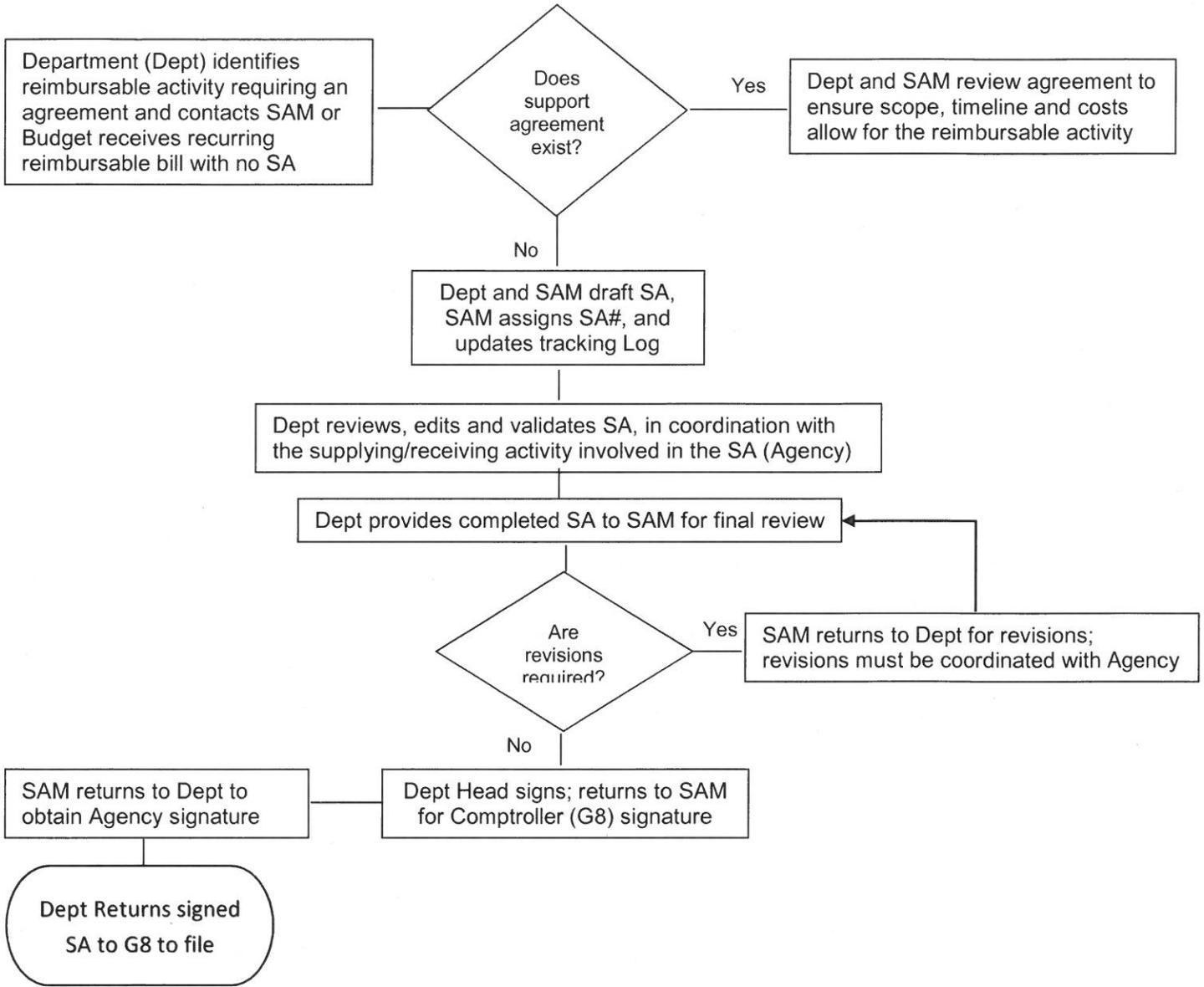


# **ANNEX A**

### Support Agreement (SA) Process



# **ANNEX B**

## Instructions for Completing Support Agreement DD Form 1144

Supplying activity is the organization supplying the service. Receiving activity is the organization receiving the product or service and typically provides funds. The DD1144 is not a funding document or a legally binding document; it is an agreement that outlines service support expectations.

Block 1. Will be provided by G8 when USMA is the supplying activity.

Block 2. Should be completed if there is an existing agreement for the support service.

Block 3. Is the effective date of the agreement; date the services are expected to begin.

Block 4. Is the agreement expiration date. Recommend 5-year agreement if services are expected to be provided for extended period of time.

Block 5a. Provide supplying activity name, physical address and phone number if possible. i.e.

US Military Academy  
G8, Programming and Manpower Management Division  
626 Swift Drive, Building 626  
West Point, NY 10996; 845-938-4139

Block 5b. Major Command of the supplying activity. i.e. USMA.

Block 6a. Provide receiving activity name, physical address and phone number if possible.

Block 6b. Major Command of the receiving activity.

Block 7a. Provide Details of the services/support being provided by the supplier

Block 7b. Explain the basis for reimbursement which is how the costs were estimated. i.e. research costs determined based on number of man-hours expected multiplied by the cost per hour.

Block 7c. This is a non-binding cost estimate. Ensure the amount covers the life of the agreement and the 7.5% G&A fee (described in the provisions section).

Block 8a. When USMA is the supplying activity, Comptroller is USMA G8 (we receive funds).

Block 8b. Date Comptroller signs agreement.

Block 8c. Approving Authority is the Department Head of organization supplying the service.

- (1) Typed name of Dept Head
- (2) Department
- (3) Dept Head phone number
- (4) Dept Head signature
- (5) Date Dept Head signs

Block 9. When USMA is the receiving activity, Comptroller is USMA G8 (We are paying for a service).

Block 9b. Date Comptroller signs agreement.

Block 9c. Approving Authority is the Department Head of organization receiving the service.

- (1) Typed name of Dept Head
- (2) Department
- (3) Dept Head phone number
- (4) Dept Head signature
- (5) Date Dept Head signs

Block 10. To be completed upon termination of agreement.

Block 11. Provides general provisions. The information provided are the standard provisions that must be validated/agreed upon by the supplying and receiving activities.

11b. Must be completed with the receiving activity POC.

11c. Must be completed with the receiving activity technical and financial POC.

11g. Must be completed with the receiving organization name.

11h. Must be completed with the purpose of the agreement

Block 12. Should be completed if there are specific provisions related to the services provided.

Block 13. Provides financial provisions for review/validation by both the supplying and receiving activities. This section should be edited as required based on the product or service supplied. Paragraph j is the current rate 7.5 but is subject to change. Financial and Technical POCs must be completed in this section.

**\*Agreements should be reviewed annually and updated as required.**

**SUPPORT AGREEMENT**

<b>1. AGREEMENT NUMBER</b> <i>(Provided by Supplier)</i> USMA16028	<b>2. SUPERSEDED AGREEMENT NO.</b> <i>(If this replaces another agreement)</i>	<b>3. EFFECTIVE DATE (YYYYMMDD)</b> 20160122	<b>4. EXPIRATION DATE</b> <i>(May be "Indefinite")</i> 20160930
<b>5. SUPPLYING ACTIVITY</b>		<b>6. RECEIVING ACTIVITY</b>	
<b>a. NAME AND ADDRESS</b> UNITED STATES MILITARY ACADEMY PHOTONICS RESEARCH CENTER ATTN: LTC FLORENCE WEST POINT, NY 10996		<b>a. NAME AND ADDRESS</b> Air Force Research Laboratory (AFRL)/RDFC 3550 Aberdeen Ave SE, Bldg 497 KAFB, NM 87117-5776	
<b>b. MAJOR COMMAND</b> USMA		<b>b. MAJOR COMMAND</b> AIR FORCE RESEARCH LABORATORY	
<b>7. SUPPORT PROVIDED BY SUPPLIER</b>			
<b>a. SUPPORT</b> <i>(Specify what, when, where, and how much)</i>		<b>b. BASIS FOR REIMBURSEMENT</b>	<b>c. ESTIMATED REIMBURSEMENT</b>
<p>Mission Title: High Energy Laser Propagation Studies</p> <p>Description: This agreement outlines a collaborative relationship between the High Energy Laser Joint Technology Office (HEL-JTO) and the United States Military Academy (USMA).</p> <p>Purpose: FY16 funding to fully fund the FY16 effort to support Cadet Education in the area of high energy laser propagation to be conducted at the United States Military Academy (USMA) Photonics Research Center (PRC) in accordance with the SOW. Supplies and travel will be supported as required. Funds will be accepted reimbursable IAW MIPR (F2KBAB6033G102).</p>		<p>Supplies and Equipment Travel via DTS G&amp;A Fee TOTAL:  A 7.5% general and administrative fee will be charged.</p>	<p>\$15,000 \$22,000 \$3000 \$40,000</p>
ADDITIONAL SUPPORT REQUIREMENTS ATTACHED: <input type="checkbox"/> YES <input type="checkbox"/> NO			
<b>8. SUPPLYING COMPONENT</b>		<b>9. RECEIVING COMPONENT</b>	
<b>a. COMPTROLLER SIGNATURE</b> CARDONA.MELIS SA.1021100591 <small>Digitally signed by CARDONA.MELISSA.1021100591 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=CARDONA.MELISSA.1021100591 Date: 2016.03.15.15:41:42-0400'</small>	<b>b. DATE SIGNED</b> 20160315	<b>a. COMPTROLLER SIGNATURE</b> BRADSHAW.ERI C.D.1155717277 <small>Digitally signed by BRADSHAW.ERIC.D.1155717277 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USAF, cn=BRADSHAW.ERIC.D.1155717277 Date: 2016.02.23.16:39:48-0700'</small>	<b>b. DATE SIGNED</b> 25022016
<b>c. APPROVING AUTHORITY</b>		<b>c. APPROVING AUTHORITY</b>	
<b>(1) TYPED NAME</b> John Hartke		<b>(1) TYPED NAME</b> Harro Ackermann	
<b>(2) ORGANIZATION</b> Professor and Acting Head, Department of Physics and Nuclear Engineering	<b>(3) TELEPHONE NUMBER</b> (845) 938-3901	<b>(2) ORGANIZATION</b> Acting Deputy Director, HEL-JTO	<b>(3) TELEPHONE NUMBER</b> (505) 248-8208
<b>(4) SIGNATURE</b> HARTKE.JOHN.P AUL.1092654407 <small>Digitally signed by HARTKE.JOHN.PAUL.1092654407 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=HARTKE.JOHN.PAUL.1092654407 Date: 2016.03.11.07:23:40-0500'</small>	<b>(5) DATE SIGNED</b>	<b>(4) SIGNATURE</b> ACKERMANN.HA RRO.1143116456 <small>Digitally signed by ACKERMANN.HARRO.1143116456 6 Date: 2016.02.09.16:04:15-0700'</small>	<b>(5) DATE SIGNED</b>
<b>10. TERMINATION</b> <i>(Complete only when agreement is terminated prior to scheduled expiration date.)</i>			
<b>a. APPROVING AUTHORITY SIGNATURE</b>	<b>b. DATE SIGNED</b>	<b>c. APPROVING AUTHORITY SIGNATURE</b>	<b>d. DATE SIGNED</b>

**11. GENERAL PROVISIONS** (Complete blank spaces and add additional general provisions as appropriate: e.g., exceptions to printed provisions, additional parties to this agreement, billing and reimbursement instructions.)

- a. The receiving components will provide the supplying component projections of requested support. (Significant changes in the receiving component's support requirements should be submitted to the supplying component in a manner that will permit timely modification of resource requirements.)
- b. It is the responsibility of the supplying component to bring any required or requested change in support to the attention of Harro Ackermann, harro.ackermann@jto.hpc.mil prior to changing or cancelling support.
- c. The component providing reimbursable support in this agreement will submit statements of costs to: Barbara Perez, barbara.perez@us.af.mil
- d. All rates expressing the unit cost of services provided in this agreement are based on current rates which may be subject to change for uncontrollable reasons, such as legislation, DoD directives, and commercial utility rate increases. The receiver will be notified immediately of such rate changes that must be passed through to the support receivers.
- e. This agreement may be cancelled at any time by mutual consent of the parties concerned. This agreement may also be cancelled by either party upon giving at least 180 days written notice to the other party.
- f. In case of mobilization or other emergency, this agreement will remain in force only within supplier's capabilities.
- g. The United States Military Academy (USMA) is herein known as the Supplier. The High Energy Laser (HEL). Joint Technology Office (HEL-JTO) is herein known as the Receiver. When referred to collectively, USMA and USAERDC,TEC will herein be known as the Parties.
- h. Purpose: This support agreement outlines a collaborative relationship between the HEL-JTO and the Photonics Research Center at the US Military Academy to support studies, research, and educational initiatives of mutual interest. Execution of this support agreement will entail the time and labor of senior USMA faculty, Cadets (if applicable), and contractors (if applicable).
- i. AUTHORITIES: The authorities for both parties to enter into this agreement are: 1. The Economy Act, 31 U.S.C. § 1535 and/or the Project Order Act, U. S. C. § 6307, which provides that an agency may place an order with a major organizational unit within the same agency or another agency for goods or services if: i) amounts are available; ii) the ordering agency decides the order is in the best interest of the United States Government; iii) the agency to fill the order is able to provide or get by contract the ordered goods or services; and iv) the agency decides ordered goods or services cannot be provided by contract as conveniently or cheaply by a commercial enterprise (payments must be made on the basis of the actual cost of goods or services provided); and 2. Both parties have the authority to participate in this agreement under 10 U.S.C. 2358, authorizing the Secretary of Defense to perform research and development projects by mutual agreement with other Federal Government departments or agencies.

ADDITIONAL GENERAL PROVISIONS ATTACHED:  YES  NO

**12. SPECIFIC PROVISIONS** (As appropriate: e.g., location and size of occupied facilities, unique supplier and receiver responsibilities, conditions, requirements, quality standards, and criteria for measurement/reimbursement of unique requirements.)

RECEIVER WILL:

- (1) Provide funding via MIPR as mutually agreed upon to support the objectives of this agreement.
- (2) Remain engaged with the Supplier, review Supplier's Study Proposal and Statement of Work; approve program goals and materials, and provide direction as necessary to meet mission requirements.

SUPPLIER WILL:

- (1) Provide the name and contact information of the project manager for this agreement.
- (2) Upon request, the project manager will provide project updates to the Receiver, to include progress on research, spending, and travel.
- (3) Perform research activities, meet milestones, and provide deliverables in accordance with submitted Study Proposal and Statement of Work, or as agreed upon by both Parties.
- (4) Upon request, provide a detailed funding proposal for each new research project, to include any travel, equipment, software or other direct costs.
- (5) It will be the responsibility of the USMA to obtain the necessary and appropriate security clearances for any Faculty, Staff or Cadets.

ADDITIONAL SPECIFIC PROVISIONS ATTACHED:  YES  NO

**13. ADDITIONAL PROVISIONS** *(Use this space to continue general and/or specific provisions, as needed.)*

j. REIMBURSEMENTS: IAW DOD guidelines, all support provided to the Receiver that can be measured and directly attributed to the Receiver are reimbursable costs. All labor costs will be based on standard rates IAW Army Cost Management Guidance. General & Administrative Expenses will be charged based on actual direct costs incurred (currently estimated at ~7.5% for 2016-2017). Costs associated with common use infrastructure are non-reimbursable, except for support provided solely for the benefit of the Receiver. Any items purchased for this agreement will remain property of the Supplier.

k. FUNDING: Per DoD FMR Vol. 11A, Chapter 1, Sec. 010204(B)(1)(c), this agreement is subject to the availability of funds. This DD Form 1144 is not a financial document as the dollar amounts are estimates. This agreement should not be used for obligation of funds. Funds certification/obligation will be provided through multiple DD Form 448, Military Interdepartmental Purchase Request (MIPRs) or direct charge through GFEBS. The Receiver shall provide funding to the Supplier for support based on statements of work.

l. BILLING AND PAYMENT: The Supplier will bill the Receiver by submitting a Standard Form (SF) 1080, voucher for Transfers between Appropriations and include a breakdown of actual cost elements being reimbursed. The voucher shall be sent or delivered to the Defense Finance and Accounting Service (DFAS) address provided on the MIPR within 30 days after the month the transaction occurred. The Receiver's paying office will forward payment(s), along with copy of billed invoice(s) to appropriate address listed on billing invoices within 30 days of the date of the invoice, unless the SF1080 is identified as no check required. Bills rendered shall not be subject to audit in advance of payment.

m. REVIEW/AMENDMENTS/CANCELLATION/DISAGREEMENTS: 1) Review of the provisions of this agreement will be performed annually. 2) All amendments to this agreement must be in writing, signed by all parties, and maintained on file. 3) If the Receiving Component cancels the order, the supplying component is authorized to collect costs incurred prior to cancellation of the order, up to the amount of funding provided on the respective MIPR or GFEBS direct charge. 4) Should disagreements arise on the interpretation of the provisions in this agreement or amendments and/or revisions thereto, that cannot be resolved at the operating level, the area(s) of disagreement shall be stated in writing by each party and presented to the other party for consideration. If agreement of interpretation is not reached within 30 days, the parties shall forward the written presentation of the disagreement to respective higher officials for appropriate resolution. 5) Disputes related to this agreement shall be resolved pursuant to and in accordance with the instructions provided in the Treasury Financial Manual, Volume 1, Part 2, Chapter 4700, Appendix 10, Intra-governmental Business Rules Bulletin, available on the TFM website at <http://www.fms.treas.gov/tfm/vol1/bull.html>.

**FINANCIAL POINT OF CONTACT:**

- (1) Receiver: Barbara Perez, (505) 846-8086, [Barbara.Perez@us.af.mil](mailto:Barbara.Perez@us.af.mil)
- (2) Supplier: Vicki Kiernan, (845) 938-4139, [Vicki.Kiernan@usma.edu](mailto:Vicki.Kiernan@usma.edu)

**TECHNICAL POINT OF CONTACT**

- (1) Receiver: Harro Ackermann, (505) 248-8208, [harro.ackermann@jto.hpc.mil](mailto:harro.ackermann@jto.hpc.mil)
- (2) Supplier: LTC Lou Florence, (845) 938-5810, [louis.florence@usma.edu](mailto:louis.florence@usma.edu)

# **ANNEX C**

UNCLASSIFIED

STATEMENT OF WORK  
FOR  
PEO Ammunition and Joint Center Picatinny Cadet and Faculty Project Support

Prepared by  
USMA EECS on behalf of the USMA Dean

13 January 2016

1. Scope. This Statement of Work (SOW) describes the support for PEO Ammunition and Joint Center Picatinny (the ‘Sponsors’) from USMA’s Department of Electrical Engineering and Computer Science (D/EECS), other USMA Departments, and their respective Research Centers.

1.1. Background. PEO Ammunition and Joint Center Picatinny are long supporters of D/EECS and other USMA Departments as evidenced by direct and indirect support to academic courses (e.g., CS482, EE/CS/IT400, EE/CS/IT401, XE402), individual cadet and faculty research projects, and professional development in support of this agreement.

2. Requirements.

2.1. Specific Requirements. The Sponsors and USMA coordinate to educate, train, and inspire cadets of various academic disciplines and majors into future leaders capable of understanding multi-disciplined technical and materiel development problem sets in support of full spectrum operations, including cyberspace operations. The period of performance for this SOW is Fiscal Year 2016 (1 October 2015 – 30 September 2016) through FY2020.

2.1.1. The Sponsors support the Service Academy Summer Research Program (SASRP) through recruitment and selection of faculty for research opportunities in support of Team Picatinny. Sponsors support Academic Individual Advanced Develop (AIAD) through the recruitment and selection of cadets in coordination with (ICW) D/EECS Program Directors and faculty as well as solicits and implements undergraduate level AIAD opportunities within their organizations. Sponsors facilitate incorporating SASRP and/or AIAD work product(s) into continuing work where appropriate and resources permit. EECS serves as the established single point-of-entry organization previously designated by the USMA Dean responsible for receiving PEO Ammo and Joint Center Picatinny monies, as well as processing, executing, tracking, and reporting those monies in compliance with this SOW and applicable regulations and law.

2.1.2. Sponsors support USMA academic courses through aligning, with prior coordination of USMA faculty, AIAD projects with subsequent senior design projects, individual thesis projects, individual study, and multi-departmental projects including potential life-cycle return on investment analysis type efforts. This includes aligning AIAD projects with other opportunities as they present themselves, and with mutual

UNCLASSIFIED

agreement (e.g., faculty research efforts). Sponsors also supports USMA through sponsorship of research appropriate to undergraduates and undergraduate faculty. Projects must remain outside of critical paths of operational systems. D/EECS coordinates with Sponsors and USMA faculty to incorporate projects into courses, academic requirements, and/or SASRP/AIAD efforts. Incorporation may be limited by on-site faculty expertise, available cadet skill sets and aptitudes, as well as cadet project selection preferences.

2.1.3. Sponsors support USMA's Leader Development Programs which ultimately impacts the employment of lethality overmatch capabilities in a complex networked system-of-systems environment that can operate in hostile and degraded environments. D/EECS and other Departments execute these programs with the aim to provide education and training opportunities, guest speaker events, and other events beyond the scope of the normal academic programs. Such opportunities, as resources permit, may include DoD and non-DoD, on-site and off-site security education and training, presentation of research and project findings, outreach efforts to improve education of all parties, and other efforts to improve the pipeline of future workforce members..

2.1.3. Expiration of funds transferred to USMA under this SOW will be in accordance with (IAW) the actual transfer documents (DD 448). The intent of having the SOW span multiple years is to reduce yearly administrative requirements while providing a structure open to mutually agreed changes. In the event resources are unavailable to execute tasks under this SOW, work will cease until suitable arrangements are in place. Each organization retains the prerogative to withdraw from the agreement.

2.2. Educational Mission Requirements. Recognizing the educational mission of the USMA, the work undertaken in support of this SOW shall enhance the education and training of cadets, staff and faculty members. Some of the activities that may be pursued in this regard include the following.

2.2.1. Travel for the purpose of attending meetings, conferences (IAW established conference approval processes) or other events related to the scope of this effort.

2.2.2. Acquisition of goods and services that facilitate the scope of this effort.

2.2.4. Civilian pay (CIVPAY) to ensure coverage of teaching, grading, course material preparation, and academic counseling requirements for officers and faculty performing tasks under this effort. CIVPAY may also support the financial, administrative, and technical operations (e.g., the Program Assistant duty position).

### 2.3. Anticipated Budget

2.3.1. The anticipated budget shown in para 2.3.2 is the initial apportionment. D/EECS shall be able to reapportion the amounts below up to 20% of the total budget. Cumulative apportionments greater than 20% of the total budget may occur with prior coordination and approval of the sending Agency.

## UNCLASSIFIED

2.3.2. Total Requested FY16: **\$150,000**

	Department	D/EECS	D/C&ME	D/CHEM
Total		\$90,000	\$30,000	\$30,000
G&A (7.5%)		\$6,750	\$2,250	\$2,250
Equipment, Materials, and Supplies, Education & Training (GPC)		\$16,250	\$15,000	\$3,000
CIVPAY				
pay periods Title X Civilian Professor (~5K ea)		\$15,000	\$10,000	
pay periods Program Assistant		\$4,000	\$2,750	
Travel (DTS) (Cadet + faculty, including AIADs)		\$48,000	\$12,750	\$12,000
sub-total		\$90,000	\$30,000	\$30,000

# **ANNEX D**

### IID MIPR for Processing Checklist

Required Form(s)	Elements of Required Information
<input type="checkbox"/> Routing/Tracking Sheet (HYPERLINK)	Include information on the required information
Support Agreement: <input type="checkbox"/> DD 1144 (for recurring agreements) (HYPERLINK); OR <input type="checkbox"/> MOU/MOA (for one-time reimbursements, one year funds). (HYPERLINK)	NOTE: For the DD1144, the agreement needs to be reviewed and completed by Ms Lisa Larkin (lisa.larkin@usma.edu), G8-Program and Manpower Management Division and contains 4 mandatory signatures: <ul style="list-style-type: none"> <li><input type="checkbox"/> G8 Comptroller Signature;</li> <li><input type="checkbox"/> Funding Agency Comptroller;</li> <li><input type="checkbox"/> Center Director (or responsible entity);</li> <li><input type="checkbox"/> Approving official of the Funding Agency and/or any other required signatures).</li> <li><input type="checkbox"/> As of 20 NOV 2014, the following is a <b>REQUIRED STATEMENT</b>: “General and Administrative Expense will be charged based on actual direct costs incurred. A 7.5% general and administrative fee for direct costs incurred in management, administration and processing of reimbursables.”</li> </ul>
<input type="checkbox"/> Statement of Work (SOW), if applicable (HYPERLINK)	Defines the scope of the work required by the requiring activity. It is used to develop the guidelines, ceiling and length of period of performance of the Technical Area Task.
<input type="checkbox"/> DD448 Military Interdepartmental Purchase Request (MIPR) (HYPERLINK)	LOOK at the G8 SOP for a list of requirements. <ul style="list-style-type: none"> <li><input type="checkbox"/> Refer to the G8 Reimbursable Inbound Checklist page 6. <b>REQUIRED ELEMENTS</b> for the DD448 MIPR: (insert sections that the PIs need to complete).</li> <li><input type="checkbox"/> Customer Number;</li> <li><input type="checkbox"/> The Department of Defense Activity Address Code (DoDAAC) which is a six position code that uniquely identifies a Department of Defense Unit, Activity or Organization that has the authority to requisition, contract for, receive, have custody of, issue or ship DoD assets, or fund/pay bills for materials and/or services;</li> <li><input type="checkbox"/> Description of the specific supplies or services ordered;</li> </ul> <b>NOTE: MIPR or Agreement must contain this information</b>
<input type="checkbox"/> Research Personnel Support Form (HYPERLINK)	NOTE: If any portion of the funds are going to be allotted to support pay, a Research Personnel Support Form needs to be completed

IID is responsible for initiating the Routing Sheet for each MIPR and confirming that a complete packet is sent to the G8. A sponsored project is awarded to the United States Military Academy, however, the actual management of those projects rests with each Principal Investigator.

1. Principal Investigator (PI): The PI bears the primary responsibility for the success of his/her sponsored project. In addition to his/her academic and scholarly duties, the PI has managerial and oversight responsibilities for the administrative aspects of a project. The PI’s particular duties include:

- Assuming overall responsibility for the management of the study;

- Determining study feasibility;
- Ensuring that all required approvals are obtained and all Army, G8 and/or Academy forms and certifications are completed in a timely manner;
- Knowing and abiding by the terms and conditions of the award.

# **ANNEX E**

educational grants  
USMA

MILITARY INTERDEPARTMENTAL PURCHASE REQUEST					1. PAGE 1 OF 2 PAGES								
2. FSC		3. CONTROL SYMBOL NO.		4. DATE PREPARED 02/02/2016		5. MIPR NUMBER F2KBAB6033G102		6. AMEND NO. BASIC					
7. TO: United States Military Academy (USMA) Attn: IID/RO Lesley Beckstrom 758 Cullum Road / Jefferson Hall West Point, NY 10996 TEL: (845) 938-5105					8. FROM: (Agency, name, telephone number of originator) Air Force Research Laboratory(AFRL)/RDFC (Barbara Perez) 3550 Aberdeen Ave SE, Bldg 497 KAFB, NM 87117-5776 TEL: (505) 846-8086								
9. ITEMS <input type="checkbox"/> ARE <input type="checkbox"/> ARE NOT INCLUDED IN THE INTERSERVICE SUPPLY SUPPORT PROGRAM AND REQUIRED INTERSERVICE SCREENING <input type="checkbox"/> HAS <input type="checkbox"/> HAS NOT BEEN ACCOMPLISHED.													
ITEM NO.	DESCRIPTION <small>(Federal stock number, nomenclature, specification and/or drawing No., etc.)</small>	QTY	UNIT	ESTIMATED UNIT PRICE	ESTIMATED TOTAL PRICE								
a	b	c	d	e	f								
1	Control Numbers: JTO#: 04-EDU-0001 / Contracting# 16-RVKDT-064  A. PURPOSE: FY16 funding to fully fund the FY16 effort to support Cadet Education in the area of high energy laser propagation to be conducted at the United States Military Academy (USMA) Photonics Research Center (PRC) in accordance with the SOW. Funds will be accepted Reimbursable.  B. MIPR Total: \$40,000. The amount of funding may not be exceeded without the written approval of the HEL-JTO office. All documents citing these funds must reference the above MIPR number.  C. POP: 29 Feb 16 to 30 Dec 2016 / Funds expire for obligation 30 Sep 2017  D. POINTS OF CONTACT USMA Technical: LTC Lou Florence, 845-938-5810, louis.florence@us.army.mil USMA Financial: Lesley Beckstrom, 845-938-5105, lesley.beckstrom@us.army.mil AFRL Financial: Barbara Perez, 505-846-8086, barbara.perez@us.af.mil; Tammy Joseph, 505-853-4126 JTO Technical: Harro Ackermann, 505-248-8208, harro.ackermann@jto.hpc.mil; JTO Program Analyst: Roy Barresi, 505-248-8214, roy.barresi@jto.hpc.mil	1.00	EA	\$40,000.00	\$40,000.00								
		VAR IN QTY											
		NONE											
The RDF budget analyst approving this document certifies that the goods/services to be procured with these funds meet a bona fide need existing in the appropriation year and that the funds cited are proper for the purpose described on this document.						PAGE 2 TOTAL: \$0.00							
 HARRO ACKERMANN, DRIV AIR FORCE REPRESENTATIVE, 248-8208													
Debited against CCar# RD1281 JTO-Educational Grants \$40,000.00													
10. SEE ATTACHED PAGES FOR DELIVERY SCHEDULES, PRESERVATION AND PACKAGING INSTRUCTIONS, SHIPPING INSTRUCTIONS AND INSTRUCTIONS FOR DISTRIBUTION OF CONTRACTS AND RELATED DOCUMENTS.						11. GRAND TOTAL \$40,000.00							
12. TRANSPORTATION ALLOTMENT (Used if FOB Contractor's plant)					13. MAIL INVOICES TO (Payment will be made by) Defense Finance & Accounting Services (DFAS) - Columbus 3990 East Broad St., Bldg. 21 Columbus, OH 43213-1152 PAY OFFICE DODAAD 503000								
14. FUNDS FOR PROCUREMENT ARE PROPERLY CHARGEABLE TO THE ALLOTMENTS SET FORTH BELOW, THE AVAILABLE BALANCES OF WHICH ARE SUFFICIENT TO COVER THE ESTIMATED TOTAL PRICE.													
ACRN	APPROPRIATION	LIMIT/SUB-HEAD	SUPPLEMENTAL ACCOUNTING CLASSIFICATION				ACCTG STA DODAAD	AMOUNT					
5763600	296 4704 615097 6TRDMJ	75633 61108F	503000	F03000	JON:5097MJED	SC:B5N	CSN:J6EG19	ALD:AA	FSR: 021999	PSR: 170075	DSR: 298460	CIN: F2KBAB6033G102	\$40,000.00
I certify these funds are available Digitally signed by cn=FLORES.LLOYD.L.1259744420,ou=USAF,ou=PKI,ou=DoD,o=U.S. Government,c=US Date: 26-Feb-2016 10:19:04.000000000 -07:00 LLOYD L FLORES, GS09 BUDGET TECHNICIAN, 246-8047													
POST TO GAFS													
15. AUTHORIZING OFFICER (Type name and title) BARBARA J PEREZ, GS12, BUDGET ANALYST, (505) 856 8086					16. SIGNATURE // DIGITALLY SIGNED //			17. DATE 25-Feb-2016					

ITEM NO. <i>a</i>	DESCRIPTION <i>(Federal stock number, nomenclature, specification and/or drawing No., etc.)</i> <i>b</i>	QTY <i>c</i>	UNIT <i>d</i>	ESTIMATED UNIT PRICE <i>e</i>	ESTIMATED TOTAL PRICE <i>f</i>
2	Footnote 2b: See Attached Business Rules  This Military Interdepartmental Purchase Order (MIPR) is an Economy Act order for non-recurring services issued pursuant to the provisions of 31 United States Code 1535 and a Determination & Finding is not required. I certify that the commitment of these funds for this procurement is in compliance with the policy set forth in Department of Defense DoD 7000.14-R, Vol 11A, Chap 3, paragraphs 0301 through 0304.	0.00  VAR IN QTY NONE	EA	\$0.00	\$0.00

**OFFICIAL STATEMENTS CONT.**

E. Forward a signed and dated copy of 448-2 by 29 Feb 16 along with the obligation document to: Barbara.perez@us.af.mil and 377th CPTS/FMAS, 1451 4th St SE, KAFB NM 87117 and roy.barresi@jto.hpc.mil .

" I certify that the goods acquired under this agreement are legitimate, specific requirements representing a bona fide need of the fiscal year in which these funds are obligated. Required reviews are complete."

  
HEL-JTO Program Manager

Footnote 3: Reference the entire accounting classification and Military Interdepartmental Purchase Order number on all obligation documents. Send contract award documents to the address in Block 8. Complete the Federal Procurement Data. System Next Generation Contract Action Report with Funding Agency Identification: 5700 (Air Force) and Funding Office Identification/:Business Partner Network (BPN)(F2KBAB).

Footnote 4: All reimbursements must be done through the Intergovernmental Payment and Collection (IPAC) system whenever possible. State the Seller Business Partner Network on the Department of Defense Form 448-2, Military Interdepartmental Purchase Order Acceptance, in Block 13 and on each invoice. The assisting agency shall provide a DD Form 448-2 to deobligate remaining funds at contract end. If the form is not received within 30 days of the written memorandum, another memorandum will be sent that funds will be deobligated in 30 days without further notice.

- Acronyms:  
 RDFC: Funds Control & Analysis  
 SOW: Statement of Work  
 POP: Period of Performance  
 HEL: High Energy Laser  
 JTO: Joint Technology Office  
 FY: Fiscal Year  
 EDU: Educational Grants

# **ANNEX F**

**ACCEPTANCE OF MIPR**

1. TO (Requiring Activity Address) (Include ZIP Code) AFRL/RVS 3550 Aberdeen Ave. SE Kirtland AFB, NM 87117-5776	2. MIPR NUMBER F2KBAB6033G102	3. AMENDMENT NO. BAS
	4. DATE (MIPR Signature Date) 2/25/2016	5. AMOUNT (As Listed on the MIPR) \$40,000.00

6. The MIPR identified above is accepted and the items requested will be provided as follows: (Check as Applicable)

a.  ALL ITEMS WILL BE PROVIDED THROUGH REIMBURSEMENT (Category I)

b.  ALL ITEMS WILL BE PROCURED BY THE DIRECT CITATION OF FUNDS (Category II)

c.  ITEMS WILL BE PROVIDED BY BOTH CATEGORY I AND CATEGORY II AS INDICATED BELOW

d.  THIS ACCEPTANCE, FOR CATEGORY I ITEMS, IS QUALIFIED BECAUSE OF ANTICIPATED CONTINGENCIES AS TO FINAL PRICE. CHANGES IN THIS ACCEPTANCE FIGURE WILL BE FURNISHED PERIODICALLY UPON DETERMINATION OF DEFINITIZED PRICES, BUT PRIOR TO SUBMISSION OF BILLINGS.

7.  MIPR ITEM NUMBER(S) IDENTIFIED IN BLOCK 13, "REMARKS" IS NOT ACCEPTED (IS REJECTED) FOR THE REASONS INDICATED.

8. TO BE PROVIDED THROUGH REIMBURSEMENT CATEGORY I	9. TO BE PROCURED BY DIRECT CITATION OF FUNDS CATEGORY II
---	--

ITEM NO. <i>a</i>	QUANTITY <i>b</i>	ESTIMATED PRICE <i>c</i>	ITEM NO. <i>a</i>	QUANTITY <i>b</i>	ESTIMATED PRICE <i>c</i>
Basi	1	\$40,000.00			
d. TOTAL ESTIMATED PRICE			d. TOTAL ESTIMATED PRICE		
			\$30,000.00		

10. ANTICIPATED DATE OF OBLIGATION FOR CATEGORY II ITEMS	11. GRAND TOTAL ESTIMATED PRICE OF ALL ITEMS
	\$40,000.00

12. FUNDS DATA (Check if Applicable)

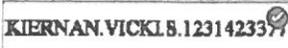
a.  ADDITIONAL FUNDS IN THE AMOUNT OF \$ \_\_\_\_\_ ARE REQUIRED (See Justification in Block 13)

b.  FUNDS IN THE AMOUNT OF \$ \_\_\_\_\_ ARE NOT REQUIRED AND MAY BE WITHDRAWN

13. REMARKS  
 WBS: R.0004971.62. 001 ; R.0018386.62. 032  
 S. O. \_\_\_\_\_  
 FUND: 202010A16

IAA:USMA16028

Reviewed/Verified \_\_\_\_\_ Date \_\_\_\_\_

14. ACCEPTING ACTIVITY (Complete Address) United States Military Academy G8, 626 Swift Road West Point, NY 10996	15. TYPED NAME AND TITLE OF AUTHORIZED OFFICIAL VICKI KIERNAN, Lead Budget Analyst
	16. SIGNATURE 
	17. DATE 20160321

# **ANNEX G**

Performing MAD/DEPT:

COST CENTER:

POC:  PHONE

REQUIRED DOCUMENTS

- MIPR.-.448. #:  Value:  Expires:
- MOU/MOA/SOW.(DD1144;.7600A/B). - Agreement #:  (i.e. USMA150##)
- Research Personnel Support Form (if PAY)

30 Dec 16 POP

RESP PERSON:  APP #:

WBS.NAME (i.e. USMA OOD):

WBS.Project.#.(9.digits.-.R.#####):

SPEND PLAN :

G&A-7.5% \$:  G&A WBS:

PAY \$:

for:

S&E \$:

DTS \$:  DTS LOA:

DEAN ORG \$:

CADET ORG \$:

non G&A TOTAL:

SALES ORDER #  S.O. VALUE

# **ANNEX H**

**DEPARTMENT OF CIVIL & MECHANICAL ENGINEERING**  
**RESEARCH PERSONNEL SUPPORT FORM**

I certify that the following individuals (Ms. Rebecca Zifchock, Ms. Tiffany Pettis, Lab Tech Overhire) will be supporting Army Research Labs projects funded through ARL, from 1 Oct 2015 – 30 Sep 2016.

**ROOT.PHILIP.JOHN.10185838**  
**24**

Digitally signed by ROOT.PHILIP.JOHN.1018583824  
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA,  
cn=ROOT.PHILIP.JOHN.1018583824  
Date: 2015.08.04 17:11:31 -04'00'

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Director, Center for Innovation and Engineering

I certify the following individual is supporting the research outlined above.

**BOETTNER.DAISIE.DAWS**  
**ON.1107682275**

Digitally signed by BOETTNER.DAISIE.DAWSON.1107682275  
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA,  
cn=BOETTNER.DAISIE.DAWSON.1107682275  
Date: 2016.03.30 13:45:12 -04'00'

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Head, Department of Civil & Mechanical Engineering

Enclosure to reimbursable package: (spreadsheet with the project title, name of employee/position, and projected hours worked in support of each project by pay period provided by G8)

# **ANNEX I**



## Defense Threat Reduction Agency

8725 John J. Kingman Road, MSC 6201  
Fort Belvoir, VA 22060-6201

### BLANKET DETERMINATION AND FINDINGS

Authority to Issue Orders under the Economy Act

#### FINDINGS

1. The Defense Threat Reduction Agency (DTRA) proposes to issue multiple Military Interdepartmental Purchase Requests (MIPRs) to the servicing agencies identified below for recurring weapons of mass destruction (WMD) detection-related scientific, technical, analytical, operational, and engineering services supporting the DTRA Advanced Detector Development (ADD) program. The total for this program shall not exceed the amount of \$406,372,909.00. Individual projects under the ADD program may be incrementally funded. The period of performance for this Blanket Determination and Findings (D&F) is from October 1, 2012 through September 30, 2017. The participating Department of Defense (DoD) servicing agencies are identified below; however, actual performers may be amended as new performers are identified. This D&F expires on 30 September 2017. The organizations covered by these MIPRs fall under the following categories:

- Department of Defense (DoD) Laboratories;
- Combatant Commands/Services;
- Other Service Entities;
- DoD Educational Institutions;
- Other DoD Agencies/Organizations.

2. MIPRs under this Blanket D&F shall be issued pursuant to the authority of the Economy Act of 1932, as amended (31 USC 1535), and adhere to Federal Acquisition Regulation (FAR) 6.002, FAR 17.503, Department of Defense (DoD) FAR Supplement 217.5 and other applicable federal laws and regulations.

3. The DTRA Nuclear Detection R&D program is focused on three capability objectives to meet the threat posed by weapons of mass destruction (WMD). The first objective is to improve fissile material detection ranges by two orders of magnitude. The second is to provide a wide-area surveillance capability. The third is to integrate detection technology into the operational counter-WMD campaign. There is no single solution for the objectives currently available. The technical strategy being employed is to simultaneously develop and evaluate alternative technical solutions for important shortfalls. This is being done within the context of the Assistant Secretary of Defense for Research and Engineering (ASD R&E) Science and Technology S&T Priority #5 (CWMD) for FY13-17 Planning<sup>1</sup>, and will provide a solution that integrates intelligence, operational, and technical capabilities for the DoD portions of the mission to counter "loose nukes".

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<sup>1</sup> Science and Technology (S&T) Priorities for Fiscal Years 2013-2017 Planning, April 19, 2011

4. The DTRA J9 Nuclear Forensics Office (NTF) is the DoD R&D organization responsible for improving the USG post-detonation National Technical Nuclear Forensics (NTNF) capabilities in the areas of materials collection, debris diagnostics and materials analysis, and prompt diagnostics and device reconstruction in order to support the attribution process.

5. Science & Technology (S&T) invents, evaluates, and enables unique technology that can be developed and produced in follow-on Research, Development, Test and Evaluation (RDT&E) and acquisition programs. Development and evaluation of technologies often requires working with other DoD organizations to ensure this extremely difficult mission is accomplished. For FY13 through FY17, the Nuclear Technologies Detection Division (NTD) and NTF have identified the following key tasks that require DoD technical support:

- Task 1: Active Interrogation Systems
  - This task will look to gather required theoretical, analytical, and experimental information regarding special nuclear material (SNM) and energy beams, and determine the military utility of active interrogation.
- Task 2: Alternative Signatures and Technologies
  - This task will look to exploit ancillary signatures of nuclear threats beyond gamma-rays and neutrons
- Task 3: Distributed Sensors
  - This task will look to achieve low-cost, low-power, and rugged tracking networks and synthetic apertures.
- Task 4: Dosimeters
  - This task will look to provide the war fighter with rapid radiation exposure evaluations per DoD requirements.
- Task 5: Gamma Spectroscopy
  - This task will look to achieve room temperature gamma spectroscopy with improved performance.
- Task 6: Imaging Spectroscopy
  - This task is focused on eliminating background and noise to achieve directionality and improved signal-to-background ratio.
- Task 7: Materials and materials testing
  - The task will look to enhance the signal-to-noise ratio, sensitivity, and resolution of materials and detection systems.
- Task 8: Neutron Detectors
  - This task is focused on improving the capability to detect, locate, identify, and characterize neutron-emitting materials.
- Task 9: Signal Processing
  - This task looks to achieve faster and more efficient analysis algorithms, lower false positive and negative rates with noise, and background suppression.
- Task 10: Forensics
  - This task supports the related scientific, technical, analytical, operational, and engineering services of the DTRA NTNF program.
- Task 11: Testing/Integration
  - This effort will focus on integration of sensors and other equipment with developmental or operational platforms and sub-system and system-level testing.

- Task 12: Nuclear Threat Detection and Intelligence, Surveillance, and Reconnaissance (ISR)
  - This effort will focus on detecting and identifying nuclear and radiological threats, including the people, vehicles, support networks, financial transactions, communications, patterns, logistics as well as materials, weapons, and weapons components
- Task 13: Modeling and Simulation
  - This effort will focus on analytical or computational techniques to benchmark, characterize, and improve current and proposed detection systems.

6. The technical efforts covered by the MIPRs issued against this Blanket D&F will leverage DoD Laboratory or Agency investments in technology as well as the unique expertise, instrumentation, and laboratory facilities that are only available at DOD Laboratories and Agencies. The DoD facilities listed in Appendix A have unique subject matter expertise and unique instrumentation expertise that can provide the specialized qualifications and experience required by NTD and NTF to successfully pursue research, technology and materials development, testing, and technology studies in all areas. Additionally, the servicing agencies are among the very few federally-authorized sources for nuclear-related efforts of the kind required by programs which frequently require the use and detailed knowledge of SNM and other radioactive sources. For classified projects, no other commercial entities have the capability to perform services under this program.

7. Prior to the issuance of an MIPR under this Blanket D&F, the respective DTRA Nuclear Technologies (NT) Department program manager (PM) for each separately funded MIPR under this Blanket D&F will:

a. conduct an Early Strategy Session, unless the proposed effort falls under paragraph 6.b.(1) of DTRA Instruction 5000.11, to verify that the proposed statement of work fulfills a validated DTRA NTD or NTF requirement and ensures that the proposed work is within scope of this Blanket D&F;

b. verify that adequate funds are available and that the servicing entity can satisfy the requirement and will accept the order;

c. ensure that the proposed work undergoes programmatic and scientific reviews to validate the proposed scientific approach and to ensure it addresses a valid programmatic gap in the Detection or Forensics portfolios;

d. ensure the overall costs are commensurate with the effort involved by comparing the cost proposal for that MIPR to his/her independent government cost estimate and, if applicable, to actual costs incurred for related efforts during the previous fiscal year(s);

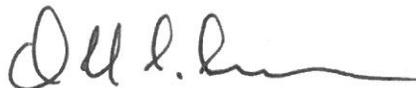
e. properly align the project funding between fiscal years based on a detailed analysis of the servicing agency cost proposal; and

f. verify that when added to all other MIPRs under the Blanket D&F, the total does not exceed the estimated ceiling of \$406,372,909.00.

## DETERMINATION

Based on the foregoing findings, I hereby determine that:

- a. the needed supplies or services could not be provided as conveniently or as economically by contracting directly with a private source;
- b. the servicing agencies have unique expertise or abilities not available within DTRA;
- c. the ordered services clearly fall within the purpose, mission, and general scope of the activities of the servicing agencies;
- d. the acquisitions will appropriately be made under existing contracts of the servicing agencies entered into before placement of these orders, to meet the requirements of the servicing agencies for the same or similar supplies or services;
- e. there are no unique DoD terms, conditions, or requirements applicable to these Economy Act actions to be incorporated by the servicing agencies to fulfill the requirement;
- f. this Blanket D&F covers all MIPR Economy Act orders issued to the servicing agencies listed in Attachment A in support of DTRA's Nuclear Technologies Department's Nuclear Detection and Nuclear Forensics programs during the period of approval of this D&F through 30 September 2017, not to exceed a total estimated cost of \$406,372,909.00; and
- g. these interagency acquisitions are the most advantageous means of satisfying the requirement and are in the best interest of the Government.



Dallas N. Newsome  
Chief, J-9 Plans and Programs Office  
Research and Development  
Defense Threat Reduction Agency

Date: 25 Jul 12

Encl:  
Attachment A: Performers

## **Attachment A: Performers**

### **Department of Defense (DoD) Research Laboratories**

Air Force Research Laboratory (AFRL)  
Armed Forces Radiobiology Research Institute (AFRRI)  
Army Night Vision Laboratory  
Army Research Laboratory (ARL)  
Army Topographics Engineering Center  
Edgewood Chemical Biological Center (ECBC)  
Naval Air Systems Command (NAVAIR)  
Navy Explosive Ordnance Disposal Technology Division (NAVEODTECHDIV)  
Naval Research Laboratory (NRL)  
Naval Sea Systems Command (NAVSEA)  
Naval Surface Warfare Center - Carderock (NSWC-C)  
Naval Surface Warfare Center - Crane (NSWC Crane)  
Naval Surface Warfare Center - Dahlgren Division (NSWC-DD)  
Naval Surface Warfare Center - Indian Head (NSWC-IH)  
Naval Undersea Warfare Center (NUWC)  
Space and Missile Defense Technical Center (SMDC)  
Space and Naval Warfare Systems Command (SPAWAR)

### **Combatant Commands/Services**

U.S. Combatant Commands (CCMDs)  
U.S. Central Command (USCENTCOM)  
U.S. Northern Command (USNORTHCOM)  
U.S. Southern Command (USSOUTHCOM)  
U.S. Special Operations Command (USSOCOM)  
U.S. Strategic Command (USSTRATCOM)  
U.S. Pacific Command (USPACOM)  
U.S. Army  
U.S. Air Force  
U.S. Coast Guard  
U.S. Marine Corps  
U.S. Navy

### **Other Service Entities**

Air Force Electronic Systems Center (ESC/CAA)  
Air Force Office of Scientific Research (AFOSR)  
Air Force Radiation Assessment Team (AFRAT)  
Air Force Special Operations Commands (AFSOC)  
Air Force Technical Applications Center (AFTAC)  
Army Corp of Engineers Engineer Research and Development Center (ERDC)  
Army Geospatial Center (AGC)  
Army Intelligence Center  
Army Materiel Command (AMC)  
Army Program Executive Office (PEO) Aviation

Army Research, Development and Engineering Command (RDECOM)  
Chemical and Biological Incident Response Force (CBIRF)  
Fort Pickett / Virginia National Guard  
Navy 2nd Fleet  
Navy Center for Security Forces (CSF)  
Navy Expeditionary Combat Command (NECC)  
Naval Medical Research Center (NMRC)  
RADIAC Team, Joint Project Manager, Nuclear, Biological and Chemical  
Contamination Avoidance (JPM NBCCA)  
U.S. Army 20<sup>th</sup> Support Command  
U.S. Army Reserve (various units)  
U.S. Army Space and Missile Defense Command/Army Forces Strategic Command  
U.S. Fleet Forces Command

**DoD Educational Institutions**

DoD Service Defense Schools  
DoD Universities and Schools  
Naval Postgraduate School (NPS)  
Uniformed Services University of the Health Sciences (USUHS)  
U.S. Air Force Academy (USAFA)  
U.S. Air Force Institute of Technology (AFIT)  
U.S. Army Chemical School (USACS)  
U.S. Army Maneuver Support Center (MANSCEN)  
U.S. Military Academy (USMA)  
U.S. Naval Academy (USNA)

**Other DoD Agencies/Organizations**

Defense Advanced Research Projects Agency (DARPA)  
Defense Information Systems Agency (DISA)  
Defense Intelligence Agency (DIA)  
Defense Logistics Agency (DLA)  
Defense Micro Electronics Agency (DMEA)  
Defense Technical Information Center (DTIC)  
Joint IED Defeat Organization (JIEDDO)  
Joint Program Executive Office for Chemical and Biological Defense (JPEO-CBD)  
Military Sealift Command  
National Geospatial Intelligence Agency (NGA)  
National Reconnaissance Office (NRO)  
National Security Agency (NSA)  
Office of Naval Research (ONR)  
Office of the Secretary of Defense (OSD)  
Pentagon Force Protection Agency (PFPA)  
Secretary of the Air Force Financial Management Office (SAF/FMB)  
United States Forces Korea (USFK)  
U.S. Army Missile Command, Redstone Arsenal (AMCOM)  
U.S. Army National Ground Intelligence Center (NGIC)

U.S. Naval Facilities Engineering Command (NAVFAC)  
Washington Headquarters Services (WHS)