

<b>SOLICITATION, OFFER AND AWARD</b>		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)		RATING DO-C9	PAGE OF PAGES 1 28
2. CONTRACT NUMBER	3. SOLICITATION NUMBER N00173-05-R-MS07	4. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)		5. DATE ISSUED 12/02/05	6. REQUISITION/PURCHASE NUMBER 67-0726-05
7. ISSUED BY Naval Research Laboratory Contracting Division, Code 3230.MS 4555 Overlook, Ave. SW Washington, DC 20375-5326		CODE N00173	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 3 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. 222 Rm. 115 until 3:00 pm local time 01/11/06  
(Hour) (Date)

CAUTION - LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-1. All offers are subject to all terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL:	A. NAME Mary M. Sandy	B. TELEPHONE (NO COLLECT CALLS)		C. E-MAIL ADDRESS mary.sandy@nrl.navy.mil
		AREA CODE 202	NUMBER 767-2021	EXT.

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

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

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

13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52.232-8)

<input type="checkbox"/>	10 CALENDAR DAYS (%)	<input type="checkbox"/>	20 CALENDAR DAYS (%)	<input type="checkbox"/>	30 CALENDAR DAYS (%)	<input type="checkbox"/>	CALENDAR DAYS (%)
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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 NUMBER AREA CODE/NUMBER EXT.	<input type="checkbox"/> 15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE.	17. SIGNATURE	18. OFFER DATE
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**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)	ITEM
24. ADMINISTERED BY (If other than Item 7) CODE		25. PAYMENT WILL BE MADE BY	CODE

26. NAME OF CONTRACTING OFFICER (Type or print)	27. UNITED STATES OF AMERICA  (Signature of Contracting Officer)	28. AWARD DATE
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## **IMPORTANT NOTICE**

**The U.S. Postal Service continues to irradiate letters, flats, Express and Priority Mail with stamps for postage and other packages with stamps for postage destined to government agencies in the ZIP Code ranges 202 through 205.**

**Mail that is irradiated may exhibit a discolored (tan-colored) quality, as well as be brittle, show spots on envelopes and make address labels unreadable. Irradiation may destroy electronic format materials provided on computer discs. Customers and businesses sending mail to ZIP Codes 202-205 can avoid the irradiation process by affixing postage meter strips or permit indicia instead of postage stamps to Express or Priority Mail. The use of corporate accounts for Express Mail or registered mail also is another way to avoid the irradiation process.**

**Due to potential delays in receiving mail and potential for receipt of damaged computer discs, offerors are encouraged to use alternatives to the mail when submitting proposals.**

**This solicitation contains the provision at FAR 52.215-5 which authorizes facsimile proposals. Offerors are encouraged to use alternatives to the mail when submitting proposals.**

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

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

ITEM NUMBER	SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	ESTIMATED COST PLUS FIXED FEE
0001	The Contractor shall perform services involving advanced research in pulsed and plasma physics as described in Section C-1.	\$	\$	\$
0002	Data in accordance with Exhibit A (DD 1423)	* NSP	* NSP	* NSP
TOTAL ESTIMATED COST PLUS FIXED FEE			\$	\$

\* *Not Separately Priced*

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

SECTION C  
DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK

**C-1 STATEMENT OF WORK**

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

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

For those portions of the work under this contract performed at any NRL site, the contractor shall comply with the Requirements for On-Site Contractors dated 30 July 2004 which are hereby incorporated by reference. The full text is available at <http://heron.nrl.navy.mil/contracts/home.htm>.

**C-3 SUBCONTRACTING PLAN**

Subcontracting Plan \_\_\_\_\_ dated \_\_\_\_\_ is hereby incorporated by reference and made a material part of this contract.

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

**SECTION D  
PACKAGING AND MARKING**

**D-1 PACKAGING AND MARKING**

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

**SECTION E  
INSPECTION AND ACCEPTANCE**

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

- |          |   |  |
|----------|---|--|
| 52.246-3 | - | Inspection Of Supplies- Cost Reimbursement (MAY 2001)          |
| 52.246-5 | - | Inspection Of Services - Cost Reimbursement (APR 1984)         |
| 52.246-9 | - | Inspection Of Research And Development (Short Form) (APR 1984) |

DFARS CLAUSE    TITLE

- |              |   |   |
|--------------|---|---|
| 252.246-7000 | - | Material Inspection And Receiving Report (MAR 2003) |
|--------------|---|---|

**E-2 INSPECTION AND ACCEPTANCE**

Inspection and acceptance of the final delivery will be accomplished by the Technical Manager (TM) or Contracting Officer Representative (COR) designated in Section G of this contract. Inspection and acceptance will be performed at the Naval Research Laboratory, Washington DC 20375-5320. Constructive acceptance, in accordance with FAR 32.904, shall be deemed to have occurred on the day after the final delivery.

**SECTION F  
DELIVERIES OR PERFORMANCE**

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

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

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

(a) The term of this contract is from date of award through 12 months four (4) options that will extend the period of performance for an additional 12 months each, if exercised.

(b) The principal place of performance of this contract shall be the Naval Research Laboratory, Washington, DC.

**SECTION G  
CONTRACT ADMINISTRATION DATA**

**G-1 PROCURING OFFICE REPRESENTATIVE**

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

Security Matters- Contracting Officer for Security, Code 1221, (202) 767-2240, DSN 297-2240, email security-group@nrl.navy.mil

Safety Matters- Head Safety Branch, Code 3540, (202) 767-2232, DSN 297-2232, email safety@nrl.navy.mil

Patent Matters-Associate Counsel (Intellectual Property), Code 1008.2, (202) 404-1552, DSN 297-1552, email patents@nrl.navy.mil

Release of Data-Public Affairs Officer, Code 1030 (202) 767-2541, DSN 297-2541, email publicaffairs@nrl.navy.mil

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

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

( \* To be completed at time of award )

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

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

**G-4 CONTRACTOR-ACQUIRED PROPERTY**

- (a) The contractor is authorized to acquire the following items of facilities, which are needed to accomplish this contract.

Items to be Acquired

Estimated Cost

\*

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

(b) This authorization does not constitute any consent required pursuant to the contract clause entitled "Subcontracts" (FAR 52.244-2). Advance notification or requests for consent pursuant to that clause shall be directed to the administrative contracting officer (ACO).

(c) Pursuant to the contract clause entitled "Government Property (Cost-Reimbursement, Time-and-Material, or Labor-Hour Contracts)" (FAR 52.245-5), title to the property shall vest in the Government.

(d) Prior to acquisition of any item of Industrial Plant Equipment, the Contractor must comply with the requirements of Department of Defense Federal Acquisition Regulation Supplement (DFARS 245.302-1(b)(1)(A). (See DFARS 245.301 for definition of "Industrial Plant Equipment.")

**G-5 SUBCONTRACTORS/CONSULTANTS**

(a) Advance notification or requests for consent pursuant to the contract clause entitled "Subcontracts" (FAR 52.244-2) shall be directed to the cognizant administrative contracting officer (ACO).

(b) The following subcontractors/consultants have been identified in the Contractor's proposal as necessary for performance of this contract:

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

**G-6 INCREMENTAL FUNDING**

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

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

**G-7 INFORMATIONAL SUBLINE ITEMS**

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

**G-8 SPECIAL PAYMENT INSTRUCTIONS- MULTIPLE ACCOUNTING CLASSIFICATION CITATIONS (COST-REIMBURSEMENT)**

Payments shall be made in accordance with the ACRN(s) cited on the contractor's invoice. The Contractor may contact the COR regarding which ACRN(s) to cite on an invoice.

**G-9 PAYMENT AND VOUCHER INSTRUCTIONS**

In accordance with the contract clause, *Electronic Submission of Payment Requests* (DFARS 252.232-7003), the contractor must submit requests for payment electronically.

If the contractor uses the Wide Area Workflow (WAWF), it may be accessed at its homepage <https://wawf.eb.mil/>. If the contractor has not registered with WAWF, instructions for doing so may be accessed at: <https://wawf.eb.mil/vreg.htm>

The following information is applicable to vouchers submitted under this contract using WAWF:

Under "Create New Document" select "Public Voucher". When you enter the contract number, some of the other fields in the document may fill out automatically.

Use the appropriate Item Number stated in the contract (e.g., 0001, 0002 or 0001AA, 0001AB, etc).

Contract Number: [Use the contract number as listed on page one of the award document.]

Issue By DODAAC: N00173

Admin DODAAC: [Use the 6 character "ADMINISTERED BY" CODE as listed on page one of the award document]

Pay DODAAC: [Use the 6 character "PAYMENT WILL BE MADE BY" CODE as listed on page one of the award document]

DCAA Auditor DODAAC: Go to <http://www.dcaa.mil/> Select "Audit Office Locator" from Left Menu

Service Acceptor DODAAC: N00173 Extension 6700

Ship To Code DODAAC: N00173 Extension 6700

LPO DODAAC: N00173

Cage Code: [Use your company specific code.]

When submitting vouchers using WAWF, email notification is to be given to the COR identified in Section G of the contract.

If the contractor uses a method other than WAWF to submit vouchers under this contract, a copy of the voucher is to be sent (preferably by email) to the COR identified in Section G of the contract.

Pursuant to DFARS 242.803(b)(i)(c), if the cognizant Government auditor has notified the contractor of its authorization to do so, the contractor may submit vouchers under this contract direct to the payment office. Such authorization does not extend to the first and final vouchers. The contractor shall continue to submit first vouchers to the cognizant auditor. The final voucher shall be submitted to the Administrative Contracting Officer.

**SECTION H  
SPECIAL CONTRACT REQUIREMENTS****H-1 TYPE OF CONTRACT**

This is a \*

(\*To be completed at time of award)

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

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

(b) The Contractor understands that during the first ninety (90) days of the contract performance period, no personnel substitutions will be permitted unless these substitutions are unavoidable because of the incumbent's sudden illness, death or termination of employment. In any of these events, the Contractor shall promptly notify the Contracting Officer and provide the information described in paragraph (c) below. After the initial ninety (90) day period the Contractor must submit to the Contracting Officer all proposed substitutions, in writing, at least thirty (30) days in advance (sixty (60) days if security clearance must be obtained) of any proposed substitution and provide the information required by paragraph (c) below.

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

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

The following are identified as key personnel: \*

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

Labor Category	First/M/Last Name
Experimental Physicist	
Theoretical Physicist	

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

(a) The Contractor agrees to provide the total level of effort specified in the next sentence in performance of the work described in this contract. The total level of effort for performance of this contract shall be 19,504 hours for the base year; 23,187 hours for Option I; 26,496 hours for Option II; 30,176 hours for Option III; and 33,120 hours for Option IV of direct labor. The direct labor per year must include subcontractor direct labor for those subcontractors specifically identified in the Contractor's proposal as having hours included in the proposed level of effort. A breakdown of labor categories and hours is set forth in paragraph (k) below.

(b) The level of effort for this contract shall be expended at an average rate of 1,625 hours per month of the base year; 1,932 hours per month for Option ; 2,208 hours per month for Option II; 2,515 hours per month for Option III; and 2, 760 hours per month for Option IV. It is understood and agreed that the rate of hours per month may fluctuate in pursuit of the technical objective, provided such fluctuation does not result in the use of the total hours of effort prior to the expiration of the term

of the contract.

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

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

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

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

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

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

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

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

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

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

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

<u>Labor Category</u>	<u>Base Hours</u>	<u>Option I Hours</u>	<u>Option II Hours</u>	<u>Option III Hours</u>	<u>Option IV Hours</u>
Technicians and Staff	7360	7360	8832	9936	12512
Senior Technician	1104	1104	1104	1104	1104
Scientist	1840	1840	1840	1840	1840
Pulsed Power Engineer	1840	3680	3680	4784	4784
Senior Pulsed Power Engineer	184	184	184	184	184
Experimental Physicist	1840	2576	3312	3864	3864
Theoretical Physicist	1840	2576	3312	3864	3864
Senior Experimental Physicist	2208	2392	2576	2760	2944
Senior Theoretical Physicist	1288	1472	1656	1840	2024

#### H-4 ONR 5252.235-9714 - REPORT PREPARATION (FEB 02)

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: All NISO American National Standards are available as free, downloadable pdf(s) at <http://www.niso.org/standards/index.html> . NISO standards can also be purchased in hardcopy form from NISO Press Fulfillment, P. O. Box 451, Annapolis Junction, MD 20701-0451 USA. Telephone U.S. and Canada: (877) 736-6476; Outside the U.S. and Canada: 301-362-6904 ax: 301-206-9789.]

#### H-5 ELECTRONIC AND INFORMATION TECHNOLOGY (EIT)

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

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

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

**First Option**

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

**Second Option**

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

**Third Option**

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

**Fourth Option**

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

#### H-7 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-8 REPRESENTATIONS AND CERTIFICATIONS

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

#### H-9 SUBCONTRACTING PLAN

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

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

#### I-1 FAR 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.acqnet.gov/far>  
<http://heron.nrl.navy.mil/contracts/home.htm>

#### a. FEDERAL ACQUISITION REGULATION CLAUSES

<u>FAR CLAUSE</u>	<u>TITLE</u>
52.202-1	- Definitions (JUL 2004)
52.203-3	- Gratuities (APR 1984)
52.203-5	- Covenant Against Contingent Fees (APR 1984)
52.203-6	- Restrictions On Subcontractor Sales To The Government (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 (SEP 2005)
52.204-2	- Security Requirements (AUG 1996)
52.204-4	- Printed Or Copied Double-Sided On Recycled Paper (AUG 2000)
52.204-7	- Central Contractor Registration (OCT 2003)

- 52.209-6 - Protecting The Government's Interest When Subcontracting With Contractors Debarred, Suspended, Or Proposed For Debarment (JAN 2005)
- 52.211-15 - Defense Priority And Allocation Requirements (SEP 1990)
- 52.215-2 - Audit And Records-Negotiation (JUN 1999)
- 52.215-8 - Order Of Precedence - Uniform Contract Format (OCT 1997)
- 52.215-10 - Price Reduction For Defective Cost Or Pricing Data (OCT 1997)
- 52.215-11 - Price Reduction For Defective Cost Or Pricing Data - Modifications (OCT 1997)
- 52.215-12 - Subcontractor Cost Or Pricing Data (OCT 1997)
- 52.215-13 - Subcontractor Cost Or Pricing Data Modifications (OCT 1997)
- 52.215-14 - Integrity Of Unit Prices (OCT 1997)
- 52.215-15 - Pension Adjustments And Asset Reversions (OCT 2004)
- 52.215-17 - Waiver Of Facilities Capital Cost Of Money (OCT 1997)  
( will be included if the successful offeror does not propose facilities capital cost of money)
- 52.215-18 - Reversion Or Adjustment Of Plans For Post-Retirement Benefits (PRB) Other Than Pensions (JUL 2005)
- 52.215-19 - Notification Of Ownership Changes (OCT 1997)
- 52.215-21 - Requirements For Cost Or Pricing Data Or Information Other Than Cost or Pricing Data -Modifications (OCT 1997)
- 52.216-7 - Allowable Cost And Payment (DEC 2002) (fill in 30th
- 52.216-8 - Fixed-Fee (MAR 1997)
- 52.219-4 - Notice Of Price Evaluation Preference For HUBZone Small Business Concerns (JUL 2005)  Offeror elects to waive the evaluation preference.
- 52.219-8 - Utilization Of Small Business Concerns (MAY 2004)
- 52.219-9 - Small Business Subcontracting Plan (JUL 2005) - Alternate II (OCT 2001)
- 52.219-16 - Liquidated Damages-Subcontracting Plan (JAN 1999)
- 52.222-2 - Payment For Overtime Premiums (JUL 1990) -The Use Of Overtime Is Authorized Under This Contract If The Overtime Premium Does Not Exceed "0"
- 52.222-3 - Convict Labor (JUN 2003)
- 52.223-10 - Waste Reduction Program (AUG 2000)
- 52.222-19 - Child Labor – Cooperation With Authorities And Remedies (JUN 2004)
- 52.222-21 - Prohibition Of Segregated Facilities (FEB 1999)
- 52.222-26 - Equal Opportunity (APR 2002)
- 52.222-35 - Equal Opportunity For Special Disabled Veterans, Veterans Of The Vietnam Era, And Other Eligible Veterans (DEC 2001)
- 52.222-36 - Affirmative Action For Workers With Disabilities (JUN 1998)
- 52.222-37 - Employment Reports On Special Disabled Veterans, Veterans Of The Vietnam Era, And Other Eligible Veterans (DEC 2001)
- 52.222-39 - Notification Of Employee Rights Concerning Payment Of Union Dues Or Fees (DEC 2004)
- 52.223-3 - Hazardous Material Identification And Material Safety Data (JAN 1997)
- 52.223-5 - Pollution Prevention And Right-To-Know Information (AUG 2003)
- 52.223-6 - Drug-Free Workplace (MAY 2001)
- 52.223-14 - Toxic Chemical Release Reporting (AUG 2003)
- 52.225-13 - Restrictions On Certain Foreign Purchases (MAR 2003)
- 52.227-1 - Authorization And Consent (JUL 1995)- Alternate I (APR 1984)
- 52.227-2 - Notice And Assistance Regarding Patent And Copyright Infringement (AUG 1996)
- 52.227-10 - Filing Of Patent Application- Classified Subject Matter (APR 1984)

- 52.227-11 - Patent Rights - Retention By The Contractor (Short Form) (JUN 1997)  
*(will be included if the successful offeror is a small business or a non-profit organization)*
- 52.227-12 - Patent Rights - Retention By The Contractor (Long Form) (JAN 1997)  
*(will be included if the successful offeror is not a small business or a non-profit organization)*
- 52.228-7 - Insurance - Liability To Third Persons (MAR 1996)
- 52.230-2 - Cost Accounting Standards (APR 1998)
- 52.230-3 - Disclosure And Consistency Of Cost Accounting Practices (APR 1998)
- 52.230-6 - Administration Of Cost Accounting Standards (APR 2005)
- 52.232-9 - Limitation On Withholding Of Payments (APR 1984)
- 52.232-17 - Interest (JUN 1996)
- 52.232-20 - Limitation Of Cost (APR 1984) *(Applicable when the contract or task order is fully funded)*
- 52.232-22 - Limitation Of Funds (APR 1984) *(Applicable when the contract or task order is not fully funded)*
- 52.232-23 - Assignment Of Claims (JAN 1986) Alternate I (APR 1984)
- 52.232-25 - Prompt Payment (OCT 2003)
- 52.232-25 - Prompt Payment (OCT 2003) Alternate I (FEB 2002)
- 52.232-33 - Payment By Electronic Funds Transfer-Central Contractor Registration (OCT 2003)
- 52.233-1 - Disputes (JUL 2002) - Alternate I (DEC 1991)
- 52.233-3 - Protest After Award (AUG 1996) - Alternate I (JUN 1985)
- 52.233-4 - Applicable Law For Breach Of Contract Claim (OCT 2004)
- 52.237-2 - Protection Of Government Buildings, Equipment And Vegetation (APR 1984)
- 52.237-3 - Continuity Of Services (JAN 1991)
- 52.242-1 - Notice Of Intent To Disallow Costs (APR 1984)
- 52.242-3 - Penalties For Unallowable Costs (MAY 2001)
- 52.242-4 - Certification of Final Indirect Costs (JAN 1997)
- 52.242-13 - Bankruptcy (JUL 1995)
- 52.243-2 - Changes - Cost-Reimbursement (AUG 1987) - Alternate V (APR 1984)
- 52.244-2 - Subcontracts (AUG 1998) - Alternate I (MAR 2005)
- 52.244-5 - Competition In Subcontracting (DEC 1996)
- 52.244-6 - Subcontracts For Commercial Items (DEC 2004)
- 52.245-5 - Government Property (Cost-Reimbursement, Time-And-Material, Or Labor-Hour Contracts) (JUN 2003) (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 (JUN 2003)
- 52.249-6 - Termination (Cost-Reimbursement) (MAY 2004)
- 52.249-14 - Excusable Delays (APR 1984)
- 52.251-1 - Government Supply Sources (APR 1984)
- 52.252-6 - Authorized Deviations in Clauses (APR 1984) (fill in Defense Federal Acquisition Regulation Supplement (48 CFR Chapter 2))
- 52.253-1 - Computer Generated Forms (JAN 1991)

## b. DEPARTMENT OF DEFENSE FEDERAL ACQUISITION REGULATION CLAUSES

<u>DFARS CLAUSE</u>	<u>TITLE</u>
252.201-7000	- Contracting Officer's Representative (DEC 1991)
252.203-7001	- Prohibition On Persons Convicted Of Fraud Or Other Defense Contract Related Felonies (DEC 2004)
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	- Alternate A (NOV 2003)
252.204-7005	- Oral Attestation Of Security Responsibilities (NOV 2001)
252.205-7000	- Provision Of Information To Cooperative Agreement Holders (DEC 1991)
252.209-7004	- Subcontracting With Firms That Are Owned Or Controlled By The Government Of A Terrorist Country (MAR 1998)
252.211-7003	- Item Identification And Valuation (APR 2005)
252.215-7000	- Pricing Adjustments (DEC 1991)
252.215-7002	- Cost Estimating System Requirements (OCT 1998)
252.219-7003	- Small Business And Small Disadvantaged Business Subcontracting Plan (DoD Contracts) (APR 1996)
252.219-7004	- Small, Small Disadvantaged And Women-Owned Small Business Subcontracting Plan (Test Program) (JUN 1997)
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 (JUN 2005)
252.225-7002	- Qualifying Country Sources As Subcontractors (APR 2003)
252.225-7012	- Preference For Certain Domestic Commodities (JUN 2004)
252.225-7013	- Duty Free Entry (JUN 2005)
252.225-7016	- Restriction On Acquisition Of Ball And Roller Bearings (JUN 2005)
252.225-7025	- Restriction On Acquisition Of Forgings (JUN 2005)
252.225-7031	- Secondary Arab Boycott Of Israel (JUN 2005)
252.225-7043	- Antiterrorism/Force Protection Policy For Defense Contractors Outside The United States (JUN 2005) (fill in : Naval Criminal Investigative Service (NCIS), Code 24, telephone, DSN 228-9113 or commercial (202)433-9113)
252.226-7001	- Utilization of Indian Organizations, Indian-Owned Economic Enterprises, And Native Hawaiian Small Business Concerns (OCT 2003)
252.227-7000	- Non Estoppel (OCT 1966)
252.227-7001	- Release Of Past Infringement (AUG 1984)
252.227-7013	- Rights In Technical Data -- Noncommercial Items (NOV 1995)
252.227-7014	- Rights In Noncommercial Computer Software And Noncommercial Computer Software Documentation (JUN 1995)
252.227-7016	- Rights In Bid Or Proposal Information (JUN 1995)
252.227-7019	- Validation Of Asserted Restrictions--Computer Software (JUN 1995)
252.227-7025	- Limitations On The Use Or Disclosure Of Government-Furnished Information Marked With Restrictive Legends (JUN 1995)
252.227-7030	- Technical Data--Withholding Of Payment (MAR 2000)
252.227-7034	- Patents--Subcontracts (APR 1984)

- 252.227-7037 - Validation Of Restrictive Markings On Technical Data (SEP 1999)  
 252.227-7039 - Patents--Reporting Of Subject Inventions (APR 1990)  
 252.231-7000 - Supplemental Cost Principles (DEC 1991)  
 252.232-7003 - Electronic Submission Of Payment Requests (JAN 2004)  
 252.232-7005 - Reimbursement Of Subcontractor Advance Payment—DoD Pilot Mentor-Protégé Program (SEP 2001)  
 252.232-7009 - Mandatory Payment By Governmentwide Commercial Purchase Card (JUL 2000)  
 252.232-7010 - Levies On Contract Payments (SEP 2005)  
 252.235-7010 - Acknowledgment Of Support And Disclaimer (MAY 1995)  
 252.235-7011 - Final Scientific Or Technical Report (NOV 2004)  
 252.242-7000 - Post Award Conference (DEC 1991)  
 252.242-7004 - Material Management And Accounting System (DEC 2000)  
 252.243-7002 - Requests For Equitable Adjustment (MAR 1998)  
 252.244-7000 - Subcontracts For Commercial Items And Commercial Components (DOD Contracts) (MAR 2000)  
 252.245-7001 - Reports Of Government Property (MAY 1994)  
 252.246-7001 - Warranty Of Data (DEC 1991)  
 252.247-7023 - Transportation Of Supplies By Sea (MAY 2002)  
 252.247-7024 - Notification Of Transportation Of Supplies By Sea (MAR 2000)  
*(will be included if the successful offeror made a negative response to the inquiry at DFARS 252.247-7022)*  
 252.251-7000 - Ordering From Government Supply Sources (OCT 2002)  
**I-2 FAR 52.223-11 - OZONE-DEPLETING SUBSTANCES (MAY 2001)**

(a) *Definitions.* "Ozone-depleting substance", as used in this clause, means any substance the Environmental Protection Agency designates in 40 CFR Part 82 as –

- (1) Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or
- (2) Class II, including, but not limited to, hydrochlorofluorocarbons.

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

**WARNING**

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

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

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

- J-1** Attachment (1) - Statement Of Work – 4 Pages, With Exhibit A - DD Form 1423, Contract Data Requirements List, - 2 Pages.
- J-2** Attachment (2 ) - DD Form 254, Contract Security Classification Specification, Ser 019-05 Dated June 8, 2005 w/Attachments - 2 Pages.
- J-3** Attachment (3 ) – Personnel Qualifications, – 3 Pages.
- J-4** Attachment (4 ) – Accounting and Appropriation Data- 1 page. \*  
(*\* To be included at time of award*)

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

**K-1 REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS OR RESPONDENTS**

In accordance with FAR 4.1201, prospective contractors must complete electronic annual federal representations and certifications via the Online Representations and Certifications Application (ORCA) at <http://orca.bpn.gov> in conjunction with required registration in the Central Contractor Registration (CCR) <http://www.ccr.gov> database. The representations and certification must be updated as necessary, but at least annually, to ensure they are kept current, accurate and complete.

In addition, each offeror must submit completed DFARS and contract specific Representations, Certifications, and Other Statements Of Offerors or Respondents with its proposal which is available electronically in full text at <http://heron.nrl.navy.mil/contracts/repsandcerts.htm> .

Use Contract Representations and Certifications: A

**K-2 FILL IN FOR FAR 52.219-1 - SMALL BUSINESS PROGRAM REPRESENTATIONS (MAY 2004)**

The fill in information is as follows:

- (a) (1) The NAICS code for this acquisition is 541710.
- (2) The small business size standard is 500 employees.

SECTION L  
INSTRUCTIONS CONDITIONS AND NOTICES  
TO OFFERORS OR RESPONDENTS

**L-1 FAR 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.acqnet.gov/far>

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

**FAR CLAUSE TITLE**

- 52.215-5 - Facsimile Proposals (OCT 1997)  
Paragraph (c) is completed as follows: (202) 767-6197 (primary) or (202) 767-0494 (alternate). In addition proposals may be transmitted by e-mail to [mary.sandy@nrl.navy.mil](mailto:mary.sandy@nrl.navy.mil) (primary) or [carol.parnell@nrl.navy.mil](mailto:carol.parnell@nrl.navy.mil) (alternate) in either Microsoft Word (2000 or earlier) or pdf format.
- 52.215-16 - Facilities Capital Cost Of Money (JUN 2003)
- 52.222-24 - Preaward On-Site Equal Opportunity Compliance Evaluation (FEB 1999)
- 52.237-10 - Identification Of Uncompensated Overtime (OCT 1997)

**DFAR CLAUSE TITLE**

- 252.209-7001- Disclosure Of Ownership Or Control By The Government Of A Terrorist Country (SEP 2004)

**L-2 INSTRUCTIONS FOR SUBMISSION OF PROPOSALS/OFFERS**

All proposals shall be submitted in accordance with FAR 52.215-1- *Instructions to Offerors-Competitive Acquisition*. Proposals/offers submitted in paper media through the United States Postal Service (USPS) or delivery services shall be addressed:

Contracting Officer, ATTN: Code 3230.MS

RFP No. N00173-05-R-MS07

Closing Date:

Time:

Naval Research Laboratory

4555 Overlook Avenue, S.W.

Washington, D.C. 20375

Proposals may be hand delivered to the Contracting Office, NRL, 4555 Overlook Avenue, S.W., Washington, D.C. 20375, Building 222, Room 115 between the hours of 8AM until 4PM, local time, excluding weekends and federal holidays. NRL is a controlled-access facility. Photo identification will be required. Report first to Building 72, Visitor Control for access to NRL. After receiving a Visitor Pass, proceed directly to Building 222, Room 115, Contracting Office Receptionist to deliver the proposal. All offerors shall allow sufficient time for delivery of their proposal to the Contracting Office prior to the closing date and time announced in the solicitation. Directions and additional information about NRL is available at <http://www.nrl.navy.mil/aboutdc.htm>

If facsimile proposals are authorized, contracting officers may request offeror(s) to provide the complete; original signed proposal at a later date.

**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;  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 52.215-20 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA (OCT 1997)**

(a) *Exceptions from cost or pricing data.* (1) In lieu of submitting cost or pricing data, offerors may submit a written request for exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable.

(i) *Identification of the law or regulation establishing the price offered.* If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office.

(ii) *Commercial item exception.* For a commercial item exception, the offeror shall submit, at a minimum, information on prices at which the same item or similar items have previously been sold in the commercial market that is adequate for evaluating the reasonableness of the price for this acquisition. Such information may include--

(A) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price of recent sales in quantities similar to the proposed quantities.

(B) For market priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market.

(C) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.

(2) The offeror grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this provision, and the reasonableness of price. For items priced using catalog or market prices, or law or regulation, access does not extend to cost or profit

information or other data relevant solely to the offeror's determination of the prices to be offered in the catalog or marketplace.

(b) *Requirements for cost or pricing data.* If the offeror is not granted an exception from the requirement to submit cost or pricing data, the following applies:

(1) The offeror shall prepare and submit cost or pricing data and supporting attachments in accordance with Table 15-2 of FAR 15.408.

(2) As soon as practicable after agreement on price, but before contract award (except for unpriced actions such as letter contracts), the offeror shall submit a Certificate of Current Cost or Pricing Data, as prescribed in FAR 15.406-2.

**L-5 FAR 52.216-1 - TYPE OF CONTRACT (APR 1984)**

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

**L-6 FAR 52.222-18 – CERTIFICATION REGARDING KNOWLEDGE OF CHILD LABOR FOR LISTED END PRODUCTS (FEB 2001)**

The fill-in information is as follows:

Listed End Product	Listed Countries of Origin

**L-7 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-8 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 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-9 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-10 MATERIAL/TRAVEL ESTIMATES AND OTHER DIRECT COSTS (FOR EVALUATION PURPOSES ONLY)**

**MATERIAL**

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

The Government estimates the material costs for this effort to be \$50,000.00 for the basic award and \$50,000.00 for each option period, if exercised.

## TRAVEL

The basis for the yearly trips, set forth below must be used as the basis for the travel estimates in each offeror's cost proposal, for evaluation purposes only. Typically, travel involves trips to conferences and to sites identified by sponsors where technical exchanges occur. Typically, travel from NRL to the following locations, within a given year, will include:

<u>Destinations</u>	<u>Persons</u>	<u>Days</u>
Sandia National Laboratories, Albuquerque, NM	6	4
Los Alamos National Laboratory, Los Alamos, NM	2	4
Lawrence Livermore National Laboratory, Livermore, CA	1	4
Titan-Pulse Sciences Division, San Leandro, CA	3	4
Atomic Weapons Establishment, Aldermaston, U.K.	2	5
Institute for Advanced Technology, Austin, TX	2	3

**L-11 INQUIRIES CONCERNING THE RFP**

Any questions concerning the RFP must be submitted in writing to the Contracting Officer representative at the contact location noted in blocks 7 and 10 of the Standard Form 33, *Solicitation, Offer and Award*. Offerors are cautioned against directing any questions concerning this RFP to technical personnel at the Naval Research Laboratory.

**L-12 PROPOSAL ORGANIZATION**

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

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

**L-13 VOLUME I - TECHNICAL/MANAGEMENT PROPOSAL**

**REQUIRED COPIES: 1 ORIGINAL AND 3 COPIES .**

(1) Include a matrix indicating proposed labor hours by skill category required to perform the statement of work. This matrix shall not contain labor rates or any other indication of price.

(2) The following information is required for evaluation of your technical/management :

**1. QUALIFICATIONS OF PERSONNEL**

(a) This factor covers the experience and other qualifications of proposed personnel. The work required under this contract is basic research, which relies upon specialized expertise and innovation for its successful completion. Contractor personnel should be assigned full time to this work in order to concentrate their efforts toward the goals of the project. Because work is to be performed on pulsed power generators located at NRL, key personnel should be immediately available on-site at the start date of the contract in order to begin work on the required tasks in a timely fashion. The technical staff, which shall assist in this work, must also have specialized experience in order to complete the sponsor-mandated work in a timely fashion with a minimum of training. Because of these requirements, the government has chosen to evaluate this proposal based largely on the experience and recognized expertise of the contractor's personnel.

(b) The proposal should indicate the specific personnel to be assigned to this project, their background, and approximate amount of time each shall be working on this project. This should include the education level and experience of all personnel who shall be assigned to the project. Key personnel should be clearly identified and their expertise stated and justified.

**2. TECHNICAL APPROACH:**

(a) Offerors should demonstrate a sound technical understanding of the objectives of the required work and the physics issues involved in carrying out this work.

**3. COMPANY EXPERIENCE**

(a) Offerors should indicate the adequacy of company experience on similar or related projects as evidenced by a narrative description of the experience. This experience should clearly show the relationship to this project and provide details, such as project descriptions and the identity of sponsoring agencies. In addition, prospective contractors should justify their ability to perform the work with a minimum delay for learning the daily operations.

**4. PAST PERFORMANCE INFORMATION**

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

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

(b) Offerors shall contact the contracting organizations identified pursuant to paragraph (a) as soon as possible and request them to send past performance information on the identified contracts to the address in Block 7 of the face page of this solicitation. The past performance report which is available electronically in full text at <http://heron.nrl.navy.mil/contracts/home.htm> is to be provided to the contracting organization for this purpose. If the contracting organization has already collected past performance information on the contract pursuant to FAR Subpart 42.15, the format used to collect the information may be used instead of the past performance report.

(c) Offerors may include in their proposals specific information relating to problems encountered in performing the identified contracts and any corrective actions by the offeror. Offerors should not provide general information on their performance on the identified contracts as this will be obtained from the contracting organizations.

**L-14 VOLUME II - BUSINESS PROPOSAL****REQUIRED COPIES: 1 ORIGINAL AND 3 COPIES****(1) COST PROPOSAL**

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

**(2) SMALL BUSINESS PARTICIPATION**

(a) In addition to complying with the clause at FAR 52.219-9, Small Business Subcontracting Plan (JAN 2002) with its Alternate II (OCT 2001), proposals must include information to permit evaluation of the extent of participation of small businesses and historical black colleges or universities and minority institutions in performance of the contract. Participation to be identified may be in the form of a joint venture, teaming arrangement, or subcontract. Small business concerns that are not required by FAR 52.219-9 to submit a subcontracting plan must indicate the extent to which proposed joint ventures, teaming arrangements, or subcontracts are with historically black colleges or universities and minority institutions. Information provided should include the extent of participation of such firms in terms of the value of the total acquisition and the complexity and variety of the work such firms are to perform.

**SECTION M  
EVALUATION FACTORS FOR AWARD****M-1 EVALUATION**

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

**M-2 EVALUATION FACTORS FOR AWARD**

Proposals will be evaluated in accordance with the following criteria. The technical factor is more important than the cost factor. Qualifications of personnel and technical approach factors, which are of equal importance, are more important than the company experience and past performance factors. Company experience and past performance factors are of equal importance.

**M-2-1. TECHNICAL/MANAGEMENT****(1) QUALIFICATIONS OF PERSONNEL**

The proposed personnel will be evaluated on the experience and qualifications of the proposed personnel relevant to the proposed task.; the quantity and quality of the Offeror's corporate experience relevant to the proposed task; and the previous experience of the key personnel including the degree to which they meet the requirements set forth in the Personnel Qualifications.

**(2) TECHNICAL APPROACH**

The soundness of the Offeror's technical approach, including the Offeror's understanding of the objectives of the required effort and the physics issues involved in carry out the effort. Proposal will be evaluated on their uniqueness, innovativeness, completeness, reasonableness, clarity and feasibility of the their technical approach and whether that approach should lead to a successful completion of the project goals in the allotted time. The technical approach will also be evaluated on technical requirement.

**(3) COMPANY EXPERIENCE**

The soundness of the companies experience will be evaluated on the adequacy of the companies experience on similar or related projects.

**(4) PAST PERFORMANCE**

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

**M-2-2 COST TO THE GOVERNMENT**

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

**M-2-3 SMALL BUSINESS PARTICIPATION**

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

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

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

## STATEMENT OF WORK

### 1. Introduction

The Pulsed Power Physics Branch (Code 6770) of the Plasma Physics Division at the Naval Research Laboratory performs research and development in a number of areas. These include, but are not limited to, the following: (a) advanced nuclear weapons effects simulation (NWES), (b) advanced x-ray radiographic sources, (c) design and testing of electromagnetic projectile launcher (EML) technologies, (d) development of systems for inertial confinement fusion (ICF), and (e) development of advanced pulsed power systems in support of these areas.

Advanced NWES includes x-ray bremsstrahlung production, production of radiation from imploding gas puff and wire-array loads, benchmarking weapons effects codes, the use of electron beams in gases to simulate photo-induced electromagnetic pulses in systems, and the use of ion beams to simulate soft x-rays effects. The development of intense, high-energy x-ray radiographic sources has primarily emphasized the physics and operation of unique diodes, such as the paraxial (PX), immersed ( $B_z$ ), self-magnetic-pinch (SMP), rod pinch (RP), and plasma-filled rod-pinch (PFRP) diodes, which concentrate high current electron beams into small areas for the production of localized bremsstrahlung radiation. The production, focusing, and transport of intense light and heavy ion beams are investigated with direct application to NWES and ICF. Design and testing of compact pulsed power systems appropriate for launching, testing, maintaining, and optimizing EML systems is another area of research, emphasizing the gun barrel/projectile interactions. Work in the area of advanced pulsed power development emphasizes research on various opening switches for inductive energy storage applications, upgrading the supporting conventional capacitive pulsed power systems, and developing new compact pulsed power generator concepts.

Work in these areas involves both experimental and theoretical efforts. Experiments are performed on existing pulsed power drivers within the Pulsed Power Physics Branch including Mercury, Hawk, Gamble II, and several smaller systems and test stands, as well as, any new-pulsed power drivers built during the performance period of this contract. The basic research nature of the work requires the rapid design, fabrication, and fielding of experimental apparatus, rapid prototyping of diagnostic hardware, and development of computer software for analyzing the experimental results. Theoretical work, including analytical and numerical techniques for researching the various problem areas, will be closely tied to the experimental programs.

### 2. Scope

In support of this research program, the Contractor shall perform on-site experimental and theoretical research in pulsed power physics and engineering, plasma physics, intense particle beam physics, radiation physics, diagnostics, and electromagnetic launcher technology. The contractor shall provide the expertise to perform experimental and theoretical research in the areas listed above with the specific tasks outlined below. Tasks performed under this contract shall be undertaken on the facilities within the Pulsed Power Physics Branch or at facilities housed within the auspices of NRL's sponsoring organizations (i.e. SNL, LANL, LLNL, and AWE) and require the capability of designing, fielding, and operating experiments on such pulsed power generators. The Contractor's theoretical researchers shall work closely with the experimental

researchers and shall provide timely analysis and guidance for the experimental research under this contract.

### 3. Specific Tasks

3.1 - Using the expertise provided under this contract and as the emphasis of the NRL program dictates, the Contractor shall carry out experimental research in the following areas:

- a) design, develop, and optimize pulsed-power nuclear weapons effects simulators (NWES) for the Services, DoD agencies, DOE laboratories, and other government agencies. These systems simulate x-ray yields and spectra typical of nuclear weapons detonation environments for the testing of military-readiness of field components. Techniques include the development of pulsed power systems to generate and impinge high-voltage electron beams onto high-atomic-number target materials (bremsstrahlung), generate low-endpoint bremsstrahlung using reflex diode/triode technology, rapidly compress gas puffs or wire-arrays for subsequent production of atomic line radiation, or generate and transport high-energy ion beams for the simulation of near-surface penetration of soft x-rays.
- b) investigate and develop advanced pulsed power systems, including the enhancement of modern capacitive and inductive energy storage devices. Advanced pulsed power systems under consideration now include the linear transformer device (LTD) and inductive voltage adders (IVA), which require special switching technologies. The key elements of inductive energy storage generators are opening switches, including the plasma-opening switch (POS). The contractor shall emphasize optimization of POS operation in the 1 microsecond conduction time regime for use as a final stage switch in a high power (TW-level) inductive generator. Understanding of the current conduction and opening mechanisms will be necessary in order to optimize and extend the performance of the POS, and experiments, and the Contractor shall focus theoretical work on gaining this understanding. Other vacuum power condition techniques under consideration include various current amplifiers such as flux compressors, transformers, and "Meatgrinders."
- c) address coupling of pulsed power generators and vacuum opening switches to electron beam diodes, ion diodes, and imploding-gas-puff plasma radiation source (PRS). Vacuum opening switches for pulsed power generators generally involve plasmas and significant vacuum electron emission and flow due to large electric field stresses in the vacuum transmission line. Techniques for efficiently coupling the pulsed power to the load in this environment need to be developed. Typically, efficient operation requires magnetic insulation of the vacuum electron flow from the anode surface to prevent large current losses. This type of operational design for vacuum power flow is called a magnetically insulated transmission line (MITL). In a large modular system, a number of vacuum transmission lines can be combined into a common disk feed to a load. Because of the non-azimuthally symmetric field geometry in this transition region, losses can occur. The contractor shall study techniques and designs for minimizing losses and optimizing power coupling into a load region shall be studied.
- d) investigate, develop, and optimized radiographic diode concepts (including RP, PFRP, SMP, Bz, and PX diodes) for improved dose, spot-size, generator-to-load coupling, and diode impedance control. The contractor shall provide particular attention to the

- efficient coupling of a particular diode to a generator while minimizing collateral dose within the constraints of user-applications (e.g. multiple view, multiple pulse, underground, etc.)
- e) investigate and improve plasma-filled diodes for optimized low-impedance applications. The Contractor shall study various techniques for injecting or pre-forming plasmas in the diode prior to applying the power pulse. Conventional high-power pulsed diodes start at very high impedance until the electrode surfaces "turn-on" and plasma forms. By injecting plasma into the diode gap, the initial impedance is small and increases as the plasma is eroded from the gap. The Contractor shall investigate this technique for controlling diode impedance.
  - f) investigate, diagnose, and numerically simulate high-power large-area electron-beams for coupling to e-beam driven KrF lasers systems. Improve e-beam uniformity and intensity across the diameter of the beam in support of a 60 kJ, 5 Hz (repetitively-rated) laser system at NRL.
  - g) investigate and develop compact, low-weight devices for accelerating projectiles based on railgun or coilgun technologies. Emphasis is placed on reliable and compact capacitor bank pulser technology and designs that suppress muzzle flash for higher overall efficiency.
  - h) develop and operate a large-scale (multi-MJ), pulsed electromagnetic launcher (EML) facilities for testing of materials. Emphasis is placed on bore and armature materials and geometries that lead to long bore-life operation of the railgun. Interaction with materials science groups at NRL will be required to design and execute specified tests.
  - i) develop models and field experiments to optimize the performance of plasma radiation sources, including the design of gas nozzles to efficiently couple to available pulsed power machines and the optimization of radiation yields by improving implosion quality (e.g., higher compression ratio, reduced zippering, etc.). Optimization techniques may include improving return current symmetry, use of pre-ionization, improved nozzle design, and use of H<sub>2</sub> gas admixture. The Contractor shall diagnosis gas density profiles, ionization states, optical and X-ray outputs.
  - j) develop and study techniques for producing and transporting intense ion beams. For beam production, pinch-reflex ion diodes, plasma-filled diodes, and magnetically insulated ion diodes may be developed. Appropriate beam conditions need to be defined and demonstrated in actual diode experiments before any given transport experiment can be fielded. To improve transport schemes, it is important to study the effects of gas species and pressure on beam-induced breakdown in gas-filled regions in order to determine the degree of charge- and current-neutralization of the beam during transport. Ion beam transport is required for heavy-ion ICF (standoff for nuclear isolation and time-of-flight bunching) and NWE simulation of soft x-ray effects using ions. Ballistic transport, self-pinch transport, and various channel transport schemes may be considered.
  - k) develop current and voltage diagnostics, plasma sources and radiation diagnostics necessary for (a)-(j). The creation and control of the proper plasma conditions is crucial to the success of these experiments. The optimization of radiation spectrum and dose output is the mandated goal of most of these experiments. Thus, plasma source and radiation diagnostics development shall be an ongoing effort that spans most of the tasks in the statement of work.

- l) develop and implement analytic techniques, numerical algorithms, and data analysis packages necessary for (a) – (k). If necessary, design and assemble large-scale parallel computing environments and architectures necessary for completion of high-performance computing in support of (a) - (k).

3.2 - In carrying out the experiments discussed above in 3.1, the contractor shall design, assemble, test, maintain, and, in the case of small hardware, fabricate any experimental apparatus needed to complete the research. Small hardware is defined to be pieces that can be fabricated by hand or machined and built on the standard machine shop equipment (lathe, milling machine, etc.) available in the Pulsed Power Physics Branch within a few days time. Examples include simple diode hardware, diagnostic cables and connectors, diagnostics such as charge collectors and B-dot loops, capacitor banks for driving plasma sources, etc. The Pulsed Power Physics Branch at NRL shall supply larger hardware. Any drawings, schematics, and hardware fabricated shall be delivered to the Pulsed Power Physics Branch and shall become Government property at the end of the performance period.

3.3 - The Contractor shall field the experiments and all required diagnostic equipment for the research discussed in 3.1. The Contractor shall operate the generators and collect the data for the experiments. The Contractor shall log and document the data for each experiment into data books and computer files, which shall be delivered to the Pulsed Power Physics Branch and become Government property at the end of the performance period.

3.4 - The Contractor shall carry out theoretical research in parallel with and in support of the experimental research discussed in 3.1. The Contractor shall tie this work to the experimental program and, in particular, the Contractor shall aid in interpreting the experimental results. The Contractor shall perform data manipulation, data analysis, analytic theory, numerical modeling, and simulation, and circuit analysis as required to guide the experimental research. Simulation work must specifically involve the use of detailed circuit codes, finite-element electromagnetic solvers, 2D and 3D electromagnetic particle-in-cell codes, Monte Carlo radiation transport codes, single particle orbit codes, and 2D and 3D MHD codes. The Government shall make all existing codes available. Any computer algorithms or codes that are developed must be documented and shall become Government property at the end of the performance period. Likewise, the Contractor shall document and deliver simulation results (computer code output).

3.5 – The Contractor shall document all work performed in both formal and informal interim topical reports as individual experiments are completed. Semi-annual progress reports in letter format shall be required along with a full and complete final report at the end of the performance period. Detailed monthly financial reports must also be required showing individual labor costs and hours, individual consultant/independent contractor costs and hours, travel costs, miscellaneous small purchases, itemization of other direct charges, associated costs for fringe benefits, overhead, G&A, material handling, and fixed fees.

**CONTRACT DATA REQUIREMENTS LIST**

Form Approved  
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 440 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 the burden, to the Department of Defense, Executive Services and Communications Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please do not return your form to the above organization. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO. 0002		B. EXHIBIT A		C. CATEGORY: TDP _____ TM _____ OTHER _____	
D. SYSTEM/ITEM			E. CONTRACT/PR NO. 67-0726-05		F. CONTRACTOR
1. DATA ITEM NO. A001	2. TITLE OF DATA ITEM MONTHLY COST REPORTS			3. SUBTITLE N/A	
4. AUTHORITY (Data Acquisition Document No.) N/A		5. CONTRACT REFERENCE SOW 3.5		6. REQUIRING OFFICE Code 6770	
7. DD 250 REQ NO	9. DIST STATEMENT REQUIRED N/A	10. FREQUENCY MTHLY	12. DATE OF FIRST SUBMISSION 45DAC	14. DISTRIBUTION	
8. APP CODE N/A		11. AS OF DATE 45 DAC	13. DATE OF SUBSEQUENT SUBMISSION	a. ADDRESSEE	b. COPIES Draft Reg Repr
16. REMARKS The contractor shall provide a monthly cost report to include a report of all labor expenditures (person, hours worked, cost); materials (description cost and use); travel; miscellaneous small purchases and other cost described in the SOW 3.5.				Code 6702	1
				Code 6770	1
				15. TOTAL	0 2 0
1. DATA ITEM NO. A002	2. TITLE OF DATA ITEM Progress Reports			3. SUBTITLE Naval Research Laboratory	
4. AUTHORITY (Data Acquisition Document No.) N/A		5. CONTRACT REFERENCE SOW 3.5		6. REQUIRING OFFICE Code 6770	
7. DD 250 REQ N/A	9. DIST STATEMENT REQUIRED N/A	10. FREQUENCY Semi-Annually	12. DATE OF FIRST SUBMISSION 180 DAC	14. DISTRIBUTION	
8. APP CODE N/A		11. AS OF DATE 180 DAC	13. DATE OF SUBSEQUENT SUBMISSION Ea 180 days	a. ADDRESSEE	b. COPIES Draft Reg Repr
16. REMARKS These reports submitted semi-annually for the purpose of reporting progress, may be in the form of letter report or a technical report.				Code 6702	1
				Code 6770	1
				15. TOTAL	0 2 0
1. DATA ITEM NO. A003	2. TITLE OF DATA ITEM Design Drawings, Documentation, Plans & Manuals			3. SUBTITLE N/A	
4. AUTHORITY (Data Acquisition Document No.) N/A		5. CONTRACT REFERENCE SOW 3.5		6. REQUIRING OFFICE Code 6770	
7. DD 250 REQ N/A	9. DIST STATEMENT REQUIRED N/A	10. FREQUENCY ASREQ	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION	
8. APP CODE N/A		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION	a. ADDRESSEE	b. COPIES Draft Reg Repr
16. REMARKS The contractor shall submit any design drawings, documentation, plans schematics and manuals developed in connection with modified hardware 30 days after completion of task.				Code 6770	
				15. TOTAL	0 0 0
1. DATA ITEM NO. A004	2. TITLE OF DATA ITEM Final Report			3. SUBTITLE N/A	
4. AUTHORITY (Data Acquisition Document No.) N/A		5. CONTRACT REFERENCE SOW		6. REQUIRING OFFICE Code 6770	
7. DD 250 REQ N/A	9. DIST STATEMENT REQUIRED N/A	10. FREQUENCY OTIME	12. DATE OF FIRST SUBMISSION 90 DAC	14. DISTRIBUTION	
8. APP CODE N/A		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION N/A	a. ADDRESSEE	b. COPIES Draft Reg Repr
16. REMARKS A final report shall be submitted to the COR within ninety days of completion of this contract.				Code 6770	
				Code 6702	
				15. TOTAL	0 0 0
G. PREPARED BY Code 6770		H. DATE	I. APPROVED BY		J. DATE

17. PRICE GROUP
18. ESTIMATED TOTAL PRICE

17. PRICE GROUP
18. ESTIMATED TOTAL PRICE

17. PRICE GROUP
18. ESTIMATED TOTAL PRICE

17. PRICE GROUP
18. ESTIMATED TOTAL PRICE



**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: 019-05**

a. FACILITY CLEARANCE REQUIRED

**SECRET**

b. LEVEL OF SAFEGUARDING REQUIRED

NONE

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

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

a. PRIME CONTRACT NUMBER	<input checked="" type="checkbox"/>	a. ORIGINAL (Complete date in all cases)	DATE (YYYYMMDD)
b. SUBCONTRACT NUMBER		b. REVISED (Supersedes all previous specs)	REVISION NO. DATE (YYYYMMDD)
<input checked="" type="checkbox"/> c. SOLICITATION OR OTHER NUMBER	DUE DATE (YYYYMMDD)	c. FINAL (Complete Item 5 in all cases)	DATE (YYYYMMDD)
67-0726-05			2005/06/08

**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 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		N/A

**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**

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

**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 6110

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 personnel available with final DoD granted personnel security clearances commensurate with level of access required for performance of contract. CNWDI briefings required.

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

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

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

a. TYPED NAME OF CERTIFYING OFFICIAL	b. TITLE	c. TELEPHONE ( <i>Include Area Code</i> )
VICKI CICALA	CONTRACTING OFFICER, SECURITY	(202) 767-2240/2576

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

e. SIGNATURE  


**17. REQUIRED DISTRIBUTION**

<input checked="" type="checkbox"/>	a. CONTRACTOR
<input type="checkbox"/>	b. SUBCONTRACTOR
<input checked="" type="checkbox"/>	c. COGNIZANT SECURITY OFFICE FOR PRIME AND SUBCONTRACTOR
<input type="checkbox"/>	d. U.S. ACTIVITY RESPONSIBLE FOR OVERSEAS SECURITY ADMINISTRATION
<input type="checkbox"/>	e. ADMINISTRATIVE CONTRACTING OFFICER
<input checked="" type="checkbox"/>	f. OTHERS AS NECESSARY 1226.2, 6102, 6110

## Personnel Qualifications

**Experimental Physicist:** Desired, the experimental physicist should have a Master (MS) degree or equivalent and at least four years additional experience in the fields of pulsed power and plasma physics. He/she should be capable of independent research and should have experience in the fields of pulsed power and plasma physics related to areas such as plasma radiation sources, plasma opening switches, vacuum power flow, intense electron and ion beams, intense x-ray sources, and electromagnetic launchers. This experience should include fielding and carrying out experiments on pulsed power generators or capacitor banks, designing and fielding loads on pulsed power generators, designing and fielding diagnostics on pulsed power generators, and generator design and operation. Expertise in developing, diagnosing, and controlling plasma sources is specifically required. Experience in applying modern data collection and analysis techniques is also required.

**Senior Experimental Physicist:** Desired, the senior experimental physicists should have a MS degree or equivalent, at least fifteen (15) years additional experience, and be a recognized expert in the fields of pulsed power and plasma physics. He/she should be capable of independent research and should have experience in the fields of pulsed power and plasma physics related to areas such as plasma radiation sources, plasma opening switches, vacuum power flow, intense electron and ion beams, intense x-ray sources, and electromagnetic launchers. This experience should include fielding and carrying out experiments on pulsed power generators or capacitor banks, designing and fielding loads on pulsed power generators, designing and fielding diagnostics on pulsed power generators, radiation diagnostics, and generator design and operation. Expertise in developing, diagnosing, and controlling plasma sources is specifically required. Experience in applying modern data collection and analysis techniques is also required.

**Senior Pulsed Power (electrical) Engineer:** An MS degree or equivalent is required for the senior pulsed power engineers, as well as at least fifteen (15) years additional experience, and be a recognized expert in the field of pulsed power engineering. As a minimum, the pulsed power engineers should have experience in fielding and carrying out experiments on pulsed power generators, trouble-shooting, repair, maintenance, and in carrying out analysis of the data. Experience should include some knowledge of advanced electronic circuit analysis, transmission line code techniques, electric, and magnetic field modeling, calibration of current and voltage probes, and engineering-quality system design of pulsed power electrical and mechanical components. Experience should also include some knowledge of diagnostic techniques, data collection techniques, and interfacing data collection devices with various computers.

**Theoretical Physicist:** Desired, the theoretical physicist should have a MS degree or equivalent and at least four years of additional experience in the fields of pulsed power and plasma physics. He/she should have proven capability of interacting with experimentalists working on the research program. He/she should have experience in the fields of pulsed power and plasma physics, relating to areas such as the generation and transport of intense electron and ion beams, generation of intense x-ray sources, plasma opening switches, plasma radiation sources, and vacuum power flow. Experience should include the use of analytic and numerical techniques for problem solving. In particular, some knowledge of 2D and 3D electromagnetic particle-in-cell (PIC) codes, 2D and 3D magnetohydrodynamic (MHD) codes, and single particle orbit codes is required. In carrying out the theoretical research and data analysis for the project, programming experience should include writing, upgrading, debugging, and implementing software on a variety of computers, ranging from desktop personal computers to large-scale parallel processing architecture. Experience with interfacing and networking data collection devices with various computers may be also required.

**Senior Theoretical Physicist:** Desired, the senior theoretical physicist should have a MS degree or equivalent, at least fifteen (15) years additional experience, and be a recognized expert in the fields of pulsed power and plasma physics. He/she should have proven capability of interacting with experimentalists working on the research program. He/she should have experience in the fields of pulsed power and plasma physics, relating to areas such as the generation and transport of intense electron and ion beams, generation of intense x-ray sources, plasma opening switches, plasma radiation sources, and vacuum power flow. Experience should include the use of analytic and numerical techniques for problem solving. In particular, some knowledge of 2D and 3D electromagnetic particle-in-cell (PIC) codes, 2D and 3D magnetohydrodynamic (MHD) codes, and single particle orbit codes is required. In carrying out the theoretical research and data analysis for the project, programming experience could include writing, upgrading, debugging, and implementing software on a variety of computers, ranging from desktop personal computers to large-scale parallel processing architecture. Experience with interfacing and networking data collection devices with various computers may be also required.

**Pulsed power (electrical) Engineer:** An MS degree or equivalent is required for the pulsed power engineers. As a minimum, the pulsed power engineers should have experience in fielding and carrying out experiments on pulsed power generators, trouble-shooting, repair, maintenance, and in carrying out analysis of the data. Experience should include some knowledge of advanced electronic circuit analysis, transmission line code techniques, electric, and magnetic field modeling, calibration of current and voltage probes, and engineering-quality system design of pulsed power electrical and mechanical components. Experience should also include some knowledge of diagnostic techniques, data collection techniques, and interfacing data collection devices with various computers.

**Senior Pulsed Power (electrical) Engineer:** An MS degree or equivalent is required for the senior pulsed power engineers, as well as at least fifteen (15) years additional experience, and be a recognized expert in the field of pulsed power engineering. As a minimum, the pulsed power engineers should have experience in fielding and carrying out experiments on pulsed power generators, trouble-shooting, repair, maintenance, and in carrying out analysis of the data. Experience should include some knowledge of advanced electronic circuit analysis, transmission line code techniques, electric, and magnetic field modeling, calibration of current and voltage probes, and engineering-quality system design of pulsed power electrical and mechanical components. Experience should also include some knowledge of diagnostic techniques, data collection techniques, and interfacing data collection devices with various computers.

**Scientists:** A MS degree or equivalent is desirable but not required for the scientists. As a minimum, the scientists should have experience in fielding and carrying out experiments on pulsed power generators and in carrying out analysis of the data. Experience should include some knowledge of diagnostic techniques, data collection techniques, and interfacing data collection devices with various computers.

**Technicians and Staff:** Desired, technicians should have experience in maintaining and operating pulsed power generators as well as fabricating, assembling, and mounting experimental apparatus on such generators. Some machine shop experience is preferable. Maintenance of large vacuum systems and a familiarity with high voltage capacitor systems is also required. Experience in drafting and machine tool operation is also desired. Technicians should also be capable of determining supply requirements, ordering, and picking up materials required for efficient performance of work under the contract. The staff should be capable of ordering materials, preparing reports, and arranging schedules or travel itineraries, all of which are required for efficient performance of work under the contract.

**Senior Technician:** As a minimum, senior technicians should have fifteen (15) years or more experience in maintaining and operating pulsed power generators as well as fabricating, assembling, and mounting experimental apparatus on such generators. Machine shop experience is preferable. Maintenance of large vacuum systems and a familiarity with high voltage capacitor systems is also required. Experience in drafting and machine tool operation is also desired. Senior technicians should also be capable of determining supply requirements, ordering, picking up materials required for efficient performance of work under the contract, and managing junior technical staff in the performance of their duties.