CATEGORIES / QUALIFICATIONS

##### 2.1 TASK I ESM Receiver Design and Fabrication Support.

Tasking is for off-site component and systems research and development.

##### 2.1.1 Labor Category: Senior Microwave/RF Design Engineer

Support Level: 1,040 man-hours per year

Education: MS Electrical Engineering with specialization in microwave engineering. Education and experience is substituted on a one to two year ratio. (Ex.: five years of education and two years of experience would equal a MS degree.)

Security Clearance: Secret minimum

Experience Requirements: In addition to the above stated education requirements or equivalencies, the following experience is required: a minimum of 15 years experience in microwave circuit design with 10 years experience in ES system design and integration. Demonstrated detailed knowledge of the requirements, alternatives, interrelationships and tradeoffs of electronic warfare support (ES) systems and the leading-edge technologies relevant to these systems. Demonstrated knowledge of ES system architectures and metrics for tactical EW and surveillance functions aboard aircraft, ships, submarines and space craft. Demonstrated ability to define system functional interfaces, incorporate leading-edge EW technology into functional modules and transition them into developed system architectures. Demonstrated knowledge of current and emerging EW technologies.

Demonstrated ability to design microwave assemblies, subassemblies and circuits using all currently existing microwave circuit fabrication technologies. This also includes a demonstrated capability in system and module definition and documentation and fluency in the computer

aided design (CAD) and modeling of microwave components and broadband EW receiver systems.

Demonstrated ability to communicate (i.e., liaison) with leading scientists in the areas of broadband receiver development and EW technology.

2.1.2 Labor Category: Microwave/RF Design Engineer

Support Level: 1,040 man-hours per year

Education: MS Electrical Engineering with specialization in microwave engineering. Education and experience is substituted on a one to two year ratio. (Ex.: five years of education and two years of experience would equal a MS degree.)

Security Clearance: Secret minimum

Experience Requirements: In addition to the above stated education requirements or equivalencies, the following minimum experience is required: a minimum of 10 years experience in microwave circuit design with 5 years experience in ES receiver technology development. Demonstrated knowledge of the requirements, alternatives, workings, interrelationships and tradeoffs of EW systems and the leading-edge technologies relevant to these systems.

Demonstrated ability to design microwave assemblies, subassemblies and circuits using all currently existing microwave circuit fabrication technologies. This also includes a demonstrated capability in system and module definition and documentation and fluency in the computer aided design (CAD) and modeling of microwave components and broadband EW receiver systems.

Demonstrated ability to communicate (i.e., liaison) with leading scientists in the areas of broadband receiver development and EW technology.

2.1.3 Labor Category: Digital Design Engineer

Support Level: 1,040 man-hours per year

Education: MS Electrical Engineering with specialization in digital design engineering. Education and experience is substituted on a one to two year ratio. (Ex.: five years of education and two years of experience would equal a MS degree.)

Security Clearance: Secret minimum

Experience Requirements: In addition to the above stated education requirements or equivalencies, the following minimum experience is required: 4 years experience in digital circuit design and 2 years experience in ES receiver technology development. Demonstrated knowledge of the requirements, alternatives, workings, interrelationships and tradeoffs of EW systems and leading-edge technologies relevant to these systems. A demonstrated knowledge in current digital circuit and software design including digital signal acquisition and processing technologies is required.

The contractor shall demonstrate an ability to design digital assemblies, subassemblies and circuits using all currently existing digital circuit design and fabrication technologies. Demonstrated experience with the development and integration of digital signal acquisition systems including the application of high speed analog-to-digital converters (ADCs) and digital signal processors (DSPs) shall be required. The contractor shall demonstrate knowledge of the current digital logic families to include, but not be limited to, the integration and programming of field programmable gate arrays (FPGAs). Additionally, the contractor shall provide evidence of advanced software development capability including programming in Assembly Language, VHDL, Visual C++ and MATLAB. This also includes a demonstrated capability in system and module definition and documentation and fluency in computer aided design (CAD) modeling of systems and digital circuitry.

Demonstrated ability to communicate (i.e., liaison) with leading scientists in the areas of EW technology interest in an effort to develop modules and system level demonstrations.

2.1.4 Labor Category: Mechanical Design Engineer

Support Level: 1,040 man-hours per year

Education: BS in Mechanical Engineering

Security Clearance: None required

Experience Requirements: In addition to the above stated education requirements or equivalencies, the following experience is required: 3 years experience in the performing thermal, structural and reliability analysis on ES modules, systems and processing assemblies. The contractor shall demonstrated knowledge of the physical workings, interrelationships, tradeoffs and mechanical characteristics of ES microwave electronic components, assemblies and fabrication processes.

Demonstrated ability to derive the impact of environmental factors on system performance such as shock, vibration, solar loading, thermal cycling and weathering elements on electronic assemblies. Demonstrated fluency in computer aided modeling procedures associated with design of mechanical systems and the management of environmental effects. Demonstrated familiarity with fabrication, plating and finishing processes associated with the exotic materials utilized in microwave assemblies and packaging. Demonstrated familiarity with assembly operations and procedures such as bonding, welding, soldering and epoxy attachment of microwave and electronic chip components to substrates and carriers.

Must be computer literate to the degree that would be required to conduct relevant component, subsystem and system analysis, design and documentation. Must have mechanical engineering computer skills encompassing production of mechanical drawings using AutoCad and SolidWorks.

2.1.5 Labor Category: Microwave Technician

Support Level: 1,040 man-hours per year

Education: High School plus 1 year of vocational training in an applicable technical school

Security Clearance: None required

Experience Requirements: In addition to the above stated education requirements, the following experience is required: 5 years experience in ESM system and microwave technology assembly, design and testing. Demonstrated experience in assembly, testing and tuning of ESM modules and equipment, MIC-hybrid RF, microwave, millimeter wave circuitry, over dc to 40 GHz. Demonstrated knowledge of and capability in the alignment and testing of ESM functional modules to verify performance. Demonstrated capability in the operation of vector and scalar network analyzers, spectrum analyzers, noise figure and power meters. Demonstrated ability to work from MIL-T-31 000, Level 2 mechanical drawings and schematics. Demonstrated experience in generating ESM module test procedures.

2.2 TASK II ES Receiver Repair

Tasking is for off-site component and systems research and development.

2.2.1 Labor Category: Microwave/RF Design Engineer

Support Level: 174 man-hours per year

Education: MS Electrical Engineering with specialization in microwave engineering. Education and experience is substituted on a one to two year ratio. (Ex.: five years of education and two years of experience would equal a MS degree.)

Security Clearance: None required

Experience Requirements: In addition to the above stated education requirements or equivalencies, the following minimum experience is required: a minimum of 10 years experience in microwave circuit design with 5 years experience in ES receiver technology development. Demonstrated knowledge of the requirements, alternatives, workings, interrelationships and tradeoffs of EW systems and leading-edge technologies relevant to these systems.

Demonstrated ability to design microwave assemblies, subassemblies and circuits using all currently existing microwave circuit fabrication technologies. This also includes a demonstrated capability in system and module definition and documentation and fluency in the computer aided design (CAD) and modeling of microwave components and broadband EW receiver systems.

Demonstrated ability to communicate (i.e., liaison) with leading scientists in the areas of broadband receiver development and EW technology.

2.2.2 Labor Category: Microwave Technician

Support Level: 696 man-hours per year

Education: High School plus 1 year of vocational training in an applicable technical school

Security Clearance: None Required

Experience Requirements: In addition to the above stated education requirements, the following experience is required: 5 years experience in ESM system and microwave technology assembly, design and testing. Demonstrated experience in assembly, testing and tuning of ESM modules and equipment, MIC-hybrid RF, microwave, millimeter wave circuitry, over dc to 40 GHz. Demonstrated knowledge of and capability in the alignment and testing of ESM functional modules to verify performance. Demonstrated capability in the operation of vector and scalar network analyzers, spectrum analyzers, noise figure and power meters. Demonstrated ability to work from MIL-T-31 000, Level 2 mechanical drawings and schematics. Demonstrated experience in generating ESM module test procedures.

### 2.3 TASK III ESM Data Collection and Analysis Support

Tasking is for support services that will require support both on-site and at off-site locations.

2.3.1 Labor Category: Field Test Engineer

Support Level: 4,160 man-years per year

Education: B.S in an applicable field minimum.

Security Clearance: Secret with SCI minimum

Experience Requirements: Must have a minimum of 5 years of experience with in-field ELINT data collection and analysis. Additionally, the contractor must have a minimum of 2 years operational experience with the AN/UYX-3 hardware and software and it's precursor technology. Will be required to work at remote field sites either as an individual or as part of a team. Must be able to define goals and requirements for exercises and write test plans. Will evaluate and document system capabilities, performance and end product results. Will provide collection/analysis systems training in the laboratory and in the field. Will be required to perform site surveys, evaluate logistics support requirements, and define site and exercise test requirements. Must be flight qualified on military propeller aircraft.

Must demonstrate a high degree of proficiency with the IBM PC and/or compatibles to the degree that the contractor would be able to install, configure and operate software. Must have a working knowledge of the Windows operating systems.

Demonstrated ability to communicate (i.e., liaison) with leading scientists in the areas of ELINT data collection and analysis. The contractor must have a demonstrated ability to communicate the results of his work in the form of written reports.

### 2.4 TASK IV Mechanical Design Support

Tasking is for on-site support services.

2.4.1 Labor Category: Mechanical Engineer

Support Level: 2,080 man-hours per year

Education: B.S. in Mechanical Engineering minimum

Security Clearance: Secret minimum

Experience Requirements: In addition to the above stated education requirements or equivalencies, the following experience is required: 3 years experience in the performing thermal, structural and reliability analysis on ES modules, systems and processing assemblies. Demonstrated knowledge of the physical workings, interrelationships, tradeoffs and mechanical characteristics of ES microwave electronic components, assemblies and fabrication processes.

Demonstrated ability to derive the impact of environmental factors on system performance such as shock, vibration, solar loading, thermal cycling and weathering elements on electronic assemblies. Demonstrated fluency in computer aided modeling procedures associated with design of mechanical systems and the management of environmental effects. Demonstrated familiarity with fabrication, plating and finishing processes associated with the exotic materials utilized in microwave assemblies and packaging. Demonstrated familiarity with assembly operations and procedures such as bonding, welding, soldering and epoxy attachment of microwave and electronic chip components to substrates and carriers.

Must be computer literate to the degree that would be required to conduct relevant component, subsystem and system analysis, design and documentation. Must have mechanical engineering computer skills encompassing production of mechanical drawings using 2D and 3D mechanical design software such as AutoCad and SolidWorks.

## 2.5 TASK V ES Digital Receiver Development Support

Tasking is for on-site support services.

### 2.5.1 Labor Category: Digital Design Engineer

Support Level: 2,080 man-hours per year

Education: B.S. Electrical Engineering minimum

Security Clearance: Secret minimum

Experience Requirements: In addition to the above stated education requirements or equivalencies, the following minimum experience is required: 4 years experience in digital circuit design and 2 years experience in ES receiver technology development. Demonstrated knowledge of the requirements, alternatives, workings, interrelationships and tradeoffs of EW systems and leading-edge technologies relevant to these systems. Must have significant experience with digital signal processing techniques, digital signal processing hardware and software as applied to Electronic Warfare Support Measure (ESM) systems development.

The contractor shall demonstrate knowledge in digital circuit and software design including digital signal acquisition and processing technologies is required. The contractor shall demonstrate an ability to design digital assemblies, subassemblies and circuits using all currently existing digital circuit design and fabrication technologies. Must have significant experience with signal processing algorithms as applied to data collection and system control. Must have experience with interface development both hardware and software. Will be required to work at the component, assembly and system integration level. Demonstrated experience with the development and integration of digital signal acquisition systems including the application of high speed analog-to-digital converters (ADCs) and digital signal processors (DSPs) shall be required. The contractor shall demonstrate knowledge of the current digital logic families to include, but not be limited to, the integration and programming of field programmable gate arrays (FPGAs). Additionally, the contractor shall provide evidence of advanced software development capability including programming in Assembly Language, VHDL, Visual C++ and MATLAB. This also includes a demonstrated capability in system and module definition and documentation and fluency in computer aided design (CAD) modeling of systems and digital circuitry.

Will be required to support ESM system test and evaluation exercises and analyze associated data for compliance with test and demonstration objectives. Will be responsible for the identification of system modifications necessary to adapt to the unknown and/or unexpected to meet developing objectives. Will generate reports for exercises as required.

Demonstrated ability to communicate (i.e., liaison) with leading scientists in the areas of EW technology interest in an effort to develop modules and system level demonstrations.

## 2.6 TASK VI ESM System Architecture Development and Assessment.

Tasking is for on-site support services.

2.6.1 Labor Category: Senior Systems Analyst

Support Level: 2,080 man-hours per year

Education: B.S. Electrical Engineering minimum

Security Clearance: Secret minimum

Experience Requirements: In addition to the above stated education requirements or equivalencies, the following minimum experience is required: a minimum of 10 years experience in ESM system analysis

and development. Demonstrated knowledge of the requirements, alternatives, workings, interrelationships and tradeoffs of EW systems and leading-edge technologies relevant to these systems.

Must possess a detailed state-of-the-art knowledge of ES sub-system components, such as antennas, microwave receiver front-ends, a wide range of receiver/processor designs and technologies, and control and display functions (hardware and software implementations). Must be capable of designing state-of-the-art, high reliability microwave components such as mixers, oscillators, and switches as well as their associated control circuitry. Must be able to conduct trade-off studies to establish receiver subsystem and components characteristics which will ensure optimal receiver system performance; then be able to translate these characteristics into component and subsystem procurement specifications. Finally, must be capable of performing hands-on component, subsystem and receiver system testing, test set design and test system automation.

Must demonstrate a high degree of proficiency with the IBM PC and/or compatibles. Must have a working knowledge of the Windows operating systems. Must be computer literate to the degree that would be required to conduct component, subsystem and system analysis, design and documentation. Additionally, the contractor shall provide evidence of system analysis software proficiency. Programming skills in Visual C++ and MATLAB are desired but not mandatory. This also includes a demonstrated capability in system and module definition and documentation and fluency in computer aided design (CAD) modeling of systems and sub-systems.

Demonstrated ability to communicate (i.e., liaison) with leading scientists in the areas of EW technology interest in an effort to develop system level demonstrations.