

## IMPORTANT NOTICE

Due to potential delays in receiving mail, this solicitation contains the provision at FAR 52.215-5 which authorizes facsimile proposals. Offerors are encouraged to use alternatives to the mail when submitting proposals.

<b>SOLICITATION, OFFER AND AWARD</b>		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)		RATING <b>DO-C9</b>	PAGE OF <b>1   37</b> PAGES
2. CONTRACT NO.	3. SOLICITATION NO. <b>N00173-01-R-HA04</b>	4. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)		5. DATE ISSUED <b>29 OCT 2001</b>	6. REQUISITION/PURCHASE NO.
7. ISSUED BY <b>CONTRACTING OFFICER NAVAL RESEARCH LABORATORY 4555 OVERLOOK AVENUE, SW, BLDG 222, RM 115 WASHINGTON DC 20375-5326</b>		CODE <b>3220.HA</b>	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 2 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 NAVAL RESEARCH LABORATORY until 4 PM local time 07 DEC 2001  
(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 <b>HILDA R. ABDON, CONTRACT SPECIALIST</b>	B. TELEPHONE NO. (Include area code) (NO COLLECT CALLS) <b>202-767-0682</b>
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**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:		23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)	
<input type="checkbox"/> 10 U.S.C. 2304(c) ( ) <input type="checkbox"/> 41 U.S.C. 253(c) ( )		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	28. AWARD DATE
		(Signature of Contracting Officer)	

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**

ITEM NUMBER	SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	ESTIMATED COST PLUS FIXED FEE
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**BASE YEAR****TASK 1**

0001	The Contractor shall conduct research in accordance with the Statement of Work (SOW). Attachment No. 1, Task 1.	\$	\$	\$
0002	Data in accordance with Exhibit A (DD 1423)	* NSP	* NSP	* NSP
<b>TOTAL ESTIMATED COST PLUS FIXED FEE:</b>		<b>\$</b>	<b>\$</b>	<b>\$</b>

**TASK 2**

0003	The Contractor shall conduct research in accordance with the Statement of Work (SOW). Attachment No. 1, Task 2.	\$	\$	\$
0004	Data in accordance with Exhibit A (DD 1423)	* NSP	* NSP	* NSP
<b>TOTAL ESTIMATED COST PLUS FIXED FEE:</b>		<b>\$</b>	<b>\$</b>	<b>\$</b>

ITEM NUMBER	SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	ESTIMATED COST PLUS FIXED FEE
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**TASK 3**

0005	The Contractor shall conduct research in accordance with the Statement of Work (SOW). Attachment No. 1, Task 3.	\$	\$	\$
0006	Data in accordance with Exhibit A (DD 1423)	* NSP	* NSP	* NSP

<b>TOTAL ESTIMATED COST PLUS FIXED FEE:</b>	\$	\$	\$
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**TASK 4**

0007	The Contractor shall conduct research in accordance with the Statement of Work (SOW). Attachment No. 1, Task 4	\$	\$	\$
0008	Data in accordance with Exhibit A (DD 1423)	* NSP	* NSP	* NSP

<b>TOTAL ESTIMATED COST PLUS FIXED FEE:</b>	\$	\$	\$
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\* *Not Separately Priced*

**NOTICE TO OFFERORS:** In addition to inserting the estimated cost and fixed fee for the base year above, the estimated cost and fixed fee for each optional extension of the term of the contract are to be inserted in Section H.

**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 8 December 2000 which are hereby incorporated by reference. The full text is available at <http://heron.nrl.navy.mil/contracts/home.htm>.

**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**

52.246-9       -    Inspection Of Research And Development (Short Form) (APR 1984)

**DFARS CLAUSE    TITLE**

252.246-7000   -    Material Inspection And Receiving Report (DEC 1991)

**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 the date of award through one year thereafter. In the event that any of the option items are exercised, the contract term shall be extended by twelve (12) months for each option exercised.
- (b) The principal place of performance of this contract shall be performed at Naval Research Laboratory (NRL), or at other Navy or DoD facilities as specified by the Contracting Officer's Representative (COR).

**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
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*(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 INFORMATIONAL SUBLINE ITEMS**

It is anticipated that the research and development services performed under this contract will be paid for from multiple sources of funds. Informational subline items will be established as necessary to identify each accounting citation classification.

#### **G-8 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.

(e) The individuals who occupy the following labor categories will be identified as key personnel in the contract resulting from this solicitation:

Task 1:

Program Manager  
Senior Scientist/Engineer

Task 2:

Program Manager  
Senior Scientist/Engineer

Task 3:

Program Manager  
Senior Scientist/Engineer

Task 4:

Program Manager  
Senior Scientist/Engineer

### 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 51,020 total hours for Base Year; and 53,100 total hours for each of four (4) Option Years (if exercised) of direct labor, 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 4,252 hours per month for Base Year and 4,425 hours per month for each option. 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 shown in Section L-14.

#### 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 ELECTRONIC AND INFORMATION TECHNOLOGY (EIT)**

In accordance with Section 508 of the Rehabilitation Act of 1973 (29 U.S.C. 794d), all EIT supplies and services provided under this contract must comply with the applicable accessibility standards issued by the Architectural and Transportation Barriers Compliance Board at 36 CFR part 1194 (see FAR Subpart 39.2). Electronic and information technology (EIT) is defined at FAR 2.101.

**H-6 OPTION TO EXTEND THE TERM OF THE CONTRACT**

This contract shall be renewable at the unilateral option of the Government by the Contracting Officer giving written notice of renewal to the Contractor within the existing term of the contract. The Government may exercise its option to renew the contract a total of four (4) times and each such renewal shall extend the term of the contract by twelve (12) months. The Contractor agrees that performance under each such renewal shall be accomplished in accordance with all of the terms and conditions of this contract and at the estimated cost and fixed fee set forth below:

**TASK 1****First Option – Second Year Effort**

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

**Second Option – Third Year Effort**

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

**Third Option – Fourth Year Effort**

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

**Fourth Option – Fifth Year Effort**

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

**TASK 2****First Option – Second Year Effort**

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

**Second Option – Third Year Effort**

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

**Third Option – Fourth Year Effort**

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

**Fourth Option – Fifth Year Effort**

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

**TASK 3****First Option – Second Year Effort**

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

**Second Option – Third Year Effort**

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

**Third Option – Fourth Year Effort**

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

**Fourth Option – Fifth Year Effort**

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

**TASK 4****First Option – Second Year Effort**

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

**Second Option – Third Year Effort**

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

**Third Option – Fourth Year Effort**

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

**Fourth Option – Fifth Year Effort**

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

**H-7 ON-SITE USE OF GOVERNMENT PROPERTY**

It is anticipated that Government property will be used by the contractor's personnel in the performance of that portion of the contract performed on-site at the U.S. Naval Research Laboratory (NRL) including any of its field sites. Such use will be on a rent free basis and all such property shall be considered to remain in the possession and control of the NRL for property responsibility and accountability purposes.

**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.

**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 (MAR 2001)
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 Debarred, Suspended, Or Proposed For Debarment (JUL 1995)
52.211-15	- Defense Priority And Allocation Requirements (SEP 1990)
52.215-2	- Audit And Records-Negotiation (JUNE 1999)
52.215-2	- Audit And Records-Negotiation (AUG 1996) - Alternate II (APR 1998)
52.215-5	- Facsimile Proposals (OCT 1997)
52.215-8	- Order Of Precedence - Uniform Contract Format (OCT 1997)
52.215-10	- Price Reduction For Defective Cost Or Pricing Data (OCT 1997)
52.215-11	- Price Reduction For Defective Cost Or Pricing Data - Modifications (OCT 1997)
52.215-12	- Subcontractor Cost Or Pricing Data (OCT 1997)
52.215-13	- Subcontractor Cost Or Pricing Data Modifications (OCT 1997)
52.215-14	- Integrity Of Unit Prices (OCT 1997)
52.215-15	- 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)
- 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)
- 52.219-3 - Notice Of Total HUBZone Set-Aside (JAN 1999)
- 52.219-4 - Notice Of Price Evaluation Preference For HUBZone Small Business Concerns (JAN 1999)  Offeror elects to waive the evaluation preference.
- 52.219-6 - Notice Of Total Small-Business Set-Aside (JUL 1996)
- 52.219-8 - Utilization Of Small Business Concerns (OCT 2000)
- 52.219-14 - Limitations On Subcontracting (DEC 1996)
- 52.219-25 - Small Disadvantaged Business Participation Program-Disadvantaged Status And Reporting (OCT 1999)
  
- 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)
- 52.222-4 - Contract Work Hours And Safety Standards Act-Overtime Compensation (SEP 2000)
- 52.222-19 - Child Labor – Cooperation With Authorities And Remedies (FEB 2001)
- 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 (JAN 1999)
- 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 (MAR 2001)
- 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)
  - 52.227-10 - Filing Of Patent Application- Classified Subject Matter (APR 1984)
  - 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)*
  - 52.228-7 - 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)
  - 52.232-9 - Limitation On Withholding Of Payments (APR 1984)
  - 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 (MAR 2001)
  - 52.232-33 - Payment By Electronic Funds Transfer-Central Contractor Registration (MAY 1999)
  - 52.233-1 - Disputes (DEC 1998) - Alternate I (DEC 1991)
  - 52.233-3 - Protest After Award (AUG 1996) - Alternate I (JUN 1985)
  - 52.237-2 - Protection Of Government Buildings, Equipment And Vegetation (APR 1984)
  - 52.242-1 - Notice Of Intent To Disallow Costs (APR 1984)
  - 52.242-3 - Penalties For Unallowable Costs (MAR 2001)
  - 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)
  - 52.243-6 - Change Order Accounting (APR 1984)
  - 52.243-7 - Notification Of Changes (APR 1984) fill in 30
  - 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)
  - 52.245-18 - Special Test Equipment (FEB 1993)
  - 52.245-19 - Government Property Furnished "As-Is" (APR 1984)
  - 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)
  - 52.249-6 - Termination (Cost-Reimbursement) (SEP 1996)
  - 52.249-14 - Excusable Delays (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)
- 252.215-7002 - Cost Estimating System Requirements (OCT 1998)
- 252.219-7003 - Small Business And Small Disadvantaged Business Subcontracting Plan (DoD Contracts) (APR 1996)
- 252.223-7001 - Hazard Warning Labels (DEC 1991)
- 252.223-7004 - Drug-Free Work Force (SEP 1988)
- 252.223-7006 - Prohibition On Storage And Disposal Of Toxic And Hazardous Materials (APR 1993)
- 252.225-7001 - Buy American Act And Balance Of Payments Program (MAR 1998)
- 252.225-7002 - Qualifying Country Sources As Subcontractors (DEC 1991)
- 252.225-7007 - Buy American Act--Trade Agreements--Balance Of Payments Program (APR 2000)
- 252.225-7012 - Preference For Certain Domestic Commodities (AUG 2000)
- 252.225-7021 - Trade Agreements (APR 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)

- 252.227-7026 - Deferred Delivery Of Technical Data Or Computer Software (APR 1988)
- 252.227-7027 - Deferred Ordering Of Technical Data Or Computer Software (APR 1988)
- 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)
- 252.232-7009 - Mandatory Payment By Governmentwide Commercial Purchase Card (JUL 2000)
- 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)
- 252.243-7002 - 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)

**I-2 FAR 52.223-11 - OZONE-DEPLETING SUBSTANCES (MAR 2001)**

- (a) *Definitions.* "Ozone-depleting substance", as used in this clause, means any substance the Environmental Protection Agency designates in 40 CFR Part 82 as –
- (1) Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or
  - (2) Class II, 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).

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

- J-1** Attachment (1) - Statement Of Work - 9 Pages, With Exhibit A - DD Form 1423, Contract Data Requirements List, 2 Pages.
- J-2** Attachment (2) - DD Form 254, Contract Security Classification Specification, Ser 037-01 Dated 8/15/01 - 2 Pages.
- J-3** Attachment (3) – Personnel Qualifications, 4 Pages.
- J-4** Attachment (5) – 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 (MAR 2001)**

The fill in information is as follows:

The NAICS code for this acquisition is 541710

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>

**FAR CLAUSE    TITLE**

52.204-6	-	Data Universal Numbering System (DUNS) Number (JUNE 1999)
52.214-34	-	Submission Of Offers In The English Language (APR 1991)
52.214-35	-	Submission Of Offers In U.S. Currency (APR 1991)
52.215-1	-	Instructions To Offerors- Competitive Acquisition (MAR 2001)
52.215-16	-	Facilities Capital Cost Of Money (OCT 1997)
52.219-24	-	Small Disadvantaged Business Participation Program - Targets (OCT 2000)
52.222-24	-	Preaward On-Site Equal Opportunity Compliance Evaluation (FEB 1999)
52.252-5	-	Authorized Deviations In Provisions (APR 1984)

**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) ALT 1V (OCT 1997)**

- (a) Submission of cost or pricing data is not required..  
(b) Provide information described below:

See Section L-13, 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 type of contract resulting from this solicitation.

**L-5 FAR 52.222-18 – CERTIFICATION REGARDING KNOWLEDGE OF CHILD LABOR FOR LISTED END PRODUCTS (FEB 2001)**

The fill-in information is as follows:

Listed End Product

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Listed Countries of Origin

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**L-6 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-7 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)
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\* 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-8 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-9 GOVERNMENT-FURNISHED PROPERTY**

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

**L-10 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-11 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-HA04**  
**Closing Date: 07 December 2001**  
**(As specified in Block 9, RFP face page)**  
**Attn: Code 3220.HA**

(3) Proposal Format and Length - The length of the Technical Proposal, exclusive of resumes and biographical information is limited to a total of no more than sixty (60) sequentially numbered pages. Proposals not conforming to the length restriction may be excluded from consideration. 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-12 VOLUME I - TECHNICAL/MANAGEMENT PROPOSAL

REQUIRED COPIES: 1 ORIGINAL AND 3 COPIES .

- (1) Include a matrix indicating proposed labor hours by skill category required to perform the statement of work. This matrix shall not contain labor rates or any other indication of price. The offeror shall propose direct labor hours in accordance with the level of effort breakdown indicated in Section L-14 bellow.
- (2) The following information is required for evaluation of your technical/management :
  - A. Qualifications:
    - (a) The proposal must demonstrate that the offeror's key personnel are technically competent to accomplish the Statement of Work. Resumes, including experience and publication records, must be provided for proposed personnel so as to establish that the individuals proposed meet the Personnel Qualifications, as stated in Attachment No. 3.
    - (b) The proposal must indicate whether the offeror's key personnel are individually available to support the effort on a full time basis.
    - (c) The proposal must indicate whether the offeror's technical team spans the total requirements of the Statement of Work.
    - (d) The proposal must indicate whether the designated project manager meets the Personnel Qualifications, as stated in Attachment No. 3, and is qualified to address the total scope of the Statement of Work.
  - B. Technical Approach:
    - (a) The proposal must indicate that the offeror's proposed technical approach is sound. The proposal must demonstrate that the offeror understands the requirements of the tasks, the technical issues critical to success of Tasks 1 and 2 and the complex nature of the effort for Task 3.
    - (b) The proposal must demonstrate that the offeror and the proposed staff possess the experience required to successfully address the technical issues.
    - (c) The proposal must fully address a competent approach to each of the technical requirements of the Statement of Work. The proposal must not simply play back the words in the Statement of Work.
  - C. Management:
    - (a) The proposal must demonstrate that the offeror possesses a corporate technical bases to support the proposed effort.
    - (b) The proposal must demonstrate that the offeror possess the experience and maturity necessary to successfully manage the proposed effort.

**D. Facilities:**

- (a) The proposal must demonstrate that the offeror's facilities are adequate and appropriate to support the in-house component of the proposed effort.

**E. Past Performance Information:**

(a) Offerors shall submit the following information as part of their proposal. (*Offerors are encouraged to submit the information prior to other parts of the proposal to assist the government in reducing the length of the evaluation period.*) List the last 3 contracts or subcontracts completed by the offeror or predecessor companies during the past 5 years for services similar in nature to this requirement. Include in document any current contracts or subcontracts for similar services that were awarded at least one year prior to the date of this solicitation. Offerors that have no similar previous or current contracts should provide the requested information for proposed subcontractors that will perform major or critical aspects of the requirement or for the proposed project manager or key personnel responsible for major or critical aspects of the requirement.

1. Name of contracting organization.
2. Contract number
3. Contract type
4. Total contract value
5. Description of the contract work
6. Contracting officer and telephone number
7. Contracting officer's representative, program manager, or similar official and telephone number

- (b) Offerors shall contact the contracting organizations identified pursuant to paragraph (a) as soon as possible and request them to send past performance information on the identified contracts to the address in Block 7 of the face page of this solicitation. The past performance report which is available electronically in full text at <http://heron.nrl.navy.mil/contracts/home.htm> is to be provided to the contracting organization for this purpose. If the contracting organization has already collected past performance information on the contract pursuant to FAR Subpart 42.15, the format used to collect the information may be used instead of the past performance report.
- (c) Offerors may include in their proposals specific information relating to problems encountered in performing the identified contracts and any corrective actions by the offeror. Offerors should not provide general information on their performance on the identified contracts as this will be obtained from the contracting organizations.

**L-13 Volume II – Business Proposal**

Required Copies: 1 ORIGINAL AND 3 COPIES

**(1) COST PROPOSAL**

The offeror shall submit a business 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, 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.

**L-14 ANTICIPATED LABOR REQUIREMENTS****LABOR MATRIX**

The following is the anticipated distribution of labor hours by labor category and by task for the anticipated level of effort. This distribution shall be used by prospective offerors in preparing their cost proposals. If the offeror uses a labor category terminology that is different from that which is stated herein, the offeror shall provide a matrix clearly relating their proposed labor categories to those in this matrix. The Program Manager and the Senior Scientist/Engineers for each of the tasks are key Personnel. The Program Manager and the Senior Scientist/Engineers will have Secret Security Clearances.

**TASK 1: ENERGETIC MATERIALS DEVELOPMENT AND CHARACTERIZATION**

Labor Category	Year 1 Hours	Year 2 Hours	Year 3 Hours	Year 4 Hours	Year 5 Hours	Total Hours
Program Manager	100	100	100	100	100	500
Senior Scientist/Engineer	2,080	2,080	2,080	2,080	2,080	10,400
Scientist/Engineer	0	2,080	2,080	2,080	2,080	8,320
<b>TOTAL</b>	<b>2,180</b>	<b>4,260</b>	<b>4,260</b>	<b>4,260</b>	<b>4,260</b>	<b>19,220</b>



**L-15 ANTICIPATED TRAVEL REQUIREMENTS****ANTICIPATED TRAVEL REQUIREMENTS**

Contractor employees will be required to travel to complete the requirements of this contract. Travel may be for the purposes of 1) reviewing contract progress in meetings at NRL, 2) supporting NRL staff in reviewing program progress in sponsor program reviews and meetings, 3) attending national or international meetings to present scholarly papers documenting the R&D accomplishments under the contract, and 4) supporting (for extended periods and at various locations) field studies and/or demonstrations of the hardware and software developed under this contract. The location of these field operations is currently unspecified, but may be at remote locations in or outside the US. It is assumed that all travel originates at the Contractor's facility.

**Anticipated Contractor Travel Requirements**

Task	Year	No. Trips	No. People	No. Days	Probable Destination
1	1	2	1	5	Los Angeles, CA
1	2	2	1	5	Los Angeles, CA
1	3	2	1	5	Los Angeles, CA
1	4	2	1	5	Los Angeles, CA
1	5	2	1	5	Los Angeles, CA

**Anticipated Contractor Travel Requirements**

Task	Year	No. Trips	No. People	No. Days	Probable Destination
2	1	1	2	5	Los Angeles, CA
2	1	1	2	5	Boston, MA
2	1	1	3	10	Albuquerque, NM
2	1	1	3	10	Rapid City, SD
2	1	1	3	10	Reno, NV
2	2	1	2	5	Los Angeles, CA
2	2	1	2	5	Boston, MA
2	2	1	3	10	Albuquerque, NM
2	2	1	3	10	Rapid City, SD
2	2	1	3	10	Reno, NV
2	3	1	2	5	Los Angeles, CA

2	3	1	2	5	Boston, MA
2	3	1	3	10	Albuquerque, NM
2	3	1	3	10	Rapid City, SD
2	3	1	3	10	Reno, NV
2	4	1	2	5	Los Angeles, CA
2	4	1	2	5	Boston, MA
2	4	1	3	10	Albuquerque, NM
2	4	1	3	10	Rapid City, SD
2	4	1	3	10	Reno, NV
2	5	1	2	5	Los Angeles, CA
2	5	1	2	5	Boston, MA
2	5	1	3	10	Albuquerque, NM
2	5	1	3	10	Rapid City, SD
2	5	1	3	10	Reno, NV

**Anticipated Contractor Travel Requirements**

Task	Year	No. Trips	No. People	No. Days	Probable Destination
3	1	12	1	1	Norfolk, VA
3	1	2	1	5	Key West, FL
3	1	1	1	5	San Diego, CA
3	1	1	1	5	Honolulu, HI
3	1	1	1	5	Boston, MA
3	2	12	1	1	Norfolk, VA
3	2	2	1	5	Key West, FL
3	2	1	1	5	San Diego, CA
3	2	1	1	5	Honolulu, HI
3	2	1	1	5	Boston, MA
3	3	12	1	1	Norfolk, VA
3	3	2	1	5	Key West, FL

3	3	1	1	5	San Diego, CA
3	3	1	1	5	Honolulu, HI
3	3	1	1	5	Boston, MA
3	4	12	1	1	Norfolk, VA
3	4	2	1	5	Key West, FL
3	4	1	1	5	San Diego, CA
3	4	1	1	5	Honolulu, HI
3	4	1	1	5	Boston, MA
3	5	12	1	1	Norfolk, VA
3	5	2	1	5	Key West, FL
3	5	1	1	5	San Diego, CA
3	5	1	1	5	Honolulu, HI
3	5	1	1	5	Boston, MA

**Anticipated Contractor Travel Requirements**

Task	Year	No. Trips	No. People	No. Days	Probable Destination
4	1	1	1	5	Los Angeles, CA
4	1	1	1	5	Boston, MA
4	1	2	2	5	Denver, CO
4	1	1	1	5	New Orleans, LA
4	1	1	1	5	Seattle, WA
4	2	1	1	5	Los Angeles, CA
4	2	1	1	5	Boston, MA
4	2	2	2	5	Denver, CO
4	2	1	1	5	New Orleans, LA
4	2	1	1	5	Seattle, WA
4	3	1	1	5	Los Angeles, CA
4	3	1	1	5	Boston, MA
4	3	2	2	5	Denver, CO

4	3	1	1	5	New Orleans, LA
4	3	1	1	5	Seattle, WA
4	4	1	1	5	Los Angeles, CA
4	4	1	1	5	Boston, MA
4	4	2	2	5	Denver, CO
4	4	1	1	5	New Orleans, LA
4	4	1	1	5	Seattle, WA
4	5	1	1	5	Los Angeles, CA
4	5	1	1	5	Boston, MA
4	5	2	2	5	Denver, CO
4	5	1	1	5	New Orleans, LA
4	5	1	1	5	Seattle, WA

#### L-16 ESTIMATED OTHER DIRECT COST REQUIREMENTS

For purposes of preparing their proposals, offerors shall use the following estimates for anticipated Other Direct Cost requirements. Specific requirements will vary depending upon the approaches the contractor proposes, the requirements of specific sponsor projects undertaken, and the nature of field operations and demonstrations required. Offerors should note that estimates are direct costs and that they should specify and add any applicable indirect costs.

#### TASK 1: ENERGETIC MATERIALS DEVELOPMENT AND CHARACTERIZATION

Materials costs for Task 1 are expected to include items such as optical components, expendable chemical materials, machining, computer hardware, software, software licenses, computer training, printers, electronics and test equipment, office supplies and other miscellaneous items.

Materials Costs (per year) for Base Year and 4 (four) Option Years, Task 1: \$15,000

#### Task 2: R&D Support of MTADS and Related UXO Detection Technologies

Materials costs for Task 2 are associated primarily with support of field operations and demonstrations. They include items such as field support instrumentation (radios, electronics, software, portable laptop computers, GPS equipment, electronics test equipment, tool kits, etc.) Machining of specialized test fixtures, equipment repair, etc. will be required. Personnel protective equipment and clothing may be required. Logistics support on field operations requires rentals, and short-term leases of field support equipment such as office trailers, portable toilets, electrical power generators, four-wheel drive vehicles and/or backhoes. Some field demonstrations will require the issuance of subcontracts or purchase orders for additional HAZWOPR certified

personnel, UXO remediation specialists, and charter time for helicopter services associated with support of airborne field surveys. The possibility exists that short term needs for consultants with expertise in electromagnetics, as well as environmental compliance and regulatory affairs may be required.

Materials Costs (per year) for Base Year and 4 (four) Option Years, Task 2: \$500,000

Consultant Costs (per year) for Base Year and 4 (four) Option Years, Task 2: \$20,000

### **Task 3: R&D Support of Surface Studies, Materials Characterization, and Device Engineering**

Materials costs for Task 3 are expected to include items such as expendable chemical materials, extensive machining costs for test specimen fabrication, computer hardware, software, software licenses, computer training, printers, electronics and test equipment, office supplies and other miscellaneous items. The possibility exists that short term needs for consultants with expertise in semiconductor manufacturing and development, materials engineering, and plasma physics may be required.

Materials Costs (per year) for Base Year and 4 (four) Option Years, Task 3: \$100,000

Consultant Costs (per year) for Base Year and 4 (four) Option Years, Task 3: \$20,000

### **Task 4: Development of Chemical and Biological Diagnostics for DoD and Dual-Use Applications**

Materials costs for Task 4 are expected to include items such as expendable chemical materials, biological supplies, machining of specialized test fixtures, computer hardware, software, software licenses, computer training, printers, electronics and test equipment, office supplies and other miscellaneous items. Logistics support for field demonstrations and testing may also be required. The possibility exists that short term needs for consultants with expertise in biosensor manufacturing and development, materials compatibility, and electrochemistry may be required. In addition, it is anticipated that collaborations with academic and/or industrial institutions will be an integral part of this effort, specifically related to the manufacture and testing of sensor components. Accordingly, provisions for subcontract arrangements are incorporated as a contingency.

Materials Costs (per year) for Base Year and 4 (four) Option Years, Task 4: \$150,000

Consultant and Subcontract Costs (per year) for Base Year and 4 (four) Option Years,  
Task 4: \$150,000

## **L-17 MULTIPLE AWARDS**

It is anticipated that only one contract will be awarded as the result of this solicitation.

## **L-18 FACSIMILE PROPOSALS (FAR 52.215-5)**

Paragraph (c) is completed as follows: (202) 767-5896 (primary) or (202) 767-0494 (alternate); in addition, facsimile proposals may be transmitted by e-mail to [abdon@contracts.nrl.navy.mil](mailto:abdon@contracts.nrl.navy.mil) (primary) or [kmiller@contracts.nrl.navy.mil](mailto:kmiller@contracts.nrl.navy.mil) (alternate) in either microsoft word (version 97 or earlier) or pdf format.

## 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. The technical subfactors are listed in descending order of importance. The first two technical subfactors are of equal importance. The last two technical subfactors are of equal importance.

#### TECHNICAL:

#### 1. Qualifications of Key Personnel

- (a) The proposal will be evaluated as to whether the offeror's key personnel are technically competent to accomplish the Statement of Work
- (b) The proposal will be evaluated as to whether the offeror's key personnel are individually available to support the effort on a full time basis.
- (c) The proposal will be evaluated as to whether the offeror's technical team spans the total requirements of the Statement of Work.
- (d) The proposal will be evaluated as to whether the designated project manager meets the Personnel Qualifications, as stated in Attachment No. 3, and is qualified to address the total scope of the Statement of Work.

#### 2. Technical Approach

- (a) The proposal will be evaluated on the extent to which the offeror's proposed technical approach is sound. The proposal will be evaluated on the extent on which the proposal demonstrates that the offeror understands the requirements of the tasks and the technical issues critical to success of the effort.
- (b) The proposal will be evaluated on the extent to which the proposal and the proposed staff possess the experience required to successfully address the technical issues.
- (c) The proposal will be evaluated on the extent to which the proposal fully addresses a competent approach to each of the technical requirements specified in the Statement of Work rather simply playing back the words.

### 3. Management/Corporate Experience

- (a) The proposal will be evaluated on the extent that the offeror provides a corporate technical base to support the proposed effort including potential expansion of the level of effort within the scope of work.
- (b) The proposal will be evaluated on the extent that the offeror demonstrates the experience and maturity required to the Key Personnel to successfully manage the proposed effort.

### 4. Facilities

- (a) The proposal must demonstrate that the offeror's facilities are adequate and appropriate to support the in-house component of the proposed effort.

### 5. Past Performance

Past performance will be evaluated on the basis of the quality of the work performed, timeliness of performance, cost control, and business relations. The evaluation will be based on the information provided pursuant to Section L and other sources if available. The evaluation will take into account past performance information regarding predecessor companies, subcontractors that will perform major or critical aspects of the requirement, or the proposed project manager or key personnel responsible for major or critical aspects of the requirement. Offerors that have no relevant performance history or for which past performance information is not available will not be evaluated favorably or unfavorably on past performance. The government may begin proposal evaluation prior to receipt of past performance information. If, after completion of proposal evaluation except evaluation of past performance, the contracting officer determines that evaluation of past performance will not affect the outcome of competitive selection, the contracting officer may waive its evaluation in accordance with FAR 15.304(c)(3)(iii).

### **M-2-1 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-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**

### **1.0 INTRODUCTION**

The Naval Research Laboratory (NRL) is responsible for a wide range of research efforts that involve both basic and applied research in the chemical and biological sciences, as well as in chemical materials and engineering. An increasing number of research initiatives within the Navy and the DoD have task elements that require the successful integration of numerous technologies. Accordingly, the Navy seeks to use an interdisciplinary approach to developing state-of-the-art analytical diagnostic techniques and instrumentation, and the characterization of the hardware and materials associated with their use. These studies include the application and development of computational modeling tools for analytical analysis and predictive tools for chemically and/or biologically derived materials and engineering studies. Environmental issues form a large component of NRL R&D efforts. Active areas include the development of environmental monitoring methodologies and instrumentation, site characterization, and advanced technology demonstrations. The surface science research tasks have environmentally related components, i.e., applications to marine surface corrosion, development of fuel cell component concepts, and biological sensors for screening microbiological contamination of environmental materials and for defending against biological warfare agents.

### **2.0 SCOPE**

These research efforts require the expertise of skilled, highly-technically qualified contractor scientists and engineers to carry out the studies. The range of skills required include analytical diagnostics in chemistry and biology; molecular biology and immunological methods; surface chemistry and the characterization of surface phenomena; development of materials for MEMS and NEMS device applications; physics and materials engineering; optical spectroscopies; detailed knowledge of energetic materials, explosives and propellant chemistry; modern computational graphics and modeling; electronics and instrumentation prototyping; and software development capabilities. Persons skilled in biochemistry, biophysics, molecular and cell biology, analytical chemistry, surface chemistry and physics, materials science and engineering, and sensor technologies are required.

The R&D requirements include tasks that vary considerably in their scope and in the complexity of the deliverable products. However, the tasks are interrelated in that they support the central mission of the NRL and will significantly benefit from coordination with each other.

### **3.0 TASK DESCRIPTIONS**

The task areas associated with this procurement are described below. The technical requirements, the source of the materials and equipment required to support the work, and the contract deliverables are described for each Task.

#### **Task 1: Energetic Materials Development and Characterization**

##### **3.1.1 Background**

The Naval Research Laboratory has for many years been involved in basic and applied studies in combustion and detonation of fuels, propellants, pyrophorics and energetic materials. These efforts have included experimental and theoretical studies in controlled combustion, deflagration, and detonation processes. The range of skills required for these studies includes laser studies, optical spectroscopies, shock studies, detonation sensitivity studies, studies of reaction kinetics and mechanisms, development of modern instrumentation capabilities in analytical chemistry, computer modeling, and hardware design.

##### **3.1.2 Scope**

The contractor shall conduct a research program on-site at NRL according to the technical requirements set forth below.

##### **3.1.3 Technical Requirements**

The contractor shall provide specified R&D support, including but not limited to the areas associated with this task as enumerated below.

- 1) The contractor shall conduct basic research studies in the areas of pyrotechnic materials, fuel, and energetic materials design and synthesis, carrying out characterization studies of energetic material properties and chemical behavior including determination of chemical structures, determination of thermodynamic properties, and characterization of chemical reactivity including stability, shelf life, and chemical compatibilities in potential formulations. These evaluations may be used to develop and transition original, new or improved materials for laboratory tests, for field studies, or scale up for large scale testing.
- 2) Systematic theoretical and computational modeling studies of new materials using NRL specified computational and modeling codes shall be carried out. The contractor shall use the modeling codes for predictive studies and use the resulting information to support experimental programs.
- 3) Pre-prototype devices and instrumental techniques will be developed in configurations for both laboratory and field applications. The contractor shall design and fabricate such prototype devices as directed by the COR. Additionally, the contractor shall support the field studies, acquire and evaluate data resulting from laboratory and field studies, and develop reports documenting the results of the tests.

### **3.1.4 Work Site**

A major portion of this task will be performed at NRL, or at other Navy or DoD facilities, as specified by the COR. Some parts of the task may be performed at the contractor's facilities. Some demonstrations and evaluations may take place at other DoD or non-DoD facilities containing UXO or other hazardous materials.

### **3.1.5 Deliverables**

The contractor shall provide a Progress Report, Monthly Status of funds report, Technical Report, and a Final Report at the completion of the Task, as required by DD Form 1423.

### **3.1.6 Security Requirements**

As this effort may require contractor personnel to have access to military installations and specifically to classified ranges and operations, as well as classified information pertaining to specific materials and/or ordnance, the security classification for this task shall be at the SECRET level.

## **Task 2: R&D Support of *MTADS* and Related UXO Detection Technologies**

### **3.2.1 Background**

The Multi-Sensor Towed Array Detection System (*MTADS*) is a vehicular-towed array of magnetic and electromagnetic sensor systems that is used to conduct geophysical surveys for Unexploded Ordnance (UXO) detection and characterization. The vehicular system is supported by man-portable and airborne geophysical survey adjuncts. The systems are also applicable for the localization of underground tanks, pipelines, and other underground structures containing metal. The *MTADS* system relies, in large part, on the Data Acquisition and Analysis Systems (DAQ and DAS). Of primary importance is the DAS, the front end is a stand-alone digital mapping interface that incorporates magnetometry and EMI data applying preprocessing steps to clean up navigation and sensor errors, edit off-site and redundant data, apply leveling and spatial filtering techniques with mapping onto a regular grid. The analysis approach incorporates both automated and interactive anomaly selection options and applies sophisticated analytical algorithms to model target parameters including position, location, depth, size, orientation, and to a limited extent, shape information. Incorporation of new navigation approaches, new sensor data streams, and new deployment strategies, requires continual development and updating of the DAS.

The *MTADS* systems typically are involved in 3-5 field demonstration activities each year in association with ongoing ESTCP, SERDP, and other DoD-sponsored programs. These activities require data processing and analysis support in the field in support of target selection, reacquisition, and remediation. Often, unique activities form an integral part of the demonstrations requiring adaptations of the software and analysis approaches in response to particular challenges. In addition, NRL continues to represent the forefront of novel sensing hardware development and testing. Accordingly, additional research in developing hardware and software for these applications is required.

### **3.2.2 Scope**

The contractor shall support NRL according to the technical requirements set forth below.

### **3.2.3 Technical Requirements**

- 1) The contractor shall provide specified R&D support, including but not limited to the areas associated with this task as specified below. The contractor shall provide support to evaluate the performance of commercially available geophysical survey and spatial location systems. These investigations will be directed at the evaluation of sensor performance, GIS integration and evaluation, as well as interoperability issues between vehicular, man-portable, airborne, and marine platform adjuncts using GPS, acoustic, or other navigation and location information.
- 2) The contractor will support laboratory and field operations associated with the evaluation and/or in-house development of novel sensor systems as required. Specifically, the contractor shall address all logistical needs that will facilitate accurate and efficient data acquisition, preprocessing and target analysis using prototype systems. The contractor shall provide for support functions such as additional UXO/HAZWOPR field personnel as required, as well as providing for UXO remediation support to validate system performance. Additionally, the contractor, as required, shall contribute to the extensive reporting requirements associated with ESTCP and SERDP projects and field demonstration activities.

### **3.2.4 Work Site**

A major portion of this task will be performed at NRL, or at other Navy or DoD facilities as specified by the COR. Some parts of the task may be performed at the contractor's facilities. Some demonstrations and evaluations may take place at current or former DoD ranges containing UXO or other hazardous materials.

### **3.2.5 Deliverables**

The contractor shall provide a Progress Report, Monthly Status of funds report, Technical Report, and a Final Report at the completion of the Task, as required by DD Form 1423.

### **3.2.6 Security Requirements**

As this effort may require contractor personnel to have access to military installations and specifically to classified ranges and operations, as well as classified information pertaining to specific ordnance, the security classification for this task shall be at the SECRET level.

### **Task 3: R&D Support of Surface Studies, Materials Characterization, and Device Engineering**

#### **3.3.1 Background**

NRL is responsible for conducting both basic and applied research focusing on the development and application of new materials and devices for DoD applications. Fundamental research includes studies of ion-solid, laser-solid, and plasma-solid interactions; ion and laser assisted thin film growth; defects in films and materials; and structure/film property relationships. Analysis of surfaces by ion, electron and photon beams is used extensively in materials research to characterize the surfaces of solids and thin films with respect to their electronic and geometric structure, mass, molecular weight, or optical properties. NRL conducts research that addresses fundamentally new approaches to surface analysis and materials characterization that may involve new particle scattering geometries, new detection schemes, new electronics advances for improved energy and temporal resolution, new compact instrument designs, and enhancements in sensitivity. Surface analysis and materials characterization techniques that are developed are applied to DoD problems in surfaces and coatings, environmental monitoring and control, materials science, polymer science, electronic materials, oceanography and geology. Applications areas include optical, electromagnetic, electronic, magnetic, biological and environmental problems within the DoD and commercial arenas.

The Navy is also working to improve the performance service life, affordability, maintainability, and safety while reducing life-cycle costs and manning requirements. NRL is significantly involved in assisting the Navy in its endeavors in supporting research, development and engineering efforts for improving these areas. Accordingly, NRL requires highly specialized technical and engineering support that is capable of supporting the diverse and interdisciplinary research topics described below.

#### **3.3.2 Scope**

The contractor shall support NRL according to the technical requirements set forth below.

#### **3.3.3 Technical Requirements**

- 1) The contractor shall maintain vacuum and optical systems, design and fabricate mechanical parts and components including hydraulic, gas, and vacuum manifolds; service ion, electron and photon sources; operate analytical systems such as the Pelletron for RBS analysis, various optical and mass spectrometers, and other techniques as required for surface analysis and materials characterization; and operate systems to grow thin and thick films on surfaces. The contractor shall troubleshoot and repair electronics and write computer programs in C++ for upgrading instrument control and data acquisition systems. The contractor shall build, operate and maintain ion beam milling and other fabrication equipment used for the design and fabrication of MEMS, NEMS and other micromachined devices.
- 2) The contractor shall provide research and engineering support on damage mechanics modeling of electrochemical / corrosion / weld failure / fracture / fatigue phenomena. The modeling shall be used in conjunction with field measurements from various sensing systems to develop predictive capabilities with respect to the behavior of materials of interest to NRL. This includes,

but is not limited to numerical/computational simulations of complex systems involving a combination of structural / thermal / electrical / chemical processes, and anisotropic material response evaluation. Specific attention shall be directed at the development of smart materials and devices.

- 3) The contractor shall conduct research in the area of materials chemistry with emphasis on polymeric materials and bioadhesives. NMR and other techniques shall be used to characterize polymers, specifically with respect to miscibility of polymer blends and morphology in crystalline and amorphous regions in glassy polymers and elastomers. Bioanalytical mass spectrometry shall be used to detect and characterize large biomolecules of interest to NRL. In addition, NMR and/or other imaging techniques shall be developed and assessed for non-destructive evaluation of solid materials.
- 4) The contractor shall conduct research and provide engineering expertise in the area of corrosion control and mitigation. This work encompasses a broad area including basic laboratory chemical and electrochemical analysis, prototype engineering/fabrication, and computerized data analysis. The contractor shall apply candidate advanced corrosion control surface coatings or implement other surface protection and material technologies, such as composite systems, in support of studies for cost effectiveness, operational effectiveness, effective life and environmental impact. In addition, the contractor shall assist in training Navy and joint service maintenance personnel to achieve the required qualifications for tool and equipment operations, repair operations and coating applications for the purpose of evaluating these approaches/systems as possible Fleet corrosion control methods.

#### **3.3.4 Work Site**

A major portion of this task will be performed at NRL, or at other Navy or DoD facilities as specified by the COR. Some parts of the task may be performed at the contractor's facilities.

#### **3.3.5 Deliverables**

The contractor shall provide a Progress Report, Monthly Status of funds report, Technical Report, and a Final Report at the completion of the Task, as required by DD Form 1423.

#### **3.3.6 Security Requirements:**

As this effort may require contractor personnel to have access to military installations and specifically to classified ranges and operations, as well as classified information pertaining to performance of DoD systems, the security classification for this task shall be at the SECRET level.

## **Task 4: Development of Chemical and Biological Systems and Diagnostics for DoD and Dual-Use Applications**

### **3.4.1 Background**

The NRL has an established history of collaborative research and development efforts within the Navy, the DoD and other Government agencies. The results of these efforts have effectively established the mechanisms to evaluate emerging technologies and to rapidly initiate research and development efforts that allow the Government to assess their potential for DoD and dual-use applications. Numerous projects have moved through advanced development into production applications for the fleet. These emerging technology investigations encompass a diverse technical spectrum within the physical, chemical, biological, and environmental arenas. Accordingly, a need is anticipated for specialized research and development support to evaluate emerging technologies as R&D and programmatic needs dictate. These include but are not limited to chemical and biological sensors, genetic engineering of biomaterials, cell biology, molecular recognition and identification, self-assembled films and patterning on such films, novel devices and microelectrodes, blood surrogates, liquid crystal technologies, and biomedical applications utilizing encapsulated therapeutic compounds. The object of the sensor studies is primarily the detection, identification, and quantification of trace chemical and biological species. These species may be trace-level single-component items of concern, or may be incorporated in complex mixtures of gases, liquids or solids such as, but not limited to, biological fluids, food, bilge/ocean/potable water, and soil/sediment samples. This task addresses emerging technologies specifically relating to chemical and biological sensor technologies.

The contractor shall conduct a laboratory research and development program primarily on-site at NRL and other Government facilities to provide specified chemical, biochemical, engineering and computational expertise, including but not limited to those described below. The contractor shall carry out laboratory research and development studies of emerging chemical, biochemical, medical, environmental technologies, and in conjunction with Government scientists as directed by the COR, transition these R&D efforts into breadboard demonstrations, and as indicated, into prototype devices. Other's devices and applications may be proposed by the contractor or identified by the COR.

### **3.4.2 Scope**

The contractor shall support NRL according to the technical requirements set forth below.

### **3.4.3 Technical Requirements:**

- 1) The contractor shall conduct a laboratory research and development program primarily on-site at NRL and other Government facilities to provide high level R&D support in the development of chemical and/or biologically based sensors for detection, identification and quantification of single-component and or mixtures of analytes in gas, liquid or solid forms. Chemically-based sensors will include but not be limited to technologies based on chemical or electrochemical reactions that produce heat, light or new products that can be detected by physical, chemical, optical, electrical or electromagnetic means. Biologically-based sensors and assays will include

but not be limited to technologies based on biomolecular recognition, e.g., antibodies, DNA and PNA probes, enzymes, aptamers, cells, and other biomolecules, that can be incorporated into biosensors as the recognition element. These sensors shall be used for the detection of drugs of abuse, explosives, pollutants and other environmental contaminants, pathogenic organisms, chemical/biological warfare agents, and other analytes.

- 2) In conjunction with 1) above, the contractor shall assist in collaborative studies with other NRL components for the purpose of developing new chemical and biological sensing concepts and devices as required. The contractor shall support NRL in the development of reagentless detection systems and label-free high-density sensors that do not rely on the addition of reagent or labels to the analyte solution to indicate when the desired interaction has occurred.
- 3) In conjunction with 1) above, the contractor shall support NRL in the development of novel Micro Electrical-Mechanical Systems (MEMS) and Nano Electrical-Mechanical Systems (NEMS) devices that incorporate physical, chemical and/or biological sensing elements. The contractor shall also support NRL initiatives in the development of nano-technologies (such as carbon nano-tubes) that may be incorporated into sensing elements for Naval applications. As directed by the COR, the contractor shall provide engineering support in microfluidics and electronics for breadboard and prototype development.
- 4) In conjunction with 1) above, the contractor shall develop, operate and maintain hardware and software associated with specified chemical and biological sensor systems as directed by the COR. Of particular emphasis is the application of chemometrics and pattern-recognition methodologies for improved detection and sensing capabilities and for enhanced system automation, function and control. The contractor shall assist with the transport of chemical/biological test facilities as required, for the purpose of conducting both simulant and live agent chemical and biological tests. The contractor shall perform checkout and life-test protocols on individual sensor components, assemble sophisticated chemical and biological sensor units, and perform system performance tests on the assembled units, including in-house chemical agent simulant tests, to ensure proper operation. The contractor shall write interface control documents and maintain a log of all design modifications to the sensor system(s) being evaluated.
- 5) As required, the contractor shall provide R&D support associated with the identification and quantification of biological species present in air samples collected globally. Of particular emphasis is the screening for the presence of three potential biological warfare (BW) agents - *Bacillus anthracis*, *Francisella tularensis*, *Yersinia pestis* -- and identifying other background microorganisms present in environmental air samples. In addition, the contractor shall develop methods and technologies associated with the examination of air samples on a continuous basis, and will propose automated techniques to measure particulate distributions as a function of time. Sampling strategies will be proposed for the collection of samples at specified intervals, with subsequent laboratory analysis.
- 6) The contractor shall conduct and support both laboratory and field-based research and development associated with the development of a biosediment-based fuel cell, focusing on developing devices that generate power utilizing the immediate environment instead of materials that need to be transported from off-site, as in the case of most current batteries. These energy sources need to be reliable, long lasting and environmentally friendly. The intended use of these

energy sources would be as remotely deployed, or unattended, devices with a power minimum of 1 Watt. In addition to laboratory-based evaluations required to determine the electrochemical performance of various components and materials, the contractor shall be required to provide logistical support for field studies of prototype systems as required by the COR.

#### **3.4.4 Work Site**

A major portion of this task will be performed at NRL, or at other Navy or DoD facilities as specified by the COR. Some parts of the task may be performed at the contractor's facilities.

#### **3.4.5 Deliverables**

The contractor shall provide a Progress Report, Monthly Status of funds report, Technical Report, and a Final Report at the completion of the Task, as required by DD Form 1423.

#### **3.4.6 Security Requirements**

As this effort may require contractor personnel to have access to military installations and specifically to classified ranges and operations, as well as classified information pertaining to performance of DoD systems, the security classification for this task shall be at the SECRET level.

### **REPORTS, DATA, AND OTHER DELIVERABLES**

In supporting NRL, there are requirements for reports, specifications, data, computer software and documentation, manuals, drawing packages, etc. These deliverables are specified in the Contract Data Requirements List (CDRL) DD Form 1423. The general requirements apply collectively for all tasks. The monthly fiscal status reports must be independently reported by project/funding source (as specified by the COR).

# 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		<b>B. EXHIBIT</b> A		<b>C. CATEGORY:</b> TDP <u>N/A</u> TM _____ OTHER _____			
<b>D. SYSTEM / ITEM</b>			<b>E. CONTRACT / PR NO.</b> N00173-01-R-HA04		<b>F. CONTRACTOR</b> TO BE DETERMINED		
<b>1. DATA ITEM NO.</b> A0003	<b>2. TITLE OF DATA ITEM</b> Technical Report (Annual)			<b>3. SUBTITLE</b>			
<b>4. AUTHORITY (Data Acquisition Document No.)</b>			<b>5. CONTRACT REFERENCE</b>		<b>6. REQUIRING OFFICE</b> NRL		
<b>7. DD 250 REQ</b>	<b>8. DIST STATEMENT REQUIRED</b>	<b>10. FREQUENCY</b> YEARLY	<b>12. DATE OF FIRST SUBMISSION</b> 12 MONTHS		<b>14. DISTRIBUTION</b>		
<b>8. APP CODE</b>	<b>11. AS OF DATE</b> 30th	<b>13. DATE OF SUBSEQUENT SUBMISSION</b> End of Each Year		<b>a. ADDRESSEE</b>	<b>b. COPIES</b>		
					Draft	Final Reg Repr	
<b>16. REMARKS</b> The final report may be of a specialized nature in response to specific requirements associated with a particular study, analysis, meeting or field activity. The final report will document technical accomplishments associated with each task area, cite all documents delivered during the reporting period, and enumerate all deliverables produced. Any special conditions, observations or problems requiring deviation from planned or approved activities will be described and explained. Documentation of all purchases and procurement will be presented by task and a list of all government-owned materials, equipment and supplies in contractor inventory will be presented.							
<b>15. TOTAL</b> →							

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

<b>1. DATA ITEM NO.</b> A0004		<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>		<b>6. REQUIRING OFFICE</b> NRL		
<b>7. DD 250 REQ</b>	<b>8. DIST STATEMENT REQUIRED</b>	<b>10. FREQUENCY</b> OTIME	<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> END OF CONTRACT		<b>a. ADDRESSEE</b>	<b>b. COPIES</b>		
					Draft	Final Reg Repr	
<b>16. REMARKS</b> The final reports may be of a specialized nature in response to specific requirements associated with a particular study, analysis, meeting or field activity. Annual reports will document technical accomplishments associated with each task area, cite all documents delivered during the reporting period, and enumerate all deliverables produced. Any special conditions, observations or problems requiring deviation from planned or approved activities will be described and explained. Documentation of all purchases and procurement will be presented by task and a list of government-owned materials, equipment and supplies in contractor inventory will be presented.							
<b>15. TOTAL</b> →							
<b>G. PREPARED BY</b> HILDA R. ABDON, Contract Specialist		<b>H. DATE</b> 8/15/01		<b>I. APPROVED BY</b>		<b>J. DATE</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	<b>B. EXHIBIT</b> A	<b>C. CATEGORY:</b> TDP <u>N/A</u> TM _____ OTHER _____
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<b>D. SYSTEM / ITEM</b>	<b>E. CONTRACT / PR NO.</b> N00173-01-R-HA04	<b>F. CONTRACTOR</b> TO BE DETERMINED
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<b>1. DATA ITEM NO.</b> A0001	<b>2. TITLE OF DATA ITEM</b> Progress Reports As Required	<b>3. SUBTITLE</b>
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<b>4. AUTHORITY (Data Acquisition Document No.)</b>	<b>5. CONTRACT REFERENCE</b>	<b>6. REQUIRING OFFICE</b> NRL
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<b>7. DD 250 REQ</b>	<b>8. DIST STATEMENT REQUIRED</b>	<b>10. FREQUENCY</b> Monthly	<b>12. DATE OF FIRST SUBMISSION</b> 12 MONTHS	<b>14. DISTRIBUTION</b>		
<b>8. APP CODE</b>		<b>11. AS OF DATE</b> 30th of each Month	<b>13. DATE OF SUBSEQUENT SUBMISSION</b> 5th workday @ Month	<b>a. ADDRESSEE</b>	<b>b. COPIES</b>	
					Draft	Final
					Reg	Repro

<b>16. REMARKS</b> PROGRESS REPORT MUST INCLUDE, BUT NOT LIMITED TO: a) Description of progress during the reporting period, accompanied by description of any changes in approach, requirements, and schedule; b) Summary of problems or areas of concern for which Government assistance or guidance is appropriate; c) Description relevant to existing or anticipated deviation from the approved program plan or required change in program objectives; d) Formal or informal oral briefings describing progress on individual tasks or subtasks, as required by the COR.	
<b>15. TOTAL</b> →	

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

<b>1. DATA ITEM NO.</b> A0002	<b>2. TITLE OF DATA ITEM</b> Monthly Fiscal Status Report	<b>3. SUBTITLE</b>
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<b>4. AUTHORITY (Data Acquisition Document No.)</b>	<b>5. CONTRACT REFERENCE</b>	<b>6. REQUIRING OFFICE</b> NRL
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<b>7. DD 250 REQ</b>	<b>8. DIST STATEMENT REQUIRED</b>	<b>10. FREQUENCY</b> Monthly	<b>12. DATE OF FIRST SUBMISSION</b> 30 DAC	<b>14. DISTRIBUTION</b>		
<b>8. APP CODE</b>		<b>11. AS OF DATE</b> 30th of each Month	<b>13. DATE OF SUBSEQUENT SUBMISSION</b> 5th Workday @ Month	<b>a. ADDRESSEE</b>	<b>b. COPIES</b>	
					Draft	Final
					Reg	Repro

<b>16. REMARKS</b> Fiscal Status Report must include: 1) Current cumulative support provided for the contract & enumeration of all prior increments applied to the contract associated with individual tasks; 2) monthly & cumulative labor hours and costs associated with each tasks including program management, individual labor hours, materials, travel, publication and other costs; 3) Funds remaining to support each Task. A. The contractor shall provide a monthly contractor labor report by the 5th workday of each month for the preceding month. The report must include reporting data, Task Identification, Task Value, Current funding obligated by NRL, Expended in Current Period, Total Expended to Date, & Date submitted. B. Labor- show employee name, # of hours & total amount billed including Subcontractors. Must include work on multiple tasks. Show separately if needed.	
<b>15. TOTAL</b> →	

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

<b>G. PREPARED BY</b> HILDA R. ABDON, Contract Specialist	<b>H. DATE</b> 8/15/01	<b>I. APPROVED BY</b>	<b>J. DATE</b>
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<b>DEPARTMENT OF DEFENSE CONTRACT SECURITY CLASSIFICATION SPECIFICATION</b> <i>(The requirements of the DoD Industrial Security Manual apply to all security aspects of this effort.)</i>				<b>1. CLEARANCE AND SAFEGUARDING SER:037-011</b> a. FACILITY CLEARANCE REQUIRED <b>SECRET</b> b. LEVEL OF SAFEGUARDING REQUIRED <b>SECRET</b>	
<b>2. THIS SPECIFICATION IS FOR:</b> <i>(X and complete as applicable)</i>			<b>3. THIS SPECIFICATION IS:</b> <i>(X and complete as applicable)</i>		
a. PRIME CONTRACT NUMBER		<input checked="" type="checkbox"/>		a. ORIGINAL <i>(Complete date in all cases)</i>	
b. SUBCONTRACT NUMBER				DATE (YYYYMMDD) 20010815	
c. SOLICITATION OR OTHER NUMBER				b. REVISED <i>(Supersedes all previous specs)</i>	
DUE DATE (YYYYMMDD)				REVISION NO.	
DATE (YYYYMMDD)				DATE (YYYYMMDD)	
c. SOLICITATION OR OTHER NUMBER				c. FINAL <i>(Complete item 5 in all cases)</i>	
DATE (YYYYMMDD)				DATE (YYYYMMDD)	
<b>4. IS THIS A FOLLOW-ON CONTRACT?</b> <input type="checkbox"/> YES <input type="checkbox"/> NO. If Yes, complete the following: Classified material received or generated under _____ <i>(Preceding Contract Number)</i> is transferred to this follow-on contract.					
<b>5. IS THIS A FINAL DD FORM 254?</b> <input type="checkbox"/> YES <input type="checkbox"/> NO. If Yes, complete the following: In response to the contractor's request dated _____, retention of the classified material is authorized for the period of _____.					
<b>6. CONTRACTOR</b> <i>(Include Commercial and Government Entity (CAGE) Code)</i>					
a. NAME, ADDRESS, AND ZIP CODE		b. CAGE CODE		c. COGNIZANT SECURITY OFFICE <i>(Name, Address, and Zip Code)</i>	
FOR RFP PURPOSES ONLY, NOT VALID FOR ACTUAL CONTRACT AWARD				N/A	
<b>7. SUBCONTRACTOR</b>					
a. NAME, ADDRESS, AND ZIP CODE		b. CAGE CODE		c. COGNIZANT SECURITY OFFICE <i>(Name, Address, and Zip Code)</i>	
N/A				N/A	
<b>8. ACTUAL PERFORMANCE</b>					
a. LOCATION		b. CAGE CODE		c. COGNIZANT SECURITY OFFICE <i>(Name, Address, and Zip Code)</i>	
N/A				N/A	
<b>9. GENERAL IDENTIFICATION OF THIS PROCUREMENT</b>  DETECTION TECHNOLOGIES TO SUPPORT GEOPHYSICAL EVALUATIONS					
<b>10. CONTRACTOR WILL REQUIRE ACCESS TO:</b>					
	YES	NO	<b>11. IN PERFORMING THIS CONTRACT, THE CONTRACTOR WILL:</b>		
a. COMMUNICATIONS SECURITY (COMSEC) INFORMATION		<input checked="" type="checkbox"/>	a. HAVE ACCESS TO CLASSIFIED INFORMATION ONLY AT ANOTHER CONTRACTOR'S FACILITY OR A GOVERNMENT ACTIVITY		<input checked="" type="checkbox"/>
b. RESTRICTED DATA	<input checked="" type="checkbox"/>		b. RECEIVE CLASSIFIED DOCUMENTS ONLY		<input checked="" type="checkbox"/>
c. CRITICAL NUCLEAR WEAPON DESIGN INFORMATION		<input checked="" type="checkbox"/>	c. RECEIVE AND GENERATE CLASSIFIED MATERIAL	<input checked="" type="checkbox"/>	
d. FORMERLY RESTRICTED DATA			d. FABRICATE, MODIFY, OR STORE CLASSIFIED HARDWARE		<input checked="" type="checkbox"/>
e. INTELLIGENCE INFORMATION			e. PERFORM SERVICES ONLY		<input checked="" type="checkbox"/>
(1) Sensitive Compartmented Information (SCI)		<input checked="" type="checkbox"/>	f. HAVE ACCESS TO U.S. CLASSIFIED INFORMATION OUTSIDE THE U.S., PUERTO RICO, U.S. POSSESSIONS AND TRUST TERRITORIES		<input checked="" type="checkbox"/>
(2) Non-SCI		<input checked="" type="checkbox"/>	g. BE AUTHORIZED TO USE THE SERVICES OF DEFENSE TECHNICAL INFORMATION CENTER (DTIC) OR OTHER SECONDARY DISTRIBUTION CENTER	<input checked="" type="checkbox"/>	
f. SPECIAL ACCESS INFORMATION		<input checked="" type="checkbox"/>	h. REQUIRE A COMSEC ACCOUNT		<input checked="" type="checkbox"/>
g. NATO INFORMATION		<input checked="" type="checkbox"/>	i. HAVE TEMPEST REQUIREMENTS		<input checked="" type="checkbox"/>
h. FOREIGN GOVERNMENT INFORMATION		<input checked="" type="checkbox"/>	j. HAVE OPERATIONS SECURITY (OPSEC) REQUIREMENTS		<input checked="" type="checkbox"/>
i. LIMITED DISSEMINATION INFORMATION		<input checked="" type="checkbox"/>	k. BE AUTHORIZED TO USE THE DEFENSE COUNNER SERVICE		<input checked="" type="checkbox"/>
j. FOR OFFICIAL USE ONLY INFORMATION		<input checked="" type="checkbox"/>	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 be submitted for approval prior to release  Direct  Through (Specify)

COMMANDING OFFICER, NAVAL RESEARCH LABORATORY, WASHINGTON, DC 20375-5320, CODE 6170.

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 separate correspondence, any documents/guides/extracts referenced herein. Add additional pages as needed to provide complete guidance.)

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.

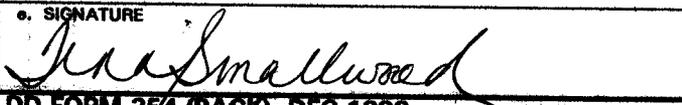
**14. ADDITIONAL SECURITY REQUIREMENTS.** Requirements, in addition to ISM requirements, are established for this contract.  Yes  No  
 (If Yes, identify the pertinent contractual clauses in the contract document itself, or provide an appropriate statement which identifies the additional requirements. 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 <b>TINA SMALLWOOD</b>	b. TITLE <b>CONTRACTING OFFICER, SECURITY</b>	c. TELEPHONE (Include Area Code) <b>(202)767-2240/2521</b>
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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 type="checkbox"/>	b. SUBCONTRACTOR
<input checked="" 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. 6170, 6102

## PERSONNEL QUALIFICATIONS

### **Program Manager**

The Program Manager (PM) for this contract must be a senior R&D manager with a minimum of 10 years experience in an applied R&D environment administering DoD-sponsored programs. Because of the highly technical and specific nature of the work the PM should possess a technical degree in the chemical, physical or engineering sciences, and shall have a demonstrated record of recent technical publications relevant to the scope of this effort. Specifically, the Program Manager must possess documented first-hand expertise in (1) the direct oversight of research and development efforts associated with the evaluation of novel energetic materials and/or propellants, (2) environmental issues associated with UXO and military ranges, including familiarity with techniques and approaches in addressing geophysical surveys and mapping, (3) R&D expertise in the development and evaluation of materials and instrumentation for Naval and other DoD applications; and (4) the understanding of biological systems and their applications associated with the Navy and DoD mission requirements. As manager of a group of highly-trained specialists, with diverse talents working on programs with both strong laboratory R&D and field operational components, the PM should have documented strengths in coordinating complex programs and managing/supervising a staff composed of physical, chemical and biological scientists, engineers, as well as ancillary technical and administrative support personnel.

### **Task 1: Energetic Materials Development and Characterization**

The senior scientist/engineer must have a Ph.D. degree in Chemistry or a related field, with a minimum of 5 years of experience in laboratory combustion studies, laser-based spectroscopies, and energetic materials research. The person is expected to be a recognized expert and an active researcher in his/her field, as documented by his/her stature in professional societies and/or regular publications/presentations in professional society settings. He/she will supervise junior staff. Hence, demonstrated supervisory experience is considered a strength.

### **Task 2: R&D Support of MTADS and Related UXO Detection Technologies**

The scientific and engineering staff for this task must have at least 5 years of direct experience in the development and demonstration of instrumentation used for magnetic and electromagnetic geophysical surveys. Specifically, the contract Program Manager must have extensive prior experience in the coordination of scientific demonstrations in field environments, particularly with the logistics of extended field operations, as appropriated documented by professional activities and reports. He/she will identify and supervise junior staff as required to support intermittent field operations. Hence, demonstrated supervisory experience is considered a strength.

**Task 3: R&D Support of Surface Studies, Materials Characterization, and Device Engineering**

The Senior Scientist/Engineer staff must possess a Ph.D. in Surface Chemistry or Physics, Materials Science or Engineering, Mechanical or Marine Engineering, or equivalent, and extensive experience in finite element methods, micromechanics, as well as continuum and marine dynamics. Senior Scientist/Engineer(s) should possess demonstrated experience with multiple platforms such as Unix and NT, and various programming languages, including C/C++ and FORTRAN. FEM applications experience shall include ABAQUS, NASTRAN, PATRAN, Hypermesh. Prior experience with math and graphics applications such as Mathematica, EnSight, TecPlot, AutoCAD, etc. are required.

Additional Senior staff will be expected to possess advanced degrees, with experience in materials engineering as it pertains to failure analysis, coating systems, and specifically in materials and coatings to address service conditions and corrosion prevention. Knowledge of corrosion, weathering, and physical test methods in accordance with various standards organizations is critical. Prior practical experience in life cycle cost analysis is a requirement.

**Task 4: Development of Chemical and Biological Diagnostics for DoD and Dual-Use Applications**

This task element has highly specialized requirements for Senior Scientific Staff, as follows:

Molecular Biologist: The proposed candidates must possess a Ph.D. in Molecular Biology/Biochemistry or a related discipline, with a minimum of 5 years of experience in the application of state of the art methods in molecular biology as applied to investigations of pathological organisms. Specifically, proposed candidates must have extensive experience in collection, identification, and quantification of pathogenic species from air, soil and water. This candidate is expected to be a recognized expert and an active researcher in his field, as documented by his stature in professional societies and/or regular publications/presentations in professional society settings. He/she will supervise junior staff. Hence, demonstrated supervisory experience is considered a strength.

Analytical Chemist: The proposed candidates must possess a Ph.D. in Analytical Chemistry or a related discipline, with a minimum of 5 years of experience in the development of potentiometric and voltammetric sensors for biological and biomedical applications. This candidate is expected to be a recognized expert and an active researcher in his field, as documented by his stature in professional societies and/or regular publications/presentations in professional society settings. He/she will supervise junior staff. Hence, demonstrated supervisory experience is considered a strength.

Support Scientist/Engineering staff shall include the following:

Molecular Biologist: The proposed candidates must possess an advanced degree in Biology/Molecular Biology/Biochemistry or a related discipline, with a minimum of 3 years of experience in the application of state of the art methods in molecular biology as applied to investigations of pathological organisms, specifically related to the development of array based technologies.

Analytical Chemist: The proposed candidates must possess an advanced degree in Chemistry, Biology or a related field, with a minimum of 3 years of experience in the design and validation of assays, to include immunoassays, nucleic acid hybridization, and electrochemical assays. Additional experience in synthesis and/or characterization of colloids and magnetic beads for sensor applications is also required.

Research Engineer: The proposed candidates must possess a B.S. degree in Mechanical Engineering or a related discipline, with demonstrated practical experience in the design and testing of prototype systems, which incorporate microfluidic systems. Prior experience with CAD tools, and the application of rapid prototyping technologies is a plus.