

<b>SOLICITATION, OFFER AND AWARD</b>		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)		RATING	PAGE OF PAGES
2. CONTRACT NUMBER	3. SOLICITATION NUMBER	4. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input type="checkbox"/> NEGOTIATED (RFP)	5. DATE ISSUED	6. REQUISITION/PURCHASE NUMBER	
7. ISSUED BY		CODE	8. ADDRESS OFFER TO (If other than Item 7)		

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

**SOLICITATION**

9. Sealed offers in original and \_\_\_\_\_ 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 \_\_\_\_\_ until \_\_\_\_\_ local time \_\_\_\_\_ (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	B. TELEPHONE (NO COLLECT CALLS)		C. E-MAIL ADDRESS
		AREA CODE	NUMBER	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 <i>(See Section I, Clause No. 52.232-8)</i>	10 CALENDAR DAYS (%)	20 CALENDAR DAYS (%)	30 CALENDAR DAYS (%)	CALENDAR DAYS (%)
14. ACKNOWLEDGMENT OF AMENDMENTS <i>(The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated):</i>	AMENDMENT NO.	DATE	AMENDMENT NO.	DATE

15A. NAME AND ADDRESS OF OFFEROR	CODE	FACILITY	16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER <i>(Type or print)</i>	
15B. TELEPHONE NUMBER		15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE. <input type="checkbox"/>	17. SIGNATURE	
AREA CODE	NUMBER			

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

19. ACCEPTED AS TO ITEMS NUMBERED	20. AMOUNT	21. ACCOUNTING AND APPROPRIATION	
22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304(c) ) <input type="checkbox"/> 41 U.S.C. 253(c) ( )		23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)	
24. ADMINISTERED BY (If other than Item 7)		25. PAYMENT WILL BE MADE BY	
26. NAME OF CONTRACTING OFFICER (Type or print)		27. UNITED STATES OF AMERICA  <i>(Signature of Contracting Officer)</i>	
		28. AWARD DATE	

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

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

<b>ITEM NUMBER</b>	<b>SUPPLIES/SERVICES</b>	<b>ESTIMATED COST</b>	<b>FIXED FEE</b>	<b>ESTIMATED COST PLUS FIXED FEE</b>
0001	The Contractor shall perform a design study in accordance with Phase I of the Statement of Work, Attachment No. 1.	\$	\$	\$
0002	The Contractor shall perform high power amplifier development in accordance with Phase II of the Statement Of Work, Attachment No. 1	\$	\$	\$
0003	The Contractor shall perform high efficiency amplifier development in accordance with Phase III of the Statement of Work, Attachment No.1.	\$	\$	\$
0004	Data for CLINS 0001-0003 (and CLIN 0007, if exercised) in accordance with Exhibit A (DD 1423).	* NSP	* NSP	* NSP
<b>OPTION I</b>				
0005	The Contractor shall develop a beam stick in accordance with Option I of the Statement of Work, Attachment No.1.	\$	\$	\$

0006	Data for CLIN 0005 in accordance with Exhibit B (DD Form 1423).	*NSP	*NSP	*NSP
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**OPTION II**

0007	The Contractor shall deliver an additional high power, high efficiency amplifier in accordance with Option II of the Statement of Work, Attachment No. 1.	\$	\$	\$
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<b>TOTAL ESTIMATED COST PLUS FIXED FEE</b>	\$	\$	\$
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*\* Not Separately Priced*

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

**C-1 STATEMENT OF WORK**

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

**C-2 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**

52.246-9    -    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 work under this contract for CLINS 0001 through 0003 shall commence on the date of contract award and be completed no later than three years thereafter. Option I (CLIN 0005), if exercised, shall be performed from the date of the exercise of the option through six months thereafter. Option II (CLIN 0007), if exercised, shall be performed from the date of the exercise of the option through nine months thereafter.

(b) The principal place of performance of this contract shall be at the contractor's facility.

**F-3 PLACE OF DELIVERY - FOB DESTINATION**

The contractor shall deliver supplies, all transportation charges paid, to destination in accordance with the clause in Section F of the Schedule titled FAR 52.247-34 FOB Destination (NOV 1991).

Receiving Officer

Naval Research Laboratory

Contract Number

ATTN:        \*

CODE:        \*

LOCATION:        \*

Bldg. 49

4555 Overlook Avenue, SW  
Washington DC 20375-5320

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

**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 ONR 5252.242-9718 - TECHNICAL DIRECTION (FEB 02)**

(a) Performance of the work hereunder is subject to the technical direction of the Scientific Officer/COR designated in this contract, or his duly authorized representative. 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 serves to accomplish the objectives described in the statement of work;
- (2) Guidelines to the Contractor which assist in the interpretation of drawings, specifications or

technical portions of work description.

- (b) Technical direction must be within the general scope of work stated in the contract. Technical direction 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 only individual authorized to in any way 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 working days after its receipt. The Contractor shall not proceed with the work affected by the technical direction until the Contractor is notified by the Contracting Officer that the technical direction is within the scope of the contract.
- (d) Nothing in the foregoing paragraphs may be construed to excuse the Contractor from performing that portion of work statement, which is not affected by the disputed technical direction.

#### **G-4 SUBCONTRACTORS/CONSULTANTS**

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

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

#### **G-5 PAYMENT OF FIXED FEE (COMPLETION FORM)**

The fixed fee set forth in Section B of this contract shall be payable on completion of the work and services required under each CLIN of this contract and their acceptance on behalf of the Government. However, the contractor may bill on each voucher the amount of the fixed fee bearing the same percentage to the amount of cost billed as the total fixed fee bears to the total estimated cost set forth in Section B, subject to the contract clause entitled "Fixed Fee" (FAR 52.216-8). If the fixed fee is reduced pursuant to any clause or requirement of this contract and the reduced fee is less than the sum of all fee payments made to the contractor under this contract, the contractor shall repay the difference to the Government. The total fee paid the contractor shall not exceed the fixed fee set forth in Section B.

#### **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 DFARS 252.232-7003, *Electronic Submission of Payment Requests*, NRL will utilize the DoD Wide Area Workflow Receipt and Acceptance (WAWF-RA) system. This web based system located at <https://wawf.eb.mil> provides the technology for government contractors and authorized Department of Defense (DoD) personnel to generate, capture and process receipt and payment-related documentation in a paperless environment. **Invoices for supplies/services rendered under this contract shall be submitted electronically through WAWF. Submission of hard copy DD250/invoices will no longer be accepted for payment.**

The designated Central Contractor Registration (CCR) Electronic Business (EB) point of contact for your company is responsible for activating the company's CAGE code on WAWF by calling 1-866-618-5988. Once the company is activated, the CCR EB will self-register on the WAWF and follow the instructions for a group administrator. After the company is set-up on WAWF, any additional persons responsible for submitting invoices must self-register at the WAWF <https://wawf.eb.mil>.

The following is required information for vouchers submitted under this contract :

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

IssueBy 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]

Service Acceptor DODAAC: N00173 Extension 6800 (Note – this line is required only with "Invoice as 2-in-1"(Services Only) type invoices)

Ship To Code DODAAC: N00173 Extension 6800

LPO DODAAC: N00173

Cage Code: [Use your company specific code.]

If you have any questions regarding the WAWF, please contact the DoN WAWF Assistance Line at 1-800-599-WAWF (9293). Submission of Invoices

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.

**NOTE: THE EXTENSION MUST BE USED WITH THE "SERVICE ACCEPTOR" / "SHIP TO" DoDAAC OR THE REQUEST FOR PAYMENT MAY BE REJECTED.**

## 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

### H-3 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-4 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-5 OPTION(S)

The Government may require performance of the numbered line items identified in the Schedule as optional items at the price stated in the Schedule. The Contracting Officer may unilaterally exercise the option by written notice to the Contractor anytime prior to the current completion date of the contract. The Government may elect to exercise its option by issuing a new contract for the option. Except as provided in the schedule, the new contract will have the same terms and conditions as this contract including any unexercised options.

### H-6 ON-SITE USE OF GOVERNMENT PROPERTY AND GOVERNMENT FURNISHED EQUIPMENT

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.

NRL plans to make available to the successful offeror access to a vector network analyzer operating in this frequency band (full coverage is 140-325 GHz, in two bands, using OML extensions to an Agilent 8510C VNA). This equipment will be available for use for this project on site at NRL,

Washington, DC, and offerors are required to budget appropriate funding for travel time to this facility if access to this equipment is desired for the performance of this effort.

NRL will also make available, as GFE on loan during this development activity to the successful offeror a solid-state frequency-multiplier-based source capable of supplying a minimum of 20 mW in this frequency band. This equipment will be available for use at the site of the performing company.

Other miscellaneous test components (power meters, directional couplers, waveguide, spectrum analyzer/mixers) are available at NRL will be made available on an as needed basis, subject to availability, by arrangement with the NRL program manager.

## **H-7 REPRESENTATIONS AND CERTIFICATIONS**

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

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

### **I-1 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**

<b>FAR CLAUSE</b>	<b>TITLE</b>
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 (JUN 2003)
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 (JAN 2002) - Alternate II (OCT 2001)
- 52.219-16 - Liquidated Damages-Subcontracting Plan (JAN 1999)
- 52.219-25 - Small Disadvantaged Business Participation Program-Disadvantaged Status And Reporting (OCT 1999)
- 52.222-2 - 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)
- 52.222-21 - 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)
- 52.223-5 - 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)
- 52.227-11 - 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) Alternate I (FEB 2002)
  - 52.232-33 - Payment By Electronic Funds Transfer-Central Contractor Registration (OCT 2003)
  - 52.233-1 - Disputes (JUL 2002)
  - 52.233-3 - Protest After Award (AUG 1996) - Alternate I (JUN 1985)
  - 52.233-4 - Applicable Law For Breach Of Contract Claim (OCT 2004)
  - 52.242-1 - 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)
  - 52.243-6 - Change Order Accounting (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)
  - 52.246-24 - Limitation Of Liability - High-Value Items (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)
  - 52.252-6 - Authorized Deviations in Clauses (APR 1984)( fill in Defense Federal Acquisition Regulation Supplement (48 CFR Chapter 2))
  - 52.253-1 - Computer Generated Forms (JAN 1991)

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

**DFARS CLAUSE    TITLE**

- 252.201-7000 - Contracting Officer's Representative (DEC 1991)
- 252.203-7001 - Prohibition On Persons Convicted Of Fraud Or Other Defense Contract Related

- Felonies (DEC 2004)
- 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)
- 252.205-7000 - 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)
- 252.223-7006 - 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)
- 252.225-7031 - Secondary Arab Boycott Of Israel (JUN 2005)
- 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)
- 252.227-7016 - Rights In Bid Or Proposal Information (JUN 1995)
- 252.227-7026 - Deferred Delivery Of Technical Data Or Computer Software (APR 1988)
- 252.227-7027 - Deferred Ordering Of Technical Data Or Computer Software (APR 1988)
- 252.227-7030 - Technical Data--Withholding Of Payment (MAR 2000)
- 252.227-7034 - Patents--Subcontracts (APR 1984)
- 252.227-7037 - 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)
- 252.235-7010 - 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)

**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 - 6 Pages, With Exhibit A - DD Form 1423, Contract Data Requirements List, 4 Pages.
- J-2** Attachment (2) – 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**

- 52.214-34 - Submission Of Offers In The English Language (APR 1991)  
 52.214-35 - Submission Of Offers In U.S. Currency (APR 1991)  
 52.215-1 - Instructions To Offerors- Competitive Acquisition (JAN 2004) Alternate II (OCT 1997)  
 52.215-5 - Facsimile Proposals (OCT 1997)  
 Paragraph (c) is completed as follows: (202) 767-5896 (primary) or (202) 767-0494 (alternate). In addition proposals may be transmitted by e-mail to: Kevin.King@nrl.navy.mil (primary) or Jan. Bays@.nrl.navy.mil (alternate) in either Microsoft Word (2000 or earlier) or pdf format.  
 52.215-16 - Facilities Capital Cost Of Money (JUN 2003)  
 52.219-24 - Small Disadvantaged Business Participation Program - Targets (OCT 2000)

#### **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 to:

Contracting Officer, ATTN: Code: 3220.KK  
Naval Research Laboratory(NRL)  
4555 Overlook Avenue, S.W.  
Washington, D.C. 20375  
Solicitation/RFP No. – N00173-05-R-KK06  
Closing Date: August 23, 2005 Time: 4:00 p.m.

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 completion contract resulting from this solicitation.

#### **L-6 FAR 52.233-2 - SERVICE OF PROTEST (AUG 1996)**

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

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

#### **L-7 DFARS 252.227-7017 - IDENTIFICATION AND ASSERTION OF USE, RELEASE, OR DISCLOSURE RESTRICTIONS (JUN 1995)**

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

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

clause.

- (2) If a successful offeror will not be required to deliver technical data, the Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation clause, or, if this solicitation contemplates a contract under the Small Business Innovative Research Program, the Rights in Noncommercial Technical Data and Computer Software--Small Business Innovative Research (SBIR) Program clause.
- (b) The identification and assertion requirements in this provision apply only to technical data, including computer software documents, or computer software to be delivered with other than unlimited rights. For contracts to be awarded under the Small Business Innovative Research Program, the notification requirements do not apply to technical data or computer software that will be generated under the resulting contract. Notification and identification is not required for restrictions based solely on copyright.
- (c) Offers submitted in response to this solicitation shall identify, to the extent known at the time an offer is submitted to the Government, the technical data or computer software that the Offeror, its subcontractors or suppliers, or potential subcontractors or suppliers, assert should be furnished to the Government with restrictions on use, release, or disclosure.
- (d) The Offeror's assertions, including the assertions of its subcontractors or suppliers or potential subcontractors or suppliers shall be submitted as an attachment to its offer in the following format, dated and signed by an official authorized to contractually obligate the Offeror:

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

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

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

- \* For technical data (other than computer software documentation) pertaining to items, components, or processes developed at private expense, identify both the deliverable technical data and each such items, component, or process. For computer software or computer software documentation identify the software or documentation.
- \*\* Generally, development at private expense, either exclusively or partially, is the only basis for asserting restrictions. For technical data, other than computer software documentation, development refers to development of the item, component, or process to which the data pertain. The Government's rights in computer software documentation generally may not be restricted. For computer software, development refers to the software. Indicate whether development was accomplished exclusively or partially at private expense. If development was not accomplished at private expense, or for computer software documentation, enter the specific basis for asserting restrictions.
- \*\*\* Enter asserted rights category (e.g., government purpose license rights from a prior contract, rights in SBIR data generated under another contract, limited, restricted, or government purpose rights under this or a prior contract, or specially negotiated licenses).

- \*\*\*\* Corporation, individual, or other person, as appropriate.
- \*\*\*\*\* Enter "none" when all data or software will be submitted without restrictions.

Date \_\_\_\_\_  
 Printed Name and Title \_\_\_\_\_  
 \_\_\_\_\_  
 Signature \_\_\_\_\_

(End of identification and assertion)

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

**L-8 GOVERNMENT-FURNISHED PROPERTY**

No material, labor, or facilities will be furnished by the Government unless provided for in the solicitation. See Clause H-6 concerning Government Furnished Equipment which will be available for this effort.

**L-9 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-10 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-11 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 proposal:
  - a. The proposal must indicate the offeror's approach to solving the technical problems inherent in the Statement of Work. This would include the details of the proposed approach, such as

the choice of gun parameters, (i.e. cathode current density, gun area convergence and focusing, the choice of circuit design, (i.e. beam conductance, circuit type, and stabilization technique) and the magnetic focusing approach. The proposal should also indicate how the Phase II approach proposed is compatible with the ability to achieve the efficiency goal in Phase III. The proposal should indicate the offeror's planned fabrication techniques, and the degree to which it believes it can achieve the specified output frequency. The proposal should identify risk areas in the chosen design and plans for mitigating that risk.

- b. The proposal must indicate the extent to which the offeror has demonstrated expertise in prior efforts for high power amplifiers in this or similar millimeter wave (MMW) frequency bands. This proposal should indicate the offeror's past experience on similar devices. Examples of similar devices would include past performance on the development of slow wave vacuum electronic amplifiers such as extended interaction klystrons (EIK) or coupled cavity traveling wave tubes (TWT) in the upper MMW bands (W-band and higher) at similar power levels.
- c. The proposal must indicate the extent to which the offeror demonstrates an understanding of the technical requirements. The proposal should state the impact on the amplifier design which results from these requirements.
- d. The proposal should state the offeror's management plan, including such issues as the reporting chain to the Naval Research Laboratory, and plans for timely submission of financial and technical monthly progress statements. The proposal should also indicate the availability of current staff to be assigned to the effort, and discuss plans for keeping the development on schedule.

#### 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 three (3) contracts or subcontracts completed by the offeror or predecessor companies during the past five (5) years for services similar in nature to this requirement. Include in the three (3) 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-12 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.

(b) Proposals must also include information to permit evaluation of the extent of participation of small disadvantaged business concerns in performance of the contract. See the provision at FAR 52.219-24, Small Disadvantaged Business Participation Program--Targets (OCT 2000), and the clause at 52.219-25, Small Disadvantaged Business Participation Program--Disadvantaged Status and Reporting (OCT 1999). Any targets will be incorporated into and become part of any resulting contract. Information provided should include the extent of participation of such firms in terms of the value of the total acquisition and the complexity and variety of the work such firms are to perform.

m this solicitation.

## **L-13 CRITERIA FOR ALTERNATE PROPOSALS**

Proposals submitted in response to this solicitation are not limited to the suggested approaches of the acquisition data furnished. In order to be evaluated, alternate proposals must offer technical

improvements or modifications which are to the overall benefit of the Government. Offerors are encouraged to submit alternate proposals containing new ideas, unique approaches or other significant beneficial program improvements. The alternate proposal will be evaluated in accordance with the evaluation criteria. If the alternate proposal is considered most advantageous to the Government but involves a substantive or material departure from the stated basic proposal requirements or the stated evaluation criteria, all offerors shall be given an opportunity to submit new or amended proposals on the basis of the revised requirements provided this can be done without revealing to the other offerors innovative solutions or techniques or other information entitled to protection from disclosure. The Government reserves the right to award a contract based upon an alternate proposal which meets the government's technical requirements and is otherwise awardable in accordance with the evaluation and award criteria.

## **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. The technical factors are listed in descending order of importance. Technical subfactors one and two are of equal importance. Technical subfactors three and four are of equal importance.

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

##### **(1) DEMONSTRATED EXPERTISE, CAPABILITY AND PAST PERFORMANCE**

The proposals will be evaluated on the extent to which the offer has demonstrated expertise in prior efforts for high power amplifiers in this or similar millimeter wave (MMW) frequency bands. Past experience on similar devices will be considered as part of this evaluation factor. Examples of similar devices would include past performance on the development of slow-wave vacuum electronic amplifiers such as extended interaction klystrons (EIK) or coupled-cavity traveling wave tubes (TWT) in the upper MMW bands (W-band and higher) at similar power levels.

This evaluation factor will also include 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).

## (2) PROPOSED APPROACH

The proposals will be evaluated on the extent to which the offeror's proposal demonstrates their approach to solving the technical problems inherent in this Statement of Work. The government recognizes this as an aggressive development effort. Accordingly, the details of the proposed approach will be evaluated, including choice of gun parameters (cathode current density, gun area convergence, focusing), and circuit design (beam conductance, circuit type, stabilization technique), and magnetic focusing approach. Due to the emphasis in Phase III on efficiency, proposal will also be evaluated based on the compatibility of the Phase II approach with the ability to achieve the efficiency goal in Phase III. The proposals will also be evaluated on the extent to which any risks in the proposed design are mitigated. Proposals will also be evaluated on the degree to which the offeror indicates that they can achieve the specified output frequency.

## (3) MANAGEMENT PLAN

The proposals will be evaluated on the management plan including such issues as the reporting chain to NRL, and the plan for timely submission of financial and technical monthly progress reports. Issues which should be addressed in the management plan include the extent of availability of current staff for assignment to this effort, and how management will keep this development on schedule.

## (4) TECHNICAL UNDERSTANDING OF THE REQUIREMENT

The proposals will be evaluated on the extent to which the offeror's proposal demonstrates an understanding of the technical requirements and the impact on the amplifier design resulting from these requirements.

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

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

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

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

(b) The extent of participation of small disadvantaged business concerns in performance of the contract will be evaluated on the basis of the proposed extent of participation of such firms in terms of the value of the total acquisition and the complexity and variety of the work such firms are to perform.

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

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

## Statement of Work

### Development Of High-Power G-Band Vacuum Electronic Amplifier

#### Introduction

The Naval Research Laboratory (NRL) is engaged in the development of high power millimeter wave amplifiers for a wide range of defense applications. This effort is for the development of a compact, high-efficiency, high-power G-band (~220 GHz) amplifier. This effort will be conducted in three phases with two options as follows:

- Phase I: Amplifier Design Trade Study and Detailed Electrical, Thermal, and Mechanical Design of Chosen Approach
- Phase II: High-Power Amplifier Development (without depressed collector)
- Phase III: High-Efficiency Amplifier Development (with depressed collector)
- Option I: Beam-Stick Development
- Option II: Additional High-Power, High-Efficiency Amplifier (with depressed collector)

The anticipated period of performance for Phase I is 3-6 months. The anticipated time for Phase II and Phase III is one year each, though offerors may propose differing periods of performance for these phases. The entire effort, Phase I, II, and III, should not require more than three years from date of contract initiation.

This Statement of Work describes the goals of the development program, and the amplifier performance requirements and goals which should be met by this effort.

Significant progress in vacuum electronic amplifiers has been made in the past in this and neighboring frequency bands. The past demonstrated performance of extended interaction klystrons at 94, 140, 220, and 280 GHz, leads us to view these specifications as attainable, even though they are certainly beyond the present state-of-technology. The contractor shall perform the following tasks:

#### Objective of Development and Specifications

The contractor shall develop a high-efficiency, high-power (5 W) continuous-wave (CW) amplifier at a nominal frequency of 220 GHz. Details are provided in Table 1 and associated notes to this table. This amplifier shall be as compact as possible, and it shall operate at as low a cathode voltage as possible, consistent with good beam transport and minimal body current. As a goal, it is desired that the power amplifier tube will occupy not more than approximately 1200cm<sup>3</sup>

(exclusive of power supply), and that the cathode voltage will be not less than 3 kV and not more than 20 kV.

The contractor shall optimize the efficiency of this amplifier. It is recognized that this is one of the highest risk areas in the development. Accordingly, following a design phase (Phase I), the program is partitioned into two development phases. The basic power-bandwidth performance is the principal objective in the initial development (Phase II), and the optimization of device efficiency is the objective in a subsequent development (Phase III). It is assumed that to achieve the objective of 25% efficiency, the contractor will have to employ a multi-stage depressed collector for beam energy recovery. The efficiency as defined here assumes proper accounting for the supplied cathode filament power, as well as the circuit-intercepted power, in the calculation of overall efficiency. Electronic interaction efficiencies in high frequency slow-wave VE amplifiers are generally very low, in the 0.5-5% range for high MMW frequencies. However, recent success in the use of depressed collectors for achieving 32% efficiency in a W-band EIK amplifier has demonstrated that high efficiency and operation at W-band and higher frequencies are not incompatible.

The contractor shall design the amplifier to operate reliably with a goal for mean time to failure (MTTF) in excess of 35,000 hours.

It is anticipated that the contractor will utilize a slow-wave amplifier design, such as an extended interaction klystron (EIK) or a coupled-cavity TWT. The following are the desired and required specifications for amplifier performance:

Table 1

Parameter	Requirement	Goal	Value	Notes
Center frequency	X		220 GHz	1
Pout (@1 dB compression)	X		5 W	2
Bandwidth [-1 dB]	X		400 MHz	3
Gain @Pout=P <sub>1dB</sub>	X		30 dB	4
Pinput	X		5 mW	5
Output VSWR			TBD	6
Input VSWR			TBD	6
Duty factor	X		100%	7
Overall Efficiency		X	25%	8
Weight		X	4 kg	9
Magnetic Focusing	X		Permanent Magnet	
Maximum Cathode Voltage	X		20 kV	10
Operating		X	-20 C to 40 C	11

Temperature Range				
Input Waveguide	x		WR-05	12
Output Waveguide	x		WR-05	12

## Notes:

1. Nominal center frequency. Offerors should specify how closely they can achieve a given specified output frequency in the developed amplifier in their proposal. For an objective center frequency,  $f_c$ , and an experimentally measured actual output center frequency,  $f_e$ , related by  $f_e = f_c \pm \delta$ , the proposals should identify the expected uncertainty,  $\delta$ . The final objective output frequency is TBD, but close to this nominal center frequency.
2. Output power at 1dB compression from saturation,  $P_{1dB}$ , measured at WR-5 output flange of amplifier.
3. Bandwidth; more bandwidth is desirable provided it does not negatively impact required voltage, circuit length, or overall weight.
4. Gain corresponding to  $P_{out}$  at 1 dB compression point.
5. Input drive power,  $P_{input}$ , corresponding to  $P_{1dB}$  output. [Input driver will be supplied by government for testing]
6. Offerors shall specify expected input and output VSWR or return loss, and attempt to minimize input VSWR. Amplifier should be capable of operating stably (without oscillation) into loads with VSWR of 1.5:1.
7. Amplifier will be operated continuous wave (CW); there is no requirement for pulsed operation
8. Efficiency goal assumes use of multi-stage depressed collector; efficiencies higher than 25% are desirable.
9. Weight includes tube and permanent magnet
10. Lower voltages are preferred over higher voltages
11. Operating temperature range is to be used for design goals. Actual testing of amplifier over this temperature range will not be required in Phases II and III.
12. WR-05 waveguide (0.0510" x 0.0255"); flanges to be Milspec MIL.F-3922/67B-M05, 0.75" D. Vendors are referred to a discussion of flange and alignment pin tolerances available at: <http://www.oml-mmw.com/mwvacamp.pdf>

The three phases anticipated for this effort are as follows:

### **Phase I: Design Study**

Phase I shall commence immediately upon contract award.

The contractor shall perform a design study, considering the following factors:

- Evaluation of optimum circuit design for their proposed device type
- Evaluation of cathode voltage/current and magnetic focusing trade-off
- Evaluation of predicted performance, with and without depressed collector
- Evaluation of potential for increasing operating bandwidth beyond 400 MHz by altering baseline design
- Development of complete thermal, mechanical and electrical design for amplifier to be developed in Phase II.

At the conclusion of Phase I, the contractor shall deliver a report containing the results of these evaluations (see form DD1423).

### **Phase II: High-Power Amplifier Development**

Phase II is the first stage of hardware development. It is assumed that not less than two builds of an amplifier will be required to achieve the stated goals. Offerors should indicate the number of amplifier builds they expect will be required to achieve the stated performance specifications and goals, and they should cost this phase accordingly. At the conclusion of Phase II, the contractor is required to demonstrate amplifier performance initially at their facility and subsequently at NRL, using the NRL test modulator model ETM Model 2062PD2 (20 kV max voltage, 1 A max current, 100% duty, 4 stage depressed collector capability). Costs (if any) for preparing this NRL test modulator for use during this demonstration will be borne by NRL. The offeror shall include travel costs for this testing at NRL in the contract cost proposed. The amplifier developed under Phase II will be a deliverable to NRL at the end of Phase II.

### **Phase III: High-Efficiency Amplifier Development**

Phase III involves the development of the amplifier with a depressed collector. It is a separate phase which follows demonstration of the power, gain, and bandwidth performance of the amplifier with a simple collector. In Phase III, the development effort will focus on integration of a multi-stage (number of stages TBD) depressed collector to achieve the efficiency goal. Offerors who wish to develop the depressed collector technology for this amplifier concurrently with Phase II development may propose this, however, they must then justify their plan with supporting documentation on the adequacy of their existing design process to predict the spent beam distribution needed to optimize a depressed collector design.

At the conclusion of Phase III, vendors are required to demonstrate amplifier performance initially at their facility and subsequently at NRL, using the NRL test

modulator described previously. The offeror shall include travel costs for this testing at NRL in the contract cost proposed.

**Option I: Beam-Stick**

As an option item, offerors shall propose to develop a beam-stick (gun, magnetic focusing, multi-stage-depressed collector) for use in power supply testing. It is anticipated that this option would not be exercised earlier than the beginning of Phase III, due to the need to have the beam stick have the same depressed collector design to be used in the amplifier in Phase III.

**Option II: Additional High-Power Amplifier**

As an option item, offerors shall propose to deliver an additional high-power, high-efficiency amplifier. This item would be delivered following successful completion of the development effort though Phase III and delivery of the hardware under Phase III.

**Contract Deliverables****Hardware Deliverables**

Hardware deliverables are as follows. At the conclusion of Phase II, the contractor shall deliver an amplifier meeting all of the specifications in Table 1 except the efficiency. At the conclusion of Phase III, the vendor shall deliver an amplifier meeting all of the specifications in Table 1, including a best effort on meeting the efficiency goal as indicated. If option I is exercised, the vendor shall deliver a beam stick. If option II is exercised, at the end of Phase III, the contractor shall deliver a second complete amplifier.

**Data and Reporting Deliverables**

In addition to the hardware deliverables, the contractor shall deliver data and reporting items as specified in the Contract Data Requirements List (CDRL), DD Form 1423. Data items shall be delivered in electronic form as specified.

Monthly technical progress reports shall report the key technical progress in a concise manner. NRL expects that adequate technical reporting for these monthly reports would not require more than 4 pages.

The monthly financial reporting shall include not only expenditures to date, but projections of the expenditure rate for all obligated funds on a month-to-month basis. This facilitates government financial management for optimal continuity of funding.

Associated with the Preliminary Design Review (PDR) and Comprehensive Design Review (CDR) the contractor shall submit, in electronic form, both a written report and the vu graphs used in the PDR/CDR. Proprietary company

information shall be so marked and will be handled accordingly. Information that is not proprietary, but rather of a general character, shall not be marked proprietary. Blanket marking of all correspondence on this contract as proprietary is discouraged.

### **Program Reviews**

General Reporting for All Phases as follows is required:

Monthly financial and short technical progress reports (electronic reporting, MS Word, MS Excel, or PDF files)

Quarterly Program Reviews (Vendor's site) (progress report including power point)

#### **Phase I**

Preliminary Design Review (PDR) will be carried out following the design trade study and selection of a specific design. This PDR will be scheduled at a mutually agreeable time during Phase I. A Critical Design Review (CDR) will be carried out following the detailed mechanical and electrical design of the amplifier. The CDR will occur at the end of the Phase I effort, prior to initiation of the Phase II development effort.

#### **Phase II**

Quarterly program reviews will be held at the contractor's site. Slides presented at quarterly program reviews will be made available in electronic form (MS Power point), marked as appropriate for proprietary information.

#### **Phase III**

Quarterly program reviews will be held at the contractor's site. Slides presented at quarterly program reviews will be made available in electronic form (MS Power point), marked as appropriate for proprietary information.

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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.

<b>A. CONTRACT LINE ITEM NO.</b> 0004	<b>B. EXHIBIT</b> A	<b>C. CATEGORY:</b> TDP _____ TM _____ OTHER _____
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<b>D. SYSTEM/ITEM</b> High Power G- Band Amplifier	<b>E. CONTRACT/PR NO.</b>	<b>F. CONTRACTOR</b> NRL, Code 6841
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<b>1. DATA ITEM NO.</b> A001	<b>2. TITLE OF DATA ITEM</b> Project Schedule - Phase I	<b>3. SUBTITLE</b>
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<b>4. AUTHORITY (Data Acquisition Document No.)</b>	<b>5. CONTRACT REFERENCE</b> SOW, Pages 6 and 7	<b>6. REQUIRING OFFICE</b> NRL, Code 6841
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<b>7. DD 250 REQ</b> NO	<b>9. DIST STATEMENT REQUIRED</b> A	<b>10. FREQUENCY</b> 1 TIME	<b>12. DATE OF FIRST SUBMISSION</b> 14 DAC	<b>14. DISTRIBUTION</b>		
<b>8. APP CODE</b> A		<b>11. AS OF DATE</b> N/A	<b>13. DATE OF SUBSEQUENT SUBMISSION</b> N/A	a. ADDRESSEE	Draft	b. COPIES

<b>16. REMARKS</b> Electronic submission in Microsoft Project Format. Contractor should submit draft plan for review prior to submission of final project schedule plan.				NRL Code 6841	1	1	
				<b>15. TOTAL</b> →	1	1	0

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

<b>1. DATA ITEM NO.</b> A002	<b>2. TITLE OF DATA ITEM</b> Monthly Technical Progress Report	<b>3. SUBTITLE</b>
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<b>4. AUTHORITY (Data Acquisition Document No.)</b>	<b>5. CONTRACT REFERENCE</b> SOW, Pages 6 and 7	<b>6. REQUIRING OFFICE</b> NRL Code 6841
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<b>7. DD 250 REQ</b> NO	<b>9. DIST STATEMENT REQUIRED</b> C	<b>10. FREQUENCY</b> MTHLY	<b>12. DATE OF FIRST SUBMISSION</b> 45 DAC	<b>14. DISTRIBUTION</b>		
<b>8. APP CODE</b> N/A	(Critical Tech)	<b>11. AS OF DATE</b> 30 DAC	<b>13. DATE OF SUBSEQUENT SUBMISSION</b> See Blk. 16	a. ADDRESSEE	Draft	b. COPIES

<b>16. REMARKS</b> Monthly progress report to be submitted each 30 days. Electronic submission in Microsoft Word or Adobe PDF format.				NRL Code 6841		1	
				<b>15. TOTAL</b> →	0	1	0

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

<b>1. DATA ITEM NO.</b> A003	<b>2. TITLE OF DATA ITEM</b> Monthly Status of Funds Report	<b>3. SUBTITLE</b>
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<b>4. AUTHORITY (Data Acquisition Document No.)</b>	<b>5. CONTRACT REFERENCE</b> SOW, Pages 6 and 7	<b>6. REQUIRING OFFICE</b> NRL, Code 6841
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<b>7. DD 250 REQ</b> NO	<b>9. DIST STATEMENT REQUIRED</b> A	<b>10. FREQUENCY</b> MTHLY	<b>12. DATE OF FIRST SUBMISSION</b> 45 DAC	<b>14. DISTRIBUTION</b>		
<b>8. APP CODE</b> N/A		<b>11. AS OF DATE</b> 30 DAC	<b>13. DATE OF SUBSEQUENT SUBMISSION</b> See Blk. 16	a. ADDRESSEE	Draft	b. COPIES

<b>16. REMARKS</b> Monthly status of funds report to be submitted each 30 days. Electronic submission in MS Excel Spreadsheet format. Submission should include monthly billing and projected expenditure profile for the remainder of obligated funds				NRL Code 6841		1	
				<b>15. TOTAL</b> →	0	1	0

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

<b>1. DATA ITEM NO.</b> A004	<b>2. TITLE OF DATA ITEM</b> Preliminary Design Review - Phase I	<b>3. SUBTITLE</b> Presentation
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<b>4. AUTHORITY (Data Acquisition Document No.)</b>	<b>5. CONTRACT REFERENCE</b> SOW, Pages 6 and 7	<b>6. REQUIRING OFFICE</b> NRL Code 6841
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<b>7. DD 250 REQ</b> NO	<b>9. DIST STATEMENT REQUIRED</b> C	<b>10. FREQUENCY</b> 1 TIME	<b>12. DATE OF FIRST SUBMISSION</b> ASREQ	<b>14. DISTRIBUTION</b>		
<b>8. APP CODE</b> N/A		<b>11. AS OF DATE</b> N/A	<b>13. DATE OF SUBSEQUENT SUBMISSION</b> N/A	a. ADDRESSEE	Draft	b. COPIES

<b>16. REMARKS</b> Presentation to be made following the design trade study and selection of a specific design. Copies of presentation materials to be submitted electronically in Microsoft Power Point format.				NRL Code 6841		1	
				<b>15. TOTAL</b> →	0	1	0

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

<b>G. PREPARED BY</b> COR, Code 6841	<b>H. DATE</b> 06/27/2005	<b>I. APPROVED BY</b>	<b>J. DATE</b>
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<b>A. CONTRACT LINE ITEM NO.</b> 0004				<b>B. EXHIBIT</b> A		<b>C. CATEGORY:</b> TDP _____ TM _____ OTHER _____			
<b>D. SYSTEM/ITEM</b> High Power G- Band Amplifier				<b>E. CONTRACT/PR NO.</b>		<b>F. CONTRACTOR</b> NRL, Code 6841			
<b>1. DATA ITEM NO.</b> A005	<b>2. TITLE OF DATA ITEM</b> Preliminary Design Review (PDR)- Phase I				<b>3. SUBTITLE</b> Report				
<b>4. AUTHORITY (Data Acquisition Document No.)</b>			<b>5. CONTRACT REFERENCE</b> SOW, Pages 6 and 7			<b>6. REQUIRING OFFICE</b> NRL, Code 6841			
<b>7. DD 250 REQ</b> NO	<b>9. DIST STATEMENT REQUIRED</b> C (Critical Tech)	<b>10. FREQUENCY</b> 1 TIME		<b>12. DATE OF FIRST SUBMISSION</b> ASREQ		<b>14. DISTRIBUTION</b>			
<b>8. APP CODE</b> N/A		<b>11. AS OF DATE</b> N/A		<b>13. DATE OF SUBSEQUENT SUBMISSION</b> N/A		a. ADDRESSEE	Draft	b. COPIES	
									Final
								Reg	Repro
<b>16. REMARKS</b> Formal report containing results of design trade study and the selection of a specific design. Report to be in electronic format, in MS Word or a PDF file. Report may be submitted in lieu of CDRL A002 for month when PDR is held.						NRL Code 6841		1	
						<b>15. TOTAL</b> →	0	1	0
<b>1. DATA ITEM NO.</b> A006	<b>2. TITLE OF DATA ITEM</b> Critical Design Review				<b>3. SUBTITLE</b> Presentation				
<b>4. AUTHORITY (Data Acquisition Document No.)</b>			<b>5. CONTRACT REFERENCE</b> SOW, Pages 6 and 7			<b>6. REQUIRING OFFICE</b> NRL Code 6841			
<b>7. DD 250 REQ</b> NO	<b>9. DIST STATEMENT REQUIRED</b> C (Critical Tech)	<b>10. FREQUENCY</b> 1 TIME		<b>12. DATE OF FIRST SUBMISSION</b> ASREQ		<b>14. DISTRIBUTION</b>			
<b>8. APP CODE</b> N/A		<b>11. AS OF DATE</b> N/A		<b>13. DATE OF SUBSEQUENT SUBMISSION</b> N/A		a. ADDRESSEE	Draft	b. COPIES	
									Final
								Reg	Repro
<b>16. REMARKS</b> Presentation to be made following the detailed mechanical and electrical design of the amplifier. Copies of presentation materials to be submitted in Microsoft Power Point format.						NRL Code 6841		1	
						<b>15. TOTAL</b> →	0	1	0
<b>1. DATA ITEM NO.</b> A007	<b>2. TITLE OF DATA ITEM</b> Final Report - Phase I				<b>3. SUBTITLE</b>				
<b>4. AUTHORITY (Data Acquisition Document No.)</b>			<b>5. CONTRACT REFERENCE</b> SOW, Pages 6 and 7			<b>6. REQUIRING OFFICE</b> NRL, Code 6841			
<b>7. DD 250 REQ</b> NO	<b>9. DIST STATEMENT REQUIRED</b> C (Critical Tech)	<b>10. FREQUENCY</b> 1 TIME		<b>12. DATE OF FIRST SUBMISSION</b> 210 DAC		<b>14. DISTRIBUTION</b>			
<b>8. APP CODE</b> A		<b>11. AS OF DATE</b> 180 DAC		<b>13. DATE OF SUBSEQUENT SUBMISSION</b> N/A		a. ADDRESSEE	Draft	b. COPIES	
									Final
								Reg	Repro
<b>16. REMARKS</b> Final report including design trade study and detailed design. Report to be in electronic format, in MS Word or a PDF file. Report may be submitted in lieu of CDRL A002 for month this is due. Includes electronic CAD file for amp. exterior.						NRL Code 6841	1	1	
						<b>15. TOTAL</b> →	1	1	0
<b>1. DATA ITEM NO.</b> A008	<b>2. TITLE OF DATA ITEM</b> Project Schedule - Phase II				<b>3. SUBTITLE</b>				
<b>4. AUTHORITY (Data Acquisition Document No.)</b>			<b>5. CONTRACT REFERENCE</b> SOW, Pages 6 and 7			<b>6. REQUIRING OFFICE</b> NRL Code 6841			
<b>7. DD 250 REQ</b> NO	<b>9. DIST STATEMENT REQUIRED</b> A	<b>10. FREQUENCY</b> 1 TIME		<b>12. DATE OF FIRST SUBMISSION</b> 180 DAC		<b>14. DISTRIBUTION</b>			
<b>8. APP CODE</b> A		<b>11. AS OF DATE</b> N/A		<b>13. DATE OF SUBSEQUENT SUBMISSION</b> N/A		a. ADDRESSEE	Draft	b. COPIES	
									Final
								Reg	Repro
<b>16. REMARKS</b> Electronic submission in Microsoft Project Format. Contractor should submit draft plan for review prior to submission of final project schedule plan. Schedule should show planned activities through Phase II and an estimate of time for each task.						NRL Code 6841	1	1	
						<b>15. TOTAL</b> →	1	1	0
<b>G. PREPARED BY</b> COR, Code 6841			<b>H. DATE</b> 06/27/2005		<b>I. APPROVED BY</b>			<b>J. DATE</b>	

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18. ESTIMATED TOTAL PRICE

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<b>A. CONTRACT LINE ITEM NO.</b> 0004		<b>B. EXHIBIT</b> A		<b>C. CATEGORY:</b> TDP _____ TM _____ OTHER _____			
<b>D. SYSTEM/ITEM</b> High Power G- Band Amplifier			<b>E. CONTRACT/PR NO.</b>		<b>F. CONTRACTOR</b> NRL, Code 6841		
<b>1. DATA ITEM NO.</b> A009	<b>2. TITLE OF DATA ITEM</b> Final Report - Phase II			<b>3. SUBTITLE</b>			
<b>4. AUTHORITY (Data Acquisition Document No.)</b>			<b>5. CONTRACT REFERENCE</b> SOW, Pages 6 and 7		<b>6. REQUIRING OFFICE</b> NRL, Code 6841		
<b>7. DD 250 REQ</b> NO	<b>9. DIST STATEMENT REQUIRED</b> C (Critical Tech)	<b>10. FREQUENCY</b> 1 TIME		<b>12. DATE OF FIRST SUBMISSION</b> 760 DAC		<b>14. DISTRIBUTION</b>	
<b>8. APP CODE</b> A		<b>11. AS OF DATE</b> 730 DAC		<b>13. DATE OF SUBSEQUENT SUBMISSION</b> N/A		a. ADDRESSEE	
<b>16. REMARKS</b> Formal report containing results of high power amplifier development. Report shall contain test data from testing amplifier(s) at contractor's facility. Report to be submitted electronically, in MS Word or Adobe PDF format.						b. COPIES	
						Draft	
						Reg	Repro
						1	1
<b>15. TOTAL</b> →						1	1
						0	
<b>1. DATA ITEM NO.</b> A010	<b>2. TITLE OF DATA ITEM</b> Project Schedule - Phase III			<b>3. SUBTITLE</b>			
<b>4. AUTHORITY (Data Acquisition Document No.)</b>			<b>5. CONTRACT REFERENCE</b> SOW, Pages 6 and 7		<b>6. REQUIRING OFFICE</b> NRL Code 6841		
<b>7. DD 250 REQ</b> NO	<b>9. DIST STATEMENT REQUIRED</b> A	<b>10. FREQUENCY</b> 1 TIME		<b>12. DATE OF FIRST SUBMISSION</b> 730 DAC		<b>14. DISTRIBUTION</b>	
<b>8. APP CODE</b> A		<b>11. AS OF DATE</b> N/A		<b>13. DATE OF SUBSEQUENT SUBMISSION</b> N/A		a. ADDRESSEE	
<b>16. REMARKS</b> Electronic submission in Microsoft Project Format. Contractor should submit draft plan for review prior to submission of final project schedule plan. Schedule should show planned activities through Phase III and an estimate of time for each task.						b. COPIES	
						Draft	
						Reg	Repro
						1	1
<b>15. TOTAL</b> →						1	1
						0	
<b>1. DATA ITEM NO.</b> A011	<b>2. TITLE OF DATA ITEM</b> Final Report - Phase III			<b>3. SUBTITLE</b>			
<b>4. AUTHORITY (Data Acquisition Document No.)</b>			<b>5. CONTRACT REFERENCE</b> SOW, Pages 6 and 7		<b>6. REQUIRING OFFICE</b> NRL, Code 6841		
<b>7. DD 250 REQ</b> NO	<b>9. DIST STATEMENT REQUIRED</b> C (Critical Tech)	<b>10. FREQUENCY</b> 1 TIME		<b>12. DATE OF FIRST SUBMISSION</b> 1125 DAC		<b>14. DISTRIBUTION</b>	
<b>8. APP CODE</b> A		<b>11. AS OF DATE</b> 1095 DAC		<b>13. DATE OF SUBSEQUENT SUBMISSION</b> N/A		a. ADDRESSEE	
<b>16. REMARKS</b> Final report including design and test data for the amplifier Report to be in electronic format, in MS Word or a PDF file. Report may contain proprietary information as appropriate						b. COPIES	
						Draft	
						Reg	Repro
						1	1
<b>15. TOTAL</b> →						1	1
						0	
<b>1. DATA ITEM NO.</b> A012	<b>2. TITLE OF DATA ITEM</b> Amplifier Operating Manual			<b>3. SUBTITLE</b>			
<b>4. AUTHORITY (Data Acquisition Document No.)</b>			<b>5. CONTRACT REFERENCE</b> SOW, Pages 6 and 7		<b>6. REQUIRING OFFICE</b> NRL Code 6841		
<b>7. DD 250 REQ</b> LT	<b>9. DIST STATEMENT REQUIRED</b> C (Critical Tech)	<b>10. FREQUENCY</b> 1 TIME		<b>12. DATE OF FIRST SUBMISSION</b> 1095 DAC		<b>14. DISTRIBUTION</b>	
<b>8. APP CODE</b> N/A		<b>11. AS OF DATE</b> N/A		<b>13. DATE OF SUBSEQUENT SUBMISSION</b> N/A		a. ADDRESSEE	
<b>16. REMARKS</b> Contractor shall provide a document containing a non-proprietary subset of information contained in CDRL A011 sufficient to permit integration of the amplifier by the power supply vendor.						b. COPIES	
						Draft	
						Reg	Repro
							1
<b>15. TOTAL</b> →						0	1
						0	0
<b>G. PREPARED BY</b> COR, Code 6841			<b>H. DATE</b> 06/27/2005		<b>I. APPROVED BY</b>		<b>J. DATE</b>

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

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

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

