

**INFORMATION TO OFFERORS OR QUOTERS  
SECTION A - COVER SHEET**

1. SOLICITATION NUMBER

2. (X one)

N00173-98-R-RS02

a. SEALED BID

b. NEGOTIATED (RFP)

c. NEGOTIATED (RFQ)

**INSTRUCTIONS**

NOTE THE AFFIRMATIVE ACTION REQUIREMENT OF THE EQUAL OPPORTUNITY CLAUSE WHICH MAY APPLY TO THE CONTRACT RESULTING FROM THIS SOLICITATION.

You are cautioned to note the "Certification of Non-Segregated Facilities" in the solicitation. Failure to agree to the certification will render your reply nonresponsive to the terms of solicitations involving awards of contracts exceeding \$25,000 which are not exempt from the provisions of the Equal Opportunity clause.

"Fill-ins" are provided on the face and reverse of Standard Form 18 and Parts I and IV of Standard Form 33, or other solicitation documents and Sections of Table of Contents in this solicitation and should be examined for applicability.

See the provision of this solicitation entitled either "Late Bids, Modifications of Bids or Withdrawal of Bids" or "Late Proposals, Modifications of Proposals and Withdrawals of Proposals."

When submitting your reply, the envelope used must be plainly marked with the Solicitation Number, as shown above and the date and local time set forth for bid opening or receipt of proposals in the solicitation document.

If NO RESPONSE is to be submitted, detach this sheet from the solicitation, complete the information requested on reverse, fold, affix postage, and mail. NO ENVELOPE IS NECESSARY.

Replies must set forth full, accurate, and complete information as required by this solicitation (including attachments). The penalty for making false statements is prescribed in 18 U.S.C. 1001.

3. ISSUING OFFICE (Complete mailing address, including ZIP Code)

Contracting Officer  
Code 3250  
Naval Research Laboratory - SSC  
Stennis Space Center, MS 39529-5004

4. ITEMS TO BE PURCHASED (Brief description)

SPACE/AEROSPACE SYSTEMS RESEARCH, DEVELOPMENT AND IMPLEMENTATION EFFORTS

5. PROCUREMENT INFORMATION (X and complete as applicable)

a. THIS PROCUREMENT IS UNRESTRICTED

b. THIS PROCUREMENT IS A \_\_\_\_\_ % SET-ASIDE FOR ONE OF THE FOLLOWING (X one). (See Section I of the Table of Contents in this solicitation for details of the set-aside.)

(1) Small Business

(2) Labor Surplus Area Concerns

(3) Combined Small Business/Labor Area Concerns

6. ADDITIONAL INFORMATION

THE NAVAL RESEARCH LABORATORY CONTRACTING DEVISION ISSUES SOLICITATIONS AND AMENDMENTS TO SOLICITATIONS ELECTRONICALLY VIA THE INTERNET AT THE FOLLOWING WEBSITE:

[HTTP://HERON.NRL.NAVY.MIL/CONTRACTS/HOME.HTM](http://heron.nrl.navy.mil/contracts/home.htm)

ANY AMENDMENTS TO THIS SOLICITATION WILL BE POSTED AT THE WEBSITE REFERENCED PREVIOUSLY. AMENDMENTS WILL NOT BE DISTRIBUTED BY ANY OTHER MEANS. IT IS THE RESPONSIBILITY OF POTENTIAL OFFERORS TO PERIODICALLY REVIEW THE WEBSITE FOR AMENDMENTS TO THIS SOLICITATION.

7. POINT OF CONTACT FOR INFORMATION

a. NAME (Last, First, Middle Initial)

SEWELL, RICHARD D.

b. ADDRESS (Include Zip Code)

Contracting Officer (Code 3250)  
Naval Research Laboratory - SSC  
Stennis Space Center, MS 39529-5004

c. TELEPHONE NUMBER (Include Area Code and Extension)  
(NO COLLECT CALLS) 601-688-5784

8. REASONS FOR NO RESPONSE ( <i>X all that apply</i> )			
a. CANNOT COMPLY WITH SPECIFICATIONS		b. CANNOT MEET DELIVERY REQUIREMENT	
c. UNABLE TO IDENTIFY THE ITEM(S)		d. DO NOT REGULARLY MANUFACTURE OR SELL THE TYPE OF ITEMS INVOLVED	
e. OTHER ( <i>Specify</i> )			
9. MAILING LIST INFORMATION ( <i>X one</i> )			
YES	NO	WE DESIRE TO BE RETAINED ON THE MAILING LIST FOR FUTURE PROCUREMENT OF THE TYPE OF TIME(S) INVOLVED.	
10. RESPONDING FIRM			
a. COMPANY NAME		b. ADDRESS ( <i>Include Zip Code</i> )	
c. ACTION OFFICER			
(1) Typed or Printed Name ( <i>Last, First, Middle Initial</i> )	(2) Title	(3) Signature	(4) Date Signed ( <i>YYMMDD</i> )

DD FORM 1707 REVERSE, MAR 90

FOLD

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FROM Contracting Officer  
Code 3250  
Naval Research Laboratory - SSC  
Stennis Space Center, MS 39529-5004

AFFIX  
STAMP  
HERE

SOLICITATION NUMBER	
N00173-98-R-RS02	
DATE ( <i>YYMMDD</i> )	LOCAL TIME
15 JUL 98	3:30 P.M.

TO

<b>SOLICITATION, OFFER AND AWARD</b>		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)		RATING <b>DO-S10</b>	PAGE OF 1   46 PAGES
2. CONTRACT NO.	3. SOLICITATION NO. <b>N00173-98-R-RS02</b>	4. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)		5. DATE ISSUED <b>29 MAY 98</b>	6. REQUISITION/PURCHASE NO. <b>N/A</b>
7. ISSUED BY Procuring Contracting Officer, Code 3235:RDS Naval Research Laboratory - SSC Department of the Navy Stennis Space Center, MS 39529-5004		CODE <b>N00173</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 05 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 Bldg. 1100, SSC, MS 39529-5004 until 3:30 local time 15 JUL 98  
(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>Richard D. Sewell</b>	B. TELEPHONE NO. (Include area code) (NO COLLECT CALLS) <b>(228) 688-5784</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 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: <input type="checkbox"/> 10 U.S.C. 2304(c) ( ) <input type="checkbox"/> 41 U.S.C. 253(c) ( )	23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)		
24. ADMINISTERED BY (If other than Item 7)	CODE	25. PAYMENT WILL BE MADE BY	CODE
26. NAME OF CONTRACTING OFFICER (Type or print)	27. UNITED STATES OF AMERICA  (Signature of Contracting Officer)		28. AWARD DATE

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

**PART I - THE SCHEDULE**

**SECTION B**

**SUPPLIES OR SERVICES AND PRICES/COSTS**

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

ITEM NUMBER	SUPPLIES OR SERVICES	MAXIMUM ESTIMATED COST	MAXIMUM FIXED FEE	MAXIMUM TOTAL EST. COST & FIXED FEE
0001	The Contractor shall provide all personnel and facilities to perform the work as described in Section C.	\$	\$	\$
0001AA	Tasks 1 through 7	NSP	NSP	NSP
0001AB	Software and Documentation in accordance with Section C and Attachment 1.3 (DD Form 1423)	NSP	NSP	NSP
0001AC	Reports and Data in accordance with Section C and Attachment 1.3 (DD Form 1423)	NSP	NSP	NSP
0001AD	System Prototypes, Fabrications, Constructs, Components, Parts, Subassemblies, Subsystems and Payloads in accordance with Section C and Attachment 1.3	NSP	NSP	NSP
TOTAL ESTIMATED COST PLUS FIXED FEE:		\$	\$	\$

**B-2 MINIMUM AND MAXIMUM QUANTITIES**

As contemplated by the clause of the solicitation entitled, "Indefinite Quantity", the minimum quantity that will be ordered by the Government during the effective period of the contract is research, development and engineering effort with a total estimated cost and fixed fee of at least \$500,000.

The maximum quantity that the Government may order during the effective period of the contract is research, development and engineering effort with a total estimated cost and fixed fee not exceeding the total maximum estimated cost and fixed fee stated in Section B-1, above.

The minimum and maximum quantities may consist of any combination of the tasks contained in the statement of work.

## SECTION C

### DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK

**C-1** The Contractor shall furnish the necessary personnel and facilities to perform the required efforts in accordance with (a) Attachment 1.1-The Statement of Work; (b) Attachment 1.2-Personnel Requirements; (c) Attachment 1.3-Contract Data Requirements List; (d) the Contractor's technical proposal which may be incorporated by reference in any resulting contract, and (e) any and all other Attachments cited in Section J, which are incorporated by reference into Section C.

**C-2** The specific work to be carried out shall be further described in task orders issued under this contract.

**C-3** 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 02 February 1998, which are incorporated herein by reference. The full text of this document is available at:  
<http://heron.nrl.navy.mil/contracts/home.htm>.

## SECTION D

### PACKAGING AND MARKING

**D-1** Preservation, packaging, packing and marking of all deliverable contract line items must conform to normal commercial packing standards to assure safe delivery at destination.

**D-2** The Contractor shall mark all shipments under this contract in accordance with the edition of ASTM-D-3951-90 "Standard Practice for Commercial Packaging" in effect on the date of the contract.

## SECTION E

### INSPECTION AND ACCEPTANCE

**E-1** INSPECTION AND ACCEPTANCE CLAUSES BY REFERENCE:

**FAR CLAUSE    TITLE**

52.246-3    -    Inspection of Supplies-Cost Reimbursement (APR 1984)  
52.246-5    -    Inspection of Services-Cost Reimbursement (APR 1984)  
52.246-8    -    Inspection of Research and Development-Cost Reimbursement (APR 1984)

**DFARS CLAUSE    TITLE**

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

**E-2 INSPECTION AND ACCEPTANCE**

Inspection and acceptance must be accomplished by the Technical Manager or COR designated in Section G of this contract within seven (7) days after delivery. 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 BY REFERENCE:**

**FAR CLAUSE    TITLE**

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

**F-2 DELIVERIES OR PERFORMANCE**

- (a) The effective period of this contract during which delivery orders/tasks orders may be issued is from date of contract award through five years thereafter.
- (b) Each delivery order/task order shall specify the period of performance.
- (c) All deliverables required by Contract Line Items (CLINs) 0001AA, 0001AB, 0001AC, and 0001AD under each order shall be shipped FOB Destination, Naval Research Laboratory, Washington, DC 20375-5320, consigned to:

Contracting Officer's Representative

Attn: \*

Naval Research Laboratory

Contract Number: \*

Delivery/Task Order Number: \*

Building Number: \*

Code: \*

4555 Overlook Ave. SW

Washington, DC 20375-5326

- (d) Each delivery order/task order shall specify the place of performance.

\*(to be filled in at time of award)

**F-3 RESPONSE TIME**

Delivery times will be specified on individual delivery/task orders. The Contractor shall provide the Government with finished supplies/services within the specified time following notification by the Government that the supplies/services are required. Notification will be provided by the Contracting Officer in writing, and may be provided on a unilateral basis in accordance with the clause entitled "Task Order Procedures for Indefinite Delivery Contracts."

In the event the Contractor anticipates difficulty in complying with the delivery schedule specified in individual delivery orders, the Contractor shall immediately notify the Contracting Officer and the Contracting Officer's Representative in writing, giving pertinent details, including the date and time by which it expects to make delivery. This notification shall be for informational purposes only. Receipt of the notification shall not be construed as a waiver by the Government of any contract delivery schedule, or of any rights or remedies provided by the law or under this contract.

## **SECTION G**

### **CONTRACT ADMINISTRATION DATA**

#### **G-1 PROCURING OFFICE REPRESENTATIVE**

In order to expedite administration of this 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 –Richard D. Sewell, Code 3235 , (228) 688-5784, DSN 485-5784, or Telecopier  
(228) 688-6055

Security Matters -Mr. Charles Rogers, Code 1221, (202) 767-2240, DSN 297-2240

Safety Matters - Mr. Kirk J. King, Code 1240, (202) 767-2232, DSN 297-2232

Patent Matters - Mr. Thomas McDonnell, Code 3008.2, (202) 767- 3427, DSN 297-3427

Release of Data - Mr. Richard H. Baturin, Code 1230 (202) 767-2541, DSN 297-2541

The ACO will forward invention disclosures and reports directly to the Associate Counsel for Patents, Code 3008.2, 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.

#### **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 filled in 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 descriptions.
- (b) Technical instructions must be within the scope of the 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 the 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 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 items 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 is inconsistent with this special provision, the Contractor shall notify the Contracting officer in writing within ten (10) working days after its receipt.

**G-4 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 filled in 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.  
  X is required only with the final invoice.  
   **\*\*** is not required.

- (f) A Certificate of Performance  
   **\*\*** shall be provided with each invoice submittal.  
  X 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.

- (g) 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-5 ACCOUNTING AND APPROPRIATION DATA**

Each delivery order/task order will contain the accounting and appropriation data for payment under this contract.

#### **G-6 INCREMENTALLY FUNDED ORDERS**

Orders issued under this contract may be incrementally funded. Incrementally funded orders will contain a provision substantially as follows:

This order is incrementally funded pursuant to the Limitation of Funds clause, FAR 52.232-22. Funds are allotted to the order in the amount of \$ \* and it is estimated that they are sufficient for performance through \*.

(\* To be filled in at time of award)

#### **G-7 TASK ORDER (TO) PROCEDURES FOR INDEFINITE QUANTITY CONTRACTS**

The following procedures shall be followed when placing task orders under this contract:

- (a) Only properly appointed Contracting Officers employed at the Naval Research Laboratory (NRL) shall issue task orders under this contract.
- (b) A DD Form 1155 will be issued for each task order. The DD Form 1155, "Order for Supplies or Services", shall constitute the instrument for the placement of requirements under this contract.
- (c) Task orders under this contract will be issued on a cost-plus-fixed-fee basis and may be either completion or term form (see FAR 16.306). Each task order shall be subject to either FAR 52.232-20 Limitation of Cost or FAR 52.232-22 Limitation of Funds, as appropriate. Each term form task order is subject to the terms and conditions of the clause in Section H entitled, "Level of Effort Task Orders".
- (d) Prior to issuance of a task order, the COR assigned in Section G will provide the contractor with a Statement of Work (SOW). The Contractor shall promptly provide the COR with a cost proposal in response to the SOW. The COR will prepare an acquisition package which will be forwarded to the NRL Contracting Division of issuance of an order. Direct labor hours, travel, material costs and other direct costs are subject to negotiations prior to award. The proposed fixed fee shall be in the same proportion to the estimated costs for each task order

as the maximum fixed fee is to the maximum estimated cost for the contract as set forth in Section B. In order to fully evaluate each order proposal, the Contractor shall provide the following as applicable: (1) A time phased (e.g., monthly, quarterly, etc.) breakdown of direct labor by labor category; (2) A complete breakdown of travel costs identifying each cost, mode of travel, and the reason for the proposed travel; and (3) A complete list of all material and other direct costs, including quantity and costs. The Contractor shall provide specific documentation to serve as the basis for price verification (i.e., vendor quotations, invoices, published price lists, GSA schedule lists, etc.).

(e) Task orders issued shall include, but not be limited to, the following information:

- (1) Date of Order
- (2) Contract Number and Task Order Number
- (3) Accounting and Appropriation Data
- (4) Description of the Work to be Performed
- (5) Level of Effort (if applicable)
- (6) DD Form 1423 (Contract Data Requirements List) (if different from the basic contract)
- (7) Place of Performance
- (8) Period of Performance
- (9) Estimated Cost Plus Fixed Fee
- (10) DD Form 254 (Contract Security Classification Specifications) (if different from the basic contract)
- (11) Government furnished property

#### **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**

The Government contemplates award of an Indefinite Delivery Indefinite Quantity type contract with both Cost-Plus-Fixed-Fee Completion-type and Cost-Plus-Fixed-Fee Term-type Task Orders resulting from this solicitation.

#### **H-2 REPRESENTATIONS AND CERTIFICATIONS**

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

#### **H-3 ONR 5252.237-9705 - KEY PERSONNEL (DEC 88)**

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

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

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

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

The following are identified as key personnel:

(To be filled in at time of award)

#### H-4 LEVEL OF EFFORT TASK ORDERS

- (a) In the performance of each term form task order issued under this contract, the Contractor agrees to provide the level of effort specified in the task order and in accordance with this provision.
- (b) The level of effort per task order shall be expended at the average monthly rate specified therein. It is understood and agreed that the rate of direct labor hours expended each 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 task order.
- (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, at any time it is forecast that during the last three months of the task order 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 under a task order 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 under a task order such that the labor-hours of effort specified therein 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 ten days of receipt.
- (f) If the total level of effort specified in each task order is not provided by the Contractor during the term of the task order, the Contracting Officer shall either (i) reduce the fixed fee of the task order 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 the task order shall have been expended, at no increase in the fixed fee of the task order.

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

(h) Notwithstanding any of the provisions of the above paragraphs, the Contractor may furnish labor-hours up to five percent in excess of the total direct labor-hours specified in the task order 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 specified in the task order.

(i) It is understood that the mix of labor categories provided by the Contractor under the task order, 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 incorporated herein applies to each task order under this contract.

#### H-5 ENGINEERING CHANGES AND TECHNOLOGY REFRESHMENT CHANGES

a. After Contract award, the Government may solicit, and the Contractor is encouraged to propose independently, engineering changes and technology refreshment changes to the requirements of the Contract. These changes may be proposed to save money, improve performance, to save energy, or to improve potential use of required deliverables. Proposed changes, if they are acceptable to the Government, will be processed as modifications to the Contract.

b. This Contract clause applies only to those engineering/technology refreshment changes submitted by the Contractor pursuant to the provisions of this clause. As a minimum, the following information shall be submitted by the Contractor with each engineering change/technology refreshment proposal:

- (1) A description of the difference between the existing Contract requirement(s) and the proposed change, and the comparative advantages and disadvantages of each;
- (2) Itemized requirements of the Contract which must be changed if the proposal is adopted, and the proposed revision to the Contract for each such change;
- (3) An estimate of the changes in performance and cost, if any, that will result from adoption of the proposal;
- (4) An evaluation of the effects the proposed change would have on collateral costs to the Government, such as Government-furnished property costs, costs to related

- items, and costs of maintenance and operation; and
- (5) A statement specifying the time in which the change order which adopts the proposal must be issued to obtain the maximum benefits of the change during the remainder of the Contract. Also, the Contractor shall identify any factor which may affect Contract completion time or delivery schedule.
- c. Engineering/technology refreshment change proposals submitted to the Contracting Officer will be processed expeditiously. The Government shall not be liable for proposal preparation costs nor for any delay in acting upon any proposal submitted pursuant to this clause. The Contractor has the right to withdraw, in whole or in part, any engineering/ technology refreshment change proposal not accepted by the Government within the period specified in the change proposal. The decision of the Contracting Officer as to the acceptance of any such proposal under this Contract shall be final and shall not be subject to the "Disputes" clause of this Contract.
- d. The Contracting Officer may accept any engineering/technology refreshment change proposal submitted pursuant to this clause by giving the Contractor written notice thereof. This written notice may be given by issuance of a modification to this Contract. Unless and until a Modification is executed to incorporate an engineering/technology refreshment change proposal under this Contract, the Contractor shall remain obligated to perform in accordance with the terms and conditions of the existing contract.
- e. If an engineering/technology refreshment change proposal submitted pursuant to this clause is accepted and applied to this Contract, an equitable adjustment in the Contract cost/price and in any other affected provisions of this Contract may be made in accordance with this clause and other applicable clauses of this Contract. When the cost of performance of this Contract is increased or decreased as a result of the change, the equitable adjustment increasing or decreasing the Contract cost shall be in accordance with the "Changes" clause rather than under this clause; but, the resulting Contract Modification shall state that it is made pursuant to this clause.
- f. The Contractor shall identify specifically any information contained in the engineering/technology refreshment change proposal which the Contractor considers confidential and/or proprietary and which the Contractor prefers not to be disclosed to the public.

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

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

## H-7 SUBCONTRACTORS/CONSULTANTS

- a. The following subcontractors/consultants have been identified in the Contractor's proposal as necessary for performance of this contract:

<u>Subcontractor/Consultant Name</u>	<u>Time or Unit</u>	<u>Estimated Cost</u>
--------------------------------------	---------------------	-----------------------

(To be filled in at time of award)

- b. The Contracting Officer's consent required by paragraph (c) of the contract clause entitled "Subcontracts (Cost-Reimbursement and Letter Contracts)" is hereby given for the listed subcontracts/consultants unless (i) they are of the cost-reimbursement, time-and-materials, or labor-hour type and are estimated to exceed \$10,000, including any fee (ii) are proposed to exceed \$100,000.00; or (iii) are one of a number of subcontracts with a single subcontractor, under this contract, for the same or related supplies or services that, in the aggregate, are expected to exceed \$100,000.00. In such cases consent shall be requested from the Administrative Contracting officer.
- c. Any changes to the above list shall be authorized by the Administrative Contracting Officer (ACO).

#### H.8 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-9 GOVERNMENT-FURNISHED PROPERTY

The following Government property will be furnished to the Contractor on a rent-free basis for use in performing this contract:

(SEE ATTACHMENT 1.5)

#### H-10 CONTRACTOR'S PROGRAM MANAGER

(a) The Contractor's Program Manager is \_\_\_\_\_ and is the contractor's authorized supervisor for technical and administrative performance of all work hereunder. The program manager shall provide the single point of contract between the contractor and the Government's contracting Officer's representative (COR). All administrative support of technical personnel required to fulfill the work stated in the contract shall be the responsibility of the contractor.

(b) The Program Manager shall receive and execute, on behalf of the Contractor, such technical directions as the Government's COR may issue within the terms and conditions of the contract.

## 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-far.npr.gov/References/References.html>

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

#### a. FEDERAL ACQUISITION REGULATION CLAUSES

##### FAR CLAUSE    TITLE

- 52.202-1    -    Definitions (OCT 1995)
- 52.203-3    -    Gratuities (APR 1984)
- 52.203-5    -    Covenant Against Contingent Fees (APR 1984)
- 52.203-6    -    Restrictions On Subcontractor Sales To The Government (JUL 1995)
- 52.203-7    -    Anti-Kickback Procedures (JUL 1995)
- 52-203-8    -    Cancellation, Rescission, And Recovery Of Funds For Illegal Or Improper Activity (JAN 1997)
- 52.203-10    -    Price Or Fee Adjustment For Illegal Or Improper Activity (JAN 1997)
- 52.203-12    -    Limitation On Payments To Influence Certain Federal Transactions (JUN 1997)
- 52.204-2    -    Security Requirements (AUG 1996)
- 52.204-4    -    Printing/Copying Double-Sided On Recycled Paper (JUN 1996)
- 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 (AUG 1996)
- 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    -    Termination of Defined Benefit Pension Plans (OCT 1997)
- 52.215-17    -    Waiver of Facilities Capital Cost of Money (OCT 1997)
- 52.215-18    -    Reversion or Adjustment of Plans for Post-retirement Benefits (PRB) Other than Pensions (OCT 1997)
- 52.215-19    -    Notification of Ownership Changes (OCT 1997)
- 52.215-21    -    Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data-Modifications (OCT 1997) - Alternate II (OCT 1997)
- 52.216-7    -    Allowable Cost And Payment (APR 1998)

- 52.216-8 - Fixed-Fee (MAR 1997)
- 52.219-8 - Utilization Of Small, Small Disadvantaged And Women-Owned Small Business Concerns (JUN 1997)
- 52.219-9 - Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan (AUG 1996)
- 52.219-16 - Liquidated Damages-Subcontracting Plan (OCT 1995)
- 52.222-1 - Notice To The Government Of Labor Disputes (FEB 1997)
- 52.222-2 - Payment For Overtime Premiums (JUL 1990) -The Use Of Overtime Is Authorized Under This Contract If The Overtime Premium Does Not Exceed \_"0" \_
- 52.222-3 - Convict Labor (AUG 1996)
- 52.222-20 - Walsh-Healey Public Contracts Act (DEC 1996)
- 52.222-21 - Prohibition of Segregated Facilities (APR 1984) (DEVIATION)}
- 52.222-26 - Equal Opportunity (APR 1984)(DEVIATION)
- 52.222-28 - Equal Opportunity Preaward Clearance of Subcontracts (APR 1984)
- 52.222-35 - Affirmative Action For Disabled Veterans And Veterans Of The Vietnam Era (APR 1998)
- 52.222-36 - Affirmative Action For Handicapped Workers (APR 1984)
- 52.222-37 - Employment Reports On Disabled Veterans And Veterans Of The Vietnam Era (APR 1998)
- 52.223-2 - Clean Air And Water (APR 1984)
- 52.223-3 - Hazardous Material Identification And Material Safety Data (JAN 1997)
- 52.223-5 - Pollution Prevention and Right-To-Know Information (APR 1998)
- 52.223-6 - Drug-Free Workplace (JAN 1997)
- 52.223-14 - Toxic Chemical Release Reporting (OCT 1996)
- 52.225-10 - Duty-Free Entry (APR 1984)
- 52.225-11 - Restrictions On Certain Foreign Purchases (OCT 1996)
- 52.226-1 - Utilization Of Indian Organizations And Indian-Owned Economic Enterprises (SEP 1996)
- 52.227-1 - Authorization And Consent (JUL 1995)
- 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)
- 52.227-12 - Patent Rights - Retention By The Contractor (Long Form) (JAN 1997)
- 52.227-13 - Patent Rights - Acquisition By The Government (JAN 1997)
- 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 (APR 1996)
- 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)
- 52.232-22 - Limitation Of Funds (APR 1984)
- 52.232-23 - Assignment Of Claims (JAN 1986) Alternate I (APR 1984)
- 52.232-25 - Prompt Payment (JUN 1997)
- 52.232-33 - Mandatory Information For Electronic Funds Transfer Payment (AUG 1996)

- 52.233-1 - Disputes (OCT 1995) - 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)
- 52.237-3 - Continuity Of Services (JAN 1991) 52.237-10 - Identification of Uncompensated Overtime (OCT 1997)
- 52.242-1 - Notice Of Intent To Disallow Costs (APR 1984)
- 52.242-3 - Penalties For Unallowable Costs (OCT 1995)
- 52.242-4 - Certification of Final Indirect Costs (JAN 1997)
- 52.242-13 - Bankruptcy (JUL 1995)
- 52.243-2 - Changes - Cost-Reimbursement (AUG 1987) - Alternate V (APR 1984)
- 52.243-6 - Change Order Accounting (APR 1984)
- 52.243-7 - Notification Of Changes (APR 1984) fill in 30
- 52.244-2 - Subcontracts (Cost-Reimbursement And Letter Contracts) (OCT 1997) - Alternate I (AUG 1996)
- 52.244-5 - Competition In Subcontracting (DEC 1996)
- 52.244-6 - Subcontracts for Commercial Items and Commercial Components (APR 1998)
- 52.245-5 - Government Property (Cost-Reimbursement, Time-And-Material, Or Labor-Hour Contracts) (JAN 1986) (DEVIATION)
- 52.245-9 - Use And Charges (APR 1984) (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 - Special Prohibition On Employment (JUN 1997)
- 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 1998)
- 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)
- 252.209-7003 - Compliance With Veterans' Employment Reporting Requirements (MAR 1998)
- 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 (JUL 1997)
- 252.219-7003 - Small Business And Small Disadvantaged Business Subcontracting Plan (DoD Contracts) (APR 1996)
- 252.219-7005 - Incentive For Subcontracting With Small Businesses, Small Disadvantaged Businesses, Historically Black Colleges And Universities And Minority Institutions (NOV 1995)
- 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)
- 252.225-7009 - Duty Free Entry- Qualifying Country Supplies (End Products and Components) (MAR 1998)
- 252.225-7010 - Duty Free Entry - Additional Provisions (MAR 1998)
- 252.225-7012 - Preference For Certain Domestic Commodities (SEP 1997)
- 252.225-7018 - Notice of Prohibition of Certain Contracts With Foreign Entities for the Conduct of Ballistic Missile Defense RDT&E (JAN 1997)
- 252.225-7025 - Restriction On Acquisition Of Forgings (JUN 1997)
- 252.225-7026 - Reporting Of Contract Performance Outside The United States (MAR 1998)
- 252.225-7031 - Secondary Arab Boycott Of Israel (JUN 1992)
- 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 Bids 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 (OCT 1988)
- 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 (NOV 1995)
- 252.227-7039 - Patents--Reporting of Subject Inventions (APR 1990)
- 252.231-7000 - Supplemental Cost Principles (DEC 1991)
- 252.232-7006 - Reduction or Suspension of Contract Payments Upon Finding of Fraud (AUG 1992)
- 252.235-7010 - Acknowledgment of Support and Disclaimer (MAY 1995)
- 252.235-7011 - Final Scientific Or Technical Report (MAY 1995)
- 252.242-7000 - Post Award Conference (DEC 1991)
- 252.242-7004 - Material Management And Accounting System (SEP 1996)
- 252.243-7001 - Pricing of Contract Modifications (DEC 1991)
- 252.243-7002 - Requests for Equitable Adjustment (MAR 1998)
- 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 (NOV 1995)
- 252.247-7024 - Notification Of Transportation Of Supplies By Sea (NOV 1995)
- 252.251-7000 - Ordering From Government Supply Sources (MAY 1995)

**I-2 FAR 52.223-11 - OZONE-DEPLETING SUBSTANCES (JUN 1996)**

(a) Definitions.

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

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

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

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

**I-3 FAR 52.216-18 ORDERING (OCT 1995)**

(a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders or task orders by the individuals or activities designated in the Schedule. Such orders may be issued for a period of five years from date of award.

(b) All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery or task order and this contract, the contract shall control.

(c) If mailed, a delivery order or task order is considered “issued” when the Government deposits the order in the mail. Orders may be issued orally, by facsimile, or by electronic commerce methods only if authorized in the Schedule.

**I-4 FAR 52.216-19 ORDER LIMITATIONS (OCT 1995)**

(a) MINIMUM ORDER. When the Government requires supplies or services covered by this contract in an amount of less than the minimum value stated in Section B-2, above, the Government is not

obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.

(b) **MAXIMUM ORDER.** The Contractor is not obligated to honor –

- (1) any order for a single item in excess of the maximum value for the period of performance as stated in the contract Section B-2, above.
- (2) any order for a combination of items in excess of the maximum value for the period of performance, as stated in Contract Section B-2, above.
- (3) a series of orders from the same ordering office within 30 days that together call for quantities exceeding the limitation in subparagraph (1) or (2) above.

(c) If this is a requirements contract (i.e., includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR), the Government is not required to order a part of any one requirement from the Contractor is that requirement exceeds the maximum-order limitations in paragraph (b) above.

d) Notwithstanding paragraph(s) (b) and (c) of this section, the Contractor shall honor any order exceeding the maximum order limitations in paragraph (b) unless that order (or orders) is returned to the ordering office within 10 days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.

#### **I-5 FAR 52.216-22 INDEFINITE QUANTITY (OCT 1995)**

(a) This is an indefinite-quantity contract for the supplies or services specified, and effective for the period stated, in the Schedule. The quantities of supplies and services specified in the Schedule are estimates only and are not purchased by this contract.

(b) Delivery or performance shall be made only as authorized by orders issued in accordance with the Ordering clause. The Contractor shall furnish to the Government, when and if ordered, the supplies or services specified in the Schedule up to and including the quantity designated in the Schedule as the "maximum". The Government shall order at least the quantity of supplies or services designated in the Schedule as the "minimum".

(c) Except for any limitations on quantities in the Order Limitations clause or in the Schedule, there is no limit on the number of orders that may be issued. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

(d) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period; provided, that the Contractor shall not be required to make any deliveries under this contract more than 180 days after the contract completion date.

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

#### **SECTION J**

## LIST OF ATTACHMENTS

- J-1** Attachment 1: (1.1) Statement of Work – 24 Pages, (1.2) Personnel Requirements – 6 Pages; (1.3) Exhibit A - DD Form 1423, Contract Data Requirements - 3 Pages, with Enclosure (1) - Instructions For Distribution-2 Page, Enclosure (2) – Monthly Cost/Performance Reporting Requirements – 1 Page, and Enclosure (3) Specific Reporting Requirements for CDRL Reports – 3 Pages; and (1.4) Contract Security Classification Specification, dated 11 FEB 98 – 2 Pages; and (1.5) List of Government Furnished Equipment – 2 Pages.

## PART IV - REPRESENTATIONS AND INSTRUCTIONS

### SECTION K

#### REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFEROR OR RESPONDENTS

- K-1** The following Representations, Certifications, and Other Statements Of Offerors are incorporated 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.

#### FAR CLAUSE      TITLE

52.203-11      -      Certification And Disclosure Regarding Payments To Influence Certain Federal Transactions (APR 1991)

#### DFARS CLAUSE      TITLE

252.209-7001      -      Disclosure Of Ownership Or Control By The Government Of A Terrorist Country (SEP 1994)

- K-2** FAR 52.204-3 - TAXPAYER IDENTIFICATION (JUN 1997)

(a) *Definitions.*

"Common parent," as used in the solicitation provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

"Corporate status," as used in this solicitation provision, means a designation as to whether the offeror is a corporate entity, an unincorporated entity, (e.g., sole proprietorship or partnership), or corporation providing medical and health care services.

"Taxpayer Identification Number (TIN)," as used in this solicitation provision, means the number required by the IRS to be used by the offeror in reporting income tax and other returns.

(b) All offerors are required to submit the information required in paragraphs (c) through (e) of this solicitation provision in order to comply with reporting requirements of 26 U.S.C. 6041, 6041A,

and 6050M and implementing regulations issued by the Internal Revenue Service (IRS). If the resulting contract is subject to reporting requirements described in FAR 4.903, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.

(c) *Taxpayer Identification Number (TIN).*

TIN: \_\_\_\_\_.

TIN has been applied for.

TIN is not required because:

Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the U.S. and does not have an office or place of business or a fiscal paying agent in the U.S.;

Offeror is an agency or instrumentality of a foreign government;

Offeror is an agency or instrumentality of a Federal, state, or local government;

Other. State basis. \_\_\_\_\_

(d) *Corporate Status.*

Corporation providing medical and health care services, or engaged in the billing and collecting of payments for such services;

Other corporate entity;

Not a corporate entity;

Sole proprietorship

Partnership

Hospital or extended care facility described in 26 CFR 501(c)(3) that is exempt from taxation under 26 CFR 501(a).

(e) *Common Parent.*

Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this clause.

Name and TIN of common parent:

Name \_\_\_\_\_

TIN \_\_\_\_\_

**K-3 FAR 52.215-6 - TYPE OF BUSINESS ORGANIZATION (JUL 1987)**

The offeror or quoter, by checking the applicable box, represents that--

(a) It operates as  a corporation incorporated under the laws of the State of \_\_\_\_\_,  an individual,  a partnership,  a nonprofit organization, or  a joint venture.

(b) If the offeror or quoter is a foreign entity, it operates as  an individual,  a partnership,  a nonprofit organization,  a joint venture, or  a corporation, registered for business in

---

(country).

**K-4 FAR 52.203-2 - CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985)**

(a) The offeror certifies that:

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to (i) those prices; (ii) the intention to submit an offer; or (iii) the methods or factors used to calculate the prices offered;

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory:

(1) Is the person in the offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision; or

(2) (i) Has been authorized, in writing to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision

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\_\_\_\_\_ [*insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization*];

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) of this provision have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision.

(c) If the offeror deletes or modifies subparagraph (a)(2) of this provision, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

**K-5 FAR 52.209-5 - CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED**

DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (MAR 1996)

(a)(1) The Offeror certifies, to the best of its knowledge and belief, that-

(i) The Offeror and/or any of its Principals:

(A) Are  are not  presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have  have not  , within a 3-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(C) Are  are not  presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(B) of this provision. The Offeror and/or any of its Principals-

(ii) The Offeror has  has not  , within a 3-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER SECTION 1001, TITLE 18, UNITED STATES CODE.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror non-responsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is

normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

**K-6 FAR 52.215-4 -TYPE OF BUSINESS ORGANIZATION (OCT 1997)**

The offeror or respondent, by checking the applicable box, represents that -

(a) It operates as  an individual,  a partnership,  a nonprofit organization,  a joint venture, or  a corporation incorporated under the laws of the State of \_\_\_\_\_.

(b) If the offeror or respondent is a foreign entity, it operates as  an individual,  a partnership,  a nonprofit organization,  a joint venture, or  a corporation, registered for business in \_\_\_\_\_.  
(country)

**K-7 FAR 52.215-6 -PLACE OF PERFORMANCE (OCT 1997)**

(a) The offeror or respondent, in the performance of any contract resulting from this solicitation,  intends,  does not intend [check applicable block] to use one or more plants or facilities located at a different address from the address of the offeror or respondent as indicated in this proposal or response to request for information.

(b) If the offeror or respondent checks "intends" in paragraph (a) of this provision, it shall insert in the following spaces the required information:

PLACE OF PERFORMANCE  
(STREET ADDRESS, CITY,  
STATE, COUNTY, ZIP CODE)

NAME AND ADDRESS OF OWNER  
AND OPERATOR OF THE PLANT  
OR FACILITY IF OTHER THAN  
OFFEROR OR RESPONDENT

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**K-8 FAR 52.219-1 - SMALL BUSINESS PROGRAM REPRESENTATIONS (JAN 1997)**

- (a) (1) The standard industrial classification (SIC) code for this acquisition is 8731.
- (2) The small business size standard is 500.
- (3) The small business size standard for a concern which submits an offer in its own name,

other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) *Representation.*

(1) The offeror represents as part of its offer that it  is ,  is not a small business concern.

(2) (Complete only if offeror represented itself as a small business concern in block (b)(1) of this section.) The offeror represents as part of its offer that it  is,  is not a small disadvantaged business concern.

(3) (Complete only if offeror represented itself as a small business concern in block (b)(1) of this section.) The offeror represents as part of its offer that it  is,  is not a women-owned small business concern.

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

"Small disadvantaged business concern", as used in this provision, means a small business concern that (1) is at least 51 percent unconditionally owned by one or more individuals who are both socially and economically disadvantaged, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one or more socially and economically disadvantaged individuals, and (2) has its management and daily business controlled by one or more such individuals. This term also means a small business concern that is at least 51 percent unconditionally owned by an economically disadvantaged Indian tribe or Native Hawaiian Organization, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one or more of these entities, which has its management and daily business controlled by members of an economically disadvantaged Indian tribe or Native Hawaiian Organization, and which meets requirements of 13 CFR Part 124.

"Women-owned small business concern", as used in this provision, means a small business concern -

(1) Which is at least 51 percent owned by one or more women or, in the case of any publicly owned business , at least 51 percent of the stock of which is owned by one ore more women; and

(2) Whose management and daily business operations are controlled by one ore more women.

(d) *Notice.*

(1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small or

small disadvantaged business concern in order to obtain a contract to be awarded under the preference programs established pursuant to sections 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall --

- (i) Be punished by imposition of fine, imprisonment, or both;
- (ii) Be subject to administrative remedies, including suspension and debarment; and
- (iii) Be ineligible for participation in programs conducted under the authority of the Act.

**K-9 FAR 52.222-22 - PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (APR 1984)**

The offeror represents that--

- (a) It  has,  has not participated in a previous contract or subcontract subject either to the Equal Opportunity clause of this solicitation, the clause originally contained in Section 310 of Executive Order No. 10925, or the clause contained in Section 201 of Executive Order No. 11114;
- (b) It  has,  has not, filed all required compliance reports; and
- (c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

**K-10 FAR 52.222-25 - AFFIRMATIVE ACTION COMPLIANCE (APR 1984)**

The offeror represents that (a) it  has developed and has on file,  has not developed and does not have on file, at each establishment, affirmative action programs required by the rules and regulations of the Secretary of Labor (41 CFR 60-1 and 60-2), or (b) it  has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

**K-11 FAR 52.223-1 - CLEAN AIR AND WATER CERTIFICATION (APR 1984)**

The Offeror certifies that--

- (a) Any facility to be used in the performance of this proposed contract is , is not  listed on the Environmental Protection Agency List of Violating Facilities;
- (b) The Offeror will immediately notify the Contracting Officer, before award, of the receipt of any communication from the Administrator, or a designee, of the Environmental Protection Agency, indicating that any facility that the Offeror proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities; and

(c) The Offeror will include a certification substantially the same as this certification, including this paragraph (c), in every nonexempt subcontract.

**K-12 FAR 52.223-13 - CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING (OCT 1996)**

(a) Submission of this certification is a prerequisite for making or entering into this contract imposed by Executive Order 12969, August 8, 1995.

(B) By signing this offer, the offeror certifies that --

(1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or

(2) None of its owned or operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at least one of the following reasons: (*Check each block that is applicable*)

(i) The facility does not manufacture, process, or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

(ii) The facility does not have 10 or more full-time employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A);

(iii) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

(iv) The facility does not fall within Standard Industrial Classification Code (SIC) designations 20 through 39 as set forth in section 19.102 of the Federal Acquisition Regulation; or

(v) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

**K-13 FAR 52.227-6 - ROYALTY INFORMATION (APR 1984)**

(a) *Cost or charges for royalties.* When the response to this solicitation contains costs or charges for royalties totaling more than \$250, the following information shall be included in the response relating to each separate item of royalty or license fee:

(1) Name and address of licensor.

(2) Date of license agreement.

(3) Patent numbers, patent application serial numbers, or other basis on which the

royalty is payable.

(4) Brief description, including any part or model numbers of each contract item or component on which the royalty is payable.

(5) Percentage or dollar rate of royalty per unit.

(6) Unit price of contract item.

(7) Number of units.

(8) Total dollar amount of royalties.

(b) *Copies of current licenses.* In addition, if specifically requested by the Contracting Officer before execution of the contract, the offeror shall furnish a copy of the current license agreement and an identification of applicable claims of specific patents.

**K-14 DFARS 252.219-7000 - SMALL DISADVANTAGED BUSINESS CONCERN REPRESENTATION (DOD CONTRACTS) (JUN 1997)**

(a) *Definition.*

Small disadvantaged business concern, as used in this provision, means a small business concern, owned and controlled by individuals who are both socially and economically disadvantaged, as defined by the Small Business Administration at 13 CFR Part 124, the majority of earnings of which directly accrue to such individuals. This term also means a small business concern owned and controlled by an economically disadvantaged Indian tribe or Native Hawaiian organization which meets the requirements of 13 CFR Part 124.112 or 124.113, respectively. In general, 13 CFR Part 124 describes a small disadvantaged business concern as a small business concern--

- (1) Which is at least 51 percent unconditionally owned by one or more socially and economically disadvantaged individuals; or
- (2) In the case of any publicly owned business, at least 51 percent of the voting stock of which is unconditionally owned by one or more socially and economically disadvantaged individuals; and
- (3) Whose management and daily business operations are controlled by one or more such individuals.

(b) *Representations.*

Check the category in which your ownership falls--

\_\_\_\_\_ Subcontinent Asian (Asian-Indian) American (U.S. citizen with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal)

\_\_\_\_\_ Asian-Pacific American (U.S. Citizen with origins from Japan, China, the Philippines, Vietnam, Korea, Samoa, Guam, U.S. Trust Territory of the Pacific Islands (Republic of Palau), the Northern Mariana Islands, Laos, Kampuchea (Cambodia), Taiwan, Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Republic of the Marshall Islands, the Federated States of Micronesia, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or

Nauru)

\_\_\_\_\_ Black American (U.S. Citizen)

\_\_\_\_\_ Hispanic American (U.S. Citizen with origins from South America, Central America, Mexico, Cuba, the Dominican Republic, Puerto Rico, Spain, or Portugal)

\_\_\_\_\_ Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians including Indian tribes or Native Hawaiian organizations)

\_\_\_\_\_ Individual/concern, other than one of the preceding, currently certified for participation in the Minority Small Business and Capital Ownership Development Program under Section 8(a) of the Small Business Act

\_\_\_\_\_ Other

(c) *Certifications.*

Complete the following--

(1) The Offeror is \_\_\_ is not \_\_\_ a small disadvantaged business concern.

(2) The Small Business Administration (SBA) has \_\_\_ has not \_\_\_ made a determination concerning the offeror's status as a small disadvantaged business concern. If the SBA has made a determination, the date of the determination was \_\_\_\_\_ and the Offeror--

\_\_\_\_\_ Was found by SBA to be socially and economically disadvantaged and no circumstances have changed to vary that determination.

\_\_\_\_\_ Was found by SBA not to be socially and economically disadvantaged but circumstances which caused the determination have changed.

(d) *Penalties and Remedies.*

Anyone who misrepresents the status of a concern as a small disadvantaged business for the purpose of securing a contract or subcontract shall--

(1) Be punished by imposition of a fine, imprisonment, or both;

(2) Be subject to administrative remedies, including suspension and debarment; and

(3) Be ineligible for participation in programs conducted under authority of the Small Business Act.

**K-15** (DFARS 252.225-7000 - BUY AMERICAN ACT - BALANCE OF PAYMENTS PROGRAM  
CERTIFICATE (DEC 1991)

(a) *Definitions.*

“Domestic end product”, “qualifying country”, “qualifying country end product,” and “nonqualifying country end product” have the meanings given in the Buy American Act and Balance of Payments Program clause of this solicitation.

(b) *Evaluation.*

Offers will be evaluated by giving preference to domestic end products and qualifying country end products over nonqualifying country end products.

(c) *Certifications.*

(1) The Offeror certifies that--

(i) Each end product, except those listed in paragraphs (c)(2) or (3) of this clause, is a domestic end product; and

(ii) Components of an unknown origin are considered to have been mined, produced, or manufactured outside the United States or a qualifying country.

(2) The Offeror certifies that following end products are qualifying country end products:

QUALIFYING COUNTRY END PRODUCTS

Line Item No.	Country of Origin
_____	_____
_____	_____
_____	_____
_____	_____

(List only qualifying country end products)

(3) The offeror certifies that the following end products are nonqualifying country end products:

NONQUALIFYING COUNTRY END PRODUCTS

Line Item No.	Country of Origin (If known)
_____	_____
_____	_____
_____	_____
_____	_____

**K-16** DFARS 252.225-7003 - INFORMATION FOR DUTY-FREE ENTRY EVALUATION (AUG 1992)

(a) Is the offer based on furnishing any supplies (i.e., end items, components, or material) of foreign origin other than those for which duty-free entry is to be accorded pursuant to the Duty-Free--Qualifying Country End Products and Supplies clause of this solicitation?

YES ( )

NO ( )

(b) If the answer in paragraph (a) is yes, answer the following questions:

(1) Are such foreign supplies now in the United States?

YES ( )

NO ( )

(2) Has the duty on such foreign supplies been paid?

YES ( )

NO ( )

(3) If the answer to paragraph (b)(2) is no, what amount is included in the offer to cover such duty? \$\_\_\_\_\_.

(c) If the duty has not been paid, the Government may elect to make award on a duty-free basis. If so, the offered price will be reduced in the contract award by the amount specified in paragraph (b)(3). The Offeror agrees to identify, at the request of the Contracting Officer, the foreign supplies which are subject to duty-free entry.

(d) Offers will be evaluated on a duty included basis except to the extent that--

(1) The supplies are qualifying country end products as defined in the Buy American Act and Balance of Payments Program clause of this solicitation; or

(2) The duty-free price is specified for use in the evaluation procedure.

**K-17 DFARS 252.247-7022 - REPRESENTATION OF EXTENT OF TRANSPORTATION BY SEA (AUG 1992)**

(a) The Offeror shall indicate by checking the appropriate blank in paragraph(b) of this provision whether transportation of supplies by sea is anticipated under the resultant contract. The term "supplies" is defined in the Transportation of Supplies by Sea clause of this solicitation.

(b) *Representation.*

The Offeror represents that it--

\_\_\_\_\_ Does anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

\_\_\_\_\_ Does not anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

(c) Any contract resulting from this solicitation will include the Transportation of Supplies by Sea clause. If the Offeror represents that it will not use ocean transportation, the resulting contract will also include the Defense FAR Supplement clause at 252.247-7024, Notice of Transportation of Supplies by Sea.

**K-18** COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE REPORTING

The Offeror's CAGE Code is \_\_\_\_\_.

See DFARS 252.204-7001 in Section L for procedures on requesting a CAGE Code.

**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-far.npr.gov/References/References.html>  
<http://heron.nrl.navy.mil/contracts/home.htm>

**FAR CLAUSE      TITLE**

52.204-6		Contractor Identification Number - Data Universal Numbering System (DUNS) Number (DEC 1996)
52.215-1	-	Instructions to Offerors- Competitive Acquisition (OCT 1997)
52.215-16	-	Facilities Capital Cost Of Money (OCT 1997)
52.237-1	-	Site Visit (APR 1984)

**L-2 FAR 52.215-20 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA (OCT 1997) ALTERNATE IV (1997)**

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

The Offeror shall provide information as required in Section L.13.C of this solicitation.

**L-3 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; (x) 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-4 FAR 52.216-1 - TYPE OF CONTRACT (APR 1984)**

The Government contemplates award of an Indefinite Delivery Indefinite Quantity type contract with both Cost-Plus-Fixed-Fee Completion-type and Cost-Plus-Fixed-Fee Term-type Task Orders resulting from this solicitation.

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

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

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

**L-6 DFARS 252.204-7001 - COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE REPORTING (DEC 1991)**

(a) The Offeror is requested to enter its CAGE code on its offer in the block with its name and address. The CAGE code entered must be for that name and address. Enter CAGE Before the number.

(b) If the Offeror does not have a CAGE code, it may ask the Contracting Officer to request one from the Defense Logistics Services Center (DLSC). The Contracting Officer will--

(1) Ask the Contractor to complete section B of a DD Form 2051, Request for Assignment of the Commercial and Government Entity (CAGE) Code;

(2) Complete section A and forward the form to DLSC; and

(3) Notify the Contractor of its assigned CAGE code.

(c) Do not delay submission of the offer pending receipt of a CAGE code.

**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****
(LIST)*****.	(LIST)	(LIST)	(LIST)

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

\*\* Generally, development at private expense, either exclusively or partially, is the only basis for asserting restrictions. For technical data, other than computer software documentation, development refers to development of the item, component, or process to which the data

pertain. The Government's rights in computer software documentation generally may not be restricted. For computer software, development refers to the software. Indicate whether development was accomplished exclusively or partially at private expense. If development was not accomplished at private expense, or for computer software documentation, enter the specific basis for asserting restrictions.

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

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

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

Date \_\_\_\_\_

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

Signature \_\_\_\_\_

(End of identification and assertion)

- (e) An offeror's failure to submit, complete, or sign the notification and identification required by paragraph (d) of this provision with its offer may render the offer ineligible for award.
- (f) If the Offeror is awarded a contract, the assertions identified in paragraph (d) of this provision shall be listed in an attachment to that contract. Upon request by the Contracting Officer, the Offeror shall provide sufficient information to enable the Contracting Officer to evaluate any listed assertion.

**L-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 ESTIMATED DIRECT LABOR HOURS BY LABOR CATEGORIES**

The following is the estimated direct labor by labor category required for performance of this contract. This estimate shall be used by the Offeror in preparing the cost proposal for the maximum quantity. If the Offeror uses labor category terminology other than that used in this provision, the Offeror must provide a matrix clearly relating their proposed labor categories to those in this provision.

For Proposal and Informational Purposes Only: The Offeror should assume that the estimated maximum number of hours is equally distributed across the anticipated five-year period of performance.

<u>Labor Category</u>	<u>Five Year Period of Performance</u>	
	Estimated Maximum <u>Hours</u>	
Program Manager	<u>10,400</u>	
Senior Engineer	<u>166,400</u>	
Senior Analyst	<u>104,000</u>	
Senior Software Engineer	<u>62,400</u>	
Engineer	<u>332,800</u>	
Software Engineer	<u>93,600</u>	
Technician	<u>301,600</u>	
Documentation Specialist	<u>72,800</u>	
Reliability Engineer	<u>72,800</u>	
Clerical	<u>228,800</u>	
TOTAL MAXIMUM:	<u>1,445,600</u>	

**L-12 ADDITIONAL LABOR CATEGORIES**

If, in order to accomplish the work under this contract, it becomes desirable to the Government to include additional labor categories under this contract, the Contractor and Government agree to, in

good faith, negotiate the hourly rates and qualifications for the desired additional labor categories. Upon successful conclusion of negotiation, the Contracting Officer may modify this contract to include the negotiated labor categories and rates in the clause entitled "H.4- Anticipated Distribution of Direct Labor Hours by Labor Categories", above.

## L-13 INSTRUCTIONS FOR SUBMISSION AND INFORMATION REQUIRED TO EVALUATE PROPOSALS

### PART L.13.A – GENERAL

(1) Offerors are advised of the possibility that award may be made on the basis of initial proposals without written or oral discussions. Therefore, proposals should be submitted on the most favorable terms from a price and technical standpoint.

(2) Offerors shall submit a completed solicitation document.

(3) In addition to a completed solicitation document, proposals shall be submitted in two readily separable volumes, one original and five copies of Volume I – Technical/Management Proposal, and one original and two copies of Volume II – Cost/Price proposal. Volume I shall include all data and information required for evaluation, excluding all references to cost and pricing data (see Section L 13.B below). Volume II shall include the completed solicitation document and a complete and detailed cost/price breakdown (see Section L 13.C below).

(4) 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:

**RFP No. N00173-98-R- RS02**  
**Closing Date:**  
**(As specified in Block 9, RFP face page)**  
**Naval Research Laboratory (NRL-SSC)**  
**Attn: Code 3235**  
**Stennis Space Center, MS 39529-5004**

### PART L.13.B - TECHNICAL PROPOSAL REQUIREMENTS

#### PART L.13.B.0 - General Proposal Content:

- (i) Offerors are required to furnish an original and five copies of a detailed TECHNICAL PROPOSAL with sufficient detail to show compliance with the requirements stated in each subparagraph of Section C of this solicitation. Specific cost or pricing details shall be omitted from the Technical Proposal.
- (ii) The technical proposal shall include a narrative in the same sequence as the items set out in Section C hereof. The narrative shall describe how each item offered will not meet, will meet, or will exceed the respective stated need of the Government for each subparagraph of Section

- C. Conclusions such as “meets or exceeds,” or “yes,” or “o.k.” are not technically acceptable. Each response shall furnish the Government with sufficient detail to enable the technical evaluation panel to independently evaluate each item offered against the respective stated need of the Government for each item in Section C and Section M.
- (iii) The technical proposal shall include any drawings, including schematic drawings, which will enable independent technical evaluation of the proposal.
  - (iv) The technical proposal shall clearly and concisely identify and discuss the Offeror’s technical and managerial qualifications and approaches to accomplishing the requirements outlined in Section C. Further, the technical proposal shall be subdivided into a “Proposal Summary” section, a “Management Factors” section, and a “Technical Factors” section, in that order. The technical proposal shall also contain a response to each of the individual requirements listed in Section C.3.1 – C.3.7 of Attachment 1.1, Attachment 1.2, and Attachment 1.3.
  - (v) The technical proposal (including summary, charts, tables, etc.) shall not exceed single-sided pages of text in length. Drawings, as required in paragraph (iii) above, will not be counted in determining proposal length. Proposal shall be typed with a minimum type size of 12 pitch. Excess pages will not be read or evaluated.
  - (vi) You are advised to closely examine the evaluation criteria set forth below prior to preparation of a technical proposal. Your technical proposal will be rated solely against the following criteria.

#### PART L.13.B.1- PROPOSAL SUMMARY

The proposal summary is an unevaluated requirement. The Offeror shall provide a concise summary, exclusive of cost information, of its proposal. This summary should be complete, stand on its own, and provide executive level reviewers with an understanding of the content of the proposal. The summary should summarize the highlights, plans and qualifications contained in the body of the technical proposal.

#### PART L.13.B.2- **MANAGEMENT FACTORS**

The “Management Factors” portion of the Offeror’s Technical volume shall address the following areas:

##### 1. Management Organization

The Offeror shall provide a brief narrative description and organization chart of the proposed supporting organization which shall include: (a) a description of how this program will fit into the organization structure of the offeror’s profit center; (b) a description of the program manager’s reporting chain within the structure (e.g. – to whom the program manager reports and the level of that official within the organizational structure); (c) a description of the relationship between the profit center and the total corporation, which shall identify to whom the program manager of the profit center reports and the placement of the program manager’s reporting official within the total corporation; (d) an explanation of the functional relationships among internal engineering development and production/manufacturing entities as well as associated elements necessary to accomplish the program; (e) a description of the relationship between the program and the profit

structure of the corporation; (f) a description of the program manager's authority to direct corporate resources toward accomplishment of tasks; (g) a description of the program manager's reporting structure; (h) a description of the inter-relationships within the offeror's organization related to the program; (i) a description of the offeror's relationships with team members; and (j) a description of the offeror's corporate commitment, willingness and ability to commit internal resources to accomplish the program. In addition, if the proposal is submitted from a team of companies, the submitter shall explain the intercompany relationships as well a program placement and reporting relationships in each company involved.

## 2. Work Force:

The Offeror shall establish the demonstrated experience, education, and qualifications of the proposed personnel to accomplish the technical requirements as stated in Section C of this solicitation. Pursuant to this requirement, the Offeror shall, as a minimum, provide the following information for each full time, key personnel proposed: name of proposed key personnel; (b) company; (c) program functions, responsibilities, authority and rationale for assignment; (d) educational qualifications; (e) length of experience; (f) technical or managerial qualifications; (g) previous work history; and (h) status of current security clearance.

In addition to the requirements stated above, the Offeror shall (a) describe their plan to retain key personnel throughout the term of any resulting contract, (b) demonstrate their ability to attract additional trained personnel , and (c) describe their strategy for and ability to respond to surges in effort.

## 3. Facilities and Equipment

The Offeror shall describe the facilities and equipment proposed to satisfy the requirements as stated in Section C of this solicitation, including (a) spacecraft environmental test facilities, (b) EMI/EMC facilities, (c) electronic fabrication facilities, (d) parts screening facilities, (e) destructive physical analysis facilities, (f) computer equipment, (g) communications equipment, (h) CAD/CAM facilities, and (I) any other facilities or equipment proposed for use. The Offeror shall state whether the proposed facilities and equipment are corporately owned, leased, or the property of a team member. The Offeror shall also describe their strategy for acquisition of new resources as necessary to satisfy program requirements.

## 4. Corporate Past Performance Information:

(i) 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 five contracts or subcontracts completed during the past three years for supplies or services similar in nature to this requirement. Include in the five any current contract or subcontracts for similar supplies/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 of 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

(ii) 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 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.

(iii) 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.

#### PART L.13.B.3- **TECHNICAL FACTORS**

The "Technical Factors" portion of the Offeror's Technical volume shall address the following areas:

##### 1. Systems Engineering:

Pursuant to the requirements stated in Section C of this solicitation, The Offeror shall demonstrate their capability to (a) analyze complete space and aerospace systems from a wholistic viewpoint; (b) define system interfaces, (c) track system requirements, (d) modify existing systems to perform new missions, and (e) perform Integrated Logistics Support (ILS) activities for both CONUS and OCONUS systems. The Offeror shall also give specific examples of past system engineering efforts related to Low Earth Orbiting Satellites and Aerospace electronics involving Tactical Internet.

##### 2. Systems Design and Development:

Pursuant to requirements stated in Section C of this solicitation, the Offeror shall: (a) describe and demonstrate its ability and experience in designing, developing, testing and documenting high

reliability electronics systems for space and aerospace environments; (b) demonstrate its ability and technical depth in developing electronic systems ranging from command and telemetry systems to spacecraft experimental payloads; (c) demonstrate its experience in developing electronic systems for Low Earth Orbiting (LEO) satellites under tight program schedule and budget constraints; (d) demonstrate its ability to respond quickly to new requirements; and (e) describe and demonstrate its software development process, including its methodology for process identification and improvement.

### 3. Systems Effectiveness:

Pursuant to the requirements in Section C of this solicitation, the Offeror shall (a) describe their capability to evaluate and characterize inherent and achieved Reliability, Maintainability, and Availability (RMA) characteristics of both space and aerospace systems; (b) describe and document their procedures and process for incorporating RMA recommendation analyses into their designs; and (c) provide specific examples of having performed these activities on other programs, provided recommendations to the design staff, and performed trade-offs in regard to the proposed design and the RMA recommendations.

### 4. Fabrication Activities:

Pursuant to the requirements in Section C of this solicitation, the Offeror shall describe their capability to (a) perform parts engineering for space and avionics systems; (b) perform necessary quality assurance functions required in a space environment; (c) perform destructive physical analysis on parts; (d) package electronics in a form factor which will meet the environmental extremes found in space and tactical environments; and (e) fabricate electronic assemblies, incorporating surface mount and ball grid arrays for space and tactical environments. Emphasis should be given to efforts which had to meet the strict environmental constraints found in space and tactical environments.

## PART L.13.C- COST/PRICE PROPOSAL REQUIREMENTS

The Offeror shall submit a Cost/Pricing Proposal, which shall include such explanatory data in as is necessary to establish that proposed costs are reasonable, allocable, appropriate and allowable pursuant to both Part 31 of the Federal Acquisition Regulation (FAR) and Part 231 of the Defense Federal Acquisition Regulation Supplement (DFARS). More specifically, the Cost/Pricing proposals shall provide the following information:

- (a) (i) Labor to include categories of labor, hours by each category, and hourly rate by each category;
- (ii) Indirect or Overhead Rate(s);
- (iii) Any Direct Materials proposed;
- (iv) Any Other Direct Costs proposed;
- (v) General and Administrative Rate(s);
- (vi) Facilities Capital Cost of Money Rate(s);
- (vii) Any other applicable rates;
- (viii) Other supporting costs;
- (ix) Fee

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 the time of proposal submission.

(b) Any information reasonably required to explain the Offeror's estimating process, including mathematical algorithms and judgmental factors used in formulating the estimate; and any contingency assumptions employed in arriving at the proposed price

(c) Consultants/Subcontractors: Offerors shall describe subcontracting arrangements proposed for completing the work required herein. Sub-Contractors shall be identified as well as the portion of the work to be subcontracted. Documents establishing a subcontracting relationship shall be submitted with the cost proposal. Offerors may arrange for proposed subcontractors to submit supporting cost data directly to the Government. Any such submission shall not be deemed to establish privity of contract between the Government and the proposed sub-contractor. With respect to Independent Contractors or Consultants, the Offeror shall document direct labor rates proposed by providing the Government with copies of either letters of intent or Consultant or Independent Contractor Agreements executed between the Offeror and the Independent Contractor. Offerors who intend to include subcontracted effort as part of their proposal are responsible for ensuring that complete information as described above is provided from each subcontractor as part of their response to this solicitation.

(d) Material and Travel: FOR PROPOSAL PURPOSES ONLY, the offerors will use the following estimates ( with applicable indirect costs added to the estimate) for required material and travel costs. If subcontractors propose material or travel costs, these must also be burdened and that burden added to the estimates.

(i) The "Material" estimate of \$5,225,251.00 for the total period of performance (an estimated average of \$ 1,045,050.00 for each of the five years included in the period of performance) includes those directly associated items which are expected to be incorporated into end products or expended during performance and minor direct equipment expense.

(ii) The "Travel" estimate of \$1,492,930.00 for the total period of performance (an estimated \$298,586.00 for each of the five years included in the period of performance) includes travel and subsistence for work at alternative sites, and for allowable local travel per the Joint Travel Regulations.

#### **L-14 MULTIPLE AWARDS**

The Government may make multiple awards resulting from this solicitation.

#### **L-15 SECURITY REQUIREMENTS**

The following is a MANDATORY REQUIREMENT which must be fulfilled:

- (1) All Contractor personnel proposed for this effort shall possess, or be capable of acquiring, at least a SECRET security clearance (unless otherwise specified) and be a U.S. citizen.
- (2) The Contractor shall possess, or be capable of acquiring, at least a SECRET facility clearance.

## SECTION M - EVALUATION FACTORS FOR AWARD

### M.1. EVALUATION

Proposals received in response to this solicitation will be evaluated in accordance with the criteria stated in Sections L.13(B)(2) and L.13(B)(3), which together comprise the Technical Category; and Section L.13.(C), which comprises the Cost/Pricing category.

Pursuant to FAR 15.306(c), proposal which are found to contain unrealistic technical or schedule terms, which fail to comply with the requirements stated in this RFP, or which are found to be unrealistically high or low in cost/price, may be removed from further consideration.

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 cost, the closer the technical scores of the various proposals are to one another, the more important cost considerations become.

### M.2. EVALUATION FACTORS FOR AWARD

#### M.2.1. – TECHNICAL CATEGORY

The technical evaluation will consider the Offeror's overall approach to, understanding of, and capability to adequately perform and provide the requirements listed in the Statement of Work, as reflected in the Offeror's responses to the evaluation criteria listed in Sections L.13.B.2 and L.13.B.3. Evaluated Components within the Technical area include "Management Factors" and "Technical Factors," both of which are equally weighted. Within the Technical area entitled "Management Factors," the Subfactor "Corporate Past Performance Information" is weighted higher than the Subfactors "Management Organization" and "Work Force," which are weighted equally. The Subfactor "Facilities and Equipment" carries the least weight. Within the Technical area entitled "Technical Factors," the Subfactors "System Design and Development" and "Fabrication Activities" are weighted equally, and carry for weight than the Subfactors "Systems Engineering" and "Systems Effectiveness," which are also weighted equally.

Past Performance – Past performance will be evaluated on the basis of quality of work performed, timeliness of performance, cost control, and business relations. The evaluation will be based on the information provided pursuant to Contract Section L.13.B.2(4) and other sources, if available. 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.2.2 - Cost/Price/Proposal-RFP Requirements

(a) Cost/Price considerations are weighted less than the combined Technical factors. The degree of Cost/Price importance will increase with the degree of equality of the proposals in relation to Technical capability, or when it is so significantly high as to diminish the value of the technical superiority to the Government.

(1) If the Cost Proposal should be so unreasonably high or unrealistically low that meaningful discussions with the offeror are precluded, further evaluation will be discontinued and the overall proposal may be considered unacceptable.

(b) Each Offeror's cost proposal will be evaluated to calculate a most-probable cost. To determine most probable cost, the Government will conduct a cost realism analysis in accordance with DFARS 215.801.

In conducting the cost realism analysis, the Government will assess all elements of proposed cost and fee, and supporting data, including the following:

- (1) Realism of all costs associated with all proposed labor categories, including rates per hour, number of hours proposed, and labor escalation rates;
- (2) Realism of the cost of indirect cost, proposed travel, per diem, other direct costs, consultant and subcontracting costs, other costs proposed and fee;
- (3) Realism of any other costs necessary to fulfill the requirements of the work described in the solicitation;
- (4) Reasonableness of the maximum cost-plus-fixed-fee stated in Section B measured against the technical effort proposed by the offeror.

### M.3 - Award Without Discussions

(a) Except as noted in paragraph (b) below, the Government intends to evaluate proposals and award a contract without discussions to the responsible offeror whose offer, conforming to the solicitation, is evaluated to be the most advantageous to the Government, cost or price and other factors considered. Consequently, a proposal submitted in response to the solicitation should represent the offeror's best product in terms of technical content and cost/price.

(b) The Government reserves the right, however, to conduct discussions if determined by the Contracting Officer to be necessary. Discussions will be conducted following evaluations only with those offerors determined to have a reasonable chance of award.

### M.4 - Basis For Award

The basis for award will be an integrated assessment, using the above stated evaluation factors, of the potential contractor's prospect for providing the Government's needs. The Government may make award without discussions with the offeror. The Government reserves the right to reject any or all proposals. The Government also reserves the right to award to other than the lowest offeror. The Government anticipates award to a single offeror; however, multiple awards may be made if determined more advantageous to the Government, cost and other factors considered.

**ATTACHMENT 1.1:**  
**SECTION C: DESCRIPTIONS/SPECIFICATIONS/WORK STATEMENT**

**C.1            BACKGROUND**

C.1.1 Introduction

The Naval Center for Space Technology (NCST) located at the U.S. Naval Research Laboratory (NRL) in Washington, DC, is the designated lead laboratory for Navy space programs. NCST has the mission to preserve and enhance a strong space technology base and provide expert capabilities in the development and acquisition of space systems which support Naval Missions.

The Space Systems Development Department (SSDD), a department within NCST, has the primary responsibility (a) to develop space and aerospace systems, and (b) to actively pursue emerging technologies to advance space and aerospace system development. The SSDD (a) defines system requirements based on overall mission objectives; (b) develops alternative system architectures; (c) designs and develops systems and subsystems; and (c) implements technologies to achieve optimized, operational systems.

C.1.2 Objective

The objective of the Request for Proposals (RFP) and Statement of Work (SOW) is (a) to acquire the necessary personnel, equipment and facilities to accomplish the tasks described herein, and (b) to define the technical and managerial tasks required to accomplish developments for present and future SSDD space and aerospace programs. SSDD is presently pursuing several programs, each at various stages of development. In addition SSDD, is currently involved in the conceptual or design phases of various other advanced concepts studies and projects which will be included in future generations of space and aerospace systems.

C.1.3 Scope of Work

This SOW defines tasks to be performed by the successful Space/Aerospace Implementation (SASI) Contractor. The scope of this statement of work will include tasks in the areas of (a) space/aerospace systems program management, (b) program documentation, (c) systems engineering, (d) systems design and development, (e) systems effectiveness, (f) fabrication, (g) logistics, and (h) other associated efforts which may be required to successfully accomplish both current and future SSDD programs.

The successful SASI contractor shall direct, perform and report on all tasks and activities incorporated into this SOW. Unless otherwise specified herein, the successful SASI contractor shall provide all personnel, resources and materials necessary to accomplish the efforts described herein.

## C.2 APPLICABLE DOCUMENTS

The Contractor shall comply with the following specifications, standards, and publications as they apply to each SASI task. The exact references listed form an unseverable part of this specification. In the event a date is not included for any given specification, standard or publication, the latest reference shall apply. In the event of inconsistencies between the referenced documents and this SOW, the requirements of the SOW shall be given precedence.

### C.2.1 SSDD Technical Specifications and Documents

<u>Document Number</u>	<u>Description</u>
STC-D-001	Spacecraft Product Assurance Program Plan
SSD-D-002	Naval Center for Space Technology (NCST) Parts Program Requirements and Guidelines
SSD-D-009C	Destructive Physical Analysis Procedure
SSD-D-010	Engineering Design Handbook for Spacecraft Electronic and Electromechanical Parts
SSD-D-059	NRL/SSDD Monthly Status Report Procedure
SSD-D-072B	Naval Center for Space Technology Document Style Guide
SSD-D-AS139	Qualified Parts List
SSD-D-AS214	Parts Program Requirements and Guidelines
SSD-D-AS303	Quality Assurance Program Requirements and Guidelines
SSD-D-AS322	Test Methods and Controls
5100.13C	NRL Occupational Safety and Health Manual
5510.40D	NRL Security Manual

(The documents listed above will be available for viewing in the Contracting Officer, Code 3200, Naval Research Laboratory, 4555 Overlook Ave., SW, Washington, DC 20375-5326.) After contract award the documents can be obtained from the designated Contracting Officer's Representative (COR).

## C.2.2 Military/Department of Defense Specifications and Standards

<u>Document Number</u>	<u>Description</u>
DOD-E-8983C	Electronic Equipment, Aerospace, Extended Space Environment, General Specification for
MIL-HDBK-343	Design, Construction, and Testing Requirements for One of A Kind Space Equipment
MIL-HDBK-217F	Reliability Prediction of Electronic Equipment
DOD-HDBK-263	Electrostatic Discharge Control Handbook for Protection of Electrical and Electronic Parts, Assemblies and Equipment
MIL-STD-461A	Electromagnetic Emission Susceptibility Requirements for The Control of Electromagnetic Interference
MIL-STD-756B	Reliability Modeling and Prediction
MIL-STD 881	Work Breakdown Structures for Defense Material Items
MIL-STD-1540B	Requirements for Space Vehicles
MIL-STD-2000	Standard Requirements for Soldering
MIL-T-31000	General Specification for Technical Data Packages

(Unless otherwise indicated, copies of federal and military specification, standards and handbooks are available from the Standardization Documents Order Desk, BLDG. 4D, 700 Robbins Ave., Philadelphia, PA 19111-5094, telephone number (215) 697-3321.)

## C.2.3 Non-Government Documents

## C.2.3.1 American National Standard Institute (ANSI)

<u>Document Number</u>	<u>Description</u>
ANSI Y32.16	Reference Designations for Electrical and Electronic Parts And Equipments

ANSI Y14.5M                      Dimensioning and Tolerancing

ANSI Y32.2                      Graphic Symbols for Electrical and Electronic Diagrams

(Applications for copies should be addressed to the American Nation Standard Institute, 1430 Broadway, New York, NY 10018.)

#### C.2.3.2          Electronic Industries Association (EIA)

<u>Document Number</u>	<u>Description</u>
RS-232	Interface Between Terminal Equipment and Data Circuit Terminating Equipment Employing Serial Binary Data Interchange
RS-422	Electrical Characteristics of Balanced Voltage Digital Interface Circuits
RS-423	Electrical Characteristics of Unbalanced Voltage Digital Interface Circuits
EIA/IS-649	Configuration Management
EIA/IS-632	Systems Engineering

(Application for copies should be addressed to Electronic Industries Association, 2001 Pennsylvania Ave., NW, Washington, DC 20006)

#### C.2.3.3          Institute of Electrical and Electronic Engineers (IEEE)

<u>Document Number</u>	<u>Description</u>
IEEE 488	IEEE Standard Digital Interface for Programmable Instrumentation
IEEE 802.3	Information Processing Systems - Local Area Networks - Part 3: Carrier Sense Multiple Access with Collision Detection
IEEE 1014	Standard for a Versatile Backplane Bus: VMEbus

IEEE 1101.4 Standard for Military Module, Format E Form Factor

IEEE 1394 High Performance Serial Bus

(Applications for copies should be addressed to the Institute of Electrical and Electronic Engineers Inc., 345 East 47th Street, New York, NY 10017.)

### **C.3 SPECIFIC REQUIREMENTS**

This section contains the detailed requirements for this effort. The Contractor shall accomplish these requirements using the guidelines and directions referenced in Section C.2 entitled Applicable Documents, unless use of these guidelines is modified by the Contracting Officer's Representative (COR) pursuant to Contract Sections G-3 and G-4 entitled Technical Direction and Technical Direction Memorandum respectively. The Contractor shall not incorporate proprietary hardware or software in any deliverable developed under this contract without prior written approval of the COR.

#### **C.3.1 TASK 1 – CONTRACT REPORTING AND COMPLIANCE**

The contractor shall provide the personnel, equipment and facilities necessary to perform the program management, control, and reporting functions necessary to manage, direct and accomplish the efforts required under this SOW. The work required under this task shall include, but may not be limited to: (a) contract phase-in efforts, (b) program control and status reporting, and (c) security/safety monitoring and reporting.

##### **C.3.1.1 Subtask 1.1 - Contract Phase In**

The successful Contractor shall integrate its organization into the ongoing system development effort being performed by the incumbent Contractor within sixty (60) days after contract award. During this phase-in period, the Contractor shall (a) establish and implement a trained and experienced work force capable of continuing the on-going work, (b) acquire facilities and equipment adequate to continuing the on-going work; and (c) develop and establish operational and program management procedures sufficient to organize, perform, manage and control the tasks required under this statement of work. Further, the successful contractors workforce shall, within the phase-in period, become familiar with and assume responsibility for the ongoing effort being performed by the SSDD.

In accordance with Section H.12, the successful contractors program manager shall be responsible for scheduling, coordinating, and executing all transition activities. All communications between the successful contractor and the incumbent contractor regarding transition shall be conducted via the COR.

### C.3.1.2 Subtask 1.2 - Status Reporting

The Contractor shall establish and maintain a management system to control and report on contract efforts. The management system shall use a Contract Work Breakdown Structure (CWBS), as described in MIL-STD-881, which shall, as a minimum perform the following functions: (a) assess technical achievement, (b) measure progress, and (c) determine and accrue costs accurately for each assigned task. The required management system shall compare actual to planned performance and costs, and shall illustrate program status. A direct correlation shall exist between the CWBS employed by the SSDD for its reporting purposes and the CWBS developed by the contractor. The Contractor shall report program technical issues, cost and schedule status at the task level, and these items shall be summarized at the overall program level within each report. Reports required under this subtask shall be in accordance with DD Form 1423 - Contract Data Requirements List (CDRL), CDRL A001, Contract Work Breakdown Structure.

(a) Contract Summary - The Contractor shall provide the COR with information and reports on (a) deliveries, (b) meetings, (c) scheduled versus actual work performed, and (d) actual and projected slippages along with actual and projected impact on overall contract performance. Resultant Milestone Chart(s) shall be submitted in accordance with DD Form 1423, CDRL A005, Milestone Chart.

(b) Contract Task Status/Items - The Contractor shall provide status on the progress of each contract task or item, which shall include, but may not be limited to, status of design, development, fabrication, production, assembly, testing, quality control efforts needed to fulfill contract requirements. The contractor shall also monitor and report status on other items, which may include, but may not be limited to: materials, Government Furnished Equipment (GFE), data items, subcontracting efforts, and unresolved problems, in accordance with DD Form 1423, CDRL A005, Monthly Status Report and Government Furnished Equipment respectively.

(c) Financial Reports - The contractor shall provide cost reports on contract expenditures which will allow an objective determination of earned value accruing to the Government for each ongoing task. Cost data shall be presented in accordance with Department of Defense (DOD) Data Item Description (DID), DI-F-6010A, Cost/Schedule Status Report (C/SSR), tailored to the SSDD requirements to include planned versus actual cost data, and planned versus actual manpower usage. The cost data included in this requirement shall be correlated to the CWBS elements referenced in paragraph C.3.1.2 above. The contractor shall provide a narrative explanation of all variances greater than 10%. Resultant reports shall be submitted in accordance with DD Form 1423, CDRL A001, Financial Reports.

### C.3.1.3 Subtask 1.3 - Security and Safety Compliance

The Contractor shall comply with all NRL safety and security requirements, and shall implement measures to accomplish these requirements. Specifically, the contractor shall comply with both the NRL Occupational Safety and Health Manual, 5100.13C, and the NRL Security Manual, 5510.40D with respect to all contractor employees located at NRL.

## C.3.2 TASK 2 – SITUATIONAL REPORTING

The contractor shall provide the personnel, equipment and facilities necessary to perform the program documentation efforts required under this SOW. The work required under this task shall include, but may not be limited to: (a) generating and preparing program plans and briefings, (b) performing configuration management functions, (c) performing data management functions, (d) generating technical documentation, and (e) documentation review and evaluation.

### C.3.2.1 Subtask 2.1 - Program Plans and Briefings

The Contractor shall generate program plans and briefings on assigned programs.

(a) Program Planing Documents - The contractor shall generate and provide updates to SSDD planning documents which may include, but may not be limited to, program implementation plans, system development, and test plans for existing and new space/aerospace programs, in accordance with DD Form 1423, CDRL A004, AProgram Documentation.

(b) Program Briefings - The contractor shall prepare program status and technical briefings for the SSDD in accordance with DD Form 1423, CDRL A004, AProgram Briefings. The required briefings shall be prepared on 8"x10" transparencies.

(c) Document Finalization and Illustration - The contractor shall finalize documents for selected SSDD space/aerospace development programs in accordance with DD Form 1423, CDRL A004, Program Documentation. Work to be performed under this requirement shall include, but may not be limited to, typing, word processing, electronic document transmission, drafting, illustrating (including development of printed circuit board (PCB) layouts, preparation of vue-graphs, document assembly, and document distribution.

### C.3.2.2 Subtask 2.2 – Configuration Control

The Contractor shall maintain configuration control of both the classified and unclassified SSDD space/aerospace programs in accordance with EIA/IS-649, entitled Configuration Management. The work required under this subtask shall include, but may not be limited to: (a) establishing and maintaining hardware and software configuration accounting records, and (b) development and maintenance of engineering drawings and documentation trees through the approval cycle.

The contractor shall be initially assigned the following SSDD programs to support:

- Interim Control Module (ICM)
- Army Airborne Command and Control System (A2C2S)
- Quick Reaction Capability (QRC) Space Systems
- NRL Ground Stations
- Spacecraft Launch Vehicle (SLV) Systems

Additional programs may be assigned over the contract period of performance.

### C.3.2.3 Subtask 2.3 - Data Control

The Contractor shall operate and maintain the SSDD data tracking system. The referenced system incorporates procedures which assist SSDD managers in assuring that data is delivered on schedule, processed for review, certified for adequacy, accepted or rejected, and reported appropriately.

The Contractor shall also organize, catalog, distribute, control and store documents, drawings and other materials. As part of this effort, the contractor shall provide status reports on drawings and conduct regular periodic inventories to ascertain item availability, legibility and reproducibility.

### C.3.2.4 Subtask 2.4 - System Technical Documentation

The Contractor shall generate technical documentation for assigned tasks which shall included, but may not be limited to: (a) system development specifications, (b) interface control documents, (c) system schedules, (d) system test documentation, (e) subsystem/equipment type B2 specifications, (f) general subsystem development specification and contents, (g) subsystem software development specifications, and (h) other system technical documentation.

(a) System Development Specifications - The Contractor shall maintain and update the existing system development specification for SSDD space/aerospace development programs, in accordance with DD Form 1423, CDRL A004, Development Specifications. The required specification define the system level performance requirements. The Contractor shall revise these specifications to reflect requirements changes as the systems evolve. All specification revisions shall be approved through the SSDD system design process.

(b) Interface Control Documents - The Contractor shall develop, update and maintain internal and external Interface Control Documents (ICD) which specify interface requirements for SSDD space/aerospace systems, in accordance with DD Form 1423, CDRL A004, Interface Control Documents. The required documents shall reflect the results of applicable design reviews. The Contractor shall also develop, update and maintain the Interface Wire Lists (IWL) for individual systems to enable integration and test planning and performance. The IWLs shall define the interconnections of subsystems/equipment with each other as well as with other systems. The IWLs shall be referenced to the ICDs to assure conformance with specification requirements.

(c) System Schedules - The Contractor shall generate, update and maintain program schedules for ongoing SSDD space/aerospace systems development programs in accordance with DD Form 1423, CDRL A004, Program Schedules. This task shall include the integration of all subsystem schedules into a master program schedule, and verification of schedule compatibility with the master development schedule. The program schedules shall consist of a master schedule, separate subsystem schedules, and a test and integration schedule for use by the SSDD. The schedules shall be prepared using both Gantt and PERT formats. New schedule baselines shall not be created without written permission from the COR. The Contractor shall revise and submit schedules on a quarterly basis. More frequent may be implemented if the program progress or risk dictates. Each schedule submission shall include a narrative discussing changes from the previous schedule revision.

(d) System Test Documentation - The Contractor shall develop, update and maintain the system test documentation required to implement approved program test plan requirements, in accordance with DD Form 1423, CDRL A004, Test Plans. System Test Documentation to be developed, updated and maintains shall include, but may not be limited to: (a) Payload and PDMS Integrated System Test Plan and Procedures, SSD-TP-AS013; (b) ASC EDM Test Plan, SSD-TO-AS140; and (c) Test Plan for MEP, SSD-D-CM007.

(e) Subsystem/Equipment Type B2 Specifications - The Contractor shall update the existing subsystem Type B2 specifications and prepare new subsystem/equipment Type B2 specifications for spacecraft and aerospace equipment, in accordance with DD Form 1423, CDRL A004, Type B2 Specifications. The Contractor shall implement the SSDD Specification Change Request (SCR) procedures defined in SSDD Document SSD-D-AS142, review proposed changes, and provide recommendations to the cognizant SSDD project engineer for changes to be incorporated into the specification.

During performance of the qualification phase design and development tasks of each development program, the Contractor may be required to prepare additional lower level equipment specifications to properly identify and control equipment configuration and performance. The Contractor shall prepare these additional specifications in accordance with written technical direction from the COR (See Contract Sections G.3 and G.4). The Contractor shall submit preliminary copies of each subsystem/equipment specification to SSDD for review and approval in accordance with the program schedule. The Contractor shall review the preliminary copies and submit final copies for COR approval. The Contractor shall update subsystem specifications after each system design review.

(f) **General Subsystem Development Specification and Contents** - The Contractor shall update and maintain the general specifications containing the common requirements to be used in each subsystem Type B2 specification. The Contractor shall use this document to assure that consistence or format and terminology is maintain throughout the specification generation and overall documentation effort, in accordance with DD Form 1423, CDRL A004, Type B2 Specifications.

(g) **Subsystem Software Development Specification** - The Contractor shall update and maintain the existing subsystem software development specifications and generate new software development specifications. Changes shall be incorporated through the specification change procedures defined in NRL Document SSD-D-AS142, and shall be submitted in accordance with DD Form 1423, CDRL A004, Software Development Specifications.

(h) **Other System Technical Documentation** - The Contractor shall prepare, update and maintain system technical documentation in accordance with DD Form 1423, CDRL A004, Program Documentation, which shall include, but may not be limited to:

- (i) Technical Reports - which shall include, but may not be limited to, system analysis reports, system requirements allocation reports, system test reports, and document lists.
- (ii) Specification Trees - which shall include the preparation and maintenance of all specification trees related to the program documentation task.
- (iii) Parts Lists - which shall include all system parts lists.
- (iv) System Design Review Reports - which shall include, but may not be limited to, system design review results, action item assignments, action item resolutions and First Article Configuration Inspection (FACI) results.
- (v) System Drawing Packages - which shall include, but may not be limited to, drawings, procedures, materials and process documents, system drawings, and lists that define a specific system design.
- (vi) Parts Program Documents - which shall be in accordance with SSD-D-AS214, Parts Programs Requirements and Guidelines.
- (vii) Quality Assurance Documents - which shall be in accordance with SSD-D-AS303, Quality Assurance Programs Requirements and Guidelines.

- (viii) Production Documents - which shall be in accordance with SSDD Manufacturing Procedures (MP) documents.
- (ix) Test Methods and Control Documents - which shall be in accordance with SSD-D-AS322.

#### C.3.2.5 Subtask 2.5 - Documentation Review and Evaluation

(a) Program Design Reviews - The Contractor shall participate in the System Requirements Review (SRR), Brassboard Design Review (BDR), Preliminary Design Review (PDR), Critical Design Review (CDR) and Final Design Review for each development program. The Contractor shall critique the design documentation for completeness and compatibility with SSDD-established documentation requirements, and shall present the results of these critiques at design reviews. The Contractor shall also participate in unit level design reviews and supplemental design reviews on systems and subsystems.

(b) Documentation Evaluation - The Contractor shall review documentation generated by SSDD and other participating contractors, evaluate its compliance with the established SSDD criteria, and assess its impact on the content of the design specifications and other system and subsystem technical documentation. The Contractor shall inform SSDD in writing of its assessment of the impact and recommend changes to the program documentation. Documentation to be reviewed shall include, but may not be limited to: (a) technical reports, (b) schedules, (c) analysis reports, (d) design specifications, (e) briefings, (f) design review data packages, (g) drawing packages, (h) design review minutes and action item responses, (i) test plans and procedures, and (j) test reports.

### C.3.3 TASK 3 - SYSTEMS ENGINEERING

In accordance with EIA/IS-632, Systems Engineering, the Contractor shall analyze systems, perform evaluations of systems interfaces, and participate in system definition and development. Evaluations to be performed under this task shall include, but may not be limited to, (a) Present Operational Space/Aerospace Systems Engineering, (b) Advanced Development Space/Aerospace Systems Engineering, (c) Battlefield Digitization Systems Engineering, and (d) Launch Vehicle Systems Engineering.

### C.3.3.1 Subtask 3.1 - Systems Integration and Test

The Contractor shall perform design and development engineering efforts which shall include, but may not be limited to (a) development of technical evaluations to be documented in technical reports and memoranda, (b) participation in working meeting and conversations, and (c) participation in test and evaluation efforts directed toward integration and continued operation of the following systems, subsystems and assemblies:

- (a) Accelerometer Sensor Assembly (ASA)
- (b) Antenna Interface Module (AIM)
- (c) Joint Combat Information Terminal (JCIT)
- (d) Radio Frequency Manager (RFM)
- (e) Improved Data Modem (IDM)
- (f) Integrated Communications System (ICS)
- (g) Remote Interface Unit (RIU)

Work to be accomplished under this requirement shall include, but may not be limited to, (a) unit circuit design rationale and constraints, (b) worst-case performance margins, (c) electrical stress margins, (d) magnetic design rationale and constraints, (e) flight software operational protocols and diagnostic capabilities, and (f) EMC/EMI design considerations.

In addition, the Contractor shall perform functions which shall include but may not be limited to development and performance of production tests and electrical performance and environmental test histories, procedures and constraints related to (a) packaging design rationale and constraints, (b) parts selection and application information, (c) materials and processes engineering considerations, and (d) fabrication and assembly techniques.

Results of the efforts required under this subtask shall be used to resolve integration, test and on-orbit anomalies.

### C.3.3.2 Subtask 3.2 - Current Operational Spacecraft System Engineering

The Contractor shall maintain present operational spacecraft baselines, which shall include, but may not be limited to (a) unit and subsystem functional interface definition in the form of interface diagrams, wiring lists and diagrams, timing diagrams, signal waveforms and interface circuit configurations, and (b) weight, power, volume and physical interface definition.

In pursuit of this effort, the Contractor shall (a) evaluate and incorporate changes resulting from spacecraft level integration and test efforts, launch support activities and on-orbit performance assessments, (b) evaluate available interface information for apparent anomalies and conduct analyses to determine methods of resolution, and (c) recommend methods to test and verify system performance at the interfaces.

### C.3.3.3 Subtask 3.3 - Systems Modification

The Contractor shall conduct systems engineering evaluations which shall result in recommendations for beneficial adaptations of existing system configurations for other missions being considered by the SSDD.

Work to be performed under this subtask shall include, but may not be limited to, (a) investigate the engineering feasibility of low-cost rocket vehicles being launched and recovered in the ocean, (b) complete systems engineering tasks involved in the maintenance and enhancement of existing spacecraft and aerospace systems, (c) provide systems engineering inputs to reviews and evaluations, and (d) participate in the development and maintenance of respective system baselines.

Deliverables under this subtask, (which shall include but may not be limited to diagrams, lists, trade-off studies, and evaluation results), shall be documented in formal and informal technical reports and memoranda. Formal reports generated under this subtask shall be submitted in accordance with DD Form 1423, CDRL Number A004, Technical Reports.

#### C.3.3.4 Subtask 3.4 - Systems Application Engineering

The Contractor shall perform systems applications engineering efforts for existing and advanced spacecraft and aerospace systems. Engineering efforts to be performed under this subtask shall include, but may not be limited to analyzing, defining, developing, evaluating, and controlling (a) bus architectures, their protocols and throughput characteristics, (b) subsystem design implementations, (c) fail-safe/fault-tolerant provisions, (d) spacecraft autonomy enhancement, (e) functional interfaces among subsystems, (f) interface circuit configurations, (g) interface signal level requirements, and (h) internal power distributions and revised power budgets.

Deliverables under this subtask shall include formal reports in the form of design packages which shall be submitted in accordance with DD Form 1423, CDRL A004, System Design Packages.

#### C.3.3.5 Subtask 3.5 - Performance Analysis

The Contractor shall perform experiment and payload performance analysis as well as troubleshooting and data analysis for both space and aerospace systems and subsystems. Analysis of performance may include pre-operational, operational, and post-operational mission phases. The work to be performed under this subtask shall include, but may not be limited to, (a) analysis of mission data to determine subsystem and system performance characteristics, (b) recovery, reduction and analysis of mission data, (c) development of systems necessary for collection, reduction and analysis of experiment data, (d) provision of real-time problem analysis and resolution for operational missions, (e) analysis of mission data to determine the nature of faults or performance-limiting factors, and (f) development of problem solutions, including work-arounds, special analysis software, and flight software or hardware upgrades to maximize mission performance.

#### C.3.3.6 Subtask 3.6 - Integrated Logistics Support (ILS)

The Contractor shall apply analytical techniques directed toward ensuring cost effective support of equipment and systems, (including the equipment/system support environment and resources) for their entire life cycle. The Contractors primary goals under this subtask shall be (a) to influence the system/equipment design process by development of design for supportability requirements, evaluating the consequences of design decisions and proactive participation in the design and design review process, or products; (b) to develop a support plan which allows achievement of specified supportability and operational objectives over the life cycle of the system/equipment; (c) to implement the support plan, and (d) to monitor the effectiveness and appropriateness of the support plan once implemented.

The work to be performed under this subtask shall include, but may not be limited to: (a) ILS planning; (b) Logistics Support Analysis; (c) Life Cycle Cost Analysis; (d) Reliability design, evaluation and monitoring; (e) Maintainability design, evaluation and monitoring; (f) maintenance and maintenance planning; (g) design and development of technical data, manuals and handbooks; (h) design and development of training and training documentation/material; (i) identification of skills and manpower requirements, prerequisites and sources; (j) identify requirements and resources to satisfy packaging, handling, storage and transportation needs; (k) identify, quantify, locate, purchase and replenish spare and repair parts; (l) minimize need for, identify, purchase and replenish support and test equipment; (m) identify requirements, analyze existing, and define requirements for new facilities; and (n) identify, examine and make recommendations concerning computer based systems for diagnostics, training, and on-line documentation.

Analyses and reports generated as deliverable under this subtask shall be submitted in accordance with DD Form 1423, CDRL A004, Integrated Logistics Support.

#### **C.3.4 TASK 4 - SYSTEMS DESIGN AND DEVELOPMENT**

The Contractor shall design, develop, and fabricate selected proof-of-concept, engineering models, and operational systems for NRL space and aerospace applications. These systems shall include, but may not be limited to, (a) Command, Control, Computer and Support (C<sub>3</sub>S) systems and (b) Experiment and Payload (EPL) systems. All systems development efforts shall be performed in accordance with the appropriate requirements as found in SSDD document STC-D-001.

##### **C.3.4.1 Subtask 4.1 - Command, Control, Computer and Support Systems Design and Development**

The Contractor shall analyze, design, fabricate, test, deliver and provide integration and testing functions for selected spacecraft and aerospace systems which shall include, but may not be limited to, (a) system controllers, (b) data acquisition and processing systems, (c) telemetry and control systems, (d) communications systems, (e) electrical power systems, (f) data storage systems, (g) databases, (h) command and control software, (i) data transfer systems, and (j) structures and mechanism systems.

The Contractor shall initiate **the** preliminary design (which shall include defining electrical and mechanical interfaces, critical operational parameters, weights and volumes) of these C<sub>3</sub>S systems for spacecraft, launch vehicles and aerospace systems. The required design effort shall include developmental testing and the acquisition of materials and test equipment. Testing shall include, but may not be limited to, breadboarding, prototyping, exposure to critical environments, and support to capability demonstrations. The Contractor shall develop integration plans and procedures for the various components, and shall perform the integration with the spacecraft, launch vehicle and tactical platform.

The Contractor shall present the completed design effort for each subsystem and mission application at a Critical Design Review (CDR). Upon approval of the CDR, the Contractor shall initiate subsystem fabrication and assembly, which shall include various ancillary, test and other items required to complete system development. The Contractor shall continue to analyze, test and integrate engineering changes, consistent with contract requirements, ensuring on a continuing basis throughout the fabrication and assembly that the design is feasible, sound, and cost effective.

#### C.3.4.2 Subtask 4.2 - Experiment and Payload (EPL) Systems Design and Development

The Contractor shall analyze the scientific/mission goals of an experiment or payload as defined by NRL and recommend experiment or payload approaches and architectures. The Contractor shall develop experiment or payload performance estimates, and shall identify requirements for data handling, experiment control, electrical power, thermal loads, mass and volume. The Contractor shall identify and define experiment and payload environmental constraints and requirements such as vibration, pressure, radiation, and contamination, EMI. The Contractor shall prepare detailed experiment definitions and specification documents for experimental hardware and software, payloads, flight software, ground support equipment, and support and analysis software.

The Contractor shall design, develop, construct, produce and test experiments and payloads for flight on rocket, balloon, aircraft or satellite in accordance with performance characteristics provided by the Government. Such test experiments and payloads will be reviewed and approved by the COR.

The Contractor shall develop and fabricate electronics and for various payloads which shall include, but may not be limited to, (a) experiment control, (b) scientific data capture and processing, (c) housekeeping data capture, and (d) command telemetry functions. The Contractor shall also develop and fabricate specialized auxiliary payload equipment and instrumentation, which shall include, but may not be limited to, (a) operation monitoring systems, (b) thermal control systems, and (c) specialized sensors or data acquisition systems.

The Contractor shall develop and construct laboratory experiments which shall include, but may not be limited to, (a) flight equipment proof-of-concept demonstrations, (b) sensor characterization, and (c) component qualification and calibration. Laboratory experiments shall include all applicable environmental, control, safety, data collection and data analysis hardware and software.

The Contractor shall define, design, develop and test software for experiments and payloads which shall include, but may not be limited to, (a) embedded software specific to experiments, and (b) test and verification software which may be required during development, test or integration of experiments and payloads. Pursuant to this requirement, the Contractor shall also define, document and perform hardware and software integration, debug, test qualification, and acceptance and verification efforts at both NRL and off-site locations.

The Contractor shall identify testing requirements for efforts which shall include, but may not be limited to (a) mission performance, (b) EMI/EMC, (c) thermal, (d) shock, (e) vibration, and (f) vacuum testing efforts. The Contractor shall document test requirements and publish test plans and procedures which define the evaluation and qualification of experimental payloads and experiments. The Contractor shall identify instrument integration requirements and provide the COR with experiment and payload integration plans and procedures. The Contractor shall document test activities and conclusions, and shall submit this information in accordance with DD Form 1423, CDRL A004, Test Plans.

The Contractor shall provide upgrade and modification definition, development, design and implementation efforts for payload and experiment modifications where modifications or upgrades to existing payloads or experiments are determined appropriate for carrying out ongoing scientific investigations.

### **C.3.5 TASK 5 - SYSTEMS EFFECTIVENESS**

The Contractor shall provide the necessary resources to perform the following systems effectiveness efforts:

#### **C.3.5.1 Subtask 5.1 - Reliability, Maintainability and Availability Engineering**

The Contractor shall evaluate the inherent and achieved reliability, maintainability and availability (RMA) characteristics of the various space and aerospace systems developed by the SSDD. The Contractor shall evaluate overall system RMA potential, compare this potential to the RMA requirements, and recommend RMA enhancement efforts where applicable. The Contractor shall also conduct RMA trade-offs among competing design concepts. The required analyses shall be performed in accordance with established SSDD procedures. The Contractor shall provide a monthly status report of RMA engineering efforts which shall include (a) a summary of completed analyses with identification of unresolved design issues, and (b) a schedule for analyses yet to be performed. The required monthly reports shall be submitted in accordance with DD Form 1423, CDRL A004, RMA Trade Studies.

(a) Subsystem Level Reliability Engineering - The Contractor shall conduct reliability engineering analyses of the SSDD subsystem level designs in accordance with STC-D-001. The reliability analyses to be performed shall include, but may not be limited to (a) Failure Modes, Effects and Criticality Analyses; (b) Electrical Stress Analyses; (c) Reliability Models and Predictions; and (d) Failure Rate Calculations. The Contractor shall identify areas where subsystem reliability may be improved and provide a description of the means available to achieve this improvement. Results of these analyses shall be documented in formal reports and shall be submitted under DD Form 1423, CDRL A004, Subsystem Reliability Engineering Reports. Where previous analyses exist, the Contractor shall revise and refine the previous reliability engineering reports.

The required reliability reports shall incorporate any updated Failure Mode Effects and Criticality Analysis (FMECA), stress analysis, reliability prediction and failure rate calculations as described in the following paragraphs.

(i) Failure Mode, Effects and Criticality Analyses (FMECA): The Contractor shall prepare subsystem FMECAs to identify potential failure modes and evaluate their effect on the operation of the subsystem. The Contractor shall verify redundancy implementations, identify any single point failure modes and prepare design modification recommendations which would lessen the impact of failure occurrence on subsystem operation. The criticality of each failure mode shall be derived to provide a quantitative means of evaluation. The Contractor shall also modify these analyses to reflect data collected as a result of testing. The Contractor shall assure that subsystem level FMECAs are capable of integration into the system level FMECA with minimal effort.

(ii) Electrical Stress Analyses: The Contractor shall perform subsystem circuit stress analyses based on the available design and test data. These analyses shall identify any parts where individual part electrical/thermal stresses may approach or exceed the maximum levels allowed by SSDD high reliability derating criteria contained in STC-D-001 and SSD-S-AS055. The Contractor shall also perform a detailed stress analysis on each part and prepare recommendations for resolving part applications where the high reliability derating criteria are exceeded.

(iii) Reliability Models and Predictions: The Contractor shall prepare subsystem level reliability block diagrams and mathematical models to reflect the subsystem design baselines, mission success criteria and FMECA information developed under Subtask 5.1(a)(i), above. The Contractor shall modify reliability predictions through the application of functional subassembly failure rates and operating/nonoperating mission times in the mathematical models. The subsystem level reliability block diagrams and mathematical models shall be functionally and operationally compatible with appropriate system level reliability model to permit maximum integration and use of the subsystem level diagrams and math models in the system level reliability models.

(iv) Failure Rate Calculations: The Contractor shall derive subassembly failure rates employing MIL-HDBK-217 augmented by direct applicable test data, when available. The Contractor shall modify subassembly failure rates as necessary to reflect the results of both the applicable stress analysis and the applicable FMECA. The Contractor shall also derive subassembly operating/nonoperating times to reflect mission operational time lines.

(b) System Level Reliability Engineering - The Contractor shall generate, refine and maintain system block diagrams and mathematical models that reflect system level redundancy implementations, system success criteria and mission operating time lines. The Contractor shall conduct system level reliability analyses employing the system level reliability mathematical models and the subsystem reliability analysis results described in subtask C.3.5(a). System level reliability analyses shall include updated FMECAs with emphasis on single point failures to enable assessment of system reliability and identification of further reliability improvements. The system level FMECA shall be performed in accordance with the requirements established in STC-D-001.

(c) Design Verification Engineering - The Contractor shall perform worst-case performance analyses on NRL electronic circuits to verify compliance with SSD-D-AS210A. The required analyses shall include, but may not be limited to, (a) transistor worst-case current gains analyses, (b) worst-case timing analyses, (c) power converter worst-case analyses, and (d) maintainability and availability analyses, as described in greater detail below. Worst-case analyses shall be submitted in accordance with DD Form 1423, CDRL A004, Worst Case Analyses.

(i) Transistor Worst-Case Current Gains Analyses: The Contractor shall verify that each transistor application has sufficient gain margin under worst-case conditions. In addition, the Contractor shall modify the existing subsystem gain analyses as necessary to reflect changes incorporated in the unit or subsystem designs.

(ii) Worst-Case Timing Analyses: The Contractor shall perform worst-case timing analyses on digital circuits. The Contractor shall identify and evaluate all instances of noncompliance with the criteria of SSD-D-AS210A for possible resolution. The Contractor shall provide recommendations for resolving timing noncompliances to the COR.

(iii) Power Converter Worst-Case Analyses: The Contractor shall perform worst-case analyses of SSDD power converters to determine any instances of performance or stability characteristics which do not comply with the criteria of SSD-D-AS210A. The Contractor shall identify all nonconformances in the analyses for resolution by the COR.

(iv) Maintainability and Availability Analyses: The Contractor shall conduct maintainability and availability analyses to project spacecraft replenishment rates, aerospace logistics support requirements and overall systems life cycle cost (LCC) characteristics.

### C.3.5.2 Subtask 5.2 - Quality Assurance Engineering

The Contractor shall support the production of NRL space and aerospace units and systems with a quality assurance program in compliance with SSDD requirements, including SSD-D-AS303, STC-D-001, SSD-D-AS214, and SSD-D-AS322. The Contractor shall provide Quality Assurance functions which shall include, but may not be limited to, (a) producibility and inspectability inputs to the design phase and inspections, (b) procedure monitoring, (c) nonconforming material controls, (d) calibration controls, and (e) test audits and implementation of corrective action throughout the fabrication, assembly and test of SSDD spacecraft and aerospace units and subsystems. The Contractor shall also participate in system level flight readiness reviews (FRR) and flight worthiness reviews (FWR) by providing QA inputs to the FRR/FWR data packages.

The Contractor shall provide QA engineering efforts to support subsystem level development. This support shall include, but may not be limited to, (a) performing QA engineering functions for the mechanical and electrical design engineering groups of the SSDD; (b) developing inspection flow plans to assist quality control inspection personnel; (c) reviewing contractor, subcontractor and vendor QA plans and procedures to determine compliance with SSDD requirements and participating in on-site surveys; (d) participating in system and subsystem design reviews; (e) assisting in the preparation of part specifications, drawings and source control drawings; (f) providing quality-related inputs to the Parts, Materials and Processes (PMP) group; (g) providing QA efforts during the fabrication and testing of subassemblies, assemblies and subsystems; and (h) participating in software peer reviews and inspections.

### C.3.5.3 Subtask 5.3 - Parts Engineering

The Contractor shall perform parts engineering efforts to assure that the appropriate SSDD parts selection control and testing requirements as delineated in STC-D-002, STC-D-009, STC-D-010, SSD-D-AS139 and SSD-D-AS214 are reflected in the subsystem designs and hardware produced for SSDD spacecraft and aerospace systems. In addition, the Contractor shall test and evaluate parts to determine their performance and environmental application potential and limitations. The parts engineering tasks shall include, but may not be limited to:

- (a) Searching for parts designated for use by SSDD Programs to verify their adequacy for the SSDD application, including qualification status, availability, and radiation susceptibility;
- (b) Identifying and evaluating potential substitute parts where the qualification listing and/or construction make contemplated parts questionable for SSDD applications;
- (c) Developing recommendations for qualification and/or high reliability processing programs where SSDD requirements indicate the need for reliability verification and/or improvement via screening and test;
- (d) Generating part Specification Control Drawings (SCDs) to control critical part parameters or to invoke special part processing and/or testing requirements;

(e) Performing vendor surveys and evaluating critical part manufacturers to ascertain their capability to provide parts consistent with SSDD reliability, performance and schedule requirements;

(f) Evaluating specific parts based on an analytical study of the construction of the devices using state-of-the-art dissection techniques, microphotography, Scanning Electron Microscopy (SEM) and Energy Dispersive Spectroscopy (EDS) and preparing formal reports of conclusions and recommendations upon completion;

(g) Interfacing with part vendors/manufacturers who require assistance in implementing SSDD requirements on process controls, manufacturing and test environments, and screening or qualification testing. Research, evaluation, selection, review and analyses results shall be presented as formal reports on each subject part;

(h) Generating Nonstandard Part Approval Requests (NSPARs) for those parts which cannot be identified as SSDD approved;

(i) Generating Candidate Parts Lists (CPLs) and documenting the results of subsystem/unit parts list reviews;

(j) Maintaining the Qualified Parts List (QPL), SSD-D-AS139;

(k) Maintaining the Parts Program Requirements and Guidelines document, SSD-D-AS214;

(l) Evaluating the characteristics of the operational radiation environment and recommending modifications to the specified hardness environment;

(m) Maintaining communications with the national radiation test network to obtain current information of tests and manufacturers process or technology revisions; and

(n) Conduct total dose radiation tests and Single Event Upset (SEU) susceptibility tests.

#### C.3.5.4 Subtask 5.4 - Material and Processing Engineering

The Contractor shall conduct a review of specific materials and processes contemplated for use by NRL. The Contractor shall evaluate materials for their suitability for use in the environment and for their intended application to determine any potential development constraints relating to toxicity, flammability and high vacuum atmospheric environment, specifically for minimization of Collected Volatile Condensable Materials (CVCM) and Total Mass Loss (TML). The Contractor shall conduct detailed material property analyses and process development efforts. Material property analyses shall define the applicability of the material in question for use of SSDD programs and, if necessary, determine and recommend acceptable substitutions. Process development efforts shall include evaluation of production techniques, process controls, handling procedures, and state-of-the-art applications for the control of part, assembly or system reliability. The Contractor shall document the results of material evaluations and process engineering efforts in formal reports which define the results and recommendations.

#### C.3.5.5 Subtask 5.5 - Failure Analysis

The Contractor shall perform failure analyses on parts, subassembly units and subsystems which are identified by NRL. Failure analyses shall be conducted to the extent necessary to determine the most probable cause(s) of failure, which may include analyses ranging from a simple witnessing or deduction of the cause of failure to a comprehensive analysis of the failed hardware. The Contractor shall determine the appropriate failure analysis approach using such evaluation techniques as (a) radiographic examination, (b) micro probing, (c) dissection, (d) cross sectioning, (e) decapsulation, (f) SEM, (g) plasma etching, (h) EDS, or other tests as necessary to isolate the failure mechanism. The Contractor shall document the comprehensive failure analyses in formal failure analysis reports in accordance with the requirements of SSDD Document STC-D-008, Failure Reporting Analysis and Corrective Action, the results of which shall be submitted in accordance with DD Form 1423, CDRL A004, Failure Analysis.

(a) Failure Analysis Engineering - The Contractor shall evaluate failures, troubles and/or malfunctions that are directly related to the design and test program. The purpose of this requirement is to assure that all failures observed are reported, evaluated from the reliability and operational viewpoints, analyzed, and then acted upon. The Contractor shall also evaluate design changes which may prevent recurrence of the failure mode and, therefore, improve system reliability.

(b) Corrective Action/Closeout - The Contractor shall provide the results of failure analysis engineering efforts to NRL for processing through the SSDD Failure Reporting and Corrective Action (FRACA) system to facilitate closeout of the corrective action.

#### C.3.5.6 Subtask 5.6 - Facility Systems Effectiveness Support

The Contractor shall study, evaluate, recommend and implement improvements to enhance productivity and quality of the development work being performed in the NRL fabrication, design and test facilities.

### C.3.6 TASK 6 - FABRICATION ACTIVITIES

The Contractor shall perform packaging design, material acquisition and control, fabrication and assembly, quality assurance, and acceptance test for units of the various SSDD spacecraft and aerospace systems.

#### C.3.6.1 Subtask 6.1 - Packaging Design

The Contractor shall employ NRL-provided design documentation (e.g., schematic diagrams and parts lists) to perform the packaging design and layout efforts necessary to fabricate both PWB housings and other machined items which are necessary to assemble the PWBs and units. The Contractor shall provide electrical design engineering effort to the packaging design task and shall coordinate all efforts under this subtask closely with SSDD.

The Contractor shall analyze PWB and housing designs to verify conformance with SSDD-specified thermal and dynamic environment and design margin criteria. The Contractor shall place special emphasis on packaging design considerations directed toward achievement of stringent EMI/EMC objectives. The Contractor shall guarantee that all contractor-generated design documentation (including assembly drawings and machined items detailed drawings) (a) shall conform to engineering drawing practices per ANSI standards, and (b) shall be controlled in accordance with the SSDD Hardware Configuration Management Plan, Document No. SSD-D-005, and applicable program-specific CM requirements.

#### C.3.6.2 Subtask 6.2 - Material Acquisition and Control

The Contractor shall acquire the specialized parts, components and chassis to fabricate space and aerospace units and systems. The Contractor (a) shall inspect, test and document that the materials conform with approved standards, and (b) shall maintain these records so that specific parts electrical test performance can be recalled for future evaluation. The Contractors purchasing system shall be approved by DCMAO.

The Contractor shall maintain accepted material in segregated and controlled stores with traceability to the acquisition records, the design revision level and the inspection results. The Contractor shall also provide kitting and other material control functions including packaging and shipment of individual material items and/or material lots requested by the COR. Kitting shall also be accomplished in conformance with SSDD forward-traceability requirements as specified by SSD-D-AS214, SSD-D-AS303 and other applicable program requirements.

#### C.3.6.3 Subtask 6.3 - Fabrication and Assembly

The Contractor shall perform manufacturing operations necessary for production of NRL space and aerospace units and systems. The Contractors manufacturing process shall be in compliance with SSD-D-AS139, Qualified Parts List; SSD-D-AS344, Electromagnetic Compatibility Plan; and product assurance/quality assurance documents including MIL-STD-2000, STC-D-0001, and SSD-D-AS303. All manufacturing processes shall be fully documented and formally controlled to assure consistent results.

**C.3.7 TASK 7 - DEMONSTRATIONS AND EXPERIMENTS**

The Contractor shall perform Advanced Technology Demonstrations (ATD), Advanced Concept Technology Demonstrations (ACTD), Advanced Warfighting Experiments, and other exercises as directed by the COR. The Contractor shall design experimental prototype systems, transport them to demonstrations, and operate the systems in the field. The Contractor shall generate reports detailing the effectiveness of the experimental systems at the exercise and make recommendations on possible improvements, which shall be submitted in accordance with DD Form 1423, CDRL A004, Experiment Reports.

**ATTACHMENT 1.2:**  
**WORKFORCE REQUIREMENTS**

GENERAL:

As stated previously (See Section L.12), the Government estimates that approximately 980,000 labor hours will be required across the 60-month period of performance. The yearly hourly usage will generally be spread evenly over each year of the contract. It is anticipated that the following labor categories will be required under any resulting contract: (a) Project Manager, (b) Senior Engineer, (c) Senior Systems Analyst, (d) Engineer, (e) Computer Scientist, (f) Senior Computer Scientist, (g) Technician, (h) Documentation Specialist, (i) Reliability Engineer, and (j) Clerical. The following paragraphs address educational and experience requirements and describe typical duties required for each of the labor categories listed above.

**(1) PROJECT MANAGER**

(a) Educational Requirements - The Project Manager shall as a minimum possess a Bachelors degree from a school of engineering with at least one curriculum accredited by the Accreditation Board for Engineering and Technology (ABET) as a profession engineering curriculum; or a combination of college-level education, training **or** technical experience that clearly indicates (1) a demonstrable knowledge and skill to develop, schedule, coordinate, and implement effective state-of-the-art system satellite programs, and (2) a demonstrable understanding of both theoretical and practical engineering sciences and techniques and their applications to one of the branches of engineering. The Government prefers that the applicant possess current registration as a professional engineering in any State, the District of Columbia, Guam or Puerto Rico **or** a Masters degree in Engineering Management or Business Administration.

(b) Experience - The Program Manager shall possess a minimum of ten (10) years of demonstrable relevant experience in managing and directing technical efforts of this scope and magnitude. The Government desires experience in the management of major spacecraft flight systems.

(c) Typical Duties - The Project Manager shall serve as the Contractors overall manager on this development effort, and shall act as the single point of contract with the Governments Contracting Officer and the Contracting Officer's Representative (COR). The Project Managers responsibilities shall include, but may not be limited to, formulating and enforcing work standards, assigning schedules, reviewing work discrepancies, and communicating policies, purposes, and goals of the organization to subordinates. The Project Managers primary purpose is to ensure effective contract performance, therefore, the Project Manager may not serve in any other capacity under this contract.

**(2) SENIOR ENGINEER**

(a) Educational Requirements - Each Senior Engineer shall, as a minimum, possess a Bachelor=s degree from a school of engineering with at least one curriculum accredited by the Accreditation Board for Engineering and Technology (ABET) as a professional engineering curriculum; or a combination of college-level education, training and technical experience that clearly reveals (1) a demonstrable knowledge of the physical and mathematical sciences underlying professional engineering, and (2) a demonstrable understanding of both theoretical and practical engineering sciences and techniques and their applications to one of the branches of engineering. The Government prefers that the applicant possess current registration as a professional engineering in any State, the District of Columbia, Guam or Puerto Rico or a Masters degree in Engineering.

(b) Experience - Each Senior Engineer shall possess a minimum of eight (8) years of demonstrable relevant experience in working on technical efforts involving the development, fabrication, test, operation, and documentation of spacecraft systems.

(c) Typical Duties - Senior Engineer(s) shall resolve engineering development problems by the application of (a) physical and engineering sciences and mathematics, (b) system development and integration principles, and (c) the principles, techniques and practices of engineering. Work for Senior Engineer(s) shall primarily pertain to (1) assessing and demonstrating the effectiveness of new concepts and ideas for equipment in achieving particular mission goals; (2) formulating overall design concepts and criteria which establish the baseline for advancement of state-of-the-art engineering developments; (3) reviewing and assessing overall progress in the development effort; and (4) resolving technical difficulties which can be overcome by changes in characteristics, approach, criteria, and requirements. Senior Engineer(s) shall provide technical direction to lower level engineers.

**(3) SENIOR SYSTEMS ANALYST**

(a) Educational Requirements - Each Senior Systems Analyst shall, as a minimum, possess a Bachelors in engineering, mathematics, computer science, physics, or a related technical discipline. Each Senior Systems Analyst shall possess a demonstrable knowledge of the theoretical and practical applications of technology related to the resolution of issues involving space system development and operation.

(b) Experience - Each Senior Systems Analyst shall possess a minimum of eight (8) years of demonstrable relevant experience in working on technical efforts involving the development, fabrication, test, operation, and documentation of spacecraft systems.

(c) Typical Duties - Senior Systems Analyst(s) shall work independently, or only under general direction, on complex application problems involving all phases of systems analysis, and shall provide problem solutions. Senior Systems Analyst(s) shall provide technical or administrative direction for personnel performing development tasks, which shall include, but may not be limited to, (1) the review of work products for correctness, (2) adherence to design concepts, and (3) users standards for progress in accordance with schedules. Senior Systems Analyst(s) coordinate with the Project Manager to assure that problems are solved and users are satisfied. Senior Systems Analyst(s) shall provide technical direction to lower level engineers.

(4) **ENGINEER:**

(a) Educational Requirements - Each Engineer shall, as a minimum, possess a Bachelor's degree from a school of engineering with at least one curriculum accredited by the Accreditation Board for Engineering and Technology (ABET) as a professional engineering curriculum; or a combination of college-level education, training and technical experience that clearly reveals (1) a demonstrable knowledge of the physical and mathematical sciences underlying professional engineering, and (2) a demonstrable understanding of both theoretical and practical engineering sciences and techniques and their applications to one of the branches of engineering. The Government prefers that the applicant possess current registration as a professional engineering in any State, the District of Columbia, Guam or Puerto Rico or a Masters degree in Engineering.

(b) Experience - Each Engineer shall possess a minimum of three (3) years of demonstrable relevant experience working on efforts of similar technical difficulty as those described in the work statement herein.

(c) Typical Duties - Engineer(s) shall apply knowledge of (1) physical and engineering sciences and mathematics, (2) electrical phenomenon, and (3) the principles, techniques and practices of engineering, to resolve technical problems. The Engineer(s) work primarily pertains to electrical circuits, electrical elements, equipment, systems, mechanical structures and associated phenomena concerned with electromagnetic, thermal, mechanical, or acoustic energy. Engineer(s) also use information from sensors and test equipment for communication, computation, sensing, control, measurement and navigation. Engineer(s) receive technical direction from one or more senior individuals.

(5) **TECHNICIAN:**

(a) Educational Requirements - Each Technician shall, as a minimum possess a high school diploma with five years of demonstrable relevant experience.

(b) Typical Duties - Technician(s) shall analyze data, investigate the properties of materials, study operating characteristics and performance of components under various environmental conditions, study the interaction of components and consider the planned use and maintenance of the item being designed. Technicians shall systematically apply their knowledge and experience to develop new and substantially improved equipment, systems, materials, processes, techniques and procedures which will perform useful functions or be suitable for particular duties. Technician(s) typically work under the general supervision of engineers and other senior individuals.

**(6) DOCUMENTATION SPECIALIST:**

(a) Educational Requirements - Each Documentation Specialist shall, as a minimum, possess an Associates degree in engineering, mathematics, computer science, or a related technical discipline.

(b) Experience - Each Documentation Specialist shall, as a minimum, possess two (2) years of demonstrable relevant experience in performing configuration management activities with both hardware and software on major development efforts. The Government desires that proposed Documentation Specialist(s) held a Certified Configuration Specialist certificate from the American Defense Preparedness Association.

(c) Typical Duties - Documentation Specialist(s) shall be familiar with the identification, control, status accounting, and audit and review requirements of EIA/IS-649 entitled Configuration Management. Documentation Specialist(s) shall be knowledgeable of management controls and shall understand the implementation and measurement of controls to provide configuration management and document generation functions for the Project Manager. Documentation Specialist(s) shall assist with the identification of configuration items; ensure that baselines are changed only through the proper configuration control process; perform status reporting; support audits and reviews; and generate/distribute minutes in a timely fashion to identify areas of concern and to track action items that may have been assigned during meetings. Documentation Specialists are able to use both manual and automated techniques in the performance of all required tasks.

**(7) RELIABILITY ENGINEER:**

(a) Educational Requirements - Each Reliability Engineer shall, as a minimum, possess a Bachelors degree in engineering, mathematics, physics, or a related technical discipline. The Government desires Reliability Engineers who possess a Masters degree in one of the technical disciplines referenced above.

(b) Experience - Each Reliability Engineer shall, as a minimum, possess five (5) years of demonstrable experience in performing reliability, maintainability and failure analysis on a wide variety of analog and digital hardware. The Government desires Reliability Engineers who possess experience in performing the referenced analyses on equipment which will be used in low earth orbiting satellite (e.g., operating in a vacuum environment with temperature variations and radiation levels significantly higher than encountered in normal earth-borne practice).

(c) Typical Duties - Reliability Engineer(s) perform mathematical functions and simulations on circuit designs, packaging designs, and thermal designs to determine their inherent reliability, maintainability, and availability. Reliability Engineer(s) review parts lists, test plans, specifications and other documents to ensure a consistent design package which meets environmental and reliability requirements. Reliability Engineer(s) also make recommendations in design, parts selection and testing methodology to improve system performance characteristics, overall reliability and producibility. Reliability Engineers receive technical direction from more senior individuals.

**(8) SOFTWARE ENGINEER:**

(a) Educational Requirements – Each Software Engineer shall, as a minimum, possess a Bachelors degree in an appropriate technical field such as computer science or mathematics.

(b) Experience – Each Software Engineer shall, as a minimum, possess at least one (1) year of demonstrable engineering experience. Each Software Engineer shall be familiar with software engineering methodologies, processes and practices with specific working knowledge of the FORTRAN, C, and C++ programming languages. Each Software Engineer shall also possess demonstrable domain experience in aerospace, space technologies, command and control systems, embedded systems, ground stations test systems, or avionics systems.

(c) Typical Duties – Software Engineer shall perform entry-level software development and routine programming efforts which primarily involve high-level language coding tasks as part of a team. Limited exercise of judgement is required on either work details or in preliminary selection and adaptation of coding alternatives. Most assignments will be designed to develop professional work knowledge and may include some work that is typical of a higher level. Software Engineer usually work under close supervision and receive detailed instructions concerning tasks to be performed and expected results.

(9) **SENIOR SOFTWARE ENGINEER:**

(a) Educational Requirements - Each Senior Software Engineer shall, as a minimum, possess a Bachelors degree in an appropriate technical field such as computer science or mathematics. Possession of an advanced technical degree is desirable.

(b) Experience - Each Senior Software Engineer shall, as a minimum, possess at least six (6) years of demonstrable engineering experience. Each Senior Software Engineer shall be familiar with software engineering methodologies, processes and practices with specific working knowledge of the FORTRAN, C, and C++ programming languages. Each Senior Software Engineer shall also possess demonstrable domain experience in aerospace, space technologies, command and control systems, embedded systems, ground stations test systems, or avionics systems.

(c) Typical Duties - Senior Software Engineer shall (1) perform mid-level software development, (2) perform routine programming work which primarily involves high-level language coding tasks as a part of a team, and (3) exercise judgement on details of work and in making preliminary selections and adaptations of coding alternative. Most assignments are typical of a higher level. Senior Software Engineer usually work under limited supervision and receive minimal instructions concerning tasks to be performed and expected results.

(10) **CLERICAL**

(a) Educational Requirements - High School diploma, GED, or equivalent life experience.

(b) Typical Duties - Clerical workers shall perform administrative and clerical tasks, which shall include, but may not be limited to, word processing, filing, documentation support, and illustration in support of technical efforts.

# CONTRACT DATA REQUIREMENTS LIST

(2 Data Items)

Form Approved  
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 220 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, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. 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> 0001AB, 0001AC, 0001AD		<b>B. EXHIBIT</b> Attachment 1.3		<b>C. CATEGORY:</b> TOP _____ TM _____ OTHER _____			
<b>D. SYSTEM / ITEM</b>			<b>E. CONTRACT / PR NO.</b> N00173-98-R-RS02		<b>F. CONTRACTOR</b> To Be Determined at Time of Award		
<b>1. DATA ITEM NO.</b> A001	<b>2. TITLE OF DATA ITEM</b> Cost/Performance/Business Reports			<b>3. SUBTITLE</b>			
<b>4. AUTHORITY (Data Acquisition Document No.)</b>			<b>5. CONTRACT REFERENCE</b> Section C - Attachment 1.1		<b>6. REQUIRING OFFICE</b> NRL Code 8101.1		
<b>7. DD 250 REQ</b> LT	<b>8. DIST STATEMENT REQUIRED</b>	<b>10. FREQUENCY</b> See Blk. 16	<b>12. DATE OF FIRST SUBMISSION</b> See Blk. 16	<b>14. DISTRIBUTION</b>			
<b>8. APP CODE</b>	<b>11. AS OF DATE</b> See Blk. 16	<b>13. DATE OF SUBSEQUENT SUBMISSION</b> See Blk. 16	<b>15. TOTAL</b> →				<b>a. ADDRESSEE</b>
<b>16. REMARKS</b> The Contractor shall provide Business Reports, which shall include, but may not be limited to: ** FINANCIAL REPORTS ** CONTRACT WORK BREAKDOWN STRUCTURE REPORTS  ** Block 12 and 13: As required under each Task Order (TO) and in accordance with T.O. Statement of Work.  (See Enclosure (3) to Attachment 1.3 for Specific Reporting Requirements)				COR 8101.1	Draft	Final	
				ACO (trx. letter only)	Reg	Repro	
<b>1. DATA ITEM NO.</b> A002				<b>2. TITLE OF DATA ITEM</b> Final Reports		<b>3. SUBTITLE</b>	
				<b>4. AUTHORITY (Data Acquisition Document No.)</b>			<b>5. CONTRACT REFERENCE</b> Contract Section B and C
<b>7. DD 250 REQ</b> DD 250**	<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> N/A	<b>15. TOTAL</b> →				<b>a. ADDRESSEE</b>
<b>16. REMARKS</b> A final report is defined as a scientific or technical report which summarizes all work accomplished under the task order or contract. Reprints of published articles may be acceptable as technical reports with the concurrence of the COR.  * - DD 250 required only for acceptance by the COR designated in Section G. ** - As required under each task order, and in accordance with T.O. statement of work.  Final reports shall be distributed in accordance with Enclosure (1) to Attachment 1.3.				COR Code 8101.1	Draft	Final	
				ACO (trx. letter only)	Reg	Repro	
<b>G. PREPARED BY</b> Richard D. Sewell			<b>H. DATE</b> 26 MAR 98	<b>I. APPROVED BY</b>		<b>J. DATE</b>	

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

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

# CONTRACT DATA REQUIREMENTS LIST

(2 Data Items)

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<b>A. CONTRACT LINE ITEM NO.</b> 0001AB, 0001AC, 0001AD			<b>B. EXHIBIT</b> Attachment 1.3		<b>C. CATEGORY:</b> TDP _____ TM _____ OTHER _____			
<b>D. SYSTEM / ITEM</b>			<b>E. CONTRACT / PR NO.</b> N00173-98-R-RS02		<b>F. CONTRACTOR</b> (To Be Determined at Time of Award)			
<b>1. DATA ITEM NO.</b> A003	<b>2. TITLE OF DATA ITEM</b> Computer-Based Deliverables				<b>3. SUBTITLE</b>			
<b>4. AUTHORITY (Data Acquisition Document No.)</b>			<b>5. CONTRACT REFERENCE</b> Contract Sections B and C		<b>6. REQUIRING OFFICE</b> NRL Code 8101.1			
<b>7. DD 250 REQ</b> LT	<b>8. DIST STATEMENT REQUIRED</b>	<b>10. FREQUENCY</b> ASREQ	<b>12. DATE OF FIRST SUBMISSION</b> See Blk. 16		<b>14. DISTRIBUTION</b>			
<b>9. APP CODE</b>		<b>11. AS OF DATE</b> See Blk. 12	<b>13. DATE OF SUBSEQUENT SUBMISSION</b> See Blk. 16		<b>a. ADDRESSEE</b>	<b>b. COPIES</b>		
				Draft		Final Reg    Repr		
<b>16. REMARKS</b>  The Contractor shall provide computer-based deliverables which shall include, but may not be limited to: software, databases, models, computer simulations, algorithms, programs, documentation, instructions, computer-generated drawings and designs, and source code. This documentation shall be provided on both electronic and hard-copy media.  Block 12 & 13: As required under each Task Order and in accordance with (IAW) Task Order Statement of Work.  Deliverables under this data item shall be delivered to the address provided in Contract Section F.2 unless otherwise directed in individual task orders.					COR Code 8101.1		1	2
					ACO (trx. letter only)			
<b>15. TOTAL</b> →							1	2
<b>1. DATA ITEM NO.</b> A004			<b>2. TITLE OF DATA ITEM</b> Technical Reports		<b>3. SUBTITLE</b>			
<b>4. AUTHORITY (Data Acquisition Document No.)</b>			<b>5. CONTRACT REFERENCE</b> Contract Sections B and C		<b>6. REQUIRING OFFICE</b> NRL Code 8101.1			
<b>7. DD 250 REQ</b> DD	<b>8. DIST STATEMENT REQUIRED</b>	<b>10. FREQUENCY</b> ASREQ	<b>12. DATE OF FIRST SUBMISSION</b> See Blk. 16		<b>14. DISTRIBUTION</b>			
<b>9. APP CODE</b>		<b>11. AS OF DATE</b> See Blk. 12	<b>13. DATE OF SUBSEQUENT SUBMISSION</b> See Blk. 16		<b>a. ADDRESSEE</b>	<b>b. COPIES</b>		
				Draft		Final Reg    Repr		
<b>16. REMARKS</b>  For the purpose of this document, "technical reports" shall include, but may not be limited to: program documentation, program briefings, development specs., interface control documents, program schedules, test plans, type B2 specs., software development specs., formal and informal technical reports, system design packages, integrated logistics support documents, RMA trade studies, reliability engineering reports, worst case analyses, failure analyses, experiment reports, recommendations, written specs., test plans, test observation reports, lists, concept papers, issue papers, manuals, operation documentation, technical reviews, problem resolution reports.  **-Blks. 12 & 13: As required under each T.O., IAW T.O. S.O.W. **-Blk. 16: Technical Reports shall be distributed IAW Encl. (1) to Atch. 1.3 **-See Encl. (3) to Atch. 1.3 for Specific Reporting Requirements					COR Code 8101.1		1	2
					ACO (trx. letter only)			
					<b>15. TOTAL</b> →			
<b>G. PREPARED BY</b> Richard D. Sewell			<b>H. DATE</b> 28 MAR 98	<b>I. APPROVED BY</b>		<b>J. DATE</b>		

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

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

# CONTRACT DATA REQUIREMENTS LIST

(2 Data Items)

Form Approved  
OMB No. 0704-0188

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<b>A. CONTRACT LINE ITEM NO.</b> 0001AB, 0001AC, 0001AD				<b>B. EXHIBIT</b> Attachment 1.3		<b>C. CATEGORY:</b> TDP _____ TM _____ OTHER _____					
<b>D. SYSTEM / ITEM</b>				<b>E. CONTRACT / PR NO.</b> N00173-98-R-RS02		<b>F. CONTRACTOR</b> (To be Determined at Time of Award)					
<b>1. DATA ITEM NO.</b> A005		<b>2. TITLE OF DATA ITEM</b> Technical Progress Reports				<b>3. SUBTITLE</b>					
<b>4. AUTHORITY (Data Acquisition Document No.)</b>				<b>5. CONTRACT REFERENCE</b> Contract Sections B and C		<b>6. REQUIRING OFFICE</b> NRL Code 8101.1					
<b>7. DD 250 REQ</b> LT		<b>8. DIST STATEMENT REQUIRED</b>		<b>10. FREQUENCY</b> See Blk. 16		<b>12. DATE OF FIRST SUBMISSION</b> See Blk. 16		<b>14. DISTRIBUTION</b>			
<b>8. APP CODE</b> AN		<b>11. AS OF DATE</b> See Blk. 12		<b>13. DATE OF SUBSEQUENT SUBMISSION</b> See Blk. 16		<b>a. ADDRESSEE</b>		<b>b. COPIES</b>			
										Draft	
								Reg		Repro	
<b>16. REMARKS</b>											
The Contract shall provide Technical Progress Reports which shall include, but may not be limited to: Monthly Status Reports, Milestone Charts, and Government-Furnished Equipment Reports.											
Block 10: As required under each individual Task Order											
Block 12: As required under each Task Order and in accordance with T.O. Statement of Work											
Deliverables under this data item shall be delivered to the address provided in Contract Section F.2 unless otherwise directed in individual Task Orders											
(** See Enclosure (3) to Attachment 1.3 for Specific Reporting Requirements)											
<b>15. TOTAL</b> →											
								1		2	

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

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

RFP NO: N00173-98-R-RS02  
Enclosure (1) to Attachment (1.3)

## INSTRUCTIONS FOR REPORT DISTRIBUTION

### DEFINITIONS

Final Technical Report: A final technical report is issued at the completion of the contract and will include (1) a summary of all work accomplished, with references to appropriate technical reports which provide details, (2) an index of all technical reports, and (3) an index of all publications.

Monthly Cost and Performance Reports: Non-technical, administrative report setting forth current progress, predictions and plans for reporting period, and information required in Enclosure Number 2.

### MINIMUM DISTRIBUTION

Technical Reports: The minimum distribution of technical reports and the final report submitted in connection with this contract is as follows:

ADDRESSEE	DODAAD CODE	NUMBER OF COPIES	
		UNCLASSIFIED/ UNLIMITED	CLASSIFIED/ LIMITED AND CLASSIFIED
Contracting Officer's Representative (COR) (See Section F.2)	N00173	1	1
Administrative Contracting Officer (ACO) (Block 6 SF 26)	(****)	1	1
Director, Naval Research Laboratory ATTN: Code 5227, Wash., DC 20375	N00173	1	1
Naval Research Laboratory - SSC, ATTN: Code 7035, SSC, MS 39529-5004	N00173	3	3

(NRL-SSC Code 7035 will provide the required number of copies to Defense Technical Information Center (DTIC)).

If the Contracting Officer directs, the Contractor shall make additional distribution of technical reports in accordance with a supplemental distribution list provided by the Contracting Officer. The supplemental distribution list shall not exceed 250 addresses.

Non-Technical Reports: The minimum distribution for non-technical reports submitted in connection with this contract is as follows:

ADDRESSEE	DODAAD CODE	NUMBER OF COPIES	
		UNCLASSIFIED/ UNLIMITED	CLASSIFIED/ LIMITED AND CLASSIFIED
COR	N00173	1	1
ACO	(****)	1	1

(\*\*\*\*) - To be provided at time of award

ENCLOSURE NUMBER 2 TO DD FORM 1423 (ATTACHMENT 1.3)  
CONTRACT DATA REQUIREMENTS LIST

1. INSTRUCTIONS FOR MONTHLY COST AND PERFORMANCE REPORTING REQUIREMENTS

This report shall specify:

1. Contract Number;
2. Reporting Period Covered by Report;
3. Total Amount Funded for Contract;
4. \*Total Amount Invoiced to Date;
5. \*Total Amount Invoiced for this Reporting Period ;
6. Estimated Cost to complete - with explanation if more than Total Amount Funded for Contract (See # 3, above);
7. Schedule Status - indicate if efforts are on schedule, or if not, indicate reason(s) for delay and how it affects final delivery;
8. Contractor hours expended on NRL property. This portion of the report shall include the following information: (a) employee name; (b) number of hours worked; and (c) specific contract task involved for each employee;
9. Technical Progress - brief narrative indicating technical progress made, significant accomplishments or meetings attended and/or participated in;
10. Briefs/Reports generated;
11. Travel Activity;
12. Plans for next month;
13. Technical problem areas and potential solutions.

\*This shall also include a breakdown by ACRNs prorated in proportion to the unliquidated balance.  
(See Section G.)

ENCLOSURE NUMBER 3 TO DD FORM 1423 (ATTACHMENT 1.3)  
CONTRACT DATA REQUIREMENTS LIST

1. SPECIFIC REPORTING REQUIREMENTS FOR CDRL A001 REPORTS

(A) Financial Reports:

In accordance with Contract Section C.3.1.2(c), the Contractor shall provide Financial Cost and Performance Reports on a monthly basis beginning on the 45th DAC and by the 20th day of each month thereafter. Format: In accordance with DID DI-F-6010A and shall include the information required in Enclosure (2) to DD Form 1423.

(B) Contract Work Breakdown Structure Reports:

In accordance with Contract Section C.3.1.2, the Contractor shall provide a Contract Work Breakdown Structure Report on a One Time with Revisions (One/R) basis on the 45th DAC with revisions submitted by the 20th day of each month, as applicable. C.O.R approval is required for the CWBS. Contractor shall maintain an up-to-date CWBS and shall submit updates to the COR for approval as revision occur.

2. SPECIFIC REPORTING REQUIREMENTS FOR CDRL A004 REPORTS

(A) Program Documentation:

In accordance with Contract Sections C.3.2.1(a)&(c) and C.3.2.4(h), the Contractor shall provide Program Documentation on an As Required basis. Format: Contractor's Format as approved by COR.

(B) Program Briefings:

In accordance with Contract Section C.3.2.1(b), the Contractor shall provide Program Briefings on an As Required basis. Briefings shall be provided within five (5) days of notification by the C.O.R., and shall include briefing packages in the same timeframe. Format: Contractor's Format as approved by COR.

(C) Development Specifications:

In accordance with Contract Section C.3.2.4(a), the Contractor shall provide Development Specifications on an As Required basis. Development specifications shall be delivered to the Code 8100 documentation center. Format: Contractor's Format as approved by COR.

(D) Interface Control Documents:

In accordance with Contract Section C.3.2.4(b), the Contractor shall provide Interface Control Documents on an As Required basis. Format: Contractor's Format as approved by COR.

(E) Program Schedules:

In accordance with Contract Section C.3.2.4(c), the Contractor shall provide Program Schedules on a quarterly basis beginning at the end of the first fiscal quarter after contract award and quarterly thereafter. Format: Contractor's Format as approved by COR.

(F) Test Plans:

In accordance with Contract Sections C.3.2.4(d) and C.3.4.2, the Contractor shall provide Test Plans on an As Required Basis. Format: Contractors Format as approved by COR.

(G) Type B2 Specifications:

In accordance with Contract Section C.3.2.4(e) and (f), the Contractor shall provide Type B2 Specifications on an As Required basis. Format: Contractors Format as approved by COR.

(H) Software Development Specifications:

In accordance with Contract Section C.3.2.4(g), the Contractor shall provide Software Development Specifications on an As Required basis. Format: Contractors format as approved by the COR.

(I) Technical Reports:

In accordance with Contract Section C.3.3.3, the Contractor shall provide Technical Reports on an As Required basis. Format: Contractors Format as approved by the COR.

(J) System Design Packages:

In accordance with Contract Section C.3.3.4, the Contractor shall provide System Design Packages on an As Required basis. Format: Contractors Format as approved by the COR.

(K) Integrated Logistics Support:

In accordance with Contract Section C.3.3.6, the Contractor shall provide Integrated Logistics Support documentation on an As Required basis. Format: Contractors Format as approved by the COR.

(L) RMA Trade Studies:

In accordance with Contract Section C.3.5.1, the Contractor shall provide Reliability, Maintainability and Availability Trade Studies on an As Required basis. Format: Contractors format as approved by the COR.

(M) Subsystem Reliability Engineering Reports:

In accordance with Contract Section C.3.5.1(a), the Contractor shall provide Subsystem Reliability Engineering Reports on an As Required basis. Format: Contractors Format as approved by the COR.

(N) Worst Case Analyses:

In accordance with Contract Section C.3.5.1(c), the Contractor shall provide Worst-Case Analyses on an As Required Basis. Format: Contractors Format as approved by the COR.

(O) Failure Analyses:

In accordance with Contract Section C.3.5.5, the Contractor shall provide Failure Analysis Reports on an As Required basis. Format: Contractors Format as approved by the COR.

(P) Experiment Reports:

In accordance with Contract Section C.3.7, the Contractor shall provide Experiment Reports describing performance and accomplishments at ATDs and ACTDs on an As Required basis. Format: Contractors Format as approved by the COR.

### 3. SPECIFIC REPORTING REQUIREMENTS FOR CDRL A005 REPORTS

(A) Milestone Charts:

In accordance with Contract Section C.3.1.2(a), the Contractor shall provide Milestone Charts on a monthly basis beginning 45 DAC and by the 20th day of each month thereafter. The Contractor shall prepare and present major project and task milestone charts which shall reflect the entire set of milestones for each assigned task. Format: Contractors Format as approved by the COR.

(B) Monthly Status Reports:

In accordance with Contract Section C.3.1.2(b), the Contractor shall provide Monthly Status Reports on a monthly basis beginning 45 DAC and by the 20th day of each month thereafter. Format: Contractors Format as approved by the COR.

(C) Government Furnished Equipment:

In accordance with Contract Section C.3.1.2(b), the Contractor shall provide status reports on Government Furnished Equipment on a quarterly basis beginning at the end of the first fiscal quarter after contract award and quarterly thereafter. Format: Contractors Format as approved by COR.

**DEPARTMENT OF DEFENSE  
CONTRACT SECURITY CLASSIFICATION SPECIFICATION**

*(The requirements of the DoD Industrial Security Manual apply to all security aspects of this effort.)*

**1. CLEARANCE AND SAFEGUARDING SER:005-98**

a. FACILITY CLEARANCE REQUIRED

**TOP SECRET**

b. LEVEL OF SAFEGUARDING REQUIRED

**SECRET**

**2. THIS SPECIFICATION IS FOR: (X and complete as applicable)**

**3. THIS SPECIFICATION IS: (X and complete as applicable)**

a. PRIME CONTRACT NUMBER		X	a. ORIGINAL (Complete date in all cases)	Date (YYMMDD) 980211
b. SUBCONTRACT NUMBER			b. REVISED (Supersedes all previous specs)	Revision No. Date (YYMMDD)
X	c. SOLICITATION OR OTHER NUMBER 81-0129-98	Due Date (YYMMDD)	c. FINAL (Complete Item 5 in all cases)	Date (YYMMDD)

**4. IS THIS A FOLLOW-ON CONTRACT?**  YES  NO. If Yes, complete the following:  
Classified material received or generated under \_\_\_\_\_ (Preceding Contract Number) is transferred to this follow-on contract.

**5. IS THIS A FINAL DD FORM 254?**  YES  NO. If Yes, complete the following:  
In response to the contractor's request dated \_\_\_\_\_, retention of the identified classified material is authorized for the period of \_\_\_\_\_

**6. CONTRACTOR (Include Commercial and Government Entity (CAGE) Code)**

a. NAME, ADDRESS, AND ZIP CODE	b. CAGE CODE	c. COGNIZANT SECURITY OFFICE (Name, Address, and Zip Code)
FOR RFP PURPOSES ONLY, NOT VALID FOR ACTUAL CONTRACT AWARD		

**7. SUBCONTRACTOR**

a. NAME, ADDRESS, AND ZIP CODE	b. CAGE CODE	c. COGNIZANT SECURITY OFFICE (Name, Address, and Zip Code)
N/A		N/A

**8. ACTUAL PERFORMANCE**

a. LOCATION	b. CAGE CODE	c. COGNIZANT SECURITY OFFICE (Name, Address, and Zip Code)
N/A		N/A

**9. GENERAL IDENTIFICATION OF THIS PROCUREMENT**  
  
CONTINUATION OF SPACE/AEROSPACE SYSTEMS IMPLEMENTATION

10. THIS CONTRACT WILL REQUIRE ACCESS TO:	YES	NO	11. IN PERFORMING THIS CONTRACT, THE CONTRACTOR WILL:	YES	NO
a. COMMUNICATIONS SECURITY (COMSEC) INFORMATION	X		a. HAVE ACCESS TO CLASSIFIED INFORMATION ONLY AT ANOTHER CONTRACTOR'S FACILITY OR A GOVERNMENT ACTIVITY		X
b. RESTRICTED DATA		X	b. RECEIVE CLASSIFIED DOCUMENTS ONLY		X
c. CRITICAL NUCLEAR WEAPON DESIGN INFORMATION		X	c. RECEIVE AND GENERATE CLASSIFIED MATERIAL	X	
d. FORMERLY RESTRICTED DATA		X	d. FABRICATE, MODIFY, OR STORE CLASSIFIED HARDWARE		X
e. INTELLIGENCE INFORMATION:			e. PERFORM SERVICES ONLY		X
(1) Sensitive Compartmented Information (SCI)		X	f. HAVE ACCESS TO U.S. CLASSIFIED INFORMATION OUTSIDE THE U.S., PUERTO RICO, U.S. POSSESSIONS AND TRUST TERRITORIES		X
(2) Non-SCI		X	g. BE AUTHORIZED TO USE THE SERVICES OF DEFENSE TECHNICAL INFORMATION CENTER (DTIC) OR OTHER SECONDARY DISTRIBUTION CENTER		X
f. SPECIAL ACCESS INFORMATION		X	h. REQUIRE A COMSEC ACCOUNT	**X	
g. NATO INFORMATION		X	i. HAVE TEMPEST REQUIREMENTS		X
h. FOREIGN GOVERNMENT INFORMATION		X	j. HAVE OPERATIONS SECURITY (OPSEC) REQUIREMENTS		X
i. LIMITED DISSEMINATION INFORMATION		X	k. BE AUTHORIZED TO USE THE DEFENSE COURIER SERVICE		X
j. FOR OFFICIAL USE ONLY INFORMATION		X	l. OTHER (Specify) Classified Automated Information System Processing.	X	
k. OTHER (Specify)			*SECURE VOICE CAPABILITY		

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 8101.1.

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.)

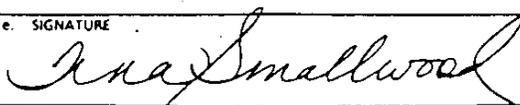
Access to classified information is not required for the purpose of submitting a bid/proposal for this statement of work. However, prior to award of contract, the successful contractor will be required to have a TOP SECRET facility clearance, SECRET storage capabilities, and personnel available with 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. (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.)  Yes  No

15. INSPECTIONS. Elements of this contract are outside the inspection responsibility of the cognizant security office. (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.)  Yes  No

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. TITLE	c. TELEPHONE (Include Area Code)
TINA SMALLWOOD	Contracting Officer, Security	(202)767-2240/2521

d. ADDRESS (Include Zip Code)	17. REQUIRED DISTRIBUTION
Naval Research Laboratory	
Washington, DC 20375-5320	
e. SIGNATURE	
	

<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, 8101.1, 1221.4, 8102

**ATTACHMENT 1.5:**  
**GOVERNMENT FURNISHED EQUIPMENT/FACILITIES**

DESCRIPTION	MODEL	QUANTITY
RADIO COMMUNICATIONS TEST SET, W/SINGARS APPLIQUE UNIT & RADIO PERSONALITY MODULE	1600-3	2
RF AMPLIFIER W/DC POWER CORD		1
COMPLIER/ASSEMBLER/LINKER	TK3602	1
CROSSVIEW DEBUGGER	TK3649	1
LAPTOP COMPUTER, COMPAQ PENTIUM ARMADA W/CARRYING CASE AND ETHERNET ADAPTER	1585 DMT 7807768A	1
BASE UNIT C4K TRACE BUFFER	8800-6	1
EMULATOR ANALYZER POD	81301-4	1
DEVELOPMENT SYSTEM FOR MOT DSP	LINK-56K-H	2
VECTOR SIGNAL ANALYZER W/RF SEGMENT	HP89441A	1
WINBOOK IBM COMPATABLE PORTABLE COMPUTER	XP 486 DX4-75MHZ	1
WINBOOK XP LAPTOP W/DOCKING STATION, MODEM TOUCHPAD	ANL-4/D-2	1
PAPER SHREDDER	142403	1
LOGIC ANALYZER W/UPGRADE	3002CGH	1
PARTS CABINET	119-881	2
CABINET AKRO	119-759	1
COMPAQ LTE W/6X CD ROM & PCMCIA FAX MODEM	5300	1
DIGITAL TRANSMISSION ANALYZER		1

TTL LAB INTERFACE		1
SIGNAL GENERATOR	HP8665A	1
8800 64K TRACE	8800-6	1
8800 POD+	81301-4	1
HORIZON OMNI VHF RADIO	GX2341B	3
CANNON PLAIN PAGER FAX MACHINE	B640	1