

<b>AWARD / CONTRACT</b>		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350) ➔	RATING DO-C9	PAGE of PAGES 1   27			
2. CONTRACT (PROC. INST. IDENT.) NO. FA8650-13-D-6368		3. EFFECTIVE DATE 03 SEP 2013	4. REQUISITION / PURCHASE REQUEST / PROJECT NO. See Section G				
5. ISSUED BY AFRL/RQKHA USAF/AFMC (b) (6) (b) (6)		CODE FA8650	6. ADMINISTERED BY (IF OTHER THAN ITEM 5) CODE DCMA MANASSAS (b) (6) SCD: C PAS: (NONE)				
7. NAME AND ADDRESS OF CONTRACTOR (NO., STREET, CITY, COUNTY, STATE AND ZIP CODE) GENERAL DYNAMICS INFORMATION TECHNOLOGY, INC. (b) (6)			8. DELIVERY <input type="checkbox"/> FOB Origin <input checked="" type="checkbox"/> Other (see below)				
			9. DISCOUNT FOR PROMPT PAYMENT N				
CAGE CODE 07MU1			10. SUBMIT INVOICES (4 COPIES UNLESS OTHERWISE SPECIFIED) TO THE ADDRESS SHOWN IN ➔				
FACILITY CODE			ITEM See Block 12				
11. SHIP TO / MARK FOR See Section F		CODE	12. PAYMENT WILL BE MADE BY DFAS COLUMBUS CENTER (b) (6) EFT: T				
			CODE HQ0338				
13. AUTHORITY FOR OTHER THAN FULL AND OPEN COMPETITION			14. ACCOUNTING AND APPROPRIATION DATA				
15A. ITEM NO See Section B	15B. SUPPLIES/SERVICES	15C. QUANTITY	15D. UNIT	15E. UNIT PRICE	15F. AMOUNT		
15G. TOTAL AMOUNT OF CONTRACT ➔ (b) (4)							
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<b>CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE</b>							
17. <input checked="" type="checkbox"/> <b>Contractor's Negotiated Agreement</b> (Contractor is required to sign this document and return 1 copies to issuing office). Contractor agrees to furnish and deliver all items or perform all services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)				18. <input type="checkbox"/> <b>Award</b> (Contractor is not required to sign this document). Your offer on solicitation number _____ including the additions or changes made by you which additions or changes set forth in full above, is hereby accepted as to items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) this award/contract. No further contractual document is necessary.			
19A. NAME AND TITLE OF SIGNER (TYPE OR PRINT)				20A. NAME OF CONTRACTING OFFICER (b) (6)			
19B. Name of Contractor		19C. Date Signed		20B. United States of America		20C. Date Signed	
by _____ (signature of person authorized to sign)				//signed//		03 SEP 2013	
				by _____ (signature of Contracting Officer)			

ITEM	SUPPLIES OR SERVICES	Qty Purch Unit	Unit Price Total Item Amount
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**0001**

*Noun:* (b) (4)  
*NSN:* N - Not Applicable  
*DD1423 is Exhibit:* A  
*Contract type:* U - COST PLUS FIXED FEE  
*Inspection:* DESTINATION  
*Acceptance:* DESTINATION  
*FOB:* DESTINATION

*Descriptive Data:*

Conduct research entitled, "Directed Energy Bio-Mechanisms" in accordance with Section C, Description/Specifications: Statement of Work dated 12 April 13, Attachment 1 to Section J of the individual task order. Deliver data in accordance with Exhibit A, Contract Data Requirements List, DD Forms 1423-1, dated 26 NOV 12, designated as Exhibit A, Section J hereto, and as further detailed in each individual Task Order.

**0002**

*Noun:* (b) (4)  
*NSN:* N - Not Applicable  
*DD1423 is Exhibit:* A  
*Contract type:* U - COST PLUS FIXED FEE  
*Inspection:* DESTINATION  
*Acceptance:* DESTINATION  
*FOB:* DESTINATION

*Descriptive Data:*

Provide Operational and/or Maintenance in support of the Research and Development effort entitled, "Directed Energy Bio-Mechanisms" in accordance with Section C, Description/Specifications: Statement of Work dated 12 April 13, Attachment 1 to Section J of the individual task order. Deliver data in accordance with Exhibit A, Contract Data Requirements List, DD Forms 1423-1, dated 26 NOV 12, designated as Exhibit A, Section J hereto, and as further detailed in each individual Task Order.

**0003**

*Noun:* (b) (4)  
*NSN:* N - Not Applicable  
*Contract type:* U - COST PLUS FIXED FEE  
*Inspection:* DESTINATION  
*Acceptance:* DESTINATION  
*FOB:* DESTINATION

*Descriptive Data:*

Deliver hardware in accordance with with Section C, Description/Specifications: Statement of Work at Atch 1 to Section J hereto, and as further detailed in each individual Task Order as applicable.

ITEM	SUPPLIES OR SERVICES	Qty Purch Unit	Unit Price Total Item Amount
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**0004**

*Noun:* (b) (4)  
*NSN:* N - Not Applicable  
*DD1423 is Exhibit:* A  
*Contract type:* U - COST PLUS FIXED FEE  
*Inspection:* DESTINATION  
*Acceptance:* DESTINATION  
*FOB:* DESTINATION

*Descriptive Data:*

Deliver software in accordance with with Section C, Description/Specifications: Statement of Work at Atch 1 to Section J hereto, and as further detailed in each individual Task Order as applicable.

**0005**

*Noun:* (b) (4)  
*NSN:* N - Not Applicable  
*DD1423 is Exhibit:* A  
*Contract type:* U - COST PLUS FIXED FEE  
*Inspection:* DESTINATION  
*Acceptance:* DESTINATION  
*FOB:* DESTINATION

*Descriptive Data:*

This CLIN will be funded with Defense Health Program O&M type funds in support of Operations and/or Maintenance type work in support of the Defense Health Program (DHP) Research and Development effort. Provide Operational and/or Maintenance type work in support of the Research and Development effort entitled, "Directed Energy Bio-Mechanisms" in accordance with Section C, Description/Specifications: Statement of Work dated 12 April 13, Attachment 1 to Section J of the individual task order. Deliver data in accordance with Exhibit A, Contract Data Requirements List, DD Forms 1423-1, dated 26 NOV 12, designated as Exhibit A, Section J hereto, and as further detailed in each individual Task Order.

**0006**

*Noun:* (b) (4)  
*NSN:* N - Not Applicable  
*DD1423 is Exhibit:* A  
*Contract type:* U - COST PLUS FIXED FEE  
*Inspection:* DESTINATION  
*Acceptance:* DESTINATION  
*FOB:* DESTINATION

*Descriptive Data:*

This CLIN will be funded with Defense Health Program funds in support of Research and Development type work. Conduct research entitled, "Directed Energy Bio-Mechanisms" in accordance with Section C, Description/Specifications: Statement of Work dated 12 April 13, Attachment 1 to Section J of the individual task order. Deliver data in accordance with Exhibit A, Contract Data Requirements List, DD Forms 1423-1, dated 26 NOV12, designated as Exhibit A, Section J hereto, and as further detailed in each individual Task Order.

**NOTICE:** The following contract clauses pertinent to this section are hereby incorporated in full text:

**OTHER CONTRACT CLAUSES IN FULL TEXT**

**B039 INDEFINITE QUANTITY (DEC 2005) (TAILORED)**

This is an Indefinite Quantity contract as contemplated by FAR 16.504. The total scope of the technical tasks for which orders may be issued is set forth in the Statement of Work at Atch 1, Section J. The maximum dollar amount the Government may order under this contract is \$19,000,000; the minimum amount is \$100,000.

**B040 ORDERING PROCEDURES (DEC 2005)**

(a) Orders will be issued by a Procuring Contracting Officer in accordance with the Ordering clause of this contract. However, the following procedures shall be used for negotiation of orders.

(1) The Contracting Officer will provide the Contractor with a copy of the notification of each proposed Order which will include a description of work to be performed, description of expertise required, and desired completion date.

(2) The Contractor shall then: (i) submit to the Contracting Officer a brief technical discussion describing how the work will be performed; (ii) submit a cost proposal identifying labor categories and number of hours within each category required for the performance of the proposed work; (iii) identify and provide rationale for all non-labor cost elements required for performance; and (iv) identify any Government property required for performance.

(3) Upon receipt of the proposal, the Contracting Officer will analyze the proposal and, if acceptable, issue an Order directing the Contractor to commence performance, or if the proposal is not fully acceptable as offered, negotiations shall be conducted prior to issuance of any Order. In the event issues pertaining to a proposed work cannot be resolved to the satisfaction of the Contracting Officer, the Contracting Officer reserves the right to withdraw and cancel the proposed work. In such event, the Contractor shall be notified, via letter, of the Contracting Officer's decision. This decision shall be final and conclusive and shall not be subject to the Disputes clause or the Contract Disputes Act.

(b) The Contractor is not authorized to commence performance prior to issuance of the Order by the Contracting Officer.

**B054 IMPLEMENTATION OF LIMITATION OF FUNDS (DEC 2005)**

Pursuant to the clause FAR 52.232-22 in Section I, entitled, "Limitation of Funds", the total amount available for payment and allotted to this contract for CLINS TBD ON AN ORDER BY ORDER BASIS through TBD ON AN ORDER BY ORDER BASIS is TBD ON AN ORDER BY ORDER BASIS. It is estimated that this amount is sufficient to cover performance through TBD ON AN ORDER BY ORDER BASIS.

**B058 PAYMENT OF FEE (CPFF) (FEB 2003) (TAILORED)**

The estimated cost and fee for this contract are shown below. The applicable fixed fee set forth below may be increased or decreased only by negotiation and modification of the contract for added or deleted work. As determined by the contracting officer, it shall be paid as it accrues, in regular installments based upon the percentage of completion of work (or the expiration of the agreed-upon period(s) for term contracts).

Estimated Cost TBD ON AN ORDER BY ORDER BASIS  
Fee TBD ON AN ORDER BY ORDER BASIS  
*Applies to Cost-Plus-Fixed-Fee CLIN(s) only.*

**NOTICE:** The following contract clauses pertinent to this section are hereby incorporated in full text:

**OTHER CONTRACT CLAUSES IN FULL TEXT**

**C004 INCORPORATED DOCUMENTS/REQUIREMENTS - ALTERNATE (FEB 2006)**

The following documents, as they may be amended below, are a part of this contract:

SEE SECTION J FOR ANY APPLICABLE EXHIBITS AND ATTACHMENTS TO THE BASIC IDIQ CONTRACT.

**NOTICE:** The following contract clauses pertinent to this section are hereby incorporated in full text:

**OTHER CONTRACT CLAUSES IN FULL TEXT**

**D002 PACKAGING AND MARKING (AUG 2005) (TAILORED)**

(a) All hardware deliverable contract items shall be packaged in accordance with established commercial practices.

(b) All hardware, software, equipment or systems are to be initially delivered to: TBD ON ORDER BY ORDER BASIS

SHIP TO: 711 HPW/RHDR

(b) (6)

(c) When special delivery and/or handling instructions are required, all boxes and/or crates must contain the following statement in plain sight and in bold letters:

**INSTRUCTION TO RECEIVING OFFICE - DO NOT OPEN;  
CONTENTS ARE SENSITIVE TO DAMAGE WHEN IMPROPERLY OPENED OR  
HANDLED.  
CONTACT THE RESPONSIBLE TECHNICAL PROJECT OFFICER IMMEDIATELY UPON  
RECEIPT.  
CONTACT: TBD ON AN ORDER BY ORDER BASIS**

I. **NOTICE:** The following contract clauses pertinent to this section are hereby incorporated by reference:

**A. FEDERAL ACQUISITION REGULATION CONTRACT CLAUSES**

52.246-08 INSPECTION OF RESEARCH AND DEVELOPMENT -- COST-REIMBURSEMENT  
(MAY 2001)  
52.246-09 INSPECTION OF RESEARCH AND DEVELOPMENT (SHORT FORM) (APR 1984)

**B. DEFENSE FEDERAL ACQUISITION REGULATION SUPPLEMENT CONTRACT CLAUSES**

252.246-7000 MATERIAL INSPECTION AND RECEIVING REPORT (MAR 2008)

II. **NOTICE:** The following contract clauses pertinent to this section are hereby incorporated in full text:

**OTHER CONTRACT CLAUSES IN FULL TEXT**

**E006 PAYMENT REQUEST AND RECEIVING REPORT SUBMISSION INSTRUCTIONS (AUG 2006)**

(a) Pursuant to DFARS 252.232-7003, Electronic Submission of Payment Requests, use of the Wide Area Work Flow - Receipt and Acceptance (WAWF-RA) system for electronic submission of payment requests and receipt/acceptance documents is mandatory for this award. In accordance with DFARS 252.246-7000, Material Inspection and Receiving Report, use of WAWF-RA fulfills the requirements for submission of DD Form 250s.

(b) Technical reports are not to be submitted as attachments in WAWF-RA. See F005 for delivery instructions and addresses for these reports.

(c) A copy of the receiving report printed from WAWF-RA shall accompany each shipment which requires a DD Form 250/receiving report.

(d) PROCESSING STATUS. Any inquiry as to the processing status of a payment request or receiving report should be made to the following office: DCMA as stated in Block 6 of the cover page, or to the Program Manager/Project Engineer as identified on each task order basis.

For any instructions on the use of Wide Area Work Flow, contact the Administrative Contracting Officer at the cognizant DCMA identified in block 6 of the contract cover page of the Basic IDIQ contract..

**E007 INSPECTION AND ACCEPTANCE AUTHORITY (APR 1998) (TAILORED)**

Inspection and acceptance for all Contract and Exhibit Lines or Subline Items shall be accomplished by the Program Manager.

THE DESIGNATED PROGRAM MANAGER/PROJECT ENGINEER, TBD ON AN ORDER BY ORDER BASIS

I. **NOTICE:** The following contract clauses pertinent to this section are hereby incorporated by reference:

**FEDERAL ACQUISITION REGULATION CONTRACT CLAUSES**

52.242-15 STOP-WORK ORDER (AUG 1989) - ALTERNATE I (APR 1984)  
52.247-34 F.O.B. DESTINATION (NOV 1991)

II. **NOTICE:** The following contract clauses pertinent to this section are hereby incorporated in full text:

**OTHER CONTRACT CLAUSES IN FULL TEXT**

**F002 PERIOD OF PERFORMANCE (FEB 1997) (TAILORED)**

Period of performance under this contract shall be 78 months from the Effective Date of the Contract.

**F003 CONTRACT DELIVERIES (FEB 1997)**

The following terms, if used within this contract in conjunction with contract delivery requirements (including data deliveries), are hereby defined as follows:

- (a) "MAC" and "MARO" mean "months after the effective date for award of the contractual action (as shown in block 3, Section A, SF 26)".
- (b) "WARO" means "weeks after the effective date for award of the contractual action".
- (c) "DARO" means "days after the effective date for award of the contractual action".
- (d) "ASREQ" means "as required". Detailed delivery requirements are then specified elsewhere in Section F.

**F005 DELIVERY OF REPORTS (OCT 1998) (TAILORED)**

(a) All data shall be delivered in accordance with the delivery schedule shown on the Contract Data Requirements List, attachments, or as incorporated by reference.

(b) All reports and correspondence submitted under this contract shall include the contract number and project number, if applicable, and be forwarded prepaid. A copy of the letters of transmittal shall be delivered to the Procuring Contracting Officer (PCO) and Administrative Contracting Officer (ACO). The addresses are set forth on the contract award cover page. All other address(es) and code(s) for consignee(s) are as set forth in the contract or incorporated by reference.

DELIVERY ADDRESSES FOR REPORTS-- TBD ON AN ORDER BY ORDER BASIS

**F007 SHIPMENT ADDRESS (SEP 1997) (TAILORED)**

TBD ON AN ORDER BY ORDER BASIS

**NOTICE:** The following contract clauses pertinent to this section are hereby incorporated in full text:

**A. DEFENSE FAR SUPP CONTRACT CLAUSES IN FULL TEXT**

**252.232-7006 WIDE AREA WORKFLOW PAYMENT INSTRUCTIONS (DEVIATION) (JAN 2013)**

(a) Definitions. As used in this clause-

“Department of Defense Activity Address Code (DoDAAC)” is a six position code that uniquely identifies a unit, activity, or organization.

“Document type” means the type of payment request or receiving report available for creation in Wide Area WorkFlow (WAWF).

“Local processing office (LPO)” is the office responsible for payment certification when payment certification is done external to the entitlement system.

(b) Electronic invoicing. The WAWF system is the method to electronically process vendor payment requests and receiving reports, as authorized by DFARS 252.232-7003, Electronic Submission of Payment Requests and Receiving Reports.

(c) WAWF access. To access WAWF, the Contractor shall-

(1) Have a designated electronic business point of contact in the Central Contractor Registration at <https://www.acquisition.gov>; and

(2) Be registered to use WAWF at <https://wawf.eb.mil/> following the step-by-step procedures for self-registration available at this web site.

(d) WAWF training. The Contractor should follow the training instructions of the WAWF Web-Based Training Course and use the Practice Training Site before submitting payment requests through WAWF. Both can be accessed by selecting the “Web Based Training” link on the WAWF home page at <https://wawf.eb.mil/>

(e) WAWF methods of document submission. Document submissions may be via web entry, Electronic Data Interchange, File Transfer Protocol, or PayWeb.

(1) To access PayWeb, the vendor may go to the following site:  
<https://onronline.onr.navy.mil/payweb/>

(2) For instructions on PayWeb payment request submission, please contact the office identified below: DFAS OFFICE AS IDENTIFIED IN BLOCK 12 OF THE BASIC IDIQ CONTRACT COVER PAGE

(f) WAWF payment instructions. The Contractor must use the following information when submitting payment requests and receiving reports in WAWF for this contract/order:

(1) Document type. The Contractor shall use the following document type(s).  
Use Cost Voucher to fulfill Clause G006, Invoice and Payment - Cost Reimbursement

Use Receiving Report to fulfill DFARS 252.246-7000, Material Inspection and Receiving Report, and CDRL A001 (Final Technical Report), Block 7 requirement for a DD250.

Note: If a "Combo" document type is identified but not supportable by the Contractor's business systems, an "Invoice" (stand-alone) and "Receiving Report" (stand-alone) document type may be used instead.)

(2) Inspection/acceptance location. The Contractor shall select the following inspection/acceptance location(s) in WAWF, as specified by the contracting officer. See CLIN(s) in Section B of each Task Order for Inspection location (typically Destination)

(3) Document routing. The Contractor shall use the information in the Routing Data Table below only to fill in applicable fields in WAWF when creating payment requests and receiving reports in the system.

Routing Data Table\*

Field Name in WAWF                      Data to be entered in WAWF

Pay Official DoDAAC Use the Code in Block 12 (DFAS) of the Basic IDIQ contract cover page

Issue By DoDAAC FA8650

Admin DoDAAC Use the Code in Block 7 of the Task Order cover page ( the Administered by block on the cover page)

Inspect By DoDAAC Vendor will leave this block blank

Ship To Code See Section F for the "SHIP TO" Code on each task order, (F4F\*\*\*); this is referred to as the BPN for the Project Engr/Prog Mgr

Ship From Code Not Applicable

Mark For Code Not Applicable

Service Approver (DoDAAC) Use the Code in Block 7 of the Task Order cover page (the Administered by block on the cover page)

Service Acceptor (DoDAAC) See Section F for the "SHIP TO" Code on each task order, (F4F\*\*\*); known as the BPN for the Project Engineer/Prog Mgr

Accept at Other DoDAAC N/A

LPO DoDAAC N/A

DCAA Auditor DoDAAC VENDOR SHALL USE LOOK UP DCAA FROM TOOLBAR AT LEFT OF WAWF SCREEN

Other DoDAAC(s) N/A

(\*Contracting Officer: Insert applicable DoDAAC information or "See schedule" if multiple ship to/acceptance locations apply, or "Not applicable.")

(4) Payment request and supporting documentation. The Contractor shall ensure a payment request includes appropriate contract line item and subline item descriptions of the work performed or supplies delivered, unit price/cost per unit, fee (if applicable), and all relevant back-up documentation, as defined in DFARS Appendix F, (e.g. timesheets) in support of each payment request.

(5) WAWF email notifications. The Contractor shall enter the e-mail address identified below in the "Send Additional Email Notifications" field of WAWF once a document is submitted in the system.

EMAIL ADDRESSES FOR THE PROGRAM MANAGER/PROJECT ENGINEER, FINANCIAL ANALYST, AND CONTRACT NEGOTIATOR OR CONTRACTING OFFICER IS TBD AND WILL BE IDENTIFIED IN SECTION F ON EACH TASK ORDER

\*The Receiving Report requires an inspection and acceptance to be performed by the Program Manager/Project Engineer. The "Ship-To Code" in WAWF is the BPN or Ship To code (F4F\*\*\*) of the Program Manager/Project Engineer for the task order effort and this code can be found in Section F of each Task Order. THE PROJECT ENGINEER/PROGRAM MGR IS TBD ON ORDER BY ORDER BASIS.

DO NOT ATTACH TECHNICAL REPORTS TO WAWF-RA DOCUMENTS. YOU MAY ATTACH FINANCIAL INFORMATION SUPPORTING YOUR VOUCHER OR DOCUMENTS SUPPORTING INSPECTION AND ACCEPTANCE.

A copy of the receiving report printed from WAWF-RA shall accompany each shipment which requires a DD Form 250/Receiving Report

(g) WAWF point of contact.

(1) The Contractor may obtain clarification regarding invoicing in WAWF from the following contracting activity's WAWF point of contact.  
CONTACT THE ADMINISTRATIVE CONTRACTING OFFICER (ACO) AT THE COGNIZANT DCMA ADMINISTRATION OFFICE AS IDENTIFIED IN BLOCK 7 OF THE TASK ORDER COVER PAGE FOR ADDITIONAL ASSISTANCE WITH WAWF TRAINING, REGISTRATION, AND IMPLEMENTATION. DO NOT ATTACH TECHNICAL REPORTS OR DOCUMENTS SUPPORTING INSPECTION AND ACCEPTANCE.

(2) For technical WAWF help, contact the WAWF helpdesk at 866-618-5988.

**B. OTHER CONTRACT CLAUSES IN FULL TEXT**

**252.204-0002 LINE ITEM SPECIFIC: SEQUENTIAL ACRN ORDER (SEP 2009)**

The payment office shall make payment in sequential ACRN order within the line item, exhausting all funds in the previous ACRN before paying from the next ACRN using the following sequential order: Alpha/Alpha; Alpha/numeric; numeric/alpha; and numeric/numeric.

**252.204-0003 LINE ITEM SPECIFIC: CONTRACTING OFFICER SPECIFIED ACRN ORDER (SEP 2009)**

The payment office shall make payment within the line item in the sequence ACRN order specified below, exhausting all funds in the previous ACRN before paying from the next ACRN.

Line Item ACRN Order TBD ON ORDER BY ORDER BASIS AS APPLICABLE

**252.204-0007 CONTRACT-WIDE: SEQUENTIAL ACRN ORDER (SEP 2009)**

The payment office shall make payment in sequential ACRN order within the contract or order, exhausting all funds in the previous ACRN before paying from the next ACRN using the following sequential order: alpha/alpha; alpha/numeric; numeric/alpha; and numeric/numeric.

**252.204-0008 CONTRACT-WIDE: CONTRACTING OFFICER SPECIFIED ACRN ORDER (SEP 2009)**

The payment office shall make payment in sequential ACRN order within the contract or order, exhausting all funds in the previous ACRN before paying from the next ACRN in the sequence order specified below:

Payment for all effort under each Task Order should be made in the order and amounts shown in the informational subline item(s) in Section B, for the applicable CLIN(s) of the Task Order. Exhaust the funds in each ACRN before using funds from the next listed ACRN.

ACRN	SUBCLIN NO.	TOTAL OBLIGATED
TBD on each Task Order	.....	.....

a. This contract may be funded by multiple accounting classification citations. Payment shall be made from ACRNs in alphabetical order (AA,AB,etc). DO NOT USE A PRORATED METHOD to pay,

disburse and liquidate funds. Do not liquidate any funds from an ACRN unless the preceding ACRNs have been fully liquidated, or if revised payment instructions are provided per paragraph b. below.

b. Additional ACRNs may be assigned when new accounting classifications are available. When adding new ACRNs or changing existing ACRNs, the above payment instructions shall apply, unless specific revised payments instructions are provided as part of a contract modification.

**G002 PROGRAM MANAGER (MAY 1997) (TAILORED)**

Program Manager/Project Engineer: TBD on each Task Order

**G005 PAYMENT INSTRUCTIONS FOR MULTIPLE ACCOUNTING CLASSIFICATION CITATIONS (MAR 2001)**

Payment for all effort under this contract should be made in the order and amounts shown in the informational subline item(s) in Section B, CLIN 0001 of the contract and recapped below. Exhaust the funds in each ACRN before using funds from the next listed ACRN.

ACRN	SUBCLIN NO.	TOTAL OBLIGATED
TBD on each Task Order		

a. This contract will be funded by multiple accounting classification citations. Payment shall be made from ACRNs in alphabetical order (AA,AB,etc). DO NOT USE A PRORATED METHOD to pay, disburse and liquidate funds. Do not liquidate any funds from an ACRN unless the preceding ACRNs have been fully liquidated, or if revised payment instructions are provided per paragraph b. below.

b. Additional ACRNs will be assigned when new accounting classifications are available. When adding new ACRNs or changing existing ACRNs, the above payment instructions shall apply, unless specific revised payments instructions are provided as part of a contract modification.

**G006 INVOICE AND PAYMENT - COST REIMBURSEMENT (FEB 1997) (TAILORED)**

Invoices (or public vouchers), supported by a statement of cost for performance under this contract, shall be submitted to the cognizant Defense Contract Audit Agency (DCAA) office. Under the provisions of DFARS 242.803(b), the DCAA auditor is designated as the authorized representative of the contracting officer (CO) for examining vouchers received directly from the contractor.

SPECIFIC PAYMENT INSTRUCTIONS MAY APPLY AS FOLLOWS TBD ON INDIVIDUAL ORDER BASIS: "Payment for all effort under this contract will be made at the SUBCLIN level with the specific ACRN specified for that SUBCLIN." TBD ON ORDER BY ORDER BASIS

**I. NOTICE:** The following contract clauses pertinent to this section are hereby incorporated in full text:

**OTHER CONTRACT CLAUSES IN FULL TEXT**

**H011 GUARANTEED FINAL REPORT (FEB 1997)**

If this contract is terminated prior to completion, the Contractor agrees to provide a final report in accordance with Exhibit A, Data Item A001 . During the life of the contract, the contractor shall continuously reserve sufficient funds from the amount allotted to guarantee the preparation and delivery of said final report.

**H015 IMPLEMENTATION OF PATENT RIGHTS CLAUSE (IDIQ) (NOV 2011)**

a. Interim or final Invention Reports 1) listing subject invention(s) and stating that all subject inventions have been disclosed, or 2) stating that there are no such inventions, shall be submitted FOR EACH ORDER to both the Administrative Contracting Officer at the address located on the face of the contract and to the Contracting Officer/Patent Administrator at det1.afri.pk.patents@wpafb.af.mil, with a courtesy copy (cc:) to the government Program Manager/Project Engineer, within the timeframes specified in the clause. Please include in the subject line of the e-mail the contract number followed by the words "Invention Reporting." Also include in the body of the e-mail the names of the Government Project Engineer/Program Manager and his/her office symbol. Contractors are highly encouraged to use DD Form 882, Report of Invention and Subcontracts to submit these reports. The DD Form 882 may also be used for the notification of an award of any subcontract(s) for experimental, developmental or research work which contain a "Patent Rights" clause.

b. All other notifications (e.g., disclosure of each subject invention to the Contracting Officer within 2 months after the inventor discloses it) shall also be sent to the e-mail address above, with a courtesy copy (cc:) to the government Program Manager/Project Engineer.

c. This provision also constitutes the request for the following information for any subject invention for which the contractor has retained ownership, 1) the filing date, 2) serial number and title, 3) a copy of the patent application and 4) patent number and issue date. Submittal shall be to the Contracting Officer/Patent Administrator e-mail address listed above, with a courtesy copy (cc:) to the government Program Manager/Project Engineer.

**H025 INCORPORATION OF SECTION K (OCT 1998)**

Section K of the solicitation is hereby incorporated by reference.

**H063 CONTRACTOR IDENTIFICATION (FEB 2003)**

(a) Contractor personnel and their subcontractors must identify themselves as Contractors or subcontractors during meetings, telephone conversations, in electronic messages, or correspondence related to this contract.

(b) Contractor-occupied facilities (on AFMC or other Government installations) such as offices, separate rooms, or cubicles must be clearly identified with Contractor supplied signs, name plates or other identification, showing that these are work areas for Contractor or subcontractor personnel.

#### **H087 GOVERNMENT- FURNISHED PROPERTY (GFP) (FEB 2003) (TAILORED)**

Pursuant to the Government Property clause herein, the Government shall furnish the item(s) of property listed below as Government-Furnished Property (GFP) to the Contractor, f.o.b. TBD ON AN ORDER BY ORDER BASIS, for use in performance of this contract. Upon completion of the contract, the Contractor shall obtain disposition instructions from the Government Property Administrator of the activity having responsibility for administration of the contract.

The listing shall include, at a minimum:

- The name, commercial part number, bulk identifier, and NSN;
- Quantity/unit of measure;
- Unit acquisition cost;
- Unique-item identifier or equivalent (its UID)
- The CO must state if the property is to be furnished "as is".
- Delivery Date

TBD ON AN ORDER BY ORDER BASIS

#### **H092 COMMUNICATIONS SECURITY (COMSEC) MONITORING (AUG 2005)**

All communications with DoD organizations are subject to Communications Security (COMSEC) review. Contractor personnel will be aware that telecommunications networks are continually subject to interception by unfriendly intelligence organizations. The DoD has authorized the military departments to conduct COMSEC monitoring and recording of telephone calls originating from or terminating at DoD organizations. Therefore, civilian contractor personnel are advised that any time they place a call to or receive a call from a USAF organization they are subject to COMSEC procedures. The Contractor will assume the responsibility for ensuring wide and frequent dissemination of the above information to all employees dealing with official DoD information.

#### **H094 CONTRACTING OFFICER AUTHORIZATION (AUG 2005)**

The Contracting Officer shall be the only individual authorized to direct and/or redirect the effort or in any way amend any of the terms of this contract, other than those instances specifically delegated to an Administrative Contracting Officer or a Termination Contracting Officer by a contract clause of this contract or in writing by the Procuring Contracting Officer (PCO). For purposes of this contract "the Contracting Officer" is the individual located at the issuing office, and may be abbreviated as "CO" or "PCO". Any changes made by the contractor WITHOUT CO authority will be made at the contractor's own risk.

#### **H097 ACKNOWLEDGEMENT OF SPONSORSHIP (APR 2006)**

(a) The contractor agrees that in the release of information relating to this contract such release shall include a statement to the effect that the project or effort depicted was or is sponsored by the Air Force Research Laboratory (AFRL).

(b) For the purpose of this clause, "information" includes but is not limited to material presented in news releases, articles, manuscripts, brochures, advertisements, still and motion pictures, speeches, presentations, meetings, conferences, symposia, etc.

(c) Nothing in the foregoing shall affect compliance with the requirements of the clause (if applicable) of this contract entitled "Security Requirements".

(d) The contractor further agrees to include this provision in any subcontracts awarded as a result of this contract.

#### **H098 BASE SUPPORT (SEP 2011)**

Base support shall be provided by the Government to the Contractor in accordance with this provision.

(a) Base support includes Government-controlled working space, material, equipment, services (including automatic data processing), or other support, use of the Defense Switched Network (DSN), which the Government determines can be made available at, or through, any Air Force installation where this contract shall be performed. All Government property in the possession of the Contractor, provided through the base support provision, shall be used and managed in accordance with the Government Property clauses.

(b) Unless otherwise stipulated in the contract schedule, support shall be provided on a no-charge-for-use basis and the value shall be a part of the Government's contract consideration.

(c) The Contractor agrees to immediately report (with a copy to the cognizant CAO) inadequacies, defective Government-Furnished Property (GFP), or nonavailability of support stipulated by the contract schedule, together with a recommended plan for obtaining the required support. Facilities shall not be purchased under this provision. Additionally, the Contractor (or authorized representative) shall not purchase, or otherwise furnish any base support requirement provided by the provision (or authorize others to do so), without prior written approval of the Contracting Officer regarding the price, terms, and conditions of the proposed purchase, or approval of other arrangements.

(d) Following are installations where base support will be provided (insert list of installations).

Ft. Sam Houston, TX

(e) The Government support to be furnished under this contract is (insert list of support items:

All base support will be provided at, building 3260, 4141 Petroleum Dr, Ft Sam Houston. Base support items include: Gov't-Owned Hazardous Materials, Office space, research laboratory space, office and research equipment, specialized research or test facilities, data storage facilities to include IT infrastructure including PCs, servers, and/or data storage and retrieval systems. Contractor will be provided with access to a 1/4 ton pickup truck, 1/2 ton pickup truck, 9 passenger van, 1/2 ton cargo van and slow speed vehicles, to be used in accordance with AIR FORCE INSTRUCTION 24-301, dated 01 November 2008, incorporating through Change 2 on 11 May 2012, certified current as of 17 August 2012. The Contractor will be provided with identification badges, building access and/or security cards/passes, and car registration. Class "C" telephones, Defense Switched Network (DSN) accessibility, Unclassified but Sensitive Internet Protocol Router Network (NIPRnet), Secret Internet Protocol Router Network (SIPRnet) and email access.

Because of the nature and location(s) of the work performed, the value of such equipment is undeterminable. The Contractor shall not incur any cost resulting from nonsupport prior to Contracting Officer concurrence in accordance with this provision.

#### **ALTERNATE I**

(f) The Contractor agrees that in the performance of this contract or any major subcontract no direct or indirect costs for property will be incurred if the Government determines that property is available at, or through any Air Force installation where this contract shall be performed.

#### **H099 EXPORT CONTROLLED DATA RESTRICTIONS (APR 2012)**

EXPORT-CONTROLLED DATA RESTRICTIONS

(a) For the purpose of this clause,

(1) Foreign person is any person who is not a citizen or national of the U.S. or lawfully admitted to the U.S. for permanent residence under the Immigration and Nationality Act, and includes foreign corporations, international organizations, and foreign governments;

(2) Foreign representative is anyone, regardless of nationality or citizenship, acting as an agent, representative, official, or employee of a foreign government, a foreign-owned or influenced firm, corporation or person;

(3) Foreign sources are those sources (vendors, subcontractors, and suppliers) owned and controlled by a foreign person; and

(b) The Contractor shall place a clause in subcontracts containing appropriate export control restrictions, set forth in this clause.

(c) Nothing in this clause waives any requirement imposed by any other U.S. Government agency with respect to employment of foreign nationals or export controlled data and information.

(d) Equipment and technical data generated or delivered under this contract are controlled by the International Traffic in Arms Regulation (ITAR), 22 CFR Sections 121 through 128. An export license is required before assigning any foreign source to perform work under this contract or before granting access to foreign persons to any equipment and technical data generated or delivered during performance (see 22 CFR Section 125). The Contractor shall notify the Contracting Officer and obtain written approval of the Contracting Officer prior to assigning or granting access to any work, equipment, or technical data generated or delivered under this contract to foreign persons or their representatives. The notification shall include the name and country of origin of the foreign person or representative, the specific work, equipment, or data to which the person will have access, and whether the foreign person is cleared to have access to technical data (DoD 5220.22-M, National Industrial Security Program Operating Manual (NISPO) <<http://www.dtic.mil/whs/directives/corres/html/522022m.htm>>).

(END CLAUSE)

#### **H101 INCORPORATION OF SUBCONTRACTING PLAN (APR 2012)**

In accordance with FAR 52.219-9, Small Business Subcontracting Plan, the subcontracting plan, dated 12 APR 2013, contained in contractor's proposal for the Basic IDIQ Contract Ceiling amount of \$49,000,000.00, is incorporated herein by reference.

#### **H102 VOLUNTARY PROTECTION PROGRAM AND INCORPORATION OF SAFETY AND HEALTH PLAN (JUN 2013)**

1. The contractors accepted Safety and Health Plan dated 12 APR 2013 is hereby incorporated by reference.

2. Voluntary Protection Program (VPP) applies only to contractors whose employees work more than 1000 hours per quarter on a government installation. VPP requires that contractors provide their employees safety and health protection equal in quality to that provided to Air Force employees. Contractors are responsible for managing their safety and health program, ensuring that the safety and health rules of the installation are followed, and flowing down VPP requirements to all subcontractors whose employees work for more than 1000 hours per quarter on a government installation under their contract.

3. Contractors shall provide their Total Case Incidence Rate (TCIR) and Day

Away, Restricted, and or Transfer Case Rate (DART) data and OSHA Form 300A annually by the 15th of January to the contracting officer for inclusion in the installation's annual VPP Safety and Health Management Report.

(End of clause)

**Contract Clauses in this section are from the FAR, Defense FAR Sup, Air Force FAR Sup, and the Air Force Materiel Command FAR Sup, and are current through the following updates:**

**Database Version: 6.14.x.800; Issued: 8/15/2013; FAR: FAC 2005-69 (Partial); DFAR: DPN 20130808; DL.: DL 98-021; Class Deviations: CD 2013-O0016; AFFAR: 2002 Edition; AFAC: AFAC 2013-0327; IPN: 98-009**

**I. NOTICE:** The following contract clauses pertinent to this section are hereby incorporated by reference:

**A. FEDERAL ACQUISITION REGULATION CONTRACT CLAUSES**

52.202-01 DEFINITIONS (JAN 2012)  
52.203-03 GRATUITIES (APR 1984)  
52.203-05 COVENANT AGAINST CONTINGENT FEES (APR 1984)  
52.203-06 RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT (SEP 2006)  
52.203-07 ANTI-KICKBACK PROCEDURES (OCT 2010)  
52.203-08 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 (OCT 2010)  
52.203-13 CONTRACTOR CODE OF BUSINESS ETHICS AND CONDUCT (APR 2010)  
52.204-02 SECURITY REQUIREMENTS (AUG 1996)  
52.204-04 PRINTED OR COPIED DOUBLE-SIDED ON POSTCONSUMER FIBER CONTENT PAPER (MAY 2011)  
52.204-09 PERSONAL IDENTITY VERIFICATION OF CONTRACTOR PERSONNEL (JAN 2011)  
52.204-10 REPORTING EXECUTIVE COMPENSATION AND FIRST-TIER SUBCONTRACT AWARDS (JUL 2013)  
52.204-13 CENTRAL CONTRACTOR REGISTRATION MAINTENANCE (DEC 2012)  
52.208-08 REQUIRED SOURCES FOR HELIUM AND HELIUM USAGE DATA (APR 2002)  
52.209-06 PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (DEC 2010)  
52.209-09 UPDATES OF PUBLICLY AVAILABLE INFORMATION REGARDING RESPONSIBILITY MATTERS (FEB 2012)  
52.209-10 PROHIBITION ON CONTRACTING WITH INVERTED DOMESTIC CORPORATIONS (MAY 2012)  
52.210-01 MARKET RESEARCH (APR 2011)  
52.211-05 MATERIAL REQUIREMENTS (AUG 2000)  
52.215-02 AUDIT AND RECORDS -- NEGOTIATION (OCT 2010)  
52.215-08 ORDER OF PRECEDENCE--UNIFORM CONTRACT FORMAT (OCT 1997)  
52.215-11 PRICE REDUCTION FOR DEFECTIVE CERTIFIED COST OR PRICING DATA--MODIFICATIONS (AUG 2011)  
52.215-13 SUBCONTRACTOR CERTIFIED COST OR PRICING DATA--MODIFICATIONS (OCT 2010)  
52.215-14 INTEGRITY OF UNIT PRICES (OCT 2010)  
52.215-15 PENSION ADJUSTMENTS AND ASSET REVERSIONS (OCT 2010)  
52.215-17 WAIVER OF FACILITIES CAPITAL COST OF MONEY (OCT 1997)  
52.215-18 REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS (PRB) OTHER THAN PENSIONS (JUL 2005)  
52.215-19 NOTIFICATION OF OWNERSHIP CHANGES (OCT 1997)

- 52.215-21 REQUIREMENTS FOR CERTIFIED COST OR PRICING DATA AND DATA OTHER THAN CERTIFIED COST OR PRICING DATA--MODIFICATIONS (OCT 2010)
- 52.215-23 LIMITATIONS ON PASS-THROUGH CHARGES (OCT 2009)
- 52.216-07 ALLOWABLE COST AND PAYMENT (JUN 2013)
- 52.216-08 FIXED FEE (JUN 2011)
- 52.216-18 ORDERING (OCT 1995)  
Para (a), Issued from date is 'Contract Effective Date'  
Para (a), Issued through date is '60 months thereafter'
- 52.216-19 ORDER LIMITATIONS (OCT 1995)  
Para (a). Insert Dollar amount or quantity. '\$100,000.00'  
Para (b)(1). Insert dollar amount or quantity '\$19,000,000.00'  
Para (b)(2). Insert dollar amount or quantity. '\$19,000,000.00'  
Para (b)(3). Insert number of days. '30'  
Para (d). Insert number of days. '15'
- 52.216-22 INDEFINITE QUANTITY (OCT 1995)  
Para (d), Date is '78 months from the Effective date of the contract as reflected in Block 3 of the Basic IDIQ Contract cover page'
- 52.219-04 NOTICE OF PRICE EVALUATION PREFERENCE FOR HUBZONE SMALL BUSINESS CONCERNS (JAN 2011)
- 52.219-08 UTILIZATION OF SMALL BUSINESS CONCERNS (JAN 2011)
- 52.219-09 SMALL BUSINESS SUBCONTRACTING PLAN (JAN 2011)
- 52.219-16 LIQUIDATED DAMAGES -- SUBCONTRACTING PLAN (JAN 1999)
- 52.219-28 POST-AWARD SMALL BUSINESS PROGRAM REREPRESENTATION (APR 2012)
- 52.222-02 PAYMENT FOR OVERTIME PREMIUMS (JUL 1990)  
Para (a), Dollar amount is 'TBD ON AN ORDER BY ORDER BASIS'
- 52.222-03 CONVICT LABOR (JUN 2003)
- 52.222-21 PROHIBITION OF SEGREGATED FACILITIES (FEB 1999)
- 52.222-26 EQUAL OPPORTUNITY (MAR 2007)
- 52.222-35 EQUAL OPPORTUNITY FOR VETERANS (SEP 2010)
- 52.222-36 AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES (OCT 2010)
- 52.222-37 EMPLOYMENT REPORTS ON VETERANS (SEP 2010)
- 52.222-40 NOTIFICATION OF EMPLOYEE RIGHTS UNDER THE NATIONAL LABOR RELATIONS ACT (DEC 2010)
- 52.222-50 COMBATING TRAFFICKING IN PERSONS (FEB 2009)
- 52.222-54 EMPLOYMENT ELIGIBILITY VERIFICATION (JUL 2012)
- 52.223-03 HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA (JAN 1997)  
Para (b), Material Identification No: 'See Section J for attached list of hazardous materials that are projected to be delivered to the government that would be used on the task orders issued under the Basic IDIQ contract as needed.'
- 52.223-05 POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION (MAY 2011)
- 52.223-05 POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION (MAY 2011) - ALTERNATE I (MAY 2011)
- 52.223-06 DRUG-FREE WORKPLACE (MAY 2001)
- 52.223-07 NOTICE OF RADIOACTIVE MATERIALS (JAN 1997)  
Para (a), Number of days is '45 days'
- 52.223-11 OZONE-DEPLETING SUBSTANCES (MAY 2001)
- 52.223-15 ENERGY EFFICIENCY IN ENERGY-CONSUMING PRODUCTS (DEC 2007)
- 52.223-16 IEEE 1680 STANDARD FOR THE ENVIRONMENTAL ASSESSMENT OF PERSONAL COMPUTER PRODUCTS (DEC 2007)
- 52.223-18 ENCOURAGING CONTRACTOR POLICIES TO BAN TEXT MESSAGING WHILE DRIVING (AUG 2011)
- 52.223-19 COMPLIANCE WITH ENVIRONMENTAL MANAGEMENT SYSTEMS (MAY 2011)
- 52.225-13 RESTRICTIONS ON CERTAIN FOREIGN PURCHASES (JUN 2008)
- 52.227-01 AUTHORIZATION AND CONSENT (DEC 2007) - ALTERNATE I (APR 1984)

52.227-02	NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (DEC 2007)
52.227-10	FILING OF PATENT APPLICATIONS -- CLASSIFIED SUBJECT MATTER (DEC 2007)
52.228-07	INSURANCE -- LIABILITY TO THIRD PERSONS (MAR 1996)
52.230-02	COST ACCOUNTING STANDARDS (MAY 2012)
52.230-03	DISCLOSURE AND CONSISTENCY OF COST ACCOUNTING PRACTICES (MAY 2012)
52.230-06	ADMINISTRATION OF COST ACCOUNTING STANDARDS (JUN 2010)
52.232-09	LIMITATION ON WITHHOLDING OF PAYMENTS (APR 1984)
52.232-17	INTEREST (OCT 2010)
52.232-18	AVAILABILITY OF FUNDS (APR 1984)
52.232-20	LIMITATION OF COST (APR 1984)
52.232-22	LIMITATION OF FUNDS (APR 1984)
52.232-23	ASSIGNMENT OF CLAIMS (JAN 1986) - ALTERNATE I (APR 1984)
52.232-25	PROMPT PAYMENT (OCT 2008)
52.232-33	PAYMENT BY ELECTRONIC FUNDS TRANSFER--CENTRAL CONTRACTOR REGISTRATION (OCT 2003)
52.233-01	DISPUTES (JUL 2002)
52.233-03	PROTEST AFTER AWARD (AUG 1996) - ALTERNATE I (JUN 1985)
52.233-04	APPLICABLE LAW FOR BREACH OF CONTRACT CLAIM (OCT 2004)
52.237-02	PROTECTION OF GOVERNMENT BUILDINGS, EQUIPMENT AND VEGETATION (APR 1984)
52.242-01	NOTICE OF INTENT TO DISALLOW COSTS (APR 1984)
52.242-03	PENALTIES FOR UNALLOWABLE COSTS (MAY 2001)
52.242-04	CERTIFICATION OF FINAL INDIRECT COSTS (JAN 1997)
52.242-13	BANKRUPTCY (JUL 1995)
52.243-02	CHANGES -- COST-REIMBURSEMENT (AUG 1987) - ALTERNATE V (APR 1984)
52.243-07	NOTIFICATION OF CHANGES (APR 1984) Para (b), Number of calendar days is (insert 30 for RDSS/C) '30 days' Para (d), Number of calendar days is (insert 30 for RDSS/C) '30 days'
52.244-02	SUBCONTRACTS (OCT 2010) Para (d), approval required on subcontracts: 'NONE' Para (j), Insert subcontracts evaluated during negotiations. 'N/A'
52.244-05	COMPETITION IN SUBCONTRACTING (DEC 1996)
52.244-06	SUBCONTRACTS FOR COMMERCIAL ITEMS (DEC 2010)
52.245-01	GOVERNMENT PROPERTY (APR 2012)
52.245-09	USE AND CHARGES (APR 2012)
52.246-23	LIMITATION OF LIABILITY (FEB 1997)
52.247-01	COMMERCIAL BILL OF LADING NOTATIONS (FEB 2006)
52.247-67	SUBMISSION OF TRANSPORTATION DOCUMENTS FOR AUDIT (FEB 2006) Para (c). Insert address. 'ADMINISTRATIVE CONTRACTING OFFICER', ADDRESS IN BLOCK 6 OF THE BASIC IDIQ CONTRACT COVER PAGE'
52.249-06	TERMINATION (COST-REIMBURSEMENT) (MAY 2004)
52.249-14	EXCUSABLE DELAYS (APR 1984)
52.251-01	GOVERNMENT SUPPLY SOURCES (APR 2012)
52.253-01	COMPUTER GENERATED FORMS (JAN 1991)

**B. DEFENSE FEDERAL ACQUISITION REGULATION SUPPLEMENT CONTRACT CLAUSES**

252.201-7000	CONTRACTING OFFICER'S REPRESENTATIVE (DEC 1991)
252.203-7000	REQUIREMENTS RELATING TO COMPENSATION OF FORMER DOD OFFICIALS (SEP 2011)
252.203-7001	PROHIBITION ON PERSONS CONVICTED OF FRAUD OR OTHER DEFENSE-CONTRACT-RELATED FELONIES (DEC 2008)
252.203-7002	REQUIREMENT TO INFORM EMPLOYEES OF WHISTLEBLOWER RIGHTS (JAN 2009)

- 252.203-7003 AGENCY OFFICE OF THE INSPECTOR GENERAL (DEC 2012)  
252.203-7004 DISPLAY OF FRAUD HOTLINE POSTER(S) (DEC 2012)  
Para (b)(2). C.O. enters contact information. 'TBD ON ORDER BY ORDER BASIS'
- 252.204-7002 PAYMENT FOR SUBLINE ITEMS NOT SEPARATELY PRICED (DEC 1991)  
252.204-7003 CONTROL OF GOVERNMENT PERSONNEL WORK PRODUCT (APR 1992)  
252.204-7004 ALTERNATE A, SYSTEM FOR AWARD MANAGEMENT (MAY 2013)  
252.204-7005 ORAL ATTESTATION OF SECURITY RESPONSIBILITIES (NOV 2001)  
252.204-7006 BILLING INSTRUCTIONS (OCT 2005)  
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 (DEC 2006)
- 252.211-7003 ITEM IDENTIFICATION AND VALUATION (JUN 2013)  
Para (c)(1)(ii). Items with acquisition cost less than \$5,000. 'TBD ON ORDER BY ORDER BASIS'  
Para (c)(1)(iii). Attachment Nr. 'TBD ON ORDER BY ORDER BASIS'
- 252.211-7007 REPORTING OF GOVERNMENT-FURNISHED PROPERTY (AUG 2012)  
252.211-7008 USE OF GOVERNMENT-ASSIGNED SERIAL NUMBERS (SEP 2010)  
252.215-7000 PRICING ADJUSTMENTS (DEC 2012)  
252.216-7006 ORDERING (MAY 2011)  
Para (a). Date. 'the Effective Date of the Contract as reflected in Block 3 of the contract cover page'  
Para (a). Date '60 months from the Effective Date of the contract that is reflected in Block 3 of the Contract Cover Page.'
- 252.219-7003 SMALL BUSINESS SUBCONTRACTING PLAN (DOD CONTRACTS) (AUG 2012)  
252.219-7003 SMALL BUSINESS SUBCONTRACTING PLAN (DOD CONTRACTS) (AUG 2012) - ALTERNATE I (OCT 2010)
- 252.222-7006 RESTRICTIONS ON THE USE OF MANDATORY ARBITRATION AGREEMENTS (DEC 2010)
- 252.223-7001 HAZARD WARNING LABELS (DEC 1991)  
252.223-7004 DRUG-FREE WORK FORCE (SEP 1988)  
252.223-7006 PROHIBITION ON STORAGE AND DISPOSAL OF TOXIC AND HAZARDOUS MATERIALS (APR 2012)
- 252.223-7008 PROHIBITION OF HEXAVALENT CHROMIUM (JUN 2013)  
252.225-7004 REPORT OF INTENDED PERFORMANCE OUTSIDE THE UNITED STATES AND CANADA--SUBMISSION AFTER AWARD (OCT 2010)  
252.225-7006 QUARTERLY REPORTING OF ACTUAL CONTRACT PERFORMANCE OUTSIDE THE UNITED STATES (OCT 2010)  
252.225-7007 PROHIBITION ON ACQUISITION OF UNITED STATES MUNITIONS LIST ITEMS FROM COMMUNIST CHINESE MILITARY COMPANIES (SEP 2006)  
252.225-7008 RESTRICTION ON ACQUISITION OF SPECIALTY METALS (MAR 2013)  
252.225-7009 RESTRICTION ON ACQUISITION OF CERTAIN ARTICLES CONTAINING SPECIALTY METALS (JUN 2013)  
252.225-7012 PREFERENCE FOR CERTAIN DOMESTIC COMMODITIES (FEB 2013)  
252.225-7016 RESTRICTION ON ACQUISITION OF BALL AND ROLLER BEARINGS (JUN 2011)  
252.225-7030 RESTRICTION ON ACQUISITION OF CARBON, ALLOY, AND ARMOR STEEL PLATE (DEC 2006)  
252.225-7048 EXPORT-CONTROLLED ITEMS (JUN 2013)
- 252.226-7001 UTILIZATION OF INDIAN ORGANIZATIONS, INDIAN-OWNED ECONOMIC ENTERPRISES, AND NATIVE HAWAIIAN SMALL BUSINESS CONCERNS (SEP 2004)
- 252.227-7013 RIGHTS IN TECHNICAL DATA--NONCOMMERCIAL ITEMS (JUN 2013)  
252.227-7014 RIGHTS IN NONCOMMERCIAL COMPUTER SOFTWARE AND NONCOMMERCIAL COMPUTER SOFTWARE DOCUMENTATION (MAY 2013)  
252.227-7015 TECHNICAL DATA--COMMERCIAL ITEMS (JUN 2013)  
252.227-7016 RIGHTS IN BID OR PROPOSAL INFORMATION (JAN 2011)  
252.227-7019 VALIDATION OF ASSERTED RESTRICTIONS--COMPUTER SOFTWARE (SEP 2011)

- 252.227-7025 LIMITATIONS ON THE USE OR DISCLOSURE OF GOVERNMENT-FURNISHED INFORMATION MARKED WITH RESTRICTIVE LEGENDS (MAY 2013)
- 252.227-7030 TECHNICAL DATA--WITHHOLDING OF PAYMENT (MAR 2000)
- 252.227-7037 VALIDATION OF RESTRICTIVE MARKINGS ON TECHNICAL DATA (JUN 2013)
- 252.227-7038 PATENT RIGHTS--OWNERSHIP BY THE CONTRACTOR (LARGE BUSINESS) (JUN 2012)
- 252.231-7000 SUPPLEMENTAL COST PRINCIPLES (DEC 1991)
- 252.232-7003 ELECTRONIC SUBMISSION OF PAYMENT REQUESTS AND RECEIVING REPORTS (JUN 2012)
- 252.232-7010 LEVIES ON CONTRACT PAYMENTS (DEC 2006)
- 252.235-7002 ANIMAL WELFARE (DEC 2011)
- 252.235-7003 FREQUENCY AUTHORIZATION (DEC 1991)
- 252.235-7004 PROTECTION OF HUMAN SUBJECTS (JUL 2009)
- 252.235-7010 ACKNOWLEDGMENT OF SUPPORT AND DISCLAIMER (MAY 1995)  
Para (a), name of contracting agency(ies): 'United States Air Force'  
Para (a), contract number(s): 'SEE BLOCK 2 OF COVER PAGE FOR CONTRACT NUMBER'  
Para (b), name of contracting agency(ies): 'United States Air Force'
- 252.235-7011 FINAL SCIENTIFIC OR TECHNICAL REPORT (NOV 2004)
- 252.242-7004 MATERIAL MANAGEMENT AND ACCOUNTING SYSTEM (MAY 2011)
- 252.242-7005 CONTRACTOR BUSINESS SYSTEMS (FEB 2012)
- 252.242-7006 ACCOUNTING SYSTEM ADMINISTRATION (FEB 2012)
- 252.243-7002 REQUESTS FOR EQUITABLE ADJUSTMENT (DEC 2012)
- 252.244-7000 SUBCONTRACTS FOR COMMERCIAL ITEMS (JUN 2013)
- 252.244-7001 CONTRACTOR PURCHASING SYSTEM ADMINISTRATION (JUN 2012)
- 252.245-7001 TAGGING, LABELING, AND MARKING OF GOVERNMENT-FURNISHED PROPERTY (APR 2012)
- 252.245-7002 REPORTING LOSS OF GOVERNMENT PROPERTY (APR 2012)
- 252.245-7003 CONTRACTOR PROPERTY MANAGEMENT SYSTEM ADMINISTRATION (APR 2012)
- 252.245-7004 REPORTING, REUTILIZATION, AND DISPOSAL (MAY 2013)
- 252.246-7003 NOTIFICATION OF POTENTIAL SAFETY ISSUES (JUN 2013)
- 252.247-7023 TRANSPORTATION OF SUPPLIES BY SEA (JUN 2013)
- 252.247-7024 NOTIFICATION OF TRANSPORTATION OF SUPPLIES BY SEA (MAR 2000)
- 252.251-7000 ORDERING FROM GOVERNMENT SUPPLY SOURCES (AUG 2012)  
Para (f), Contractor's address is 'TBD ON AN ORDER BY ORDER BASIS'  
Para (f), Government remittance address is 'TBD ON AN ORDER BY ORDER BASIS'

### **C. AIR FORCE FEDERAL ACQUISITION REGULATION SUPPLEMENT CONTRACT CLAUSES**

- 5352.201-9101 OMBUDSMAN (NOV 2012)  
Para (c). Ombudsmen names, addresses, phone numbers, fax, and email addresses.  
(b) (6)
- 5352.204-9000 NOTIFICATION OF GOVERNMENT SECURITY ACTIVITY AND VISITOR GROUP SECURITY AGREEMENTS (MAR 2012)
- 5352.223-9000 ELIMINATION OF USE OF CLASS I OZONE DEPLETING SUBSTANCES (ODS) (NOV 2012)
- 5352.223-9001 HEALTH AND SAFETY ON GOVERNMENT INSTALLATIONS (NOV 2012)
- 5352.242-9000 CONTRACTOR ACCESS TO AIR FORCE INSTALLATIONS (NOV 2012)  
Para (b), Any additional requirements to comply with local security procedures 'any other required documentation as directed by Government personnel located at Government facilities'  
Para (d). Additional requirements. 'all regulations'

**II. NOTICE:** The following contract clauses pertinent to this section are hereby incorporated in full text:

**A. FEDERAL ACQUISITION REGULATION CONTRACT CLAUSES IN FULL TEXT**

**52.211-15 DEFENSE PRIORITY AND ALLOCATION REQUIREMENTS (APR 2008)**

This is a rated order certified for national defense, emergency preparedness, and energy program use, and the Contractor shall follow all the requirements of the Defense Priorities and Allocations System regulation (15 CFR 700).

**52.252-02 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://farsite.hill.af.mil/>

**52.252-06 AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)**

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

(b) The use in this solicitation or contract of any Defense Federal Acquisition Regulation Supplement (48 CFR Chapter 2) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

**B. AIR FORCE FEDERAL ACQUISITION REGULATION SUPPLEMENT CONTRACT CLAUSES IN FULL TEXT**

**5352.209-9000 ORGANIZATIONAL CONFLICT OF INTEREST (OCT 2010) (TAILORED)**

5352.209-9000 ORGANIZATIONAL CONFLICT OF INTEREST (OCT 2010) (TAILORED) - Alternates III, IV and VI

(a) The following restrictions and definitions apply to prevent conflicting roles which may bias the Contractor's judgment or objectivity, or to preclude the Contractor from obtaining an unfair competitive advantage in concurrent or future acquisitions.

(1) Descriptions or definitions:

"Contractor" means the business entity receiving the award of this contract, its parents, affiliates, divisions and subsidiaries.

"Development" means all efforts towards solution of broadly-defined problems. This may encompass research, evaluating technical feasibility, proof of design and test, or engineering of programs not yet approved for acquisition or operation.

"Proprietary Information" means all information designated as proprietary in accordance with law and regulation, and held in confidence or disclosed under restriction to prevent uncontrolled distribution. Examples include limited or restricted data, trade secrets, sensitive financial information, and computer software; and may appear in cost and pricing data or involve classified information.

"System" means the system that is the subject of this contract.

"System Life" means all phases of the system's development, production, or support.

"Systems Engineering" means preparing specifications, identifying and resolving interface problems, developing test requirements, evaluating test data, and supervising design.

"Technical Direction" means developing work statements, determining parameters, directing other Contractors' operations, or resolving technical controversies.

(b) The Contractor may gain access to proprietary information of other companies during contract performance. The Contractor agrees to enter into company-to-company agreements to:

(1) protect another company's information from unauthorized use or disclosure for as long as it is considered proprietary by the other company; and,

(2) to refrain from using the information for any purpose other than that for which it was furnished. For information purposes, the Contractor shall furnish copies of these agreements to the Contracting Officer. These agreements are not intended to protect information which is available to the Government or the Contractor from other sources and furnished voluntarily without restriction (Alternate III).

(c) The Contractor agrees to accept and to complete all issued task orders, and not to contract with Government prime Contractors or first-tier subcontractors in such a way as to create an organizational conflict of interest (Alternate IV).

(d) The above restrictions shall be included in all subcontracts, teaming arrangements, and other agreements calling for performance of work which is subject to the organizational conflict of interest restrictions identified in this clause, unless excused in writing by the Contracting Officer (Alternate VI).

**5352.242-9001 COMMON ACCESS CARDS (CAC) FOR CONTRACTOR PERSONNEL-AFRL (NOV 2012)**

(a) For installation(s)/location(s) cited in the contract, contractors shall ensure Common Access Cards (CACs) are obtained by all contract or subcontract personnel who meet one or both of the following criteria:

(1) Require logical access to Department of Defense computer networks and systems in either:

(i) the unclassified environment; or

(ii) the classified environment where authorized by governing security directives.

(2) Perform work, which requires the use of a CAC for installation entry control or physical access to facilities and buildings.

(b) Contractors and their personnel shall use the following procedures to obtain CACs:

(1) Contractors shall provide a listing of personnel who require a CAC to the contracting officer. The government will provide the contractor instruction on how to complete the Contractor Verification System (CVS) application and then notify the contractor when approved.

(2) Contractor personnel shall obtain a CAC from the nearest Real Time Automated Personnel Identification Documentation System (RAPIDS) Issuing Facility (typically the local Military Personnel Flight (MPF)).

(3) Contractor personnel will proceed to the nearest CAC issuance workstation (usually the local Military Personnel Flight (MPF) with the DD Form 1172-2 and appropriate documentation to support their identification and/or citizenship. The CAC issuance workstation will then issue the CAC.

(c) While visiting or performing work on installation(s)/location(s), contractor personnel shall wear or prominently display the CAC as required by the governing local policy.

(d) During the performance period of the contract, the contractor shall:

(1) Within 7 working days of any changes to the listing of the contract personnel authorized a CAC, provide an updated listing to the contracting officer who will provide the updated listing to the authorizing government official;

(2) Return CACs in accordance with local policy/directives within 7 working days of a change in status for contractor personnel who no longer require logical or physical access;

(3) Return CACs in accordance with local policy/directives within 7 working days following a CACs expiration date; and

(4) Report lost or stolen CACs in accordance with local policy/directives.

(e) Within 7 working days following completion/termination of the contract, the contractor shall return all CACs issued to their personnel to the issuing office or the location specified by local policy/directives.

(f) Failure to comply with these requirements may result in withholding of final payment.

PART III - LIST OF DOCUMENTS, EXHIBITS & ATTACHMENTS  
SECTION J - LIST OF ATTACHMENTS

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DOCUMENT	PGS	DATE	TITLE
EXHIBIT A	11	26 NOV 2012	CONTRACT DATA REQUIREMENTS LIST, DD FORMS 1423
EXHIBIT A1	9		ANSI-BASED FORMAT GUIDELINES
EXHIBIT A2	2		SF 298 FORM
EXHIBIT A3	1	25 NOV 2008	AFRL FORM 25
ATTACHMENT 1	8	12 APR 2013	STATEMENT OF WORK ENTITLED, DIRECTED ENERGY BIO-MECHANISMS
ATTACHMENT 2	6	15 AUG 2013	DD FORM 254 SECURITY REQUIREMENTS
ATTACHMENT 3	20	18 JUL 2013	HAZARDOUS MATERIAL LISTING



**CONTRACT DATA REQUIREMENTS LIST***(1 Data Item)*

A. CONTRACT LINE ITEM NO. 0001	B. EXHIBIT A	C. CATEGORY: TDP _____ TM _____ OTHER _____
D. SYSTEM/ITEM	E. CONTRACT/PR NO. FA8650-13-D-6368	F. CONTRACTOR

**16. REMARKS (Continued)**

contractor shall take no more than 30 calendar days to incorporate all required changes and deliver the final technical report in camera ready and in an editable text format (MS Word) on CD-ROM electronic copy. CD-ROM shall be labeled IAW ANSI based AFRL Format Guidelines.

Block 14: Draft submittal shall consist of 1 editable (MS Word) file on CD-ROM plus two (2) paper copies of all printable material. The final camera-ready (ANSI para 6.3.2.4) submittal shall consist of all editable text documents and all multimedia source files in current AF Standard Desktop format (MS Office compatible) and one (1) camera-ready document and one reproduction of all printable materials. Acceptance shall be in accordance with the ANSI based AFRL Format guidelines and the AFRL Quality Technical Report (TR) Checklist (attached). The checklist must be signed and submitted with the Final Report.







**CONTRACT DATA REQUIREMENTS LIST**  
(1 Data Item)

Form Approved  
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing 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> 0001	<b>B. EXHIBIT</b> A	<b>C. CATEGORY:</b> TDP _____ TM _____ OTHER _____
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<b>D. SYSTEM/ITEM</b>	<b>E. CONTRACT/PR NO.</b> FA8650-13-D-6368	<b>F. CONTRACTOR</b>
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<b>1. DATA ITEM NO.</b> A005	<b>2. TITLE OF DATA ITEM</b> PRESENTATION MATERIAL	<b>3. SUBTITLE</b>
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<b>4. AUTHORITY (Data Acquisition Document No.)</b> DI-ADMN-81373/T	<b>5. CONTRACT REFERENCE</b> CSOW	<b>6. REQUIRING OFFICE</b> 711 HPW/RHDR
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<b>7. DD 250 REQ</b> LT	<b>9. DIST STATEMENT REQUIRED</b> B	<b>10. FREQUENCY</b> ASREQ	<b>12. DATE OF FIRST SUBMISSION</b> *	<b>14. DISTRIBUTION</b>			
<b>8. APP CODE</b> N/A		<b>11. AS OF DATE</b> *	<b>13. DATE OF SUBSEQUENT SUBMISSION</b> *	<b>a. ADDRESSEE</b>	<b>b. COPIES</b>		
					Draft	Final	
						Reg	Repro

<b>16. REMARKS</b> Tailored to require only view graphs or hard copy. Submittal of the actual viewgraph is not required if the presentation is computer generated.  ASREQ means as required to document topics under discussion at briefings and reviews.  * Submit at each briefing or review as appropriate.  Maximum # of view graphs shall not exceed 700 for this contract.  Submit reproducible on media compatible with MS-Office for Windows.  Submit electronically.  BLOCK 9: B: Distribution authorized to US Government agencies only.	711 HPW/RHDR	0	1	1
	<b>15. TOTAL</b>	→	0	1

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

<b>G. PREPARED BY</b> (b) (6)	<b>H. DATE</b> 01-NOV-2012	<b>I.</b> (b) (6)	<b>J. DATE</b> 26-NOV-2012
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**CONTRACT DATA REQUIREMENTS LIST**  
(1 Data Item)

Form Approved  
OMB No. 0704-0188

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<b>A. CONTRACT LINE ITEM NO.</b> 0001	<b>B. EXHIBIT</b> A	<b>C. CATEGORY:</b> TDP _____ TM _____ OTHER _____
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<b>D. SYSTEM/ITEM</b>	<b>E. CONTRACT/PR NO.</b> FA8650-13-D-6368	<b>F. CONTRACTOR</b>
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<b>1. DATA ITEM NO.</b> A006	<b>2. TITLE OF DATA ITEM</b> SOFTWARE USER MANUAL (SUM)	<b>3. SUBTITLE</b>
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<b>4. AUTHORITY (Data Acquisition Document No.)</b> DI-IPSC-81443A/T	<b>5. CONTRACT REFERENCE</b> CSOW	<b>6. REQUIRING OFFICE</b> 711 HPW/RHDR
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<b>7. DD 250 REQ</b> LT	<b>9. DIST STATEMENT REQUIRED</b> B	<b>10. FREQUENCY</b> ASGEN	<b>12. DATE OF FIRST SUBMISSION</b> *	<b>14. DISTRIBUTION</b>			
<b>8. APP CODE</b> A		<b>11. AS OF DATE</b> *	<b>13. DATE OF SUBSEQUENT SUBMISSION</b> R/ASR	<b>a. ADDRESSEE</b>	<b>b. COPIES</b>		
					Draft	Final	
						Reg	Repro

<b>16. REMARKS</b> Tailored to allow contractor's format.  * Submit electronically as generated through out the technical effort.  Approval/disapproval by letter from the Air Force Program Manager within 15 days after receipt.  Disapproval requires correction/resubmission within 15 days after receipt of Air Force comments.  R/ASR means revisions as required to keep the SUM up to date, make changes or corrections; submit revisions as generated. Revisions are subject to the above stated approval/disapproval cycle.  Submit reproducible on media compatible with MS-Office for Windows.  BLOCK 9: B: Distribution authorized to US Government agencies only.	711 HPW/RHDR	1	1	1
<b>15. TOTAL</b>	→	1	1	1

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

<b>G. PREPARED BY</b> (b) (6)	<b>H. DATE</b> 01-NOV-2012	<b>I.</b> (b) (6)	<b>J. DATE</b> 26-NOV-2012
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**CONTRACT DATA REQUIREMENTS LIST**  
(1 Data Item)

Form Approved  
OMB No. 0704-0188

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<b>A. CONTRACT LINE ITEM NO.</b> 0001	<b>B. EXHIBIT</b> A	<b>C. CATEGORY:</b> TDP _____ TM _____ OTHER _____
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<b>D. SYSTEM/ITEM</b>	<b>E. CONTRACT/PR NO.</b> FA8650-13-D-6368	<b>F. CONTRACTOR</b>
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<b>1. DATA ITEM NO.</b> A007	<b>2. TITLE OF DATA ITEM</b> TECHNICAL REPORT-STUDY / SERVICES	<b>3. SUBTITLE</b> Reports/Protocols
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<b>4. AUTHORITY (Data Acquisition Document No.)</b> DI-MISC-80508B/T	<b>5. CONTRACT REFERENCE</b> CSOW	<b>6. REQUIRING OFFICE</b> 711 HPW/RHDR
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<b>7. DD 250 REQ</b> LT	<b>9. DIST STATEMENT REQUIRED</b> B	<b>10. FREQUENCY</b> ASREQ	<b>12. DATE OF FIRST SUBMISSION</b> *	<b>14. DISTRIBUTION</b>			
<b>8. APP CODE</b> N/A		<b>11. AS OF DATE</b> *	<b>13. DATE OF SUBSEQUENT SUBMISSION</b> *	<b>a. ADDRESSEE</b>	<b>b. COPIES</b>		
					Draft	Final	
						Reg	Repro

<b>16. REMARKS</b> Tailored to allow contractor's format.  Submit electronically.  ASREQ means as required to document reports or protocols through out the technical effort.  * Submit as generated.  BLOCK 9: B: Distribution authorized to US Government agencies only.	711 HPW/RHDR	0	1	0
<b>15. TOTAL</b>	→	0	1	0

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

<b>G. PREPARED BY</b> (b) (6)	<b>H. DATE</b> 01-NOV-2012	<b>I.</b> (b) (6)	<b>J. DATE</b> 26-NOV-2012
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**CONTRACT DATA REQUIREMENTS LIST**  
(1 Data Item)

Form Approved  
OMB No. 0704-0188

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<b>A. CONTRACT LINE ITEM NO.</b> 0001	<b>B. EXHIBIT</b> A	<b>C. CATEGORY:</b> TDP _____ TM _____ OTHER _____
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<b>D. SYSTEM/ITEM</b>	<b>E. CONTRACT/PR NO.</b> FA8650-13-D-6368	<b>F. CONTRACTOR</b>
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<b>1. DATA ITEM NO.</b> A008	<b>2. TITLE OF DATA ITEM</b> COMMERCIAL OFF-THE-SHELF (COTS) MANUAL AND ASSOCIATED SUPPLEMENTAL DATA	<b>3. SUBTITLE</b>
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<b>4. AUTHORITY (Data Acquisition Document No.)</b> DI-TMSS-80527C/T	<b>5. CONTRACT REFERENCE</b> CSOW	<b>6. REQUIRING OFFICE</b> 711 HPW/RHDR
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<b>7. DD 250 REQ</b> LT	<b>9. DIST STATEMENT REQUIRED</b> B	<b>10. FREQUENCY</b> ASGEN	<b>12. DATE OF FIRST SUBMISSION</b> *	<b>14. DISTRIBUTION</b>			
<b>8. APP CODE</b> N/A		<b>11. AS OF DATE</b> *	<b>13. DATE OF SUBSEQUENT SUBMISSION</b> *	<b>a. ADDRESSEE</b>	<b>b. COPIES</b>		
					Draft	Final	
						Reg	Repro

<b>16. REMARKS</b> Tailored to allow contractor's format.  Submit electronically.  * ASGEN means as procured throughout this effort.  BLOCK 9: B: Distribution authorized to US Government agencies only.	711 HPW/RHDR	0	1	0
<b>15. TOTAL</b>	→	0	1	0

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

<b>G. PREPARED BY</b> (b) (6)	<b>H. DATE</b> 01-NOV-2012	<b>I.</b> (b) (6)	<b>J. DATE</b> 26-NOV-2012
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**CONTRACT DATA REQUIREMENTS LIST**

(1 Data Item)

Form Approved  
OMB No. 0704-0188

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<b>A. CONTRACT LINE ITEM NO.</b> 0001	<b>B. EXHIBIT</b> A	<b>C. CATEGORY:</b> TDP _____ TM _____ OTHER _____
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<b>D. SYSTEM/ITEM</b>	<b>E. CONTRACT/PR NO.</b> FA8650-13-D-6368	<b>F. CONTRACTOR</b>
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<b>1. DATA ITEM NO.</b> A009	<b>2. TITLE OF DATA ITEM</b> TECHNICAL AND MANAGEMENT WORK PLAN	<b>3. SUBTITLE</b>
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<b>4. AUTHORITY (Data Acquisition Document No.)</b> DI-MGMT-81117/T	<b>5. CONTRACT REFERENCE</b> CSOW	<b>6. REQUIRING OFFICE</b> 711 HPW/RHDR
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<b>7. DD 250 REQ</b> LT	<b>9. DIST STATEMENT REQUIRED</b> B	<b>10. FREQUENCY</b> ASGEN	<b>12. DATE OF FIRST SUBMISSION</b> *	<b>14. DISTRIBUTION</b>			
<b>8. APP CODE</b> A		<b>11. AS OF DATE</b> *	<b>13. DATE OF SUBSEQUENT SUBMISSION</b> **	<b>a. ADDRESSEE</b>	<b>b. COPIES</b>		
					Draft	Final	
						Reg	Repro

<b>16. REMARKS</b> Tailored to allow contractor format.  Submit electronically.  * Submit as generated through out the technical effort.  Approval/disapproval by letter from the Air Force Program Manager within 15 days after receipt.  **Disapproval requires correction/resubmission within 15 days after receipt of Air Force comments.  BLOCK 9: B: Distribution authorized to US Government agencies only.	711 HPW/RHDR	1	1	0
	<b>15. TOTAL</b> →	1	1	0

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

<b>G. PREPARED BY</b> (b) (6)	<b>H. DATE</b> 01-NOV-2012	<b>I.</b> (b) (6)	<b>J. DATE</b> 26-NOV-2012
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## INSTRUCTIONS FOR COMPLETING DD FORM 1423

(See DoD 5010.12-M for detailed instructions.)

### FOR GOVERNMENT PERSONNEL

- Item A.** Self-explanatory.
- Item B.** Self-explanatory.
- Item C.** Mark (X) appropriate category: TDP - Technical Data Package; TM - Technical Manual; Other - other category of data, such as "Provisioning," "Configuration Management," etc.
- Item D.** Enter name of system/item being acquired that data will support.
- Item E.** Self-explanatory (to be filled in after contract award).
- Item F.** Self-explanatory (to be filled in after contract award).
- Item G.** Signature of preparer of CDRL.
- Item H.** Date CDRL was prepared.
- Item I.** Signature of CDRL approval authority.
- Item J.** Date CDRL was approved.
- Item 1.** See DoD FAR Supplement Subpart 4.71 for proper numbering.
- Item 2.** Enter title as it appears on data acquisition document cited in Item 4.
- Item 3.** Enter subtitle of data item for further definition of data item (optional entry).
- Item 4.** Enter Data Item Description (DID) number, military specification number, or military standard number listed in DoD 5010.12-L (AMSDL), or one-time DID number, that defines data content and format requirements.
- Item 5.** Enter reference to tasking in contract that generates requirement for the data item (e.g., Statement of Work paragraph number).
- Item 6.** Enter technical office responsible for ensuring adequacy of the data item.
- Item 7.** Specify requirement for inspection/acceptance of the data item by the Government.
- Item 8.** Specify requirement for approval of a draft before preparation of the final data item.
- Item 9.** For technical data, specify requirement for contractor to mark the appropriate distribution statement on the data (ref. DoDD 5230.24).
- Item 10.** Specify number of times data items are to be delivered.
- Item 11.** Specify as-of date of data item, when applicable.
- Item 12.** Specify when first submittal is required.
- Item 13.** Specify when subsequent submittals are required, when applicable.
- Item 14.** Enter addressees and number of draft/final copies to be delivered to each addressee. Explain reproducible copies in Item 16.
- Item 15.** Enter total number of draft/final copies to be delivered.
- Item 16.** Use for additional/clarifying information for Items 1 through 15. Examples are: Tailoring of documents cited in Item 4; Clarification of submittal dates in Items 12 and 13; Explanation of reproducible copies in Item 14.; Desired medium for delivery of the data item.

### FOR THE CONTRACTOR

**Item 17.** Specify appropriate price group from one of the following groups of effort in developing estimated prices for each data item listed on the DD Form 1423.

a. Group I. Definition - Data which is not otherwise essential to the contractor's performance of the primary contracted effort (production, development, testing, and administration) but which is required by DD Form 1423.

Estimated Price - Costs to be included under Group I are those applicable to preparing and assembling the data item in conformance with Government requirements, and the administration and other expenses related to reproducing and delivering such data items to the Government.

b. Group II. Definition - Data which is essential to the performance of the primary contracted effort but the contractor is required to perform additional work to conform to Government requirements with regard to depth of content, format, frequency of submittal, preparation, control, or quality of the data item.

Estimated Price - Costs to be included under Group II are those incurred over and above the cost of the essential data item without conforming to Government requirements, and the administrative and other expenses related to reproducing and delivering such data item to the Government.

c. Group III. Definition - Data which the contractor must develop for his internal use in performance of the primary contracted effort and does not require any substantial change to conform to Government requirements with regard to depth of content, format, frequency of submittal, preparation, control, and quality of the data item.

Estimated Price - Costs to be included under Group III are the administrative and other expenses related to reproducing and delivering such data item to the Government.

d. Group IV. Definition - Data which is developed by the contractor as part of his normal operating procedures and his effort in supplying these data to the Government is minimal.

Estimated Price - Group IV items should normally be shown on the DD Form 1423 at no cost.

**Item 18.** For each data item, enter an amount equal to that portion of the total price which is estimated to be attributable to the production or development for the Government of that item of data. These estimated data prices shall be developed only from those costs which will be incurred as a direct result of the requirement to supply the data, over and above those costs which would otherwise be incurred in performance of the contract if no data were required. The estimated data prices shall not include any amount for rights in data. The Government's right to use the data shall be governed by the pertinent provisions of the contract.



AIR FORCE RESEARCH LABORATORY  
AMERICAN NATIONAL STANDARD INSTITUTE / NATIONAL  
INFORMATION STANDARDS ORGANIZATION  
(ANSI/NISO)  
STANDARD Z39.18-2005  
SCIENTIFIC AND TECHNICAL REPORTS-PREPARATION,  
PRESENTATION AND PRESERVATION  
FORMAT GUIDELINES  
**JUNE 2010**

The United States Air Force uses ANSI NISO Z39.18 as a guide for all technical reports. AFRL uses this subset of the ANSI standard to highlight important guidance addressed in the ANSI standard as outlined below. Full component descriptions are available in the ANSI NISO Z39.18.

### COMPONENTS OF A TECHNICAL REPORT

	POC	Inclusion Status
<b>Front Matter</b> – numbered sequentially with Roman numerals beginning with Table of Contents		
Cover or Title	Government WUM (Contractor has a placeholder version)	<b>Required</b>
Notice and Signature Page	Government WUM	<b>Required</b>
Notice to Accompany the Dissemination of Export-Controlled Technical Data	Government WUM	<b>Required</b> , if applicable
SF298, Report Documentation Page (Contains Abstract)	Report Author	<b>Required</b>
Table of Contents	Report Author	<b>Required</b>
List(s) of Figures and Tables	Report Author	Conditional (include when there are more than 5 figures and/or tables)
Foreword	Report Author	Optional
Preface	Report Author	Optional
Acknowledgements	Report Author	Optional

<b>Body</b> – numbered sequentially beginning with the Arabic numeral 1		
Summary	Report Author	<b>Required</b>
Introduction	Report Author	<b>Required</b>
Methods, Assumptions, and Procedures	Report Author	<b>Required</b>
Results and Discussion	Report Author	<b>Required</b>
Conclusions	Report Author	<b>Required</b>
Recommendations	Report Author	Conditional (include when purpose of report is to suggest a course of action)
References	Report Author	Conditional (use if references are provided)

<b>Back Matter</b> – numbering continues sequentially from body of report		
Appendices	Report Author	Conditional (Include when needed to supplement Results and Discussion)
Bibliography	Report Author	Conditional
List of Symbols, Abbreviations, and Acronyms	Report Author	Conditional (include if used in any other component of the report)
Glossary of Terminology	Report Author	Conditional (Include if report incorporates terms unfamiliar to the intended audience)

Index	Report Author	Optional
Distribution List	Report Author/Government WUM	Conditional (Some technology directorates control access)
Back Cover	Report Author	Required for classified reports only

**FORMAT REQUIREMENTS:**

**1.0 TYPE (FONT) AND HEADS (CHAPTER TITLES)**

The preferred type (font) is 12-point Times New Roman or Arial. The following is an example (format and spacing) of heads:

<b>1.0</b>	<b>FIRST-ORDER HEAD IS ALL CAPS, FLUSH LEFT AND BOLDED</b>
<b>1.1</b>	<b>Second-Order Head is Bolded, Same Font Size as Text, Caps and Lower Case, Flush with Left Margin</b>
	Insert one blank line between head and text then begin copy.
<b>1.1.1</b>	<b>Third-Order Head is Flush Left, Boldface, Caps and Lower Case Letters, Followed by a Period.</b> Then continue the copy.

**2.0 SPACING**

Final reports should be single spaced. It isn't necessary to double-space between paragraphs if the first line of each paragraph is indented.

**3.0 MARGINS**

Leave **one-inch left, right, and top margins**. *Page number should be centered and located one-half inch (1/2") from bottom of page. This is accomplished in page setup, Margins - bottom - 1", Layout – Footer .7".* Leave enough room at the bottom of each page to include applicable restrictive statements.

**4.0 NUMBERING**

Page numbers are centered at bottom of page. Figure numbers are centered **below** Figure, with caption centered either on the line below Figure number or on the same line as Figure number. Table numbers are centered **above** Table on the same line as Table caption, and Equations are numbered on right margin across from Equation.

*Number Pages, Figures, Tables, and Equations sequentially, not by section.*

**5.0 PRESENTATION STYLES**

**5.1** All figures, tables, equations, and line drawings shall be crisp and easy to read. Figure letters and numbers (callouts) should be in at least an 8-point type (handwriting on figures is not acceptable). Figures and tables in the table of contents are numbered, worded, spelled and punctuated exactly as they are in the report.

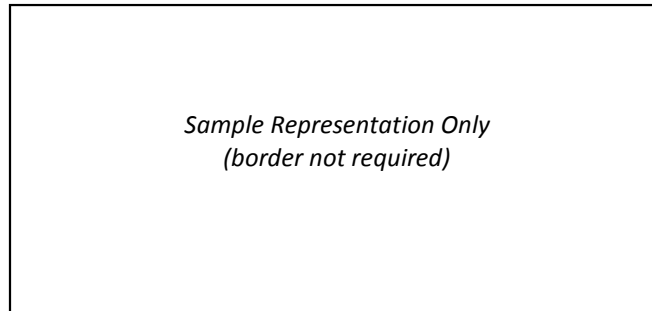
**5.2 Style for Equations:**

$$E = mc^2 \tag{1}$$

$$\phi_{det} = L_e \times \Omega_{det} \times \nu n(D, \hat{i}) \cdot \pi D^2 dD \tag{2}$$

**5.3 Style for Figure Captions**

Callouts (labels) should be in Upper and Lower case type, not all caps, bolded, no periods.

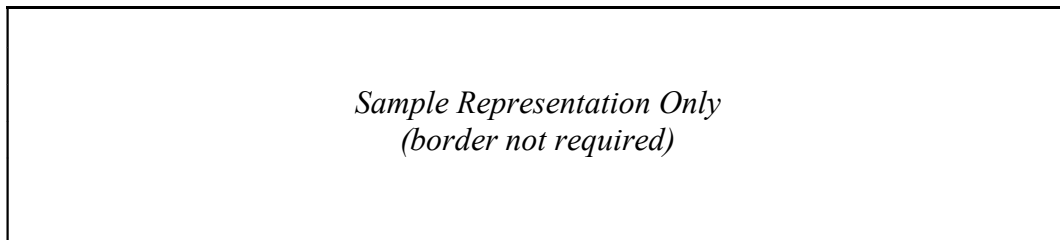


**Figure 1. Figure Caption May be on Same Line as Figure Number**

**5.3.1** The figure caption describes the content without giving background information, results, or comments about the figure. Reference to Figures and Tables must appear in text ***before*** actual Figure or Table appears in report. Where possible, integrate Figures and Tables into text and place Figure/Table as soon after the first mention of it as possible, before beginning a new subject. There should be two blank lines between Figures or Tables and text.

**5.4 Style for Table Captions** (authors should use the style listed in para 5.3 above)

**Table 1. Title Line and Number All in One Line, Centered or Flush Left, Bolded, (No Periods)**



## 6.0 FRONT MATTER

The **Cover Page** is followed by the appropriate **Notice Page(s)**, after which is the **SF298**. Then there should be the three sections (with page numbers listed in lower-case Roman numerals, beginning with Roman numeral i), **Table of Contents, followed by List of Figures, and List of Tables.**

### 6.1 Instructions for Standard Form 298

Contractor/Author shall complete Blocks 1– 5b, 6-8, 12-15 of the SF 298 and submit per CDRL requirements.

### 6.2 Table of Contents

Start pagination of Table of Contents with lower-case Roman numeral i. Start listing contents that are in front matter, e.g. List of Figures, List of Tables, Foreword, Preface, then body of text, then back matter. Appendices should be numbered sequentially from the last page of the report. If there's only one Appendix, just call it an Appendix. Example (border not required):

<b>TABLE OF CONTENTS</b>		
<b>Section</b>		<b>Page</b>
List of Figures .....		iv
List of Tables .....		v
1.0 SUMMARY .....		1
2.0 INTRODUCTION .....		3
3.0 METHODS, ASSUMPTIONS, AND PROCEDURES.....		4
3.1 High Symmetry Hypervalent Structures (OF <sub>6</sub> ) .....		7
3.2 Azide-like Structures .....		9
3.2.1 N(N <sub>3</sub> ) <sub>3</sub> , HN(N <sub>3</sub> ) <sub>2</sub> , N(N <sub>3</sub> ) <sub>2</sub> <sup>-</sup> and N(N <sub>3</sub> ) <sub>4</sub> <sup>+</sup> .....		12
4.0 RESULTS AND DISCUSSION .....		15
5.0 CONCLUSIONS .....		35
6.0 REFERENCES .....		37
APPENDIX A - Publications and Presentations.....		40
APPENDIX B - Abstracts.....		51

### 6.3 List of Figures

Continue pagination with lower-case Roman numerals. List all Figures found in text (not Figs. in Appendix, if any, those will be listed separately in front of the Appendix). Example (border not required):

<b>LIST OF FIGURES</b>	
<b>Figure</b>	<b>Page</b>
1 Overall View of Propulsion Vehicle.....	3
2 Motor Configuration.....	6
3 Apparatus Used to Make Nozzle Tubes.....	7

### 6.4 List of Tables

Continue pagination with lower-case Roman numerals. List all Tables found in text (not Tables in Appendix, if any, those will be listed separately in front of the Appendix). Example (border not required):

<b>LIST OF TABLES</b>	
<b>Table</b>	<b>Page</b>
1 Some of the Upper-Stage Propulsion Options.....	19
2 Results of Test Firing #1.....	25
3 Results of Test Firing #2.....	26

## 7.0 BODY

Next, start body of text with **Summary** and begin pagination with Page 1 (Arabic numerals). This may be accomplished by inserting a Section Break and start the pagination with 1. Follow with **Introduction, Methods, Assumptions, and Procedures, Results and Discussion, Conclusions**, then **References**, to be followed by the appropriate **Back Matter**.

### 7.1 References

References should be listed numerically, in the order they appear in the text. The Reference page should be at the end of the report (not at the end of each section).

For works that are generally referred to throughout the report, without citing specific references from the work, create a Bibliography (in alphabetical order). Personal communications, unpublished speeches, or any other information not available for reference by the reader should not be included in the References – footnote your citation instead. References must be available to readers of the report.

References are prepared according to the accepted practice of the discipline of the primary author/creator of the report. The examples below are a suggested format.

### 7.1.1 Papers / Journal Articles / Conference Presentations or Proceedings

Author's last name, then first

Titles of papers are in quotation marks

Journal names or Conference names are in *italics*

Volume is **bolded**

Date follows comma (not within parenthesis)

Page numbers (pp.) are last.

*Examples:*

Author(s), "Title of Article," *Journal Name (italics)*, **19**, 628, Jun 1993 pp. \_\_-\_\_.

Chidambaram, N., Dash, S., and Kenzakowski, D., "Scalar Variance Transport in the Turbulence Modeling of Propulsive Jets," *Journal of Propulsion and Power*, Vol. 17, No. 1, pp. 79-84, 2001.

Author(s), "Title of Article," Paper No. (if AIAA or CPIA paper, etc.), *Name of Conference*, Location, Date.

Chai, A.H., Cao, Z.T., Chen, H. P., "Monte Carlo Method Study of Terahertz Pulse Propagation in Biological Tissue," *Proceedings of the 2005 IEEE, EMBS 27th Annual Conference*, Shanghai China, (2005).

**7.1.2 URLs** The URL or other path information appears instead of the volume and number cited for a conventional journal. It is frequently useful to the reader to know the date when the material was accessed. In such cases, "Accessed [date]" would be appropriate wording.

Virillio, Paul, "Speed and Information: Cyberspace Alarm!" CTHEORY, URL: <http://www.freedonia.com/ctheory/>, last modified September 19, 1995. Accessed November 17, 1999.

### 7.1.3 Technical Reports

Author's last name, then first

Titles of reports are in *italics*

Next is report number

Name and address of performing agency/organization

Date is last.

*Example:*

Author(s), *Title*, AFRL-PR-ED-TR-20XX-XXXX, Company, Inc., City, ST, Jan 2006.

Gaitonde, Datta, *Advances in High-Fidelity Multiphysics Simulation*, AFRL-RB-WP-TR-2008-3019, Wright-Patterson AFB: AFRL Air Vehicles Directorate, 2008.

Gaitonde, Datta, *Advances in High-Fidelity Multiphysics Simulation*, AFRL-RB-WP-TR-2008-3019; ADB123456, Wright-Patterson AFB: AFRL Air Vehicles Directorate, 2008.

#### 7.1.4 Books

Author's last name, then first

Title of book can be **Bolded** or Underlined

Publisher's name and address

Date of publication

Page numbers last

*Example:*

Author(s), **Book Title**, Harper & Rowe, New York, NY, 1993, pp. 36-38, 77, 98-101.

Wylie, C.R., **Advanced Engineering Mathematics**, 7th ed, New York: McGraw-Hill, 2005.

## 8.0 BACK MATTER

Pagination continues from the body. Include conditional and optional back matter in the order listed in the components table on page 2: Appendices, Bibliography, List of Symbols, Abbreviations, and Acronyms, Glossary, Index, Distribution List, and Back Cover.

### 8.1 Appendices

If there is only one appendix, titled Appendix, all tables and figures in that appendix are prefixed with A-, the "A" representing the word, Appendix.

Each appendix should be referred to in the body text. Any references cited in an appendix must be listed as the last page of the appendix. Appendix page numbering is a sequential continuation of the Arabic text page numbering.

Number figures, tables, equations, and references in an appendix with the letter of the appendix, followed by a hyphen and a sequential number, starting at 1, e.g., Figure A-1. An Appendix Figure; Table A-1. An Appendix Table; and for reference citations, [A-1].

### 8.2 Symbols, Abbreviations and Acronyms

When first introduced in the report (title or text), completely write out abbreviations and acronyms, followed by the abbreviation or acronym in parentheses, and subsequently use only the acronym/abbreviation in the body text ; i.e. Small Business Innovation Research (SBIR).

Create an acronym list that lists and defines all acronyms and symbols that appear in your report. List all terms alphabetically, beginning with those starting with capital letters, followed by lower case (e.g., H<sub>2</sub>, HEDM, hcp). Follow alphabetical entries with Greek or special symbols. Capitalize definitions only if they are proper names (e.g. Department of Defense).

Example (border not required):

<b>LIST OF SYMBOLS, ABBREVIATIONS AND ACRONYMS</b>	
CAT	computerized axial tomography
COMSAT	Communication Satellites
DMP-128	a Polaroid™ photopolymer
DoD	Department of Defense
dcg	dichromated gelatin
H <sub>2</sub>	hydrogen
HEDM	High Energy Density Matter
∇	angle of attack

The words “Figure,” “Reference,” and “Equation” should be written out in text, but abbreviated when used within parentheses. Months are abbreviated to three letters without punctuation (e.g., Jun, Jul, Aug). Units of measurement are abbreviated (e.g., 12 cm, 50 l, 20 lb, 1 atm, 30 sec, 200 psig) without punctuation – except for “in.” (inches), which may be followed by a period to distinguish it from the preposition – and are generally singular.

For a complete list of abbreviations, see Chapter 9 of the *GPO Style Manual* <http://www.gpoaccess.gov/stylemanual/browse.html>.

## **9.0 INSTRUCTIONS FOR SUBMITTAL**

Follow your Contract Data Requirements List (CDRL) for submission instructions. If your CDRL requires delivery of the final technical report on CD-ROM, ensure it is marked as follows:

CD-ROMs shall have the following items legibly printed on top of the disk:

1. Contract Number and Program Name.
2. CDRL numbers referenced and Title of Data Items.
3. Date.
4. Company Logo/ Nomenclature.
5. Distribution Statement, export control warning notice (when applicable).

**REPORT DOCUMENTATION PAGE**

*Form Approved  
OMB No. 0704-0188*

The public reporting burden for this collection of information is estimated to average 1 hour 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 Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

**PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.**

1. REPORT DATE (DD-MM-YYYY)		2. REPORT TYPE		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE			5a. CONTRACT NUMBER		
			5b. GRANT NUMBER		
			5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S)			5d. PROJECT NUMBER		
			5e. TASK NUMBER		
			5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			19b. TELEPHONE NUMBER (Include area code)

## INSTRUCTIONS FOR COMPLETING SF 298

**1. REPORT DATE.** Full publication date, including day, month, if available. Must cite at least the year and be Year 2000 compliant, e.g. 30-06-1998; xx-06-1998; xx-xx-1998.

**2. REPORT TYPE.** State the type of report, such as final, technical, interim, memorandum, master's thesis, progress, quarterly, research, special, group study, etc.

**3. DATES COVERED.** Indicate the time during which the work was performed and the report was written, e.g., Jun 1997 - Jun 1998; 1-10 Jun 1996; May - Nov 1998; Nov 1998.

**4. TITLE.** Enter title and subtitle with volume number and part number, if applicable. On classified documents, enter the title classification in parentheses.

**5a. CONTRACT NUMBER.** Enter all contract numbers as they appear in the report, e.g. F33615-86-C-5169.

**5b. GRANT NUMBER.** Enter all grant numbers as they appear in the report, e.g. AFOSR-82-1234.

**5c. PROGRAM ELEMENT NUMBER.** Enter all program element numbers as they appear in the report, e.g. 61101A.

**5d. PROJECT NUMBER.** Enter all project numbers as they appear in the report, e.g. 1F665702D1257; ILIR.

**5e. TASK NUMBER.** Enter all task numbers as they appear in the report, e.g. 05; RF0330201; T4112.

**5f. WORK UNIT NUMBER.** Enter all work unit numbers as they appear in the report, e.g. 001; AFAPL30480105.

**6. AUTHOR(S).** Enter name(s) of person(s) responsible for writing the report, performing the research, or credited with the content of the report. The form of entry is the last name, first name, middle initial, and additional qualifiers separated by commas, e.g. Smith, Richard, J, Jr.

**7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES).** Self-explanatory.

**8. PERFORMING ORGANIZATION REPORT NUMBER.** Enter all unique alphanumeric report numbers assigned by the performing organization, e.g. BRL-1234; AFWL-TR-85-4017-Vol-21-PT-2.

**9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES).** Enter the name and address of the organization(s) financially responsible for and monitoring the work.

**10. SPONSOR/MONITOR'S ACRONYM(S).** Enter, if available, e.g. BRL, ARDEC, NADC.

**11. SPONSOR/MONITOR'S REPORT NUMBER(S).** Enter report number as assigned by the sponsoring/monitoring agency, if available, e.g. BRL-TR-829; -215.

**12. DISTRIBUTION/AVAILABILITY STATEMENT.** Use agency-mandated availability statements to indicate the public availability or distribution limitations of the report. If additional limitations/ restrictions or special markings are indicated, follow agency authorization procedures, e.g. RD/FRD, PROPIN, ITAR, etc. Include copyright information.

**13. SUPPLEMENTARY NOTES.** Enter information not included elsewhere such as: prepared in cooperation with; translation of; report supersedes; old edition number, etc.

**14. ABSTRACT.** A brief (approximately 200 words) factual summary of the most significant information.

**15. SUBJECT TERMS.** Key words or phrases identifying major concepts in the report.

**16. SECURITY CLASSIFICATION.** Enter security classification in accordance with security classification regulations, e.g. U, C, S, etc. If this form contains classified information, stamp classification level on the top and bottom of this page.

**17. LIMITATION OF ABSTRACT.** This block must be completed to assign a distribution limitation to the abstract. Enter UU (Unclassified Unlimited) or SAR (Same as Report). An entry in this block is necessary if the abstract is to be limited.

**ALL PURPOSE CHECKLIST**

TITLE/SUBJECT/ACTIVITY/FUNCTIONAL AREA <b>AFRL QUALITY FINAL TECHNICAL REPORT (TR)</b>		OPR <b>AFRL/CSC</b>		
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No.	ITEM (Assign a paragraph number to each item. Draw a horizontal line between each major paragraph)	Author (Y/N/NA)	WU MGR (Y/N/NA)	STINFO (Y/N/NA)
<b>Contract No. or Local Identifier:</b>				
1.	Is the TR a comprehensive description of the research and NOT just a journal article, briefing charts, collection of status reports, restatement of the statement of work, or a duplicated report submitted for another work unit?			
2.	Does the TR contain the required elements of a scientific report per AFRL ANSI/NISO Standard Z39.18 -2005 (this includes methods, assumptions, procedures, results and discussion, conclusions, recommendations, and references)?			
3.	Is the TR logically organized and developed in one file/one format (PER CDRL)?			
4.	Is the writing clear and concise, accurately depicting all the data (positive and negative) and does the TR contain all the necessary information to duplicate the research, if necessary?			
5.	Are all parties responsible for the data properly acknowledged for their contribution?			
6.	Are all classified data properly marked and are markings properly placed (i.e., pages marked with highest classification, top/bottom, paragraphs marked, etc.)?			
7.	Are data rights content properly identified (portion marked, etc.) throughout the report per assertions rights at contract award?			
8.	Is data that is delivered with less-than-unlimited rights contained only in an appropriately marked appendix to the final report (except for contracts awarded under the SBIR or STTR program)? Is there a waiver to this requirement with written approval from the Technical Director?			
9.	Are all formulas and equations clearly presented?			
10.	Are all technical terms defined in a glossary and are all acronyms, abbreviations, and symbols properly defined (if needed)?			
11.	Are all references that are cited in the text listed with a full citation in the references list?			
12.	Are there any supporting documents that need to be appended to the TR?			
13.	Have there been any meetings with the Government in which notes were taken regarding the TR, has the author reviewed the notes to ensure that all requirements have been addressed?			
14.	Is there a signed notice page that indicates correct data rights per the data rights section of the contract?			
15.	Are specific pages and/or sections marked in the "location of data rights" within the data rights legend?			
16.	Have all appendices been identified and included in the TR?			
17.	Is the SF 298, <i>Report Documentation Page</i> , properly completed?			
18.	Has a distribution statement and export control been addressed?			
19.	Does the distribution statement reflect the appropriate reason(s) and audience for the TR content?			

**COMMENTS (If additional space is needed, enter comments on back of form)**

\_\_\_\_\_

**AUTHOR:(print)** \_\_\_\_\_ **Signature** \_\_\_\_\_ **Date** \_\_\_\_\_

**WU MGR:(print)** \_\_\_\_\_ **Signature** \_\_\_\_\_ **Date** \_\_\_\_\_

**STINFO:(print)** \_\_\_\_\_ **Signature** \_\_\_\_\_ **Date** \_\_\_\_\_



## **STATEMENT OF WORK FOR BASIC CONTRACT**

### **Basic Contract SOW – Directed Energy Bio-Mechanisms**

#### **1.0 BACKGROUND, SCOPE, GOALS, OBJECTIVES, AND NEEDS.**

**1.1 Background.** The Directed Energy Bioeffects Research (DEBR) contract supports the US Air Force, one of the largest developers and users of radio frequency (RF) and high power microwave (HPM) emitting devices in the world, which has been at the forefront of research on the biological effects of RF/HPM radiation for more than 30 years. The use of Directed Energy (DE) extends to military and commercial applications. While the targeted customers for this effort are primarily concerned with the use and application of RF/HPM radiation technologies, the joint services and others like the Department of Homeland Security along with commercial customers will likely benefit from the research conducted and discoveries made under this program.

Specifically, the DEBR contract aids in the mission accomplishment of the Radio Frequency Bioeffects Branch (711 HPW/RHDR) part of the Bioeffects Division (711 HPW/RHD) to protect Air Force personnel from RF/HPM radiation hazards, while minimizing negative operational impact. This will be conducted as part of an extensive research program in the dosimetry and bioeffects of RF/HPM radiation. Research results will be transitioned and transferred to national and international health and safety standards, which will be used by the Air Force Surgeon General for Occupational Health and Environmental Safety, as well as for data to support the rapid development and deployment of DE technologies. The advent of HPM and ultra-wide band for directed energy weapons (DEW) make this effort supporting 711 HPW/RHDR's products and services ever more essential to national security.

**1.2 Goals.** The goal of the Air Force Research Laboratory (AFRL) and this contract is to provide the USAF with the world's best RF/HPM radiation bioeffects research and science-based exposure standards, allowing maximum safe exploitation of DE for the national defense. Using joint-service cooperation, this contract shall help bring broad expertise, advocacy, and involvement in RF/HPM technologies.

**1.3 Scope.** The scope of this effort shall cover conducting bioeffects research on DE and kinetic energy systems to assist in transitioning DoD technologies. Research efforts shall include the following technical areas: directed energy weapon effectiveness and safety, directed energy bio-mechanisms, radiofrequency bioeffects modeling and simulation, and human effectiveness analysis and integration.

**1.4 Objectives.** This effort shall include conducting research to identify the benefits, risks, and capabilities for a wide range of military RF/HPM radiation systems. This shall include prediction and mitigation of the bio-effects of DE on personnel and mission performance and exploitation of the bio-effects of DE for DEW applications. Specifically, these Technology Areas (TAs) and objectives shall be broken into the following:

**1.4.1 Directed Energy Bio-Mechanisms.** Conduct proteomic, genomic, and metabolomic studies that identify critical biochemical or molecular changes following exposure to DE prior to or during mission operations that assists in the prediction of health degradation. Investigate basic mechanism(s) of interactions between biology and RF radiation (DC-THz). Uncover previously unknown bioeffects of RF exposure that may provide a defensive or offensive capability to the Air Force. Conduct and design laboratory and field research and testing of the bioeffects of RF and DEW systems hardware and software.

**1.4.2 Directed Energy Weapon Effectiveness and Safety.** Conduct biological effects research in support of the development and deployment of future DE weapons and other emerging technologies that shall be beneficial to the Air Force and the warfighter. The research shall provide data to aid in the development of tactics, training, and procedures for the safe and optimal use of DE weapons. Research shall provide data that evaluates and supports the DE system effectiveness, its policy acceptability, and optimal use. The research shall lead to a better understanding of the bioeffects of DE weapons, as well as methods to counter the bioeffects produced by these technologies. This research shall characterize behavioral and physiological responses of individuals in response to high average power and high peak power directed energy systems.

**1.4.3 Modeling and Simulation of Radio Frequency Bioeffects.** Conduct mathematical, statistical, and theoretical analyses necessary for the development of modeling and simulation products. These models

shall lead to capabilities that include predictive and decision-making software that allow futuristic views of the bioeffects from exposure to RF/HPM radiation. The development and execution of modeling and simulation of electrical current, DE weapons, and radar and communication effects shall aid in the understanding of effects on and within biological systems.

**1.4.4 Human Effectiveness Analysis and Integration.** Develop an understanding of the bioeffects associated with exposing humans to counter-personnel, non-lethal weapons is essential for legal, treat, policy, and material development purposes. Without it, escalation of force options cannot be provided to war fighters. The objective of this effort shall provide Human Effects data and information that is necessary to characterize devices and technologies intended for this purpose. In order to accomplish these objectives it is essential to conduct laboratory and field experiments necessary to understand a variety of human effects responses across a wide taxonomy of technologies. These shall include directed energy, riot control agents, broadband light, acoustic sounds, and blunt impact materials. Another objective shall apply that scientific information by engineering optimal effects-based design parameters for non-lethal weapons. Additionally, this effort will provide Integrated Product Teams with engineering data necessary to not only design devices, but to evaluate and test prototypes during material development phases of the DoD acquisition process.

**1.4.5 Health and Safety.** Shall provide substantial value to the Air Force and scientific community by evaluating bioeffects of DE exposure. Shall address the physical and cognitive health and safety concerns of DE systems. Data obtained from RF/HPM radiation bioeffects research shall be designed in this technical area to support national and international health and safety standards.

**1.5 Needs.** This effort shall provide the means to protect personnel from RF radiation exposure hazards, and assess weapons application of RF/HPM radiation, by meeting the military needs to push the state-of-the art in science. The contract effort shall do so by evaluating the bioeffects of DE systems. All this shall be accomplished while addressing the health and safety concerns of the Air Force. These outcomes shall help to enable the maximum safe exploitation of the RF/HPM electromagnetic spectrum for national defense.

## **2.0 SPECIFIC TECHNICAL REQUIREMENTS.**

**2.1. Data Collections.** Conduct data collection activities, as necessary and determined by Air Force and user requirements. This shall include as necessary developing research plans, experimental plans, human use protocols, and animal use protocols for all data collections. Preparation for data collection shall require as necessary pilot studies and setup of a panel of readily available subjects. The contractor shall collect pre-experimental data to assure that the facilities for specific data collections are available and functioning.

**2.2. Data Analysis.** The contractor shall conduct appropriate descriptive and inferential statistical analyses using experimental data. The contractor shall represent statistical analyses using graphical, pictorial, and tabular summaries.

**2.3. Modeling and Simulation.** Perform modeling and simulation to support understanding of subsystem and system technologies and guide technical efforts.

**2.4. Developmental Research.** The contractor shall develop hardware and software (in the form of prototypes, conceptual demonstrations, models, and simulations) as necessary to accomplish specific research.

**2.5. Research Laboratories and Research, Development, Test, and Evaluation (RDT&E) Network.** As required by the research programs, the contractor shall provide all engineering and related efforts necessary to effect and document changes to laboratory facilities or to integrate new and unique components which will enhance research goals, improve equipment reliability, increase productivity, enhance flexibility, or improve fidelity. The contractor shall provide the capability for machining and fabricating research articles, to include, but not be limited to, prototypes, fixtures, mounting brackets, and the like. The contractor shall ensure operation of RDT&E networks, including hardware fault determination and repair, software development and updates, training in system usage, engineering development, installation of enhancements and upgrades, and system software configuration.

**2.6. Systems Integration.** The contractor shall perform systems integration of software and hardware components as necessary to validate requirements for advanced technology demonstrations.

**2.7. Management of Effort.** The contractor shall manage technical, schedule and cost satisfaction of the task order; plan, prepare, conduct, and document reviews; track CDRL satisfaction; and interface with the

customer to assess performance satisfaction and re-plan the project as needed. Contractor shall comply with all applicable human use and animal use regulations.

### **3.0 DELIVERABLES.**

#### **3.1. Data.**

#### **3.2. Hardware.**

#### **3.3. Software.**

### **4.0 OTHER REQUIREMENTS.**

**4.1. Individual Security Clearances.** IAW DD254. The Contractor shall maintain a U.S. security clearance up to a maximum of Top Secret SCI as required by individual task orders for all contractor personnel required to have access to classified information. Onsite contractor personnel must have an active clearance prior to reporting for duty in performance of any task order issued. Interim clearances for newly hired personnel shall be processed as expeditiously as possible since some contractor personnel will be required to use the SIPRNET and process classified materials; however this will be on a case-by-case basis. Such clearance must be obtained through the Defense Investigative Services. Contractor personnel who already have approved security clearances are highly preferred. The contractor shall be required to wear contractor identification badges and maintain currency in all Privacy Act Laws.

**4.2. Position of Trust.** All contractor personnel require a minimum of a National Agency Check with written Inquires (NACI)/SF85 for any position that requires access to the internet, use of automated systems or unescorted entry into restricted or controlled areas prior to reporting for duty in performance of any task order. The investigation is not for a security clearance; it is for a position of trust. This is a mandatory requirement set forth in DoD5200.1-R and AFI 31-50 I Information Security. All documentation required for security certification shall be the responsibility of the contractor. No foreign nationals shall be employed for any task order issued under this contract without prior approval of the Government.

**4.3. Operations Security (OPSEC).** The contractor shall provide OPSEC protection for all sensitive/critical information as defined by AFI 10-701 (Operations Security), the 711 HPW OPSEC Plan, and critical information list. The contractor shall participate in the 711 HPW sustained OPSEC awareness

training or include OPSEC training as part of their on-going security program. The 711 IIPW OPSEC coordinator will evaluate the OPSEC posture of AF contract activities and operations.

**4.4. Information Security and Force Protection.** The contractor shall provide Information Security and Force Protection training as defined by AFI31-401 (Information Security Program Management) and AFII0-245 (Air Force Antiterrorism Standards). The contractor shall participate in the 711 HPW sustained information Security and Force Protection/Antiterrorism training or include this training as part of their on-going security program. The 711HPW Security Managers will evaluate the training posture of AF contract activities and operations. This requirement is set forth in AFI 31-401, AFI 10-245 and applicable AFMC and local supplements.

## **5.0 OTHER INFORMATION.**

**5.1. Hazardous Waste.** The contractor shall use hazardous materials in research studies under this effort. Contractors shall be required to complete Fort Sam Houston, TX hazardous materials training. The government shall be responsible for disposing all Laboratory HazWaste.

**5.2. Human Use.** The contractor shall use human subjects in research studies under this effort. The final contract shall include the clause entitled "Protection of Human Subjects." For the performance of the contract, the contractor shall be complying with the provisions of the following directives/regulations:

5.2.1. Department of Defense, Title 32, Code of Federal Regulations, Part 219 (32 CFR 219), "Protection of Human Subjects" July 2006;

5.2.2. DHHS Regulations, Title 45, Code of Federal Regulations, Part 46 (45 CFR 46) "Protection of Human Subjects," July 2009;

5.2.3. DoD Instruction 3216.02, "Protection of Human Subjects and Adherence to Ethical Standards in DoD Supported Research," November 2011;

5.2.4. Air Force Instruction 40-402, "Protection of Human Subjects in Biomedical and Behavioral Research, (May 2005);" and (v) AFRL Instruction 40-402, "Using Human Subjects in Research, Development, Test, and Evaluation" (October 2008).

5.2.5. Contractor personnel performing human use research shall be required to take government sponsored initial and annual refreshers "Basic Human Subjects - Biomedical & Social & Behavioral Focus"

Human testing shall not commence until approval from the Air Force IRB has been obtained for any applicable task order effort.

The contractor shall be required to establish a Federal Wide Assurance (FWA), for the Protection of Human Subjects.

### **5.3. Animal Use.**

5.3.1. The contractor shall use animals in research studies under this effort. The contractor shall comply, as appropriate, with the provisions of the following directives/regulations: 1) Air Force Manual 40-401(I), "The Care and Use of Laboratory Animals in DoD Programs", July 2006; and 2) "DoD Instruction 3216.01, "Use of Animals in DoD Programs," September 2010.

5.3.2. Moreover, the contractor shall maintain records associated with animal subjects research as required by the approved protocol.

5.3.3. Contractor personnel performing animal use research shall be required to take government sponsored initial and annual refreshers training as prescribed by the on-site Veterinarian

5.3.4. Contractor personnel working with animals shall be required to have an annual "negative" Tuberculosis (TB) test at the expense of the contractor.

Animal testing shall not commence until approval from the Air Force Institutional Animal Care and Use Committee has been obtained for any applicable task order effort.

**5.4. Base Support/Network Access** will be provided at JBSA Ft Sam Houston TX for the performance of this effort.

### **5.5 Contract Holidays**

The following days are contract holidays:

New Year's Day  
Birthday of Martin Luther King  
Presidents Day  
Memorial Day  
Independence Day 4th of July Holiday

Labor Day  
Columbus Day  
Veterans Day  
Thanksgiving Day  
Christmas Day

DEPARTMENT OF DEFENSE CONTRACT SECURITY CLASSIFICATION SPECIFICATION <i>(The requirements of the DoD Industrial Security Manual apply to all security aspects of this effort.)</i>				1. CLEARANCE AND SAFEGUARDING	
				a. FACILITY CLEARANCE REQUIRED <b>(b) (3) (B)</b>	
				b. LEVEL OF SAFEGUARDING REQUIRED N/A	
2. THIS SPECIFICATION IS FOR: <i>(X and complete as applicable)</i>			3. THIS SPECIFICATION IS: <i>(X and complete as applicable)</i>		
<input checked="" type="checkbox"/>	a. PRIME CONTRACT NUMBER FA8650-13-D-6368, Basic		<input checked="" type="checkbox"/>	a. ORIGINAL <i>(Complete date in all cases)</i>	DATE (YYYYMMDD) 20130815
	b. SUBCONTRACT NUMBER			b. REVISED <i>(Supersedes all previous specs)</i>	REVISION NO. DATE (YYYYMMDD)
	c. SOLICITATION OR OTHER NUMBER	DUE DATE (YYYYMMDD)		c. FINAL <i>(Complete item 5 in all cases)</i>	DATE (YYYYMMDD)
4. IS THIS A FOLLOW-ON CONTRACT? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO. If Yes, complete the following: Classified material received or generated under _____ <i>(Preceding Contract Number)</i> is transferred to this follow-on contract.					
5. IS THIS A FINAL DD FORM 254? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO. If Yes, complete the following: In response to the contractor's request dated _____, retention of the classified material is authorized for the period of _____					
6. CONTRACTOR <i>(Include Commercial and Government Entity (CAGE) Code)</i>					
a. NAME, ADDRESS, AND ZIP CODE General Dynamics Information Technology Inc <b>(b) (6)</b>		b. CAGE CODE 0GR87	c. COGNIZANT SECURITY OFFICE <i>(Name, Address, and Zip Code)</i> Defense Security Service (IOFND) <b>(b) (6)</b>		
7. SUBCONTRACTOR					
a. NAME, ADDRESS, AND ZIP CODE N/A		b. CAGE CODE N/A	c. COGNIZANT SECURITY OFFICE <i>(Name, Address, and Zip Code)</i> N/A		
8. ACTUAL PERFORMANCE					
a. LOCATION TBD		b. CAGE CODE N/A	c. COGNIZANT SECURITY OFFICE <i>(Name, Address, and Zip Code)</i> TBD		
9. GENERAL IDENTIFICATION OF THIS PROCUREMENT The goal of this effort includes conducting research to identify the benefits, risks, & capabilities for a wide range of military RF/HPM radiation systems. To predict & mitigate the bioeffects of directed energy on personnel & mission performance, & to exploit the bioeffects of directed energy (DE) for DE weapons applications. In order to protect personnel from RF radiation exposure hazards, & assess weapons application of RF/HPM radiation, the military needs to push the state-of-the-art in science by evaluating the bioeffects of DE systems. While addressing health & safety concerns. This will help to enable the maximum safe exploitation of the RF/HPM electromagnetic spectrum for national defense.					
10. CONTRACTOR WILL REQUIRE ACCESS TO:			11. IN PERFORMING THIS CONTRACT, THE CONTRACTOR WILL:		
	YES	NO		YES	NO
a. COMMUNICATIONS SECURITY (COMSEC) INFORMATION		<input checked="" type="checkbox"/>	a. HAVE ACCESS TO CLASSIFIED INFORMATION ONLY AT ANOTHER CONTRACTOR'S FACILITY OR A GOVERNMENT ACTIVITY	<input checked="" type="checkbox"/>	
b. RESTRICTED DATA		<input checked="" type="checkbox"/>	b. RECEIVE CLASSIFIED DOCUMENTS ONLY		<input checked="" type="checkbox"/>
c. CRITICAL NUCLEAR WEAPON DESIGN INFORMATION		<input checked="" type="checkbox"/>	c. RECEIVE AND GENERATE CLASSIFIED MATERIAL		<input checked="" type="checkbox"/>
d. FORMERLY RESTRICTED DATA		<input checked="" type="checkbox"/>	d. FABRICATE, MODIFY, OR STORE CLASSIFIED HARDWARE		<input checked="" type="checkbox"/>
e. INTELLIGENCE INFORMATION		<input checked="" type="checkbox"/>	e. PERFORM SERVICES ONLY		<input checked="" type="checkbox"/>
(1) Sensitive Compartmented Information (SCI)	<input checked="" type="checkbox"/>		f. HAVE ACCESS TO U.S. CLASSIFIED INFORMATION OUTSIDE THE U.S., PUERTO RICO, U.S. POSSESSIONS AND TRUST TERRITORIES	<input checked="" type="checkbox"/>	
(2) Non-SCI	<input checked="" type="checkbox"/>		g. BE AUTHORIZED TO USE THE SERVICES OF DEFENSE TECHNICAL INFORMATION CENTER (DTIC) OR OTHER SECONDARY DISTRIBUTION CENTER	<input checked="" type="checkbox"/>	
f. SPECIAL ACCESS INFORMATION	<input checked="" type="checkbox"/>		h. REQUIRE A COMSEC ACCOUNT		<input checked="" type="checkbox"/>
g. NATO INFORMATION	<input checked="" type="checkbox"/>		i. HAVE TEMPEST REQUIREMENTS		<input checked="" type="checkbox"/>
h. FOREIGN GOVERNMENT INFORMATION	<input checked="" type="checkbox"/>		j. HAVE OPERATIONS SECURITY (OPSEC) REQUIREMENTS	<input checked="" type="checkbox"/>	
i. LIMITED DISSEMINATION INFORMATION		<input checked="" type="checkbox"/>	k. BE AUTHORIZED TO USE THE DEFENSE COURIER SERVICE		<input checked="" type="checkbox"/>
j. FOR OFFICIAL USE ONLY INFORMATION	<input checked="" type="checkbox"/>		l. OTHER <i>(Specify)</i>	<input checked="" type="checkbox"/>	
k. OTHER <i>(Specify)</i>		<input checked="" type="checkbox"/>	AFFARS 5352.204-9000 applies. See Blk 13.		

DD FORM 254, DEC 1999

PREVIOUS EDITION IS OBSOLETE.

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**12. PUBLIC RELEASE.** Any information (classified or unclassified) pertaining to this contract shall not be released for public dissemination except as provided by the Industrial Security Manual or unless it has been approved for public release by appropriate U.S. Government authority. Proposed public releases shall be submitted for approval prior to release  Direct  Through (Specify)

Joint Base San Antonio (JBSA) Public Affairs

Public release of sensitive compartmented information is not authorized.

Ref Blk 10f: See Special Access Information addendum for details.

to the Directorate for Freedom of Information and Security Review, Office of the Assistant Secretary of Defense (Public Affairs)\* for review.

\*In the case of non-DoD User Agencies, requests for disclosure shall be submitted to that agency.

**13. SECURITY GUIDANCE.** The security classification guidance needed for this classified effort is identified below. If any difficulty is encountered in applying this guidance or if any other contributing factor indicates a need for changes in this guidance, the contractor is authorized and encouraged to provide recommended changes; to challenge the guidance or the classification assigned to any information or material furnished or generated under this contract; and to submit any questions for interpretation of this guidance to the official identified below. Pending final decision, the information involved shall be handled and protected at the highest level of classification assigned or recommended. (Fill in as appropriate for the classified effort. Attach, or forward under separate correspondence, any documents/guides/extracts referenced herein. Add additional pages as needed to provide complete guidance.)

The National Industrial Security Program Operating Manual (NISPOM), Feb 06, applies.

The DoD security classification guide entitled "Joint Non-Lethal Weapons Program," dated October 1999, the HQ USAF SCG for Directed Energy (DE) Weapon and Counter High Power Microwave (CHPM) Weapon Technology SCG dated 21 June 1999 shall be used when determining the classification of most data under this contract.

Ref Blk 10e(1): Contractor requires access to SCI materials; SCI security requirements apply, (see 21 IS/INS, SSO WPAFB, SCI addendum, for details).

Ref Blk 10e(2): Contractor will require access to intelligence information and must comply with AFI 14-303/AFMC Supplement 1. The Program Manager has determined that disclosure does not create an unfair competitive advantage for the contractor or a conflict of interest with the contractor's obligation to protect the information and will submit the AFMC Form 210 to AFRL/RYOY for approval prior to granting access.

(b) (6)

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

Ref Blk 10e(1): SCI security requirements apply, see SCI addendum for details. Ref Blk 10e(2): Access to SIPRNET is required.

Ref Blk 10f: See Special Access Information addendum for details

Ref Blk 11j: OPSEC requirements apply. See Statement of Objectives (SOO) for requirements.

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

Ref Blk 10e(1): SCI security requirements apply, see SCI addendum (para 13) for details.

Ref Blk 10f: See Special Access Information addendum for details

Ref Blk 11i: Contractor performance will occur at JBSA Ft Sam Houston, TX. DSS is relieved of all inspection responsibilities for contractor performance on the installation. 502 ABW/IP will maintain security oversight.

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

a. TYPED NAME OF CERTIFYING OFFICIAL | b. TITLE | c. TELEPHONE (Include Area Code)

(b) (6)

d. ADDRESS (Include Zip Code)

AFRL/RQKHA

(b) (6)

(b) (6)

**17. REQUIRED DISTRIBUTION**

- a. CONTRACTOR
- b. SUBCONTRACTOR
- c. COGNIZANT SECURITY OFFICE FOR PRIME AND SUBCONTRACTOR
- d. U.S. ACTIVITY RESPONSIBLE FOR OVERSEAS SECURITY ADMINISTRATION
- e. ADMINISTRATIVE CONTRACTING OFFICER
- f. OTHERS AS NECESSARY

**Block 12:**

Public release of Sensitive Compartmented Information (SCI) is NOT authorized.

Ref Blk 10f: See Special Access Information addendum for details

**Block 13:**

Servicing IP: (b) (6)

Program Manager: (b) (6)

Servicing SSO: (b) (6)

Chief of Security: (b) (6)

The DoD security classification guide entitled "Joint Non-Lethal Weapons Program," dated October 1999, the HQ USAF SCG for Directed Energy (DE) Weapon and Counter High Power Microwave (CHPM) Weapon Technology SCG dated 21 June 1999 shall be used when determining the classification of most data under this contract.

Item 8a. Work performed under this contract will be at 711 HPW/RHD, (b) (6) & elsewhere as directed by the program manager including military installations & approved contractor operated secure facilities.

Ref Blk 10e(1): Contractor requires access to SCI materials; SCI security requirements apply, (see 21 IS/INS, SSO WPAFB, SCI addendum, for details).

Ref Blk 10e(1): Contractor requires access to SCI materials; SCI security requirements apply, see SCI addendum for details.

Ref Blk 10e(2): Contractor will require access to intelligence information and must comply with AFI 14-303/AFMC Supplement 1. The Program Manager has determined that disclosure does not create an unfair competitive advantage for the contractor or a conflict of interest with the contractor's obligation to protect the information and will submit the AFMC Form 210 to AFRL/RYOY for approval prior to granting access.

Ref Blk 10e(2): Access to SIPRNET is required.

Ref Blk 10f: See Special Access Information addendum for details

Ref Blk 10g: NATO briefing required prior to granting access. See NISPOM Chapter 10 for details.

Ref Blk 10j: See DoDM 5200.01, Volume 4, DoD Information Security Program: Controlled Unclassified Information (CUI), Enclosures 3 & 4 and DoD 5400.7-R/Air Force Manual 33-302, DoD Freedom of Information Act (FOIA) Program, for requirements.

Ref Blk 11a: Using activity will provide security classification guidance for performance on this contract. On base performance in support of 711 HPW/RHDR will occur in (b) (6) If any classified information is generated in the performance of this contract at the identified location, the contractor shall apply derivative classification and markings consistent with the source material.

Ref Blks 10a/11h: COMSEC/Cryptologic, Safeguarding requirements apply. See AFI 33-201 Volume 2, *Communications Security (COMSEC) User Requirement* for details.

Ref Blk 11i: Provide the information requested by the Notification of Government Security Activity and Visitor Group Security Agreements clause, Air Force Federal Acquisition Regulation Supplement (AFFARS) 5352.204-9000, to 88 ABW/IPD, (b) (6)

Ref Blk 17e (ACO): AFLCMC/PZIEA, (b) (6)

Ref Blk 17f (DISTRIBUTION):

502d ABW/IP, (b) (6) (b) (6)

88 ABW/IPD, (b) (6) (b) (6)

AFRL: (b) (6) AFRL/RYOY, (b) (6) (b) (6)

21 IS/INS, SSO WPAFB (b) (6)

711 HPW/OMS, (b) (6) (b) (6)

**Block 14:**

DoD Manual 5105.21, Vols 1 -3, dated 19 Oct 12 and AFMAN 14-304; DCID 6/1, w/ ICPM 2006-700-8; ICD 701, ICD 702, DCID 6-03 w/ICPM 2006-700-9, ICD 704/ICPGs 704.1. ICPG 704.2, ICPG 704.3, ICPG 704.4, ICD 710, DCID 6-06; DCID 6-07, ICD 705, ICS 705-1; ICD 503, Joint DoDISS/Cryptologic SCI Information Systems Security Standards (JDCSISSS) and DoD Joint Security Implementation Guide (DJSIG), dated June 2011 provides the necessary guidance for physical, personnel, industrial, information, and information systems security measures and are part of the Sensitive Compartmented Information (SCI) security specifications for the contract.

- a. Ref Blk 10e(1): SCI security requirements apply, see SCI addendum for details.
- b. Ref Blk 10k: Program Protection Plan (PPP) will be provided by the Government activity.
- c. Ref Blk 11i: EMSEC requirements apply to the SCIF execution location see DFARS Clause 252.239-7000, Protection Against Compromising Emanations: ICD 705, Technical Specifications V-2: NSTISSAM TEMPEST/2-95, Red/Black Installation Guide, dated 12 Dec 95: and NSTISSAM TEMPEST 2/95a, Addendum to Red/Black Installation Guide, dated 03 Feb 00.
- d. Ref Blk 11j: OPSEC requirements may apply in future delivery orders. Each delivery order will provide specific guidance.

**Block 15:**

Ref Blk 10e(1): SCI security requirements apply, see SCI addendum (para 13) for details.

Ref Blk 10f: See Special Access Information addendum for details

Ref Blk 11i: Contractor performance will occur at JBSA Ft Sam Houston, TX. DSS is relieved of all inspection responsibilities for contractor performance on the installation. 502d ABW/IP will maintain security oversight.

(b) (3) (B)

(b) (3) (B)

FOR OFFICIAL USE ONLY

This document contains information exempt from mandatory disclosure under the FOIA. Exemption 2 Applies.

DEBR HAZARDOUS MATERIALS LISTING ON FA8650-13-D-6368, SECTION J, ATCH 3, DATED 18 JUL 13

(-)-BLEBBISTATIN	B0560	6810PHM00084089
(-)-Epothilone A	E3656-10UG	6505PHM00091379
(-)-Epothilone B	E2656-10UG	6505PHM00091373
(25-30% METHYLHYDROSILOXANE) - DIMETHYLSILOXANE COPOLYMER, TRIMETHYLSILOXANE TERMINATED, 25-35 cSt	HMS-301	6810PHM00090901
(3-AMINOPROPYL)TRIETHOXY SILANE	A3648	6810PHM00057637
(3-MERCAPTOPROPYL) TRIMETHOXY SILANE	175617	6810PHM00089531
(7-8% VINYL METHYLSILOXANE)(DIMETHYLSILOXANE) COPOLYMER, TRIMETHYLSILYL TERMINATED	VDI-731	6810PHM00090896
(S)-(-)-CAMPTOTHECIN	C9911	6810PHM00081873
***CARBON DIOXIDE	P4574J	6830PHM00043792
***CARBON DIOXIDE	P4574J	6830002920142
***CARBON DIOXIDE	C530228421 / NT X 152724	6830002920142
1,2-BIS(2-AMINOPHENOXY)ETHANE-N,N,N',N'-TETRAACETIC ACID (BAPTA)	A4926	6810PHM00081878
1,2-DICHLOROETHANE		6810PHM00041282
1,2-dimyrystoyl-sn-glycero-3-phosphocholine (DMPC)	850345C	6850PHM00089274
1,2-dioleoyl-sn-glycero-3-phosphocholine (DOPC)	850375C	6850PHM00089276
1,2-dipalmitoyl-sn-glycero-3-phosphocholine (DPPC)	850355C	6850PHM00089281
1,4-DIOXANE	296309	6810PHM00081874
10X TRIS/GLYCINE/SDS BUFFER	161-0772	6850PHM00081875
10X WASH BUFFER	L-WB	6550PHM00089682
1-1-DIFLUOROETHYLENE	295272	
1X SYPRO RUBY PROTEIN GEL STAIN	1703125	6550PHM00082054
1X SYPRO RUBY PROTEIN GEL STAIN	1703125	6550PHM00092571
2-(2-AMINO-3-METHOXYPHENYL)-4H-1-BENZOPYRAN-4-ONE		6810PHM00089453
2-(6-(7-Nitrobenz-2-Oxa-1,3-Diazol-4-yl)amino)Hexanoyl-1-Hexadecanoyl-sn-Glycero-3-Phosphocholine (NBD C <sub>6</sub> -HPC)	N-3786	6850PHM00089251

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2,2-AZOBIS(2-METHYLPROPIONITRILE)	441090	6810PHM00046085
2,2-DIMETHOXY-2-PHENYLACETOPHENONE	196118	6810PHM00044962
2,4,6,8-Tetramethyl-2,4,6,8-tetravinylcyclotetrasiloxane	396281	6810PHM00090923
2-AMINOETHYL METHACRYLATE HYDROCHLORIDE	516155	6810PHM00081908
2-D SDS-PAGE STANDARDS	1610320	6550PHM00091046
2-MERCAPTOETHANOL	M6250	6810PHM00081910
2-PROPANOL, 99%	278475	6810PHM00065173
3-(TRIMETHOXSILYL)PROPYL METHACRYLATE	M6514	6810PHM00081946
4-AMINOPYRIDINE	275875	6810PHM00081902
4-Aminopyridine	940	6810PHM00092875
4-Chloro-N-methylpyridine-2-carboxamide(Lamin A)	SC-206860	not hazardous
5-(and 6-)-Carboxy SNARF-1 acetoxymethyl ester, acetate	C-1272	6810PHM00092452
5-plex heat shock protein magnetic bead kit	48-615	6550PHM00092820
A967079	4716	6810PHM00092825
ACETIC ACID	A6283	6810PHM00081931
ACETIC ACID	320099	6810PHM00081934
ACETONE	00140	6810PHM00007489
ACETONE	650501	6810PHM00051660
ACETONE	A949-4	6810PHM00007489
ACETONE		6810PHM00089237
ACETONE, CHROMASOLV	270725	6810014618136
ACETONITRILE, 99%	271004	6810PHM00067250
Acid Phenol Chloroform	AB9720	6850PHM00092783
ACTINOMYCIN D	A1410	6810PHM00089431
Clinitrol 290 Reference Solution	3LA029	6850PHM00093095
AGAROSE	AM9046	6810PHM00081978
AGAROSE	A9539	6810PHM00081980
ALBUMIN (BOVINE, FITC-ALBUMIN)	A9771	6550PHM00091084
ALBUMIN, FROM BOVINE SERUM	A9418	6550PHM00091084
ALCOHOL DENATURED (CROWN)	DNAL01	6810002056786
ALCOHOL DENATURED (HOME OIL CO)		6810002056786
ALEXA FLOR 594	A11058	6850PHM00092646
ALEXA FLUOR 555 PHALLOIDIN	A34055	6550PHM00092517
ALEXO FLUOR 488	A11029	6850PHM00092644
ALEXO FLUOR 488	A21202	6850PHM00093079
All Prep RNA/Protein Minikit	80404	6550PHM00093101
AMMONIUM CHLORIDE	A0171	6810PHM00091085
AMPICILLIN, SODIUM SALT	171254	6810PHM00083141

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AMPLEX RED CHOLESTEROL ASSAY	A12216	6850PHM00090191
Annexin V	PF032	6550PHM00092895
ANNEXIN-BINDING BUFFER (5X)	V13242C	6550PHM00090389
Anti-Angiopietin 2 antibody (ab10601)	ab10601	Non-hazardous
Anti-Caveolin-2	C9992	6850PHM00092981
Antimycin A, from <i>Streptomyces</i> sp.	A8674	6810PHM00090876
ANTI-RABBIT IGG	C2306	6550PHM00091189
Anti-rabbit IgG, HRP-linked Antibody #7074	7074S	6550PHM00090875
ANTI-TAU RABBIT	T6402	6850PHM00091038
Anti-Tubular Antibody	ab56676	6550PHM00091390
Anti-VEGF-C Propeptide Antibody	AB10601	Non-hazardous
ANTI-VIMENTIN AB-2 (CLONE:V9)	MS129B1	non-hazardous
Anti-Vimentin antibody RV202	ab8978	6850PHM00090906
Apoptotic DNA Ladder Kit	11835246001	550PHM00092999
ARG-GLY-ASP-SER	A9041	6810PHM00089529
ARGON, COMPRESSED	P-4563-I	6830001690779
ARGON, COMPRESSED	P-4563-I	6830PHM00073637
AS-1 PORC-AFIX PORCELAIN TOUCH-UP GLAZE		8010PHM00031215
AUTO/MARINE SILICONE SEALANT CLEAR (DAP)		8030PHM00091171
BACTERIO STATIC CONCENTRATION (SHEATH FLUID FROM ACCURI)	KR-220/653156	7930PHM00092735
Bafilomycin A1	B1793-10UG	6810PHM00091372
BAPTA-AM	A1076	6810PHM00089452
BARIUM CHLORIDE	202738	6810PHM00081905
BCA PROTEIN ASSAY (REAGENTS A & B)	23225	6550PHM00091991
BD Cell Tak	354240	6550PHM00084332
BD™ DiC12(3) Fluorescent Dye	354218	6550PHM00092888
BIO-LYTE 3-10 BUFFER	1632094	6810PHM00091028
BLEOMYCIN SULFATE	15361	6810PHM00089244
BLEOMYCIN SULFATE	15361	6810PHM00089244
BODIPY FL	B7469	6850PHM00092655
BORIC ACID	B9645	6810PHM00081909
BRASSO® METAL POLISH	26600-76523	7930PHM00045396, 7930PHM00052715, 7930PHM00073954, 7930000567874, 7930010680751
BROMOPHENOL BLUE	B0126	6810PHM00081904

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CADMIUM CHLORIDE ANHYDROUS	20899	6810PHM00081900
CADMIUM CHLORIDE SOLN (0.1M)	28811	6810PHM00092481
CALCEIN, AM	L3224A	6810PHM00090961
CALCEIN, AM	C3100MP	6550PHM00087501
CALCEIN, AM (SPECIAL PACKAGING)	C3100MP	6550PHM00087501
CALCIUM ACETATE MONOHYDRATE	402850	6810PHM00081932
CALCIUM CHLORIDE ANHYDROUS	C1016	6810PHM00081896
CALCIUM CHLORIDE DIHYDRATE	223506	6810PHM00081899
CALCIUM GREEN-1, AM	C3012	6810PHM00089006
CALCIUM SPONGE S (BAPTA POLYSTYRENE)		6810PHM00090214
CALCIUM SULFATE DIHYDRATE	C3210	6810PHM00092475
CALIBRATION KIT (LUMINEX)	LK200-CAL-K25	6550PHM00091923
CaMKII (pan) (D11A10) Rabbit mAb #4436	4436S	6550PHM00090873
CAPSAZEPINE	C191	999000284642
CARBON DIOXIDE (GAS)	P-4574-J	6830PHM00043792
CARBON DIOXIDE, COMPRESSED	P4574J	6830002920142
CARBON DIOXIDE, REFRIGERATED LIQUID	P-4573-D	6830PHM00004555
CARBONYL CYANIDE 3-CHLOROPHENYLHYDRAZONE	C2759	6810PHM00091048
Carbonyl cyanide 4-(trifluoromethoxy)phenylhydrazone (a.k.a. FCCP)	C2920	6810PHM00090877
CELL LIGHT™ ACTIN-GFP	C10126	item discontinued by company
CELL LIGHT™ LYCOSOMES-GFP	C10596	6550PHM00091051
Cell Therapy Systems Synth-a-Freeze® CTS™	A13713	6550PHM00093017
CELL TRACKER BLUE	C2110	6850PHM00092650
CELL TRACKER GREEN CMFDA	C7025	6810PHM00091021
CELL TRACKER RED CMTPX	C34552	6550PHM00091190
CELL/MITOCHONDRIA LYSIS BUFFER	43-042	6550PHM00089689
CELL-TAK	354240	6550PHM00084332
CELLTITER 96® AQUEOUS NON-RADIOACTIVE CELL PROLIFERATION ASSAY	G-5421	6550PHM00091908
CellTiter-Glo® Luminescent Cell Viability Assay	G7571	6550PHM00092975
CELLTOX NON RADIOACTIVE	G1780	6550PHM00091927
CEMEDINE SUPER X CLEAR		8040PHM00032817
CESIUM ACETATE	329827	6810PHM00081915
CESIUM HYDROXIDE MONOHYDRATE	516988	6810PHM00081917
CHITOSAN (POLY(D-GLUCOSAMINE))	448877	6810PHM00081918
CHLOROFORM	288306	6810PHM00083535

CHLOROFORM	C2432	6810PHM00081830
CHLOROFORM, Reagent, A. C. S.	12540	6850PHM00089259
CHLOROTRIMETHYLSILANE	110121000	6810PHM00082501
CHOLESTEROL (OVINE WOOL, >98%)	700000P	6810PHM00089255
Cholesterol Water Soluble		6550PHM00091969
Chromo 505 Goat Anti-Mouse IgG	15050	6550PHM00093057
CITRUS CLEARING SOLVENT	8301	6850PHM00082066
CLEANING FLUID (ACCURI)	KR-225/653157	7930PHM00092734
Clinitrol 290 Reference Solution	3LA029	6550PHM00093118
CLOROX BLEACH		6810005987316
CO2 Independent Medium (1X), liquid	18045-088	6550PHM00089397
CO2 Independent Medium (1X), liquid	18045-088	6550PHM00089397
COATING MATRIX	509700	6850PHM00090500
COATING MATRIX KIT	R-011-K	6850PHM00090500
COBALT (II) CHLORIDE HEXAHYDRATE	C8661	6810PHM00081923
Collagen Bovine Type I	354231	6550PHM00091459
Collagen from bovine serum	C2124	6850PHM00092806, 25ml;
Collagen I, Rat Tail, High Concentration	354249	6850PHM00092809, 50ml
Collagen IV, mouse	354233	6850PHM00090822
COMPRESSOR OIL		9150PHM00012886
COOLING FLUID (PROPYLENE GLYCOL)	00AR10	6850PHM00081982
COPPER (II) SULFATE PENTAHYDRATE	C8027	6810PHM00081920
CORONA GREEN AM	C36676	6550PHM00091149
CRITERION TGX STAIN-FREE 10% GEL	5678034	6550PHM00090385
CRITERION TGX STAIN-FREE 12% GEL	5678044	6550PHM00090398
Criterion TGX Stain-Free, 10% Gel	5678034	6550PHM00090385
CRITERION™ PRE-CAST GELS, 8-16% Tris-HCl	3450105	6550PHM00092075
CROWN DENATURED ALCOHOL		6810PHM00081911
CYCLOHEXIMIDE	C7698	6810PHM00089455
CYTOCHALASIN B	C2743	6550PHM00091191
CYTOCHALASIN D	C2618	6810PHM00088967
CYTOCHROME C RELEASESING APOPTOSIS ASSAY KIT	ab65311	6850PHM00090426
CYTOFIX/CYTOPERM FIXATION & PERMEABILIZATION SOLN	554714	6550PHM00091188
Cytofix/Cytoperm Plus Fixation/Permeabilization Kit with Golgi-stop	554715	6550PHM00092716

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CYTOTOX 96@ NON-RADIOACTIVE CYTOTOXICITY ASSAY	G1780	6550PHM00091927
D-(+)-GLUCOSE		6810PHM00081926
D-(+)-TREHALOSE DIHYDRATE	T0167-10GM	6810PHM00090764
DAPI (4',6-DIAMIDINO-2-PHENYLINDOLE) DILACTATE	D3571	6810PHM00091041
DC PROTEIN ASSAY REAGENT A	5000113	6810PHM00081929
DC PROTEIN ASSAY REAGENT B	5000114	6810PHM00091030
DEAD CELL APOPTOSIS KIT	V13242	6550PHM00090149
DECONTAMINATION FLUID (ACCURI)	KR-205/653155	7930PHM00092732
DEUTERIUM OXIDE	151882	6810PHM00081913
DIBUTYLAMINE	471232	6810PHM00083103
DIFLUOROMETHANE	318043	6810PHM00081852
DIGITONIN	300410	6810PHM00083104
DILUTION MEDIUM	509701	6850PHM00090510
DIMETHYL SULFOXIDE (DMSO)	4-X-5	6810PHM00091050
DIMETHYL SULFOXIDE (DMSO) BOX	D2650	6810PHM00081775
DITHIOTHREITOL (DTT)	1610610	6810PHM00091026
DMEM F-12 Medium	30-2006	6550PHM00089870
DMEM F-12 Medium	30-2006	6550PHM00089870
DNA LADDER, LOW SCALE	BP2581	6550PHM00091242
DNase I (RNase-free DNase Set)	79254	6550PHM00089331
Docetaxel	AAJ60174-MC	6810PHM00091376
DOWFROST* HEAT TRANSFER FLUID		6810PHM00026974
DATP solution	850457C	6850PHM00093851
Dulbecco's Modified Eagle's Medium (DMEM)	30-2002	6550PHM00089874
Dulbecco's Modified Eagle's Medium (DMEM)	30-2002	6550PHM00089874
Dulbecco's Modified Eagle Medium (DMEM) (1X), liquid (high glucose)	11965-118	6550PHM00089389
Dulbecco's Modified Eagle Medium (DMEM) (1X), liquid (high glucose)	11965-118	6550PHM00089389
Dulbecco's Phosphate-Buffered Saline (D-PBS)(1X), liquid	14190-250	6550PHM00089396
DUST OFF COMPRESSED GAS DUSTER		6830PHM00060386
Eagle's Minimum Essential Medium (EMEM)	30-2003	6550PHM00089877
Eagle's Minimum Essential Medium (EMEM)	30-2003	6550PHM00089877
EFFECTENE TRANSFECTION REAGENT	301425	6550PHM00091964
ELIMINASE	1101	7930PHM00081831
Eliminase	1101	7930PHM00081831
EndoFree Plasmid Maxi Kit	12362	6550PHM00092940

ENZOL ENZYMATIC DETERGENT	7363-4	7930PHM00026021
ENZOL ENZYMATIC DETERGENT		7930PHM00027251
EPI-100 NEW MAINTENANCE MEDIUM-113	EPI-100-NMM-113	6550PHM00090152
EPIDERM FULL THICKNESS TISSUE MAINTENANCE MEDIUM	EFT-300-MM	6550PHM00090150
EpiLife® Medium with 60 mM Calcium	MEP1500CA	6850PHM00089368
EPOXY INSTANT MIX	41861	8040PHM00081916
ERIOGLAUCINE DISODIUM SALT	861146	6810PHM00089526
ER-TRACKER RED	E34250	6550PHM00092657
ETHANOL	S71822	6810PHM00055971
ETHANOL	E7023	6810PHM00055971
ETHIDIUM BROMIDE	17898	6810PHM00083108
ETHYL ALCOHOL (ETHANOL)	S93232	6810PHM00021910
ETHYL ALCOHOL ANHYDROUS DENATURED	S93232	6810PHM00090966
ETHYL ALCOHOL, 70%	S71822	6810PHM00090960
ETHYL ALCOHOL, ANHYDROUS DENATURED	S93232	6810PHM00090966
ETHYLENE GLYCOL-BIS (B-AMINOETHYL ETHER)-N,N,N,N,-TETRAACETIC ACID		6810PHM00083148
ETHYLENE GLYCOL-BIS(β-AMINOETHYL ETHER) (EGTA)	03777	6810PHM00090954
ETHYLENE GLYCOL-BIS(β-AMINOETHYL ETHER) (EGTA)	E8145	6810PHM00083147
ETHYLENE GLYCOL-BIS(β-AMINOETHYL ETHER) (EGTA)	E8145	6810PHM00090947
ETHYLENEDIAMINETETRAACETIC ACID DISODIUM SALT SOLN (EDTA)	E7889	6810PHM00073421
F-12K Medium	30-2004	6550PHM00089879
F-12K Medium	30-2004	6550PHM00089879
FETAL BOVINE SERUM	30-2020	6810PHM00089857
Fetal Bovine Serum (FBS)	30-2020	6810PHM00089857
FIBRONECTIN, FROM BOVINE PLASMA	F1141	6550PHM00092660
Fibronectin, human	354008	6550PHM00091462
FILIPIN COMPLEX (STREPTOMYCES FILIPINENSIS)	F9765	6810PHM00089821
FITC ANNEXIN V	V13242A	6550PHM00090386
FLIP	SC136160	not hazardous
FLUORESCCEIN DIACETATE	F7378	6550PHM00091104
FLUORESCCEIN SODIUM SALT	F6377	6810PHM00083146

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FLUXOR THALLIUM DETECTION KIT	F10016	6550PHM00091924
FLUXOR THALLIUM DETECTION KIT (POTASSIUM ION CHANNEL ASSAY)	F10016	6550PHM00091924
FM 4-64 - Special Packaging (N-(3-Triethylammoniumpropyl)-4-(6-(4-(Diethylamino) Pheny)) Hexatrienyl) Pyridinium Dibromide)	T-13320	6850PHM00089446
FM@ 4-64 (N-(3-Triethylammoniumpropyl)-4-(6-(4-(Diethylamino) Pheny)) Hexatrienyl) Pyridinium Dibromide)	T-3166	6850PHM00089451
FM1-43 (N-(3-triethylammoniumpropyl) -4-(4-(dibutylamino)styryl) pyridinium dibromide)	T-35356	6810PHM00090948
FM1-43 (N-(3-triethylammoniumpropyl) -4-(4-(dibutylamino)styryl) pyridinium dibromide)	T-3163	6810PHM00091202
FM2-10 (N-(3-Triethylammoniumpropyl)-4-(4-(Diethylamino)styryl)Pyridinium Dibromide)	T-7508	6810PHM00089424
FM5-95 (N-(3-trimethylammoniumpropyl) -4-(6-(4-(diethylamino) phenyl)hexatrienyl)pyridinium dibromide)	T-23360	6850PHM00089451
FORMALDEHYDE SOLN, 37%	F8775	6810PHM00083143
FORMALDEHYDE, 16%	0028908	6810PHM00083140
FORMALDEHYDE, 37%	F1635	6810PHM00070067
FORMALIN 10%	F5304	6810PHM00083136
FORMAMIDE, 99%	F7503	6810PHM00021125
FORMVAR 0.25% IN 1,2-DICHLOROETHANE	15810	6550PHM00091039
FR180204	SML0320	6810PHM00089458
G 418 SULFATE	345812	6810PHM00091076
GADOLINIUM (III) CHLORIDE HEXAHYDRATE	G7532	6810PHM00083134
Genie Disrupter Beads, 0.5 mm, 0.8 oz bottle	SI-BG05	not hazardous
GENTAMYCIN/AMPHOTERICIN B	R01510	6550PHM00091168
GLUTAMAX I	35050061	6550PHM00091141
GLUTAMAX I (100X)	35050061	6550PHM00091141
GLUTARALDEHYDE GRADE 1 25%	G5882	6810PHM00049409
GLUTARALDEHYDE SOLUTION		6810PHM00052041
GLUTARALDEHYDE SOLUTION 8%	16019	6550PHM00091042

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Gluteraldehyde Solution	G7651	6550PHM00091125
GLYCEROL	G8773	68100014584127
GLYCINE	G8898	6810PHM00083132
GLYCOGEN	AM9510	6850PHM00092531
Go Taq DNA Polymerase	M3001	6550PHM00094124
Go Taq Green Master Mix	M7122	6550PHM00092957
GOAT ANTI-MOUSE IGG1	SC-2078	not hazardous
Goat Anti-Rabbit IgG Antibody, HRP-conjugate   12-348	12-348	6550PHM00093009
GOLD ACID CHLORIDE (HYDROGEN TETRACHLORO AURATE(III))	--	6810PHM00092684
GOLD NANOPARTICLES	741949	6810PHM00084209
GOO GONE XTREME REMOVER	710748	7930PHM00020471
GRAMICIDIN	G5002	6810PHM00084162
GUAIFENESIN	GU102	6550PHM00091123
GUANOSINE 5'-TRIPHOSPHATE (GTP) SODIUM SALT HYDRATE	G8877	6810PHM00084261
GURR BUFFER SOLUTION, 50 TABLETS	P1503	6850PHM00081966
H2O BATH TREATMENT	S5525	6850PHM00092652
Hank's Balanced Salt Solution (HBSS) (1X)	14170-161	6550PHM00089390
Hank's Balanced Salt Solution (HBSS) (1X), liquid	14185	6550PHM00089390
Hank's Balanced Salt Solution (HBSS) (1X), liquid	14170-161	6550PHM00089390
Hanks' Balanced Salt Solution (HBSS)(1X) w/Ca2+Mg2+	21-023-CM	6550PHM00089399
HARD AS NAILS (SALLY HANSEN)	N/A	8510PHM00091179
HAT SUPPLEMENT (50X)	21060017	6850PHM00089369
HAT SUPPLEMENT (50X)	21060-017	6850PHM00089369
HDCP1A	SC22575	non-hazardous
Heat Transfer Fluid	3DA811	6850PHM00093095
HEKa-APF, 500,000 cells/vial	C0215C	6850PHM00090475
HELIUM, COMPRESSED	P4602G	6830PHM00092581
HEPA MAIN FILTER (INCUBATOR)	760207	discontinued by manufacturer
HEPES	H3375	6810PHM00048500
HEPES	H3375	6810PHM00048858
HEPG2 CELL LYSATE: UNSTIMULATED	47-239	6550PHM00089692
HIGH VACCUUM GREASE (DOW CORNING)	2021854-0807	6515015090415
Hi-Horse Serum	26050	6550PHM00092884
HORSE SERUM, INVITRO USE		6850PHM00090820
HSP27	SPA-803	6550PHM00092948

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Human ACTB (beta actin) Endogenous Control (VIC/MGB Probe, Primer Limited) (NON-HAZ), 1000 rxn	4326315E/ 4325788	6850PHM00089376
HUMAN CYTOKINE IMMUNOASSAY	HCCYTO-60SK	6850PHM00092845
HUMAN CYTOKINE/CHEMOKINE MAGNETIC BEAD PANEL IMMUNOASSAY	HCYTMAG-60K- PX42/PX29	6550PHM00092740
Human GADP (GADPH) Endogenous Control (VIC/MGB Probe, Primer Limited) (NON-HAZ)	4326317E	6550PHM00089439
HUMAN OXIDATIVE STRESS MAGNETIC BEAD PANEL	H0XSTMAG-18K	6550PHM00089641
HUMAN OXPHOS MAGNETIC BEAD PANEL	H0XPSMAG-16K	6550PHM00089625
HUMAN OXPHOS PANEL DETECTION ANTIBODIES	H0XPS-1016	6550PHM00089625
HUMAN OXPHOS PANEL PRE-MIXED MAGNETIC BEADS	H0XPSPMX6- MAG	6550PHM00089693
Human/Mouse Total HSP70/HSPA1A Cell-Based ELISA	KCB1663	6550PHM00092521
HYCLONE Phosphate Balanced Salt (PBS) Solutions	SH30028	6810PHM00089422
HYDROCHLORIC ACID, 37%	320331	6810PHM00051797
HYGROMYCIN B SOLN	H0654	6505PHM00091122
HYVOLT-II OIL		9150PHM00088207
ICA 069673	4305	6850PHM00092840
Icilin	1531	6850PHM00092830
IMMERSOL	518F	9150PHM00092639
INDO-1, AM	I-1203	6550PHM00092477
INSTANT KRAZY GLUE® All Purpose with Plastic Primer	KG-589	8040PHM00077352
Insulin(SAFC)	9190	considered drug
IODIZED SALT (FROM HEB)	N/A	Household item--exempt
IONOMYCIN, CALCIUM SALT	I24222	6550PHM00091115
IRON (II, III) OXIDE NANOPARTICLES	700320	6810PHM00084260
IRON(III) CHLORIDE HEXAHYDRATE	F2877	6810PHM00050979
ISOFLURANE	05260-05	6810PHM00081832
ISOPROPYL ALCOHOL		6810PHM00004022
ISOTON II DILUENT	8546719	6850PHM00090043
JASPLAKINOLIDE	J7473	6550PHM00091109
JASPLAKINOLIDE	J4580	6810PHM00089219
K-252A	K1639	6810PHM00089461
Kaleidoscope Polypeptide Standard	161-0325	6850PHM00092886
KALEIDOSCOPE PRESTAINED STANDARDS	1610324	6550PHM00091080
KANAMYCIN SULFATE	61-176-P	6810PHM00083117

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KARYOMAX COLCEMID SOLUTION	51210-040	6550PHM00091193
KARYOMAX(R) GIEMSA STAIN STOCK SOLUTION	10092013	6850PHM00083116
Kendall/Webel alcohol prep	6818	6850PHM00008299
KN-93	K1385	6810PHM00089462
LAEMMLI SAMPLE BUFFER	1610737	6550PHM00055735
Lamin B1	AB16048	6550PHM00092871
LAMP-1	SE2001	not hazardous
LAMP-1 MOUSE MONOCLONAL IGG1	SC-20011	not hazardous
LAMP-1 MOUSE MONOCLONAL IGG1(FITC MOUSE, ANTI HUMAN CD107a)	SC-20011	not hazardous
LAMP-1 RFP	87131	not hazardous
LANTHANUM (III) CHLORIDE HYDRATE	61490	6810PHM00083114
LATRUNCULIN A	L12370	6550PHM00091107
LATRUNCULIN A	L5163	6810PHM00088936
LB Agar Ampicillin	L0168	6810PHM00093525
LB Agar Ampicillin	L5667	6550PHM00094101
LB Agar Kanamycin	L0543	6810PHM00093526
LB Broth	L2542	6810PHM00093520
LEICA KUHL OL (NR 407)	14033606098	9150PHM00091054
LEITSILBER 200 SILVER PAINT	16035	8010PHM00083112
L-GLUTAMIC ACID MONOSODIUM SALT HYDRATE	G5889	6810PHM00083111
LIPOFECTAMINE 2000		6550PHM00091968
L-NAME (N $\omega$ -NITRO-L-ARGININE METHYL ESTER HYDROCHLORIDE)	N5751	6810PHM00089463
LOW SERUM GROWTH SUPPLEMENT (LSGS)	S00310	6850PHM00090042
LYSOSENSOR GREEN DND-189	L7535	6810PHM00091180
LYSOTRACKER GREEN	L-7526	6850PHM00092649
LYSOTRACKER RED DND-99	L-7528	6810PHM00091180
L- $\alpha$ -phosphatidylcholine (Egg, Chicken) (EggPC)	840051C	6850PHM00089250
M-3M3FBBS	1941	6810PHM00091023
MAGNESIUM CHLORIDE HEXAHYDRATE	M2670	6810PHM00083113
MAGNESIUM CHLORIDE HEXAHYDRATE	M2670	6810PHM00045397
MAGNESIUM SULFATE HEPTAHYDRATE	63138	6810PHM00083115
MANGANESE(II) SULFATE HYDRATE	229784	6810PHM00091071
MAPKSAPK KIT (MILLIPLEX)	48-660	6550PHM00089636
MEDIUM 106	M-106-500	6850PHM00089367
MELANODERM ASIAN TISSUE	MEL-312-A	6550PHM00089537
MELANODERM BLACK TISSUE	MEL-312-B	6550PHM00089539

MELANODERM CAUCASIAN TISSUE	MEL-312-C	6550PHM00089540
MELANODERM FULL THICKNESS CAUCASIAN TISSUE	MEL-300-FT-C	6550PHM00090147
MELANODERM FULL THICKNESS ASIAN TISSUE	MEL-300-FT-A	6550PHM00090145
MELANODERM FULL THICKNESS BLACK TISSUE	MEL-300-FT-B	6550PHM00090146
MELANODERM FULL THICKNESS MAINTENANCE MEDIUM	MEL-FT-MM	6550PHM00090155
MELANODERM TISSUE	MEL-312	6550PHM00089533
MELANODERM-300 FULL THICKNESS NEW MAINTENANCE MEDIUM-113	MEL-300-FT-NMM-113	6550PHM00090154
MELANOMA FULL THICKNESS MAINTENANCE MEDIUM	MLNM-FT-MM	6550PHM00090156
MELANOMA FULL THICKNESS MAINTENANCE MEDIUM	30-2001	6550PHM00089873
MELANOMA SKIN MODEL	MLNM-FT-A375	6550PHM00089532
MEM NEAA	11140-050	6550PHM00092790
METHANOL	179337	6810PHM00092576
METHANOL	179337	6810PHM00083124
METHYL- $\beta$ -CYCLODEXTRIN	C4555	6810PHM00083127
MiniElute PCR Purification Kit	28004	6550PHM00092983
MINERAL OIL	1632129	9150PHM00092534
MITOTRACKER RED FM DYE	M22425	6550PHM00092760
MOBIL VELOCITE OIL # 6 SPINDLE LIGHT OIL	970334	9150PHM00037898
MONITROL WHOLE BLOOD HEMOGLOBIN CONTROLS	2043752	item discontinued
MONOCLONAL ANTI-MAP2 CLONE AP- 20	M1406	6810PHM00091861
MONOCLONAL ANTI-MAP2(2A+2B)CLONE AP- 20	M1406	6810PHM00091861
Monoclonal Anti- $\beta$ -Actin, antibody produced in mouse	A1978	6550PHM00092822
Monoclonal Anti- $\beta$ -Tubulin, antibody produced in mouse	T8328	MSN: 6550PHM00092897 for 25ul MSN: 6550PHM00092901 for 200ul
MOUSE MONOCLONAL [12G10] TO INTEGRIN-BETA 1	AB30394	6850PHM00089373
MRS 2365	2157	6810PHM00090215
MTT CELL PROLIFERATION ASSAY DETERGENT REAGENT	30-1010K	6550PHM00090376
MTT DETERGENT REAGENT	30-1010K	6550PHM00090376
MTT REAGENT	10009591	6550PHM00090381
MURIATIC ACID	00118	6810PHM00039164

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N-(4-HYDROXYPHENYL)-ARACHIDONYLAMIDE	H1911	6505PHM00092516
N-Methyl-D-glucamine	M2004	6810PHM00094425
N,N-DIMETHYLFORMAMIDE	D4551	6810PHM00083128
N-5-AZIDO-2-NITROBENZOYLOXYSUCCINAMIDE	BC29	6810PHM00091088
NBACTIV1	Nbactiv1-500	6550PHM00088928
Nbactiv1	Nbactiv1-500	6550PHM00088928
NBACTIV4	Nb4-500	6850PHM00088960
Nbactiv4	Nb4-500	6850PHM00088960
NEGATIVE CONTROL, RNA RESEARCH	N1142	6550PHM00091972
NEOMYCIN SOLUTION	N1142	6810PHM00091178
Nerve Growth Factor 7S	13290-010	6850PHM00090825
NGF Mouse Protein, Native, 7S Subunit		6850PHM00090825
NITRIC ACID	9601-04	6810PHM00041667
NITRIC ACID		6810PHM00091056
NITRILOTRIACETIC ACID	N9877	6810PHM00083130
NITROGEN LIQUID NF LC230 (22 PSI)	P-4630-J	6830PHM00084914
NITROGEN, COMPRESSED	P4631H	6830006169183
NITROGEN, REFRIGERATED LIQUID	P-4630-J	6830PHM00084914
NOCODAZOLE	M1404	6810PHM00084077
NONIDET P40 (NP40) SUBSTITUTE	74385	6550PHM00091083
NORMOCIN	ANT-NR-2	considered drug does not need loaded
Novex HRP Chromogenic Substrate (TMB)	WP20004	6850PHM00092762
NP40 CELL LYSIS BUFFER	FNN0021	6550PHM00091129
Nuclease Free Water	AM9937	6850PHM00092763
Oligomycin, from <i>Streptomyces diastatochromogenes</i>	O4876	6810PHM00090874
OLIGONUCLEOTIDE		6810PHM00090973
One Shot Top 10 Chemically Competent Cells	C4040-10	6550PHM00092769
Opti-MEM	31985	6550PHM00091974
ORGANELLE LIGHT LYOSOMES GFP REAGENT (A/B/C)	O36228	product discontinued by manufacturer
OXYGEN, COMPRESSED	P-4638-H	6830PHM00021453
OXYTREMORINE M	1067	6810PHM00091067
p38 MAPK (D13E1) XP® Rabbit mAb	8690	6550PHM00091490
p44/42 MAPK (Erk1/2) (137F5) Rabbit mAb	4695	6550PHM00091401
p53ab5	MS-186-P1	6550PHM00093141
PACLITAXEL	TT7191	6810PHM00084086
Papain		6850PHM00092798

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PAPAIN KIT	PAP/HE-CA	6850PHM00088971
PARAFORMALDEHYDE	P6148	6810PHM00091066
PARAFORMALDEHYDE 8%	157-8	6810PHM00089262
PARAFORMALDEHYDE 8%	157-8	6810PHM00091061
PBS(amresco)	E504	6850PHM00092877
PCR nucleotide mix	C1141	6550PHM00094112
PCR PRIMER AMPLIFICATION KIT, HUMAN VIMENTIN	SP-10663	6550PHM00090140
PELCO COLLOIDAL SILVER LIQUID	16034	8010PHM00082703
PELCO CONDUCTIVE SILVER 187	16045	8010PHM00081869
PELCO ELECTRODAG 502 (COLLOIDAL SILVER)	16056	6850PHM00081843
PELCO NANOXACT 10 NM	8215010	6850PHM00092527
PELCO NANOXACT 100 NM	82150100	8010PHM00091093
PENICILLIN-STREPTOMYCIN	30-2300	6550PHM00091044
PENICILLIN-STREPTOMYCIN	1670049	6505PHM00093020
PEN-STREP (100X)	15140122	6550PHM00089231
PERFORMANCE VERIFICATION KIT	LK200-CON-K25	6550PHM00091923/ 6550PHM00092731
PfTurbo DNA Polymerase, 100 units	600250	6550PHM00094115
pGEM-T Easy Vector	A1360	6550PHM00094118
pH Electrode Storage Solution	910001	6850PHM00003504
PHALLOIDIN, TETRAMETHYLRHODAMINE B ISOTHIOCYANATE	P1951	6550PHM00091098
PHALLOIDIN, FLUORESCCEIN ISOTHIOCYANATE	P5282	6810PHM00091183
PHENYL METHANESULFONYL FLUORIDE (PMSF)	78830	6810PHM00091059
PHENYL METHANESULFONYL FLUORIDE (PMSF)	36978	6550PHM00091150
PHORBOL 12-MYRISTATE 13-ACETATE	BML-PE160	6810PHM00091090
PHOSPHATE BUFFERED SALINE (amresco)	780	6850PHM00082044
Phospho-CaMKII (Thr286) Antibody #3361	3361S	6550PHM00090884
Phospho-CaMKII (Tyr231) Antibody #3356	3356S	6550PHM00090882
Phospho-p38 MAPK (Thr180/Tyr182) (D3F9) XP@ Rabbit mAb	4511	6550PHM00091402
Phospho-p44/42 MAPK (Erk1/2) (Thr202/Tyr204) (D13.14.4E) XP@ Rabbit mAb	4370	6550PHM00091403
PhosphoPlus® p38 MAPK (Thr180/Tyr182) Antibody Duet #8203	8203S	6550PHM00091488
PhosphoPlus® p44/42 MAPK (Erk1/2) (Thr202/Tyr204) Antibody Duet #8201 (KIT)	8201S	6550PHM00091404
PHYTOHEMAGGLUTININ	10576015	6550PHM00091192

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PIG HIGH SENSITIVE CRP ELISA	KT-184	6550PHM00092197
PIPES SODIUM SALT	P2949	6810PHM00084285
PLATINUM-DIVINYLTETRAMETHYLDISILOXANE COMPLEX in xylene	SIP6831.2	6810PHM00090894
PLURONIC F-127	P3000MP	6550PHM00091094
POLY(ETHYLENE GLYCOL)		6810PHM00091368
POLY(ETHYLENE GLYCOL) ---Mn 200	P3015	6810PHM00094612
POLY(ETHYLENE GLYCOL) ---Mn 400	202398	6850PHM00025334
POLY(ETHYLENE GLYCOL) DIACRYLATE	475629	6810PHM00091078
POLY(ETHYLENE GLYCOL) METHYL ETHER METHACRYLATE	457876	6810PHM00082047
POLY-D-LYSINE HYDROBROMIDE	P6407	6810PHM00091182
POLY-D-LYSINE HYDROBROMIDE	P6403	6810PHM00091415
POLY-D-LYSINE HYDROBROMIDE	102694	6810PHM00091412
POLYEECT TRANSFECTION REAGENT	301105	6550PHM00092723
POLY-L-LYSINE HYDROBROMIDE	P1274	6810PHM00091386
POLY-L-LYSINE SOLUTION	P8920	6810PHM00089474
POLYLYSINE PEG CONJUGATE	PG5K-PLY	6810PHM00089527
PONCEAU S SOLUTION	P7170	6850PHM00082068
PORC-A-FIX HIGH HEAT TOUCHUP KIT	HH-3 (or KK-14)	8010PHM00082709
PORCINE IL-6 QUANTIKINE ELISA KIT	P6000B	6550PHM00092755
POTASSIUM ACETATE	P1190	6810PHM00082009
POTASSIUM BICARBONATE	P4913	6810PHM00082010
POTASSIUM CHLORIDE	60129	6810PHM00082011
POTASSIUM CHLORIDE	60129	6810PHM00082012
POTASSIUM HYDROXIDE	P5958	6810PHM00082013
POTASSIUM NITRATE	P6083	6810PHM00082017
PRECISION PLUS PROTEIN STANDARDS	1610373	6850PHM00020185
PRECISION PLUS PROTEIN™ STANDARDS	1610378	6550PHM00091865
PRECISION PLUS Western C Protein Standards		6810PHM00091357
PRIMARY RAT HIPPOCAMPAL NEURONS	A1084101	6550PHM00091854
Primer Set, Human Alpha Tubulin	1335147 (SP10597)	Not Hazardous, per Melanie... keep letter from Company in your MSDS Binder
PROLONG GOLD ANTIFADE REAGENT WITH DAPI	P36931	6850PHM00091184
PROPIDIUM IODIDE	P4170	6810PHM00073067
PROPIDIUM IODIDE	287075	6810PHM00090951

PROPIDIUM IODIDE	V13242B	6550PHM00090388
PROPIDIUM IODIDE STAINING SOLN	556463	6550PHM00090930
PROTEASE INHIBITOR COCKTAIL	P2714	6550PHM00091096
PROTEASE INHIBITOR COCKTAIL	P8340	6810PHM00091181
PROTEASE/PHOSPHATASE INHIBITOR 100X	5872	6550PHM00091032
PROTEIN ASSAY STD I GLOBULIN	5000005	6550PHM00092117
PROTEIN ASSAY STD II ALBUMIN	5000007	6550PHM00091086
PROTEIN SOLUBILIZATION BUFFER	4307610	6850PHM00083154
PSB 0474	2715	6810PHM00091027
Pure Yield Plasmid Maxiprep System	A2391	6550PHM00093018
PUROMYCIN (INVITROGEN)	A1138-03	6840PHM00092642
QIAamp DNA Mini Kit	513004	6550PHM00092946
QIAEX II Gel Extraction Kit	20021	6550PHM00093025
QIAprep Spin Miniprep Kit	27104	6550PHM00092868
QIAzol LYSIS REAGENT (GUANIDINE THIOCYANATE PHENOL SOLN, PART OF KIT 75842 IN 3177)	75842	6550PHM00082353
Quantitative Dual RT PCR Kit(maxim biotech, inc)	DP-10068	non-hazardous
QUICK START BOVINE SERUM ALBUMIN STD KIT	5000207	6550PHM00092509
QUICK START BRADFORD DYE REAGENT	5000205	6550PHM00092505
RAT NEURON NUCLEOFECTOR KIT (LONZA)	VPG-1003	6850PHM00092748
RAT NEURON NUCLEOFECTOR KIT (LONZA)	VCA-1002	6850PHM00092149
RC REAGENTS PACKAGE (RC DC PROTEIN ASSAY KIT)	5000119	6550PHM00091112
ReadyPrep 2D Cleanup Kit	1632140	6850PHM00090278
READYPREP 2-D CLEANUP KIT	1632130	6850PHM00091900
READYPREP 2-D STARTER KIT	1632105	6850PHM00092141
READYPREP TBP REDUCING AGENT	1632101	6550PHM00091082
REDMAX CLEAR AMMONIA	214486	6810PHM00071231
Reducing Agent TBP	163-2101	6550PHM00091082
REXOLITE ADHESIVE	12517	9330PHM00092502
RIBONUCLEASE A (RNASE)	R4642	6810PHM00084084
RIPA LYSIS BUFFER (10X)	98065	6550PHM00091081
RNA 6000 NANO KIT	5067-1511	6850PHM00091103
RNALATER TISSUEPROTECT TUBES (20 TUBES/BOX, 5 ML/TUBE)	76163	non-hazardous
RNALATER TISSUEPROTECT TUBES (50 TUBES/BOX, 1/5ML/TUBE)	76154	non-hazardous

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RNAqueous Kit	AM1914	6550PHM00093026
<b>RNASE ZAP WIPES</b>	<b>AM9780</b>	<b>6850PHM00027203</b>
RNaseZap® WIPES (100 SHEETS)	AM9786	6850PHM00027203/6840PHM00091394
RNaseZap® Wipes Refill (300 SHEETS)	AM9788	6850PHM00090390
RNEASY LIPID TISSUE MIDI KIT (10 TUBES/KIT)	75842	6550PHM00092982
RNEASY MICRO KIT	74004	6550PHM00089331
RNEASY MINI KIT (250)	74106	6550PHM00089071
RNEASY MINI KIT (50)	74104	6550PHM00089306
ROCCAL-D PLUS (DISINFECTANT)	53208	7930PHM00025893
Rotenone	R8875	6810PHM00090870
ROTTLELIN	R5648	6810PHM00084081
RPMI MEDIUM	45052	6550PHM00055777
RPMI MEDIUM - 1640	11875101	6550PHM00069327
RPMI-1640 Medium	30-2001	6550PHM00089873
RT2 FIRST STRAND KIT	330401	6550PHM00089339
RT2 Profiler PCR Array(SA Biosciences)		non-hazardous
RT2 SYBR Green ROX qPCR Mastermix	330520	6550PHM00089548
RT-PCR Water	AM9935	6810PHM00092949
SAPONIN	47036	6810PHM00083131
SGC5 (Biotium)	70057	not hazardous
Sheared Salmon Sperm DNA	AM9680	6850PHM00092952
SI RNASE STARTER KIT	AM1640	6550PHM00091977
SILICON (IV) OXIDE	93-1434	6810PHM00082051
SILICONE GREASE	MG-8462	9150PHM00051946
SILVER, DISPERSION NANOPARTICLES	730793	6810PHM00084266
SKF-96365	S7809	6810PHM00089457
SOC Medium	S1797	6810PHM00093522
SODIUM ACETATE	S7545	6810PHM00082016
SODIUM ACETATE	AM9740	6810PHM00092815
SODIUM BICARBONATE	25080094	6810PHM00092498
SODIUM CARBONATE	S1641	6810PHM00082019
SODIUM CHLORIDE	S7653	6810PHM00082014
SODIUM CITRATE TRIBASIC DEHYDRATE	S4641	6810PHM00065104
SODIUM DODECYL SULFATE (SDS) ELECTROPHORESIS GRADE	BP166-500	6810PHM00082058

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SODIUM HYDROSULFITE (SODIUM DITHIONITE)	157953	6810PHM0020144
SODIUM HYDROXIDE PELLETS	30620	6810PHM00049926
SODIUM HYDROXIDE SOLN	72068	6810PHM00083105
SODIUM MOLYBDATE	243655	6810PHM00083137
SODIUM NITRATE	S8170	6810PHM00083139
SODIUM PHOSPHATE DIBASIC	S3264	6810PHM00083107
SODIUM PHOSPHATE DIBASIC	71640	6810PHM00082062
SODIUM PHOSPHATE MONOBASIC MONOHYDRATE	S8282	6810PHM00082065
SODIUM PHOSPHATE TRIBASIC DODECAHYDRATE	S8639	6810PHM00082045
SODIUM PYRUVATE	BP356-100	6810PHM00082050
SODIUM PYRUVATE, 100 mM	11360070	6810PHM00082048
SODIUM TETRABORATE DECAHYDRATE	B9876	6810PHM00082020
SODIUM TRIPOLYPHOSPHATE	238503	6810PHM00082030
Sperm Dead/Live Kit	L7011	6550PHM00092899
Sperotech 6-peak validation beads	QA110	6810PHM00092818
STANDARD EPIDERM TISSUE	EPI-212	6550PHM00089516
STANDARD EPIDERM-FT TISSUE	EFT-312	6550PHM00089514
STAUROSPORINE SOLN	S6942	6810PHM00091176
STREPTAVIDIN-PHYCOERYTHRIN	MC-SAPE4	6550PHM00089673
SUCROSE	S5016	6810PHM00082056
SULFUR HEXAFLUORIDE-SF6	1048	6830008172342
SULFURIC ACID	320501	6850PHM00042264
Super Friendly Freeze it	23-022524	6850PHM00092921
SUPER GLUE (HFT)	67190	8040PHM00091063
SUPER X GLUE	8008	8040PHM00091036
SUPER SIGNAL WEST DUFA EXTENDED DURATION SUBSTRATE	34075	6550PHM00091053
SUPPLEMENT S7 RUO	S0175	6850PHM00090478
SYL GUARD 184 SILICONE ELASTOMER KIT (DOW CORNING)	3097366-1004	8030004859200
Tae BUFFER, 50X	129237	6850PHM00092816
TAP GREASE		9150PHM00092941
TaqMan Fast Universal PCR Master Mix	4352042	6550PHM00092824
TaqMan Reverse Transcription Reagents	N8080234	6550PHM00092166
TaqMan® Gene Expression Master Mix	4369016	6850PHM00089342
TaqMan® ONE STEP RT-PCR Master Mix	4309169	6550PHM00092846
TETRAETHYLAMMONIUM ACETATE TETRAHYDRATE	205583	6810PHM00082059

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TETRAETHYLAMMONIUM CHLORIDE	T2265	6810PHM00082098
TETRODOTOXIN		6810PHM00090830
THAPSIGARGIN	T9033	6810PHM00091175
THYMIDINE	T9250-10g	6550PHM00091998
TIA-1	SC1751	non-hazardous
TRI REAGENT	T9424	6850PHM00092779
TRICHLOROACETIC ACID (TCA)	T9159	6810PHM00045254
TRIFLUOROACETIC ACID	BP618-500	6810PHM00082055
TRIFLUOROACETIC ACID (TFA)	09653	item discontinued
TRI-PAK Z SERIES	8320312	6550PHM00089860
TRIS(HYDROXYMETHYL)AMINOMETHANE	154563	6810PHM00072451
TRIS-Glycine 10X solution	BP-1306-4	6550PHM00091245
TRIS-HYDROCHLORIDE	H512-3	6810PHM00082070
TRITON X-100 SOLUTION	T8787	6810PHM00082089
TRIZMA HYDROCHLORIDE SOLUTION	T2788	6810PHM00082085
TRYPAN BLUE STAIN	T10282	6550PHM00090929
TRYP SIN EDTA	25052	6810PHM00092754
<b>TRYP SIN NEUTRALIZER SOLUTION</b>	<b>R-002-100</b>	<b>6810PHM00089421</b>
TRYP SIN-EDTA	ATCC 30-2101	6810PHM00090762
TRYPTONE	BP1421-500	6810PHM00082319
Tubulin Protein Derived from Porcine Brain		6550PHM00089242
TUBULIN PROTEINS FROM PORCINE BRAIN	MT002-A	6550PHM00089223
TWEEN 20	P9416	6810PHM00082094
TWEEN 20	P5927	6810PHM00065974
U0126 MONOETHANOLATE	U120	6810PHM00089466
ULTRA GRADE 19 OIL	11025015	4920015028010
Ultrapure BSA	AM2618	Non-hazardous
VACCUUM PUMP FLUID (INLAND 19)	01-184-150A	9150PHM00088216
VARIOUS ANIMAL CELL CULTURES AT BIOSAFETY LEVEL 1 OR 3		6550PHM00090990
VARIOUS ANIMAL CELL CULTURES AT BIOSAFETY LEVEL 1 OR 4		6550PHM00090986
Verso-cDNA synthesis kit	AB-1453B	6550PHM00091512
VIMENTIN PURIFIED	BP2545-100	6810PHM00090036
VIMENTIN RV202	SC-32322	Non-hazardous
VINBLASTINE SULFATE SALT		6810PHM00091371
VIRKON S DISINFECTANT	71654-6	6840PHM00091065
WATER FOR INJECTION	A1287301	6550PHM00089216

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WATER FOR INJECTION (WFI) FOR CELL CULTURE	A1287301	6550PHM00089216
WATER, CHROMASOLV	270733	6810PHM00065164
WAY LUBE 68 WAY OIL (MOTOR OIL CO)		9150PHM00051072
WD-40		8030014189006
WELD-ON 2007 FOR VINYL	10448	8040PHM00092515
WELD-ON 4 FOR ACRYLIC	10307	6810PHM00004066
WELDWOOD GEL FORMULA CONTACT CEMENT	00030536	8040PHM00011856
WORTMANNIN	W1628	6810PHM000818070
WORTMANNIN, READY MADE SOLN	W3144	6810PHM00089468
XE 991 dihydrochloride	2000	6810PHM00092833
XF ASSAY MEDIUM	101022-100	6850PHM00089364
XF CALIBRANT SOLUTION	100840-000	6850PHM00089363
XF CELL MITO STRESS TEST KIT	101706-100	6550PHM00092722
XL1-Blue Supercompetent Cells	200236	6550PHM00093603
YEAST EXTRACT	BP1422-500	6505PHM00056286
YO-PRO1 Iodide (491/509)	Y3603	6810PHM00089253
ZINC SULFATE HEPTAHYDRATE	Z0251	6810PHM00082103

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