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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	294.837	316.608	311.071	-	311.071	416.915	336.227	352.119	404.940	Continuing	Continuing
CA5: <i>CONTAMINATION AVOIDANCE (SDD)</i>	122.354	52.114	33.018	-	33.018	37.385	45.882	30.029	44.953	Continuing	Continuing
CM5: <i>HOMELAND DEFENSE (SDD)</i>	-	9.109	9.952	-	9.952	7.425	3.606	1.981	1.981	Continuing	Continuing
CO5: <i>COLLECTIVE PROTECTION (SDD)</i>	18.227	11.307	10.642	-	10.642	10.249	1.600	-	-	0.000	52.025
DE5: <i>DECONTAMINATION SYSTEMS (SDD)</i>	7.594	-	9.324	-	9.324	8.652	10.938	9.129	9.466	Continuing	Continuing
IP5: <i>INDIVIDUAL PROTECTION (SDD)</i>	20.862	11.490	13.971	-	13.971	17.046	1.603	1.990	6.370	Continuing	Continuing
IS5: <i>INFORMATION SYSTEMS (SDD)</i>	15.689	2.423	2.045	-	2.045	11.794	9.884	24.826	23.267	Continuing	Continuing
MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>	75.657	216.715	214.056	-	214.056	246.295	187.101	213.001	238.653	Continuing	Continuing
MC5: <i>MEDICAL CHEMICAL DEFENSE (SDD)</i>	3.801	2.407	9.642	-	9.642	41.257	45.477	50.862	58.935	Continuing	Continuing
MR5: <i>MEDICAL RADIOLOGICAL DEFENSE (SDD)</i>	-	-	2.027	-	2.027	16.610	18.103	6.101	7.115	Continuing	Continuing
TE5: <i>TEST & EVALUATION (SDD)</i>	30.653	11.043	6.394	-	6.394	20.202	12.033	14.200	14.200	Continuing	Continuing

A. Mission Description and Budget Item Justification

Operational forces have an immediate need to survive, safely operate, and sustain operations in a Chemical and Biological (CB) threat environment across the continuum of global, contingency, special operations/low intensity conflict, counternarcotics, and other high-risk missions. Operating forces have a critical need for defense against worldwide proliferation of CB warfare capabilities and for medical treatment of CB casualties. Congress directed centralized management of Department of Defense (DoD) CB Defense initiatives, both medical and non-medical. This program element supports the System Development and Demonstration (SDD) of medical and non-medical CB defensive equipment and materiel. Projects within BA5 are structured to consolidate Joint and Service-unique tasks within four commodity areas: contamination avoidance, individual and collective force protection, decontamination, and medical countermeasures. This consolidation provides for development and operational testing of equipment for Joint Service use and for Service-unique requirements.

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APPROPRIATION/BUDGET ACTIVITY
0400: *Research, Development, Test & Evaluation, Defense-Wide*
BA 5: *Development & Demonstration (SDD)*

R-1 ITEM NOMENCLATURE
PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*

Contamination avoidance efforts under this system development program will provide U.S. forces with real-time hazard assessment capabilities. They include multi-agent point and remove chemical detection for ground, aircraft, and shipboard applications; automated warning and reporting systems; integrated radiation detection and monitoring equipment; and enhanced battlefield reconnaissance capabilities. Force protection efforts will increase protection levels while decreasing physical and psychological burdens imposed by protective equipment.

The DoD Biological Defense mission requires the detection of validated biological threat agents to provide early warning capabilities on mobile and fixed platforms. This program, element will provide theater protection through the development of point and stand-off detection systems. The detection system concept will provide detection, identification, warning, and sample collection for verification that a biological agent attack has occurred.

The Secretary of Defense is responsible for research, development, acquisition, and deployment of medical countermeasure equipment and materiel to prevent or mitigate the health effects of CB threats to the Armed Forces and directs strategic planning for and oversight of programs to support medical countermeasures development and acquisition for our Armed Forces personnel. The CB medical threat to the Armed Forces, in contrast with public health threats to U.S. citizens, encompasses all potential or continuing enemy actions that can render a Service Member combat ineffective. CB medical threats, because they apply as a whole to military units deployed on a specific mission and/or operations, may result in the unit being unable to complete its mission. CB medical countermeasures developed by DoD, unlike those developed to support U.S. population, must support military commanders practical operational requirements and deployment strategies and must emphasize prevention of injury and illness and protection of the force. Preventive measures in this SDD, such as vaccines and chemical prophylaxis, conserves fighting strength, decreases the logistics burden by reducing the need for larger deployed hospital footprint and greater demand for tactical and strategic medical evacuation, and satisfy the need for greater flexibility in military planning and operations. When vaccines and other prophylactic medical countermeasures are not available, efforts on this SDD support pre-hospitalization treatment, en-route care, hospital care, and long-term clinical outcomes. Specific items in this category include CB diagnostics, and therapeutics to mitigate the consequences of biologic threats and exposure to ionizing radiation due to nuclear or radiological attacks. DoD is the only Federal activity conducting SDD on these prophylactic, therapeutic and rapid identification and diagnostic CB medical countermeasures.

The Department of Defense coordinates its efforts with the Departments of Health and Human Services to promote synergy and minimize redundancy. This Department of Defense ensures coordination by participating in the Public Health Emergency Medical Countermeasures Enterprise interagency strategic planning process ("One Portfolio"). The Department of Defense's longstanding experience and success in CB medical countermeasure research, development, acquisition, and deployment not only ensures protection of the Armed Forces, it also accelerate and improves the overall national efforts in CB medical countermeasure research, development, and acquisition because of its unique facilities, testing capabilities, and trained and experienced personnel.

The projects in this program element support efforts in the engineering and manufacturing phase of the acquisition strategy and are therefore correctly placed in Budget Activity 5.

UNCLASSIFIED

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0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i>	PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>
BA 5: <i>Development & Demonstration (SDD)</i>	

B. Program Change Summary (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	407.162	400.608	405.991	-	405.991
Current President's Budget	294.837	316.608	311.071	-	311.071
Total Adjustments	-112.325	-84.000	-94.920	-	-94.920
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.599	-			
• SBIR/STTR Transfer	-3.599	-			
• Other Adjustments	-108.127	-84.000	-94.920	-	-94.920

Change Summary Explanation

Funding: FY11

-\$1.527M Congressional General Reductions - Section 8117 (CA5 -\$466K; CM5 -\$4K; CO5 -\$69K; DE5 -\$106K; IP5 -\$46K; IS5 -\$51K; MB5 -\$534K; MC5 -\$186K; MR5 -\$4K; TE5 -\$61K)

-\$41.000M Congressional Directed Reductions (CA5 -\$15,000K; DE5 -\$9,000K; MB5 -\$5,000K; MC5 -\$12,000K)

-\$65.600M Congressional Directed Transfer (MB5 -\$65,600K) Medical Realignment to Tech Base

-\$.599M Reprogrammings (CA5 +\$13,985K; CM5 -\$1,152K; DE5 -\$11,548K; IP5 +\$11,338K; IS5 +\$2,016K; MB5 -\$6,367K; MC5 -\$35,432K; MR5 -\$1,129K; TE5 +\$14,956K)

-\$3.599M SBIR Transfers (CA5 -\$1,101K; CM5 -\$10K; CO5 -\$163K; DE5 -\$251K; IP5 -\$108K; IS5 -\$120K; MB5 -\$1,256K; MC5 -\$437K; MR5 -\$10K; TE5 -\$143K)

-\$1.323M Other Adjustments (MC5 -\$1,323K)

FY12

-\$84.000M Congressional Reductions (DE4 -\$4,370K; MB4 -\$55,630K; MC4 -\$24,000K)

FY13

-\$94.920M Other Adjustments

(-\$98.760M) Other Adjustments (CA5 -\$30,914K; CM5 -\$4,000K; CO5 -\$4,000K; DE5 +\$20K; IP5 +\$2,030K; IS5 -\$7,503K; MB5 -\$47,625K; MC5 -\$9,337K; MR5 +\$2,002K; TE5 +\$567K)

(+\$3.840M) Inflation Adjustments (All Programs)

Schedule: N/A

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Technical: N/A

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>				PROJECT CA5: <i>CONTAMINATION AVOIDANCE (SDD)</i>			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
CA5: <i>CONTAMINATION AVOIDANCE (SDD)</i>	122.354	52.114	33.018	-	33.018	37.385	45.882	30.029	44.953	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This project supports Engineering and Manufacturing Development and Low Rate Initial Production (EMD/LRIP) of an array of reconnaissance, detection and identification equipment, and warning systems.

Efforts included in this project are: (1) Chemical, Biological, Radiological, and Nuclear Dismounted Reconnaissance Systems (CBRN DRS); (2) Joint Biological Point Detection System (JBPDS); (3) Joint Biological Tactical Detection System (JBTDS); (4) Joint Chemical Agent Detector (JCAD); (5) Major Defense Acquisition Program (MDAP) Support; (6) Next Generation Chemical Standoff Detection (NGCSD); (7) Non-Traditional Agent (NTA) Detection Support; and (8) Sensor Suite Integration for NBC Reconnaissance Systems (SSI NBCRS).

The CBRN Dismounted Reconnaissance Systems (CBRN DRS) consists of portable, commercial and government off-the-shelf equipment to provide personnel protection from current and emerging CBRN hazards and detection, identification, sample collection, decontamination, marking, and hazard reporting of CBRN threats. The system supports dismounted Reconnaissance, Surveillance, and CBRN Site Assessment missions to enable more detailed CBRN information reports for commanders. The program will support emerging CBRN threat capability to provide an enhanced capability in the future.

The Joint Biological Point Detection System (JBPDS) is a Joint Service biological detection system. The Army platforms include the JBPDS on the Biological Integrated Detection System (BIDS) and the Stryker Nuclear Biological Chemical Reconnaissance Vehicle (NBCRV). The Navy installs the JBPDS on Aegis class ships. Engineering Changes to refresh the technology of the JBPDS consist of two separate efforts (one funded by procurement and one RDT&E funded) that, when combined, will reduce lifecycle costs and address obsolescence concerns. The existing computer hardware and operating system in the JBPDS will not be supportable beyond FY13 due to obsolescence. Under the existing production contract, an engineering effort is underway to address the computer and operating system obsolescence concerns. The element being developed under RDT&E funding is a new detector technology that will reduce false positives by a rate of 30:1 resulting in reduced consumable use and reduced operational and maintenance costs.

The Joint Biological Tactical Detection System (JBTDS) will integrate, test and produce the first lightweight (less than 37 lbs), low cost biological surveillance system that will detect, collect and identify biological warfare agent aerosols. JBTDS will provide warning through the Joint Warning And Reporting Network (JWARN) and archive sample for follow-on analyses. JBTDS will provide near real time local audio and visual alarm for use by any Military Occupational Specialty (MOS). JBTDS components will be man portable, battery operable and easy to employ. JBTDS will be used organically at battalion level and below and provide notification of a hazard and enhanced battle space awareness to protect and preserve the force. When networked, JBTDS will augment existing biological detection systems to provide a theater-wide seamless array capable of biological detection, identification and warning. Units equipped with JBTDS will conduct biological surveillance missions to detect BWA aerosol clouds, collect a sample, and identify the agent to support time sensitive force protection decisions.

UNCLASSIFIED

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The Joint Chemical Agent Detector (JCAD) is a miniaturized, rugged, and portable point chemical agent detector that automatically and simultaneously detects, identifies, quantifies, and alerts in the presence of nerve, blister, and blood chemical warfare agents. The M4 JCAD entered full rate production in September 2008 and will be produced through FY10. The attainable JCAD Increment 2 capabilities within the JCAD Increment 1 objectives were incorporated into an improvement of the M4 JCAD (M4A1). Production of the M4A1 began in FY11. JCAD will be used for wheeled vehicles, stand alone, and individual soldier applications. The M4 JCAD will replace the M8A1 and the M22 Automatic Chemical Agent Alarms (ACAA/ACADA). The M4A1 may additionally replace the Chemical Agent Monitor (CAM) and Improved Chemical Agent Monitor (ICAM) and other legacy systems currently used by the individual Services.

The Major Defense Acquisition Program (MDAP) Support program will integrate System of Systems (SoS) solutions across the Armed Services for (MDAP) having Chemical and Biological Radiological and Nuclear (CBRN) survivability requirements. The program will demonstrate modular, net-centric, "plug and play" capabilities for mounted and dismounted CBRN reconnaissance that will establish a common CBRN reconnaissance architecture across the services. This program does not continue beyond FY11.

The Next Generation Chemical Standoff Detection (NGCSD), a next generation chemical standoff effort initiated under the JSLSCAD program, will provide an assessment of current standoff detection capabilities for both traditional and non-traditional chemical agent attacks at fixed sites, forward operating bases and on Service designated vehicles and ships. This effort will evaluate industry developed standoff sensor technologies for future standoff systems. Findings will support development of the future detection system. This program does not continue beyond FY11.

The Non-Traditional Agent (NTA) Detection projects will develop, procure and sustain detection and identification system(s) through follow-on tech insertion that will enhance the Domestic Response Capability, Advanced Threat (AT) Box, CBRN DRS (Dismounted Reconnaissance Sets, Kits, and Outfits), and Next Generation Chemical Point Detection programs to attain situational awareness and respond to emerging and escalating threats. The projects will test, optimize and sustain technology capabilities provided within the fielded NTA detection components and explore the passive defense mission space. The products provide a mid-term capability to detect priority emerging threat materials and afford the Warfighter the ability to support domestic response and force protection missions. These products leverage common core technologies to detect and identify threats that can be exploited for lab deployable, fixed site and handheld applications. Conduct systems engineering analysis to prioritize capability gaps and outline issues that require investment. These projects will continue to address next priority passive defense mission areas and escalating threats by continuing to qualify and improve key detection and identification equipment.

Sensor Suite Integration for NBC Reconnaissance Systems (SSI NBCRS) will evaluate technologies' ability to provide biological warfare agents (BWA), liquid Chemical Warfare Agent (CWA), Toxic Industrial Chemical (TIC), and Non-Traditional Agent (NTA) identification using a single detection technology. This effort will provide improved capability and significant cost savings to the warfighter by reducing consumables, reducing false alarms, and providing the ability to rapidly upgrade to detect emerging threats. The program will demonstrate a modular, "plug and play" capability, which may support mounted and dismounted CBRN reconnaissance, fixed site, lab deployable, and handheld applications. Feasibility of a single sensor concept for CWA, TIC, and biological aerosols was demonstrated in FY11 technology evaluation. A low volatile chemical surface contamination detection capability will provide improved identification of CWAs, TICs, and NTAs. Continued prototype development will mitigate risk for future programs including NTA Detection products and Next Generation Chemical Point Detection.

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Title: 1) CBRN DRS - Dismounted Reconnaissance Sets, Kits, and Outfits (DR SKO) FY 2011 Accomplishments: Completed documentation, systems engineering, and design to support Milestone (MS) B. Initiated documentation, systems engineering, and design to support Milestone (MS) C Low Rate Initial Production (LRIP). Continued Integrated Product Team (IPT) support. FY 2012 Plans: Continue documentation, systems engineering, and design to support MS C LRIP. Continue IPT support. FY 2013 Plans: Complete documentation, systems engineering, and design to support MS C. Continue IPT support.		2.516	3.900	4.167
Title: 2) CBRN DRS - DR SKO FY 2011 Accomplishments: Completed developmental test planning. Initiated developmental testing at the component level. Initiated system level developmental testing. FY 2012 Plans: Complete component and system level developmental testing. FY 2013 Plans: Initiate and complete Multi-Service Operational Test and Evaluation (MOT&E). Initiate Failure Mode, Effects, and Criticality Analysis (FMECA).		12.450	1.821	6.248
Title: 3) CBRN DRS - DR SKO FY 2011 Accomplishments: Initiated technical manual and logistics products development for Operational Assessment for Dismounted Reconnaissance Sets, Kits, and Outfits (DR SKO). FY 2012 Plans: Initiate and complete Operational Assessment for DR SKO. Continue technical manual development and logistics products development. FY 2013 Plans: Complete technical manual development. Continue logistics products development.		5.000	9.048	4.266
Title: 4) CBRN DRS - DR SKO		8.350	2.602	-

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2011	FY 2012	FY 2013
<p><i>FY 2011 Accomplishments:</i> Fabricated Engineering and Manufacturing Development (EMD) systems for test (2 Navy systems, \$675K each; 2 Air Force systems, \$975K each; 2 Army systems, \$1125K each; 2 Marine Corps systems, \$1400K each).</p> <p><i>FY 2012 Plans:</i> Retrofit Engineering and Manufacturing Development (EMD) systems.</p>			
<p><i>Title:</i> 5) CBRN DRS - Emerging Threats</p> <p><i>FY 2011 Accomplishments:</i> Initiated and completed Developmental Testing (DT) and Operational Assessment (OA) to support initial emerging capability to meet urgent need for Domestic Response Capability.</p> <p><i>FY 2012 Plans:</i> Assess emerging technical solutions from ONS investments.</p>	3.314	2.929	-
<p><i>Title:</i> 6) CBRN DRS - Emerging Threats</p> <p><i>FY 2011 Accomplishments:</i> Initiated and completed engineering solution for integrated emerging threats kit to address capability shortfalls identified in the operational assessment.</p>	5.324	-	-
<p><i>Title:</i> 7) CBRN DRS - Emerging Threats</p> <p><i>FY 2011 Accomplishments:</i> Supported testing and integration of capability shortfalls with engineering solutions and CONOPs development for cutting edge solutions to provide systems that address emerging threats.</p>	6.200	-	-
<p><i>Title:</i> 8) CBRN DRS - Emerging Threats</p> <p><i>FY 2011 Accomplishments:</i> Completed Commercial Off-the-Shelf (COTS)/Government Off-the-Shelf (GOTS) evaluation for Sensitive Site Assessment and Consequence Management mission areas, and initiated and completed evaluation in force protection mission area of environmental monitor technology.</p>	1.617	-	-
<p><i>Title:</i> 9) CBRN DRS - Emerging Threats</p> <p><i>FY 2011 Accomplishments:</i></p>	2.700	-	-

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Initiated and completed COTS Detection Fast Track to upgrade and develop training for specialized CBRN forces COTS solutions. Benefit to field enhanced capabilities to Civil Support Teams and transition possibilities for Next Generation Chemical Point Detector (NGCPD).				
Title: 10) CBRN DRS - Emerging Threats FY 2011 Accomplishments: Initiated and completed validation of analytical methods that enables high throughput on site analysis of environmental samples for rapid site recovery. Benefit to field enhanced capabilities to Civil Support Teams and transition possibilities for Next Generation Chemical Point Detector (NGCPD).		0.950	-	-
Title: 11) JBPDS FY 2011 Accomplishments: Continued strategic and tactical planning, government system engineering, program/financial management, costing, contracting, scheduling, acquisition oversight and technical support. FY 2012 Plans: Continue strategic and tactical planning, government system engineering, program/financial management, costing, contracting, scheduling, acquisition oversight and technical support. FY 2013 Plans: Complete strategic and tactical planning, government system engineering, program/financial management, costing, contracting, scheduling, acquisition oversight and technical support.		3.476	0.926	0.328
Title: 12) JBPDS FY 2011 Accomplishments: Continued development of a new detector for the JBPDS program. FY 2012 Plans: Complete development of a new detector for the JBPDS program. FY 2013 Plans: Complete development of a new detector for the JBPDS program.		12.688	1.994	1.017
Title: 13) JBPDS FY 2011 Accomplishments: Initiated component level testing of the prototype detector. FY 2012 Plans:		1.000	2.000	-

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Complete component level testing of the new detector.				
Title: 14) JBTDS FY 2013 Plans: Provide strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support.		-	-	1.904
Title: 15) JBTDS FY 2013 Plans: Provide user representation and involvement (i.e. integrated product teams and working groups).		-	-	1.135
Title: 16) JBTDS FY 2013 Plans: Initiate Engineering Manufacturing & Development (EMD) Contract Award.		-	-	6.923
Title: 17) JCAD FY 2011 Accomplishments: Completed purchase of prototype detection systems for Technology Evaluation (6 prototypes at a price of \$600K each) and technical support.		3.965	-	-
Title: 18) JCAD FY 2011 Accomplishments: Completed test and evaluation of software enhancements to incorporate into CBRN DRS to meet Navy specific requirements for Visit Board Search & Seizure (VBSS) mission and TIC testing.		2.679	-	-
Title: 19) JCAD FY 2011 Accomplishments: Completed program management, systems engineering, and Integrated Product Team (IPT) support.		2.967	-	-
Title: 20) MDAP SPRT Description: Development of modular CBRN sensing capabilities for the Small Unmanned Ground Vehicle (SUGV) and Multifunction Utility/Logistics Equipment (MULE). FY 2011 Accomplishments: Completed the design, development and test of the Chemical Point Sensor (CPS), Common CBRN Sensor Interface (CCSI) Compliant Radiological Detector (CCRD), and a CCSI Sensor Mounting Cradle to meet Brigade Combat Team Modernization		0.470	-	-

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
(BCTM) CBR detection requirements for the Small Unmanned Ground Vehicle (SUGV) and the Multifunction Utility/Logistics Equipment (MULE), unmanned vehicle platforms.				
Title: 21) MDAP SPRT Description: Decontamination capabilities to meet Joint Strike Fighter (JSF) survivability requirements. FY 2011 Accomplishments: Completed the design and development of one transportable shelter system prototype at an estimated unit cost of \$1.5 million. Completed component level testing of the transportable shelter system. Conducted system level testing of the portable shelter system.		1.993	-	-
Title: 22) MDAP SPRT - JSF Description: Development of an aircrew mask to meet Joint Strike Fighter (JSF) Survivability Requirements. FY 2011 Accomplishments: Completed the design and development of a JSF specific aircrew mask.		4.830	-	-
Title: 23) MDAP SPRT Description: Provide strategic tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support. FY 2011 Accomplishments: Conducted strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight, and technical support.		2.682	-	-
Title: 24) NGCSD FY 2011 Accomplishments: Provided program management, systems engineering, and Integrated Product Team (IPT) support.		1.455	-	-
Title: 25) NTA DETECT - COTS/GOTS Mission Analysis FY 2011 Accomplishments: Completed DT for Commercial Off-the-Shelf (COTS)/Government Off-the-Shelf (GOTS) evaluation for Sensitive Site Assessment (SSA) and Consequence Management (CM) mission areas. Continued analysis for Commercial Off-the-Shelf (COTS)/Government Off-the-Shelf (GOTS) evaluation in force protection mission area. Initiate COTS/GOTS dual use assessment. FY 2012 Plans:		2.340	2.920	1.952

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Initiate exploring passive defense mission space. Complete analysis for Commercial Off-the-Shelf (COTS)/Government Off-the-Shelf (GOTS) evaluation in force protection mission area. Continue COTS/GOTS dual use assessment. FY 2013 Plans: Initiate and complete DT and Limited Objective Experiment (LOE) to assess performance Commercial Off-the-Shelf (COTS)/Government Off-the-Shelf (GOTS) solution in passive defense mission space. Optimize system configuration, develop sampling improvements and provide system support. Complete COTS/GOTS dual use assessment.				
Title: 26) NTA DETECT - DESI Mass Spectrometer FY 2011 Accomplishments: Completed library development, integration, and DT for the lab deployable Desorption Electrospray Ionization (DESI) Mass Spectrometer. Initiated engineering to support reduced form factor for the Man Portable Mass Spectrometer and improve sampling techniques. FY 2012 Plans: Continue engineering to support reduced form factor, improve sampling techniques and ruggedize the Man Portable Mass Spectrometer. FY 2013 Plans: Continue engineering to support reduced form factor, improve sampling techniques, ruggedize and integration for the Man Portable DESI Mass Spectrometer. Transition Man Portable DESI Mass Spectrometer as candidate to NGCPD.		4.192	4.611	2.043
Title: 27) NTA DETECT - Environmental Monitor FY 2011 Accomplishments: Continued engineering, integration of COTS and initiate DT to provide environmental monitoring capability. FY 2012 Plans: Continue optimization, improve sampling techniques, and continue DT to optimize and ruggedize environmental monitoring COTS capability to assess military utility. These efforts provide technology inserts for advanced threat box, domestic response capability, and adoption by programs of record. Continue DT to assess performance of environmental monitoring capability including Chemical Hazard Indicating and Ranging Pack (CHIRP) and Instantaneous Biological Aerosol Collector (IBAC) for Chem. FY 2013 Plans:		1.623	2.197	2.141

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CA5: <i>CONTAMINATION AVOIDANCE (SDD)</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Complete DT and initiate Limited Objective Experiment (LOE) of environmental monitor (CHIRP and IBAC for Chem) to support force protection and domestic response mission. Transition as possible candidate technology to Next Generation Chemical Point Detection (NGCPD) and/or CBRN DRS (DR SKO Inc II).				
Title: 28) NTA DETECT - SSA and CM Gaps FY 2011 Accomplishments: Continued DT and OA to address NTA detection capability shortfall and critical data gaps. FY 2012 Plans: Update and complete integration of NTA detection capability with CBRN DRS to provide enhanced NTA detection solution for SSA and CM mission areas. Complete DT and OA to address NTA detection capability shortfall and critical data gaps for SSA and CM mission areas.		3.217	1.472	-
Title: 29) NTA DETECT - Systems Engineering FY 2011 Accomplishments: Continued systems engineering analysis to prioritize technology investment strategies for SSA and CM missions. FY 2012 Plans: Continue systems engineering analysis to prioritize technology investment strategies across multiple missions. FY 2013 Plans: Update systems engineering model to refine capability shortfalls with current technology advances and developmental test data inputs.		1.153	1.933	0.894
Title: 30) NTA DETECT - Fielded System Evaluation FY 2011 Accomplishments: Initiated and completed characterization of current equipment performance against emerging threats.		9.419	-	-
Title: 31) SSI NBCRS FY 2011 Accomplishments: Continued program management, systems engineering, and Integrated Product Team (IPT) support. FY 2012 Plans: Continue program management, systems engineering, and Integrated Product Team (IPT) support.		3.646	2.274	-
Title: 32) SSI NBCRS FY 2011 Accomplishments:		5.240	4.850	-

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CA5: <i>CONTAMINATION AVOIDANCE (SDD)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2011	FY 2012	FY 2013
Continued chemical biological (CB) sensor testing, development, support and demonstration using competitive prototypes. FY 2012 Plans: Complete CB sensor testing, demonstration and prototyping (3 vendors, 1 system each at \$800K per system) to transition to Next Generation Chemical Point Detection (NGCPD).			
Title: 33) SSI NBCRS FY 2011 Accomplishments: Initiated low volatile test development and evaluation efforts. FY 2012 Plans: Complete low volatile sensor test support, development, and evaluation efforts.	4.898	5.950	-
Title: 34) SBIR FY 2012 Plans: Small Business Innovative Research.	-	0.687	-
Accomplishments/Planned Programs Subtotals	122.354	52.114	33.018

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• CA4: <i>CONTAMINATION AVOIDANCE (ACD&P)</i>	57.121	33.952	3.038		3.038	19.803	38.588	39.729	34.595	Continuing	Continuing
• JC0100: <i>JOINT BIO POINT DETECTION SYSTEM (JBPDS)</i>	45.294	26.300	30.934		30.934	52.732	50.223	0.000	0.000	0.000	205.483
• JF0100: <i>JOINT CHEMICAL AGENT DETECTOR (JCAD)</i>	39.372	35.172	15.212		15.212	19.130	50.985	57.966	47.758	Continuing	Continuing
• JN0900: <i>NON TRADITIONAL AGENT DETECTION (NTAD)</i>	4.105	3.891	4.770		4.770	0.000	0.000	0.000	0.000	0.000	12.766
• MC0100: <i>JOINT NBC RECONNAISSANCE SYSTEM (JNBCRS)</i>	22.117	63.714	96.244		96.244	0.000	0.000	0.000	0.000	0.000	182.075

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CA5: <i>CONTAMINATION AVOIDANCE (SDD)</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• MC0101: <i>CBRN DISMOUNTED RECONNAISSANCE SYSTEMS (CBRN DRS)</i>	12.644	6.991	15.080		15.080	34.698	95.081	95.889	90.109	Continuing	Continuing

D. Acquisition Strategy

CBRN DRS

The Chemical Biological Radiological Nuclear Dismounted Reconnaissance Systems (CBRN DRS) program uses a government-off-the-shelf (GOTS)/commercial-off-the-shelf (COTS) non-developmental item (NDI) single step to full capability acquisition approach. Upon further review of the CBRN capabilities at the Materiel Development Decision (MDD), the program restructured in 4QFY10 to begin the acquisition process at Milestone (MS) B. Funding finalized the Analysis of Materiel Solutions (AMS), materiel/prototype testing, and design to provide the Services with enhanced full spectrum CBRN detection capability to support strategic, operational, and tactical objectives at lower life cycle costs. Dismounted Reconnaissance Sets, Kits, and Outfits (DR SKO) will enhance the Situational Awareness (SA) by providing a dismounted ability to detect chemical, biological and radiological hazards across the Range of Military Operations (ROMO) and employ contamination avoidance activities to prevent disruption to operations and organizations.

The Emerging Threat efforts develop, test, procure, and sustain dismounted reconnaissance and sensitive site analysis systems for urgent needs for Domestic Response Capability Systems and Advanced Threat Boxes. Funding also informs the Materiel Development Decision and requirements development for the CBRN DRS.

JBPDS

Engineering changes to refresh the technology of the Joint Biological Point Detection System (JBPDS) consist of two separate efforts that, when combined, will reduce life cycle costs and address obsolescence concerns. The technology update for the detector focused on the Rapid Agent Aerosol Detector (RAAD) which is being developed by MIT-LL with producibility and logistics support from Kansas City Plant (KCP). JPM-BD will competitively solicit for RAAD full rate production. KCP will transition RAAD production to industry with the use of a technical data package in FY15. The RAAD contractor will provide the new biological warfare agent detector to the JBPDS prime contractor, who was selected in 2010 through a two step competitive process. Through an Engineering Change Order the prime contractor will initiate system integration efforts to accept the new detector technology. A Follow-on Test and Evaluation will be conducted to ensure the new components meet the JBPDS System Production Capabilities Document requirements.

JBTDS

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	CA5: <i>CONTAMINATION AVOIDANCE (SDD)</i>

The Joint Biological Tactical Detection System (JBTDS) is an Acquisition Category III (ACAT III) program dedicated to developing a lightweight biological warfare agent system that will detect, warn, and provide presumptive identification and samples for follow-on confirmatory analysis. The JBTDS is being developed using an evolutionary acquisition strategy. The JBTDS program will incrementally design, develop, integrate, test, procure and field systems that improve biological detection, sampling and identification capabilities and reduce size, weight, power consumption and logistics footprint over current systems. JBTDS will make maximum use of commercial off-the-shelf (COTS) and Government off-the-shelf (GOTS) technology. The awards for competitive prototyping utilized best value approach via the competitive CBRNE mission support contract to three contractor teams. Full and open competition will be utilized at MS B for the EMD contract with options for Low Rate Initial Production and Full Rate Production. In addition the JPM-BD is coordinating with JPM Guardian and JPM CBMS on the Common Analytical Laboratory System and Next Generation Diagnostic System programs respectively to share information and leverage potential identification technology solutions common to the three programs.

This approach also provides capability to the warfighter in the shortest possible time. The JBTDS program will incrementally design, develop, integrate, test, procure and field systems that improve biological aerosol detection, sampling and identification capabilities and reduce size, weight, power consumption, and logistic footprint over current systems. Again, COTS and GOTS will be utilized to the fullest extent possible.

JCAD

The current strategy employs an improvement of the M4 JCAD to reduce Life Cycle costs, transition to a competitive procurement contract, and attain objective capability. Three competitive fixed-price contracts for the M4A1 were awarded in Sep 2007 for prototypes and options for full rate production. Competitive prototype testing was conducted and one system was selected for continued development. The VBSS JCAD exercised a contract option for VBSS-specific software. Upon completion of PVT and an Operational Assessment (under CBRN DRS), standard M4A1 JCADs will be reprogrammed to fill CBRN DRS VBSS needs. The low volatile sensor technology evaluation will purchase prototypes of commercial equipment to evaluate technologies for addressing capability gaps for emerging threats not addressed by M4 and M4A1 JCAD. The results of the low volatile sensor technology evaluation will be used to inform the Analysis of Alternatives for NGCPD.

NTA DETECT

The Non-Traditional Agent (NTA) Detection products will provide a detection capability through incremental acquisition that will afford the Warfighter ability to attain situational awareness and respond to unknown and emerging hazards. The products provide a near term capability to detect priority emerging threat materials with common core technologies to detect and identify threats that can further be explored for lab deployable, fixed site and handheld applications. Leveraging COTS/GOTS assessments will be used in order to lower program risks, reduce costs, and ensure a higher confidence in selected technologies. The project will continue to address next priority mission areas and threats by continuing to qualify identified detection equipment. To accomplish these efforts, various competitive contracting strategies will be used, i.e., cost plus type contracts, task orders, and IDIQ.

SSI NBCRS

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	CA5: <i>CONTAMINATION AVOIDANCE (SDD)</i>

The Sensor Suite and Integration for Nuclear Biological and Chemical Reconnaissance System (SSI NBCRS) will evaluate the state of Chemical and Biological sensor manufacturing to support future acquisition programs. In FY11 a technical evaluation was performed on four separate Cost plus Fixed Fee (CPFF) task orders using a competitive omnibus contract. The evaluation focused on using a common sensor technology to detect and identify both chemical and biological threats. Future efforts will modularize the components allowing for potential mounted and dismounted reconnaissance, lab deployable, fixed site, and handheld applications. A similar technical evaluation in FY11-FY12 will assess ability of industry sensors to detect low volatility CWAs, TICs, NTAs and other compounds of interest. This effort will allow the program office to assess current technologies in order to lower program risk, reduce costs, and ensure a higher confidence in selected technologies for the Next Generation Chemical Point Detection (NGCPD) and NTA Detect programs.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CA5: <i>CONTAMINATION AVOIDANCE (SDD)</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
** CBRN DRS - HW S - DR SKO EMD systems	C/CPFF	FLIR:Elkridge, MD	8.350	2.602	May 2012	1.975	Nov 2012	-		1.975	Continuing	Continuing	0.000
** JBPDS - HW C - New Detector development	MIPR	MIT/Lincoln Lab:Lexington, MA	16.229	0.893	Feb 2012	-		-		-	Continuing	Continuing	0.000
HW C - New Detector development	MIPR	Kansas City Plant:Kansas City, MO	2.586	2.101	Feb 2012	1.017	Feb 2013	-		1.017	Continuing	Continuing	0.000
** JBTDS - HW C - EMD Contract Award	C/CPFF	TBD:	-	-		6.923	May 2013	-		6.923	Continuing	Continuing	0.000
** NTA DETECT - HW S - DESI Mass Spec	C/CPAF	FLIR:West Lafayette, IN	1.196	3.024	Feb 2012	0.900	Feb 2013	-		0.900	Continuing	Continuing	0.000
HW S - GOTS/COTS Dual Use Assessment	C/CPAF	Battelle:Columbus, OH	3.105	2.200	Feb 2012	0.671	Feb 2013	-		0.671	Continuing	Continuing	0.000
SW S - DESI Mass Spec Library Development	C/CPFF	Battelle:Columbus, OH	0.819	0.200	Feb 2012	0.700	Feb 2013	-		0.700	Continuing	Continuing	0.000
HW S - Environmental Monitor	C/CPAF	FLIR:Pittsburgh, PA	2.797	1.800	Aug 2012	0.400	Aug 2013	-		0.400	Continuing	Continuing	0.000
HW S - System Performance Baseline	C/CPFF	Various:	0.740	-		0.400	Aug 2013	-		0.400	Continuing	Continuing	0.000
** SSI NBCRS - HW S - Chemical Biological Sensor Capability Development	C/CPFF	Various:	12.757	2.400	Feb 2012	-		-		-	Continuing	Continuing	0.000
Subtotal			48.579	15.220		12.986		-		12.986			0.000

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
** CBRN DRS - ES S - Logistics	MIPR	Edgewood Chemical Biological Center:Edgewood, MD	1.000	0.600	Nov 2011	0.700	Nov 2012	-		0.700	Continuing	Continuing	0.000
ILS S - DR SKO Logistics Products	C/CPFF	FLIR:Arlington, VA	4.500	2.000	May 2012	3.450	Nov 2012	-		3.450	Continuing	Continuing	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CA5: <i>CONTAMINATION AVOIDANCE (SDD)</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** JBTDs - ES S - User involvement	MIPR	USA/USN/USAF/USMC:	-	-		1.135	Nov 2012	-		1.135	Continuing	Continuing	0.000
** NTA DETECT - ES SB - COTS/GOTS Analysis and Evaluation	C/CPFF	Battelle Memorial Institute:Columbus, OH	1.873	0.078	Feb 2012	0.165	Feb 2013	-		0.165	Continuing	Continuing	0.000
ES S - Systems engineering support	C/CPFF	Joint Research & Development Inc.:Stafford, VA	1.091	1.433	Feb 2012	0.894	Feb 2013	-		0.894	Continuing	Continuing	0.000
ES S - Environmental Monitor	C/CPFF	MIT/Lincoln Lab:Lexington, MA	-	0.500	Mar 2012	0.300	Feb 2013	-		0.300	Continuing	Continuing	0.000
ES S - Mass Spectrometer	C/CPFF	MIT/Lincoln Lab:Lexington, MA	-	0.300	Feb 2012	0.200	Feb 2013	-		0.200	Continuing	Continuing	0.000
Subtotal			8.464	4.911		6.844		-		6.844			0.000

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** CBRN DRS - DTE S - DR SKO Developmental Testing and Operational Assessment	MIPR	Aberdeen Test Center:APG, MD	1.201	1.000	Feb 2012	-		-		-	Continuing	Continuing	0.000
DTE S - DR SKO Developmental Testing and Operational Assessment	MIPR	Dugway Proving Ground:DPG, UT	3.105	2.000	Feb 2012	-		-		-	Continuing	Continuing	0.000
DTE S - DR SKO Developmental Testing and Operational Assessment #2	MIPR	Army Test and Evaluation Command:Alexandria, VA	0.714	0.500	Feb 2012	-		-		-	Continuing	Continuing	0.000
DTE S - DR SKO Developmental Testing and Operational Assessment #3	MIPR	Various:	6.756	6.669	Feb 2012	5.556	Feb 2013	-		5.556	Continuing	Continuing	0.000
DTE S - Emerging Threat Enhancements	MIPR	Army Test and Evaluation	0.240	0.500	Feb 2012	-		-		-	Continuing	Continuing	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CA5: <i>CONTAMINATION AVOIDANCE (SDD)</i>
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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Command:Alexandria, VA											
DTE S - Emerging Threat Enhancements #2	MIPR	Aberdeen Test Center:Aberdeen Proving Ground, MD	0.184	0.500	Feb 2012	-		-		-	Continuing	Continuing	0.000
** JBPDS - DTE C - New Detector developmental testing.	MIPR	MIT/Lincoln Lab.:Lexington, MA	1.000	1.000	Feb 2012	-		-		-	Continuing	Continuing	0.000
** NTA DETECT - DTE S - Developmental Test Component	C/CPFF	Battelle Memorial Institute:Columbus, OH	5.087	2.400	Feb 2012	1.400	Feb 2013	-		1.400	Continuing	Continuing	0.000
** SSI NBCRS - OTHT S - Chemical Biological Prototype Evaluation	MIPR	Various:	0.974	2.450	Feb 2012	-		-		-	Continuing	Continuing	0.000
OTHT S - Low Volatile Sensor Evaluation	MIPR	Various:	4.898	2.750	Feb 2012	-		-		-	Continuing	Continuing	0.000
OTHT S - Low Volatile Sensor Support	C/CPFF	Various:	-	3.200	Feb 2012	-		-		-	Continuing	Continuing	0.000
Subtotal			24.159	22.969		6.956		-		6.956			0.000

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** CBRN DRS - PM/MS-S - Program Management and System Engineering Support	MIPR	Various:	3.202	1.500	Nov 2011	1.500	Nov 2012	-		1.500	Continuing	Continuing	0.000
PM/MS S - Emerging Threat Enhancements Program Management and System Engineering Support	MIPR	JPM NBC CA:APG, MD	2.099	0.600	Nov 2011	-		-		-	Continuing	Continuing	0.000
PM/MS S - Integrated Product Team	MIPR	Various:	2.267	1.829	Nov 2011	1.500	Nov 2012	-		1.500	Continuing	Continuing	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CA5: <i>CONTAMINATION AVOIDANCE (SDD)</i>
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Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
** JBPDS - PM/MS SB - JPM BD and JPEO CBD Project Management and System Engineering Support	MIPR	JPM BD/JPEO CBD:APG, MD	10.187	0.926	Feb 2012	0.328	Feb 2013	-		0.328	Continuing	Continuing	0.000
** JBTDS - PM/MS SB - JPM BD & JPEO CBD - Management and System Engineering Support	MIPR	JPM BD/JPEO CBD:APG, MD	-	-		1.904	Nov 2012	-		1.904	Continuing	Continuing	0.000
** NTA DETECT - PM/MS S - Program Management support	MIPR	JPM NBC CA:APG, MD	5.995	1.198	Feb 2012	1.000	Feb 2013	-		1.000	Continuing	Continuing	0.000
** SSI NBCRS - PM/MS S - Program Management and Systems Engineering Support	MIPR	JPM NBC CA:APG, MD	5.243	2.274	Feb 2012	-		-		-	Continuing	Continuing	0.000
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/STTR	PO	HQ:AMC, Alexandria	-	0.687		-		-		-	Continuing	Continuing	0.000
Subtotal			28.993	9.014		6.232		-		6.232			0.000
Project Cost Totals			110.195	52.114		33.018		-		33.018			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Chemical and Biological Defense Program		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CA5: <i>CONTAMINATION AVOIDANCE (SDD)</i>

	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
** CBRN DRS - Dismounted Reconnaissance (DR) Preliminary Design Review	■																											
CBRN DRS - Dismounted Reconnaissance (DR) Component Developmental Test	■	■	■	■	■	■	■	■																				
CBRN DRS - Dismounted Reconnaissance (DR) Milestone (MS) B		■																										
CBRN DRS - Dismounted Reconnaissance (DR) EMD Phase		■	■	■	■	■	■	■																				
CBRN DRS - Dismounted Reconnaissance (DR) Critical Design Review			■																									
CBRN DRS - Dismounted Reconnaissance (DR) System Developmental Test			■	■	■	■	■	■																				
CBRN DRS - Dismounted Reconnaissance (DR) Operational Assessment						■	■	■																				
CBRN DRS - Dismounted Reconnaissance (DR) Milestone (MS) C LRIP										■																		
CBRN DRS - Dismounted Reconnaissance (DR) Production & Deployment Phase									■	■	■	■	■	■	■	■												
CBRN DRS - Dismounted Reconnaissance (DR) Production Qualification Test										■	■	■																
CBRN DRS - Dismounted Reconnaissance (DR) MOT&E											■	■																
CBRN DRS - Dismounted Reconnaissance (DR) FRP														■														
CBRN DRS - Dismounted Reconnaissance (DR) Technical Insertion Analysis															■	■												
CBRN DRS - Emerging Threat Component/ System DT			■	■	■	■	■	■																				

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CA5: <i>CONTAMINATION AVOIDANCE (SDD)</i>
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	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
CBRN DRS - Emerging Threat Component/ System OT				■																								
CBRN DRS - Emerging Threat Component/ System IOC							■																					
CBRN DRS - Emerging Threat COTS/GOTS Domestic Response Capability Set				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
** JBPDS - Tech Refresh - Development and Integration	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
JBPDS - Tech Refresh - Test and validation of LRU improvements															■	■	■	■	■	■	■	■	■	■	■	■	■	
** JBTDS - MS A Decision		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
JBTDS - Competitive Prototyping Contract Award				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
JBTDS - Competitive Prototyping Testing				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
JBTDS - PDR							■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
JBTDS - TEMP												■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
JBTDS - Capability Development Document												■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
JBTDS - MS B Decision															■	■	■	■	■	■	■	■	■	■	■	■	■	
JBTDS - EMD Contract Award															■	■	■	■	■	■	■	■	■	■	■	■	■	
JBTDS - EDT/OA															■	■	■	■	■	■	■	■	■	■	■	■	■	
JBTDS - DT 1																												
JBTDS - CDR																												
JBTDS - DT 2/LUT																												
JBTDS - Milestone C																												
JBTDS - PQT																												
JBTDS - OT																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CA5: <i>CONTAMINATION AVOIDANCE (SDD)</i>
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	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
NTA DETECT - Man Portable Mass Spec Transition																																
NTA DETECT - Aerosol Detection DT/LOE																																
NTA DETECT - Environmental Monitor DT/LOE																																
NTA DETECT - System Engineering																																
** SSI NBCRS - CB Prototype Sensor Technology Evaluation																																
SSI NBCRS - Low Volatile Prototype Sensor Technology Evaluation																																
SSI NBCRS - Sensor Transition to NGCPD																																

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Chemical and Biological Defense Program		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CA5: <i>CONTAMINATION AVOIDANCE (SDD)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
** CBRN DRS - Dismounted Reconnaissance (DR) Preliminary Design Review	1	2011	1	2011
CBRN DRS - Dismounted Reconnaissance (DR) Component Developmental Test	1	2011	3	2012
CBRN DRS - Dismounted Reconnaissance (DR) Milestone (MS) B	2	2011	2	2011
CBRN DRS - Dismounted Reconnaissance (DR) EMD Phase	2	2011	1	2013
CBRN DRS - Dismounted Reconnaissance (DR) Critical Design Review	3	2011	3	2011
CBRN DRS - Dismounted Reconnaissance (DR) System Developmental Test	3	2011	2	2012
CBRN DRS - Dismounted Reconnaissance (DR) Operational Assessment	2	2012	3	2012
CBRN DRS - Dismounted Reconnaissance (DR) Milestone (MS) C LRIP	1	2013	1	2013
CBRN DRS - Dismounted Reconnaissance (DR) Production & Deployment Phase	1	2013	3	2014
CBRN DRS - Dismounted Reconnaissance (DR) Production Qualification Test	2	2013	3	2013
CBRN DRS - Dismounted Reconnaissance (DR) MOT&E	3	2013	4	2013
CBRN DRS - Dismounted Reconnaissance (DR) FRP	1	2014	1	2014
CBRN DRS - Dismounted Reconnaissance (DR) Technical Insertion Analysis	3	2014	4	2014
CBRN DRS - Emerging Threat Component/System DT	4	2011	1	2012
CBRN DRS - Emerging Threat Component/System OT	1	2012	2	2012
CBRN DRS - Emerging Threat Component/System IOC	2	2012	2	2012
CBRN DRS - Emerging Threat COTS/GOTS Domestic Response Capability Set	4	2011	3	2013
** JBPDS - Tech Refresh - Development and Integration	1	2011	4	2013
JBPDS - Tech Refresh - Test and validation of LRU improvements	1	2014	2	2014
** JBTDS - MS A Decision	2	2011	2	2011
JBTDS - Competitive Prototyping Contract Award	4	2011	4	2011
JBTDS - Competitive Prototyping Testing	1	2012	4	2012

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CA5: <i>CONTAMINATION AVOIDANCE (SDD)</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
JBTDS - PDR	4	2012	4	2012
JBTDS - TEMP	2	2013	2	2013
JBTDS - Capability Development Document	2	2013	2	2013
JBTDS - MS B Decision	3	2013	3	2013
JBTDS - EMD Contract Award	3	2013	3	2013
JBTDS - EDT/OA	1	2014	2	2014
JBTDS - DT 1	3	2014	4	2014
JBTDS - CDR	4	2014	4	2014
JBTDS - DT 2/LUT	1	2015	3	2015
JBTDS - Milestone C	4	2016	4	2016
JBTDS - PQT	1	2017	1	2017
JBTDS - OT	3	2017	3	2017
** JCAD - Enhanced Detector Development for VBSS	2	2011	4	2011
JCAD - Enhanced Detector Development Testing for VBSS	2	2012	2	2012
JCAD - Technology Evaluation and Transition to NGCPD	2	2012	4	2012
JCAD - Transition VBSS to DR-SKO	3	2012	3	2012
JCAD - Low Volatile System Evaluation	2	2012	4	2012
** MDAP SPRT - Advance Component Prototype Development of JSF Decontamination Capability	1	2011	4	2012
MDAP SPRT - Develop aircrew mask for JSF	1	2011	4	2012
MDAP SPRT - CBR sensing capabilities for the SUGV/MULE	1	2011	4	2012
** NGCSD - Technology Evaluation and Transition to NGCPD and NTA Detection programs	4	2011	2	2012
** NTA DETECT - COTS/GOTS DT/MUA	1	2011	1	2011
NTA DETECT - Methodology Development	1	2011	3	2011
NTA DETECT - Equipment Set DT/OA	4	2011	1	2012

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CA5: <i>CONTAMINATION AVOIDANCE (SDD)</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
NTA DETECT - COTS/GOTS Capability Shortfall Closure	4	2011	3	2013
NTA DETECT - Lab Deployable Mass Spec DT/OA	1	2011	1	2011
NTA DETECT - Man Portable Mass Spec DT/OA	1	2012	2	2012
NTA DETECT - Man Portable Mass Spec Integration	2	2012	3	2013
NTA DETECT - Man Portable Mass Spec Transition	3	2013	3	2013
NTA DETECT - Aerosol Detection DT/LOE	4	2011	3	2013
NTA DETECT - Environmental Monitor DT/LOE	2	2011	2	2013
NTA DETECT - System Engineering	1	2011	3	2013
** SSI NBCRS - CB Prototype Sensor Technology Evaluation	1	2011	4	2012
SSI NBCRS - Low Volatile Prototype Sensor Technology Evaluation	3	2011	4	2012
SSI NBCRS - Sensor Transition to NGCPD	4	2012	4	2012

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>				PROJECT CM5: <i>HOMELAND DEFENSE (SDD)</i>			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
CM5: <i>HOMELAND DEFENSE (SDD)</i>	-	9.109	9.952	-	9.952	7.425	3.606	1.981	1.981	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This project supports Engineering and Manufacturing Development and Low Rate Initial Production (EMD/LRIP) for programs that provide a comprehensive, integrated and layered Chemical Biological Radiological Nuclear (CBRN) protection and response capability for military installations and specialized military consequence management units both at home and abroad. Particular emphasis is placed on improving military-civilian interoperability in CBRN detection and response capabilities; providing tiered levels of CBRN protection and response capabilities to military installations; and tailored modular and integrated COTS solutions to consequence management units.

Efforts included in this project are:

The Common Analytical Laboratory System capability (CALs) will be modular, scalable and adaptable to a variety of concept of operations (CONOPS) and environmental conditions. Currently, fielded systems have been designed independently by various agencies with the intent of meeting a specific units requirements. As a result, multiple mobile lab configurations exist with differing sustainment tails and lacking in commonality. The system under development will incorporate an open architecture that can accommodate quick installation or removal of equipment as mission requirements dictate. As well, it will provide the ability to rapidly develop a common operating picture allowing first responders and DoD officials to determine the appropriate course of action. The analytical detection package fielded will be fitted to the specific mission and CONOPS of the gaining unit and be able to detect and identify Chemical Warfare Agents (CWAs), Toxic Industrial Chemicals (TICs), Toxic Industrial Materials (TIMs), Biological Warfare Agents (BWAs), Lower Explosive Limits (LEL), and radioactive particles in all sample types.

The Weapons of Mass Destruction Civil Support Team Program supports the ongoing assessment and acquisition of COTS and GOTS analytical detection, protection, decontamination and sampling equipment for survey in order to expand/enhance the operational capabilities of the (57) WMD CST Teams.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2011	FY 2012	FY 2013
Title: 1) CALS - System Engineering and Program Management	-	-	1.661
Description: System engineering and technical control, as well as the business management of the system/program. It encompasses the overall planning, direction and control of the definition, development, and production of the system/program, including functions of logistics engineering and integrated logistics support (ILS) management (e.g., maintenance support, facilities, personnel, training, testing, and activation of the system).			
FY 2013 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CM5: <i>HOMELAND DEFENSE (SDD)</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Continue System and Program Management Support at the initiation of the Engineering Manufacturing and Development Phase, provide management and engineering support, System Integration Laboratory Efforts in preparation of Critical Design Review, Manufacture of Prototypes and testing.				
Title: 2) CALS - Production Engineering and Planning Description: Efforts to ensure the producibility of the developmental material system, item, or component. Involves engineering task necessary to ensure timely, efficient, and economic production of essential materiel and is primarily of a planning nature. Includes efforts related to development of quality assurance (QA) plans, and special production processes to assess producibility. FY 2013 Plans: Prepare Quality Assurance plans for system level development and conduct logistics analysis.		-	-	1.743
Title: 3) CALS - Development Tooling Description: Planning, design, assembly, installation, and rework of all tools, inspection equipment, and test equipment supporting the development of each system level prototype. FY 2013 Plans: Conduct and complete planning and preparation of tools, equipment, platforms, materials required to fabricate, and integrate a complete set of CALS modules for test and evaluation.		-	-	1.521
Title: 4) WMD CST - System Engineering and Program Management Description: System engineering and technical control, as well as the business management of the system/program. It encompasses the overall planning, direction, and control of the definition, development, and production of the system, including functions of logistics engineering and integrated logistics support (ILS) management (e.g., maintenance support, facilities, personnel, training, testing, and activation of the system). FY 2012 Plans: Provide for system engineering, technical control, and business management support of the next generation biological detection system. FY 2013 Plans: Continues to provide for system engineering, technical control, and business management support of the next generation biological detection system.		-	2.500	2.925
Title: 5) WMD CST - Development Engineering		-	3.494	0.500

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CM5: <i>HOMELAND DEFENSE (SDD)</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
<p>Description: Studies, analysis, design development, evaluation testing, and redesign for the system component(s) during system development. Includes the design efforts of preparing specifications, engineering drawings, parts lists, wiring diagrams, test planning and scheduling, analysis of test results, data reduction, report preparations and establishment of reliability, maintainability, and quality assurance control requirements.</p> <p>FY 2012 Plans: Initiate Development of reagents for the next generation biological detection system to be integrated into the Analytical Laboratory System.</p> <p>FY 2013 Plans: Complete development of reagents for the next generation biological detection system to be integrated into the Analytical Laboratory System.</p>				
<p>Title: 6) WMD CST - Development Engineering</p> <p>Description: Includes the costs of study, analysis, design development, evaluation testing, and redesign for the system components(s) during system development efforts. Includes the design efforts of preparing specifications, establishment of reliability, maintainability, and quality assurance control requirements. Also includes the engineering efforts in support of preplanned product improvements and development costs for any neutralization process designed to change the physical, chemical, biological character or composition of hazardous waste produced by the system.</p> <p>FY 2012 Plans: Initiate development of method protocols for sampling with the next generation biological detection system for integration into the Analytical Laboratory System.</p> <p>FY 2013 Plans: Complete development of method protocols for sampling with the next generation biological detection system for integration into the Analytical Laboratory System.</p>		-	1.498	0.650
<p>Title: 7) WMD CST - System Test and Evaluation</p> <p>Description: General system-related test activities, including costs of specially fabricated hardware to obtain or validate engineering data on the performance of the system. This element also includes costs of the detailed planning, conduct, support, data reduction, and reports from such testing, as well as hardware items that are consumed or planned to be consumed in the conduct of such operations.</p> <p>FY 2012 Plans:</p>		-	1.497	-

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CM5: <i>HOMELAND DEFENSE (SDD)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2011	FY 2012	FY 2013
Conduct next generation biological detection system Component Test and evaluation.			
Title: 8) WMD CST - Component Integration and Test (ALS) Description: Integration of component and test to ensure viable integration and connectivity of the component as a part of the general system layout. This includes raw and semi-fabricated material plus purchased parts materials, fabrication, processing, subassembly, final assembly, reworking modification, and installation of parts and equipment, power plants, electronic equipment and instrumentation for the specified component as well as evaluation. FY 2013 Plans: Conduct integration of component detection system into the Analytical Laboratory System and validate connectivity of the component as a part of the general system.	-	-	0.952
Title: 9) SBIR FY 2012 Plans: Small Business Innovative Research.	-	0.120	-
Accomplishments/Planned Programs Subtotals	-	9.109	9.952

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• JS0004: <i>WMD - CIVIL SUPPORT TEAMS (WMD CST)</i>	39.166	15.900	24.025		24.025	13.237	11.657	5.069	5.069	Continuing	Continuing
• JS0005: <i>COMMON ANALYTICAL LABORATORY SYSTEM (CALs)</i>	0.000	0.000	0.000		0.000	14.957	34.991	59.411	64.946	Continuing	Continuing

D. Acquisition Strategy
CALs

The Common Analytical Laboratory System (CALs) will follow an incremental approach designed to address known joint force capability requirements for Chemical, Biological, Radiological and Nuclear (CBRN) detection which includes Toxic Industrial Chemicals (TICs), Toxic Industrial Materials (TIMs), Chemical Warfare Agents (CWAs), Biological Warfare Agents (BWAs). CALs will address situational awareness by leveraging efforts underway with Joint Program Executive Office for Chemical Biological Defense (JPEO-CBD) to the extent possible. CALs will accommodate these component requirements within a modular and scalable concept framework.

WMD CST

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CM5: <i>HOMELAND DEFENSE (SDD)</i>

This program utilizes multiple acquisition vehicles to deliver a CBRN capability to the WMD response units. The CALS program will upgrade the analytical capability with the objective of improving chemical and biological detection sensitivity and selectivity of the WMD CST Analytical Laboratory System Increment 1 and the 20th SUPCOM heavy and light tactical lab variants. Additionally, the CALS will integrate the communications and reachback capability for mobile CBRN homeland defense capability as required by the Joint Requirements Oversight Council (JROC).

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CM5: <i>HOMELAND DEFENSE (SDD)</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** WMD CST - HW S - Next Generation Bio Detection - Reagent Development	MIPR	TBD:	-	3.494	Feb 2012	0.500	Nov 2012	-		0.500	Continuing	Continuing	0.000
HW S - Method Protocol Development	MIPR	TBD:	-	1.498	May 2012	0.650	Feb 2013	-		0.650	Continuing	Continuing	0.000
Subtotal			-	4.992		1.150		-		1.150			0.000

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** CALS - ES S - Engineering Support System - CALS	C/FFP	Various:	-	-		1.454	Jan 2013	-		1.454	Continuing	Continuing	0.000
ES S - Modeling and Simulation Support	Various	Various:	-	-		0.350	Jan 2013	-		0.350	Continuing	Continuing	0.000
ILS S - Retooling and Preparation for System Level Manufacture	C/FPIF	TBD:	-	-		1.521	Jan 2013	-		1.521	Continuing	Continuing	0.000
** WMD CST - ES S - Next Generation Bio Detection - Support	MIPR	Edgewood Chemical Biological Center:Edgewood, MD	-	1.089	Feb 2012	1.371	Feb 2013	-		1.371	Continuing	Continuing	0.000
Subtotal			-	1.089		4.696		-		4.696			0.000

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** WMD CST - OTHT C - Next Generation Bio Detection Component Testing	MIPR	TBD:	-	1.497	May 2012	-		-		-	Continuing	Continuing	0.000
OTHT S - Next Generation Bio Detection Component	MIPR	TBD:	-	-		0.952	Feb 2013	-		0.952	Continuing	Continuing	0.000

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CM5: <i>HOMELAND DEFENSE (SDD)</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
** CALS - CALS Milestone A	2	2011	2	2011
CALS - CALS Prototype Module Development and Fabrication	3	2011	3	2012
CALS - CALS Preliminary Design Review	3	2012	3	2012
CALS - CALS Milestone B	1	2013	1	2013
CALS - CALS Milestone C	1	2014	1	2014
CALS - CALS Full Rate Production	4	2014	4	2017
** WMD CST - Reagent Development - M1M Replacement Technology for ALS	2	2012	2	2013
WMD CST - Protocol Development - M1M Replacement Technology for ALS	4	2012	2	2013
WMD CST - Component Level Testing - M1M Replacement Technology for ALS	3	2012	2	2013

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CO5: <i>COLLECTIVE PROTECTION (SDD)</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
CO5: <i>COLLECTIVE PROTECTION (SDD)</i>	18.227	11.307	10.642	-	10.642	10.249	1.600	-	-	0.000	52.025
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

Funding supports Engineering and Manufacturing Development and Low Rate Initial Production (EMD/LRIP) of Joint Service Chemical, Biological, and Radiological (CBR) Collective Protection (CP) systems that are smaller, lighter, less costly to produce and maintain, and more logistically supportable enabling mission accomplishment in CBR environments. CP systems can be installed on any type of platform, such as, hard and soft shelters, vehicles, ships, aircraft, and buildings. CP systems provide spaces safe from the effects of CBR contamination.

The system included in this project is the Joint Expeditionary Collective Protection (JECP).

JECP provides the Joint Expeditionary Forces a CP capability which is lightweight, compact, modular, and affordable. A family of systems is planned that will allow the application of CP to transportable soft-side shelters, enclosed spaces of opportunity, and in remote austere locations as a standalone resource. JECP will be capable of protecting personnel groups of varying size, unencumbered by Individual Protective Equipment (IPE), from the effects of CB agents, Toxic Industrial Materials (TIMs), radiological particles, heat, dust, and sand. The employment of JECP is a strategic deterrence against enemy use of CBR agents or TIMs, and will reduce the need for personnel and equipment decontamination.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2011	FY 2012	FY 2013
Title: 1) JECP - Engineering and Manufacturing Development (EMD) Contract	3.854	0.250	4.347
Description: Engineering and Manufacturing Development Contract to design, develop, integrate and test the prototype Joint Expeditionary Collective Protection (JECP) Family of Systems (FoS) that meet the requirements of the Capability Development Document (CDD) and System Performance Specification (SPS).			
FY 2011 Accomplishments: Completed contractor system level DT. Completed the manufacture of prototypes for Government system level DT. Prototypes consist of 9 configurations: 13 tent kits (3 configurations, 5 units of the first configuration at approximately \$32K each, 7 units of the second at approximately \$33K each; and 1 unit of the third at approximately \$75K each), 4 structure kits - improved at approximately \$27K each, 6 stand alone (SA) man-portable at approximately \$16K each, 10 SA small at approximately \$35K each, 6 SA medium at approximately \$39K each, 6 SA large at approximately \$150K each, 12 single person airlocks at approximately \$8K each and 12 multi-person airlocks at approximately \$25K each. Estimated total multi-year cost of all prototypes: \$2.566M. Prototype cost reduction due to modified scope of Government system level DT. Conducted Critical Design			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CO5: <i>COLLECTIVE PROTECTION (SDD)</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
<p>Review (CDR) and developed post-CDR report. Conducted post-contractor qualification testing technical review. Provided support for Government system level DT, at three test sites, of all 9 configurations of the FoS including training, maintenance, troubleshooting and repair. Began the development of logistic products including technical manuals, level of repair analysis, provisioning technical documentation, and training plans and curriculum. Prepared for Technical Manual Validation.</p> <p>FY 2012 Plans: Continue providing support for Government system level DT with combined Operational and DT field events, logistics/manpower and personnel integration (MANPRINT) demonstration, and operational assessment (OA). Conduct System Verification Review, Functional Configuration Audit and Production Readiness Review. Continue development of logistic products. Conduct Technical Manual Validation.</p> <p>FY 2013 Plans: Continue development of logistic products. Support Milestone C decision review. Build 6 of each configuration of FoS for LRIP and provide support to production verification test and multi-service operational test and evaluation.</p>				
<p>Title: 2) JECF - Government Component Level Developmental Testing</p> <p>Description: Conduct Government component level developmental testing (DT) using agent and simulant to determine compliance with System Performance Specification (SPS) protection requirements. Use test data from agent and simulant testing to establish a defensible agent to simulant relationship (ASR). Develop component level empirical models to provide to the JECF System Performance Model (SPM).</p> <p>FY 2011 Accomplishments: Completed ASR and component level empirical models to provide to the JECF SPM team.</p>		0.190	-	-
<p>Title: 3) JECF - Government System Level Developmental Testing</p> <p>Description: Conduct Government system level Developmental Testing (DT) of the Family of Systems (FoS) to be conducted both in the chamber and in the field (littoral and desert environments). Conduct Operational Assessment (OA). Develop system level empirical models to provide to the JECF SPM.</p> <p>FY 2011 Accomplishments: Began Non-CB mode DT of the Family of Systems (FoS) in littoral and desert environments. Began Reliability and Maintainability Analysis (RAM) and static system verification testing on the FoS. Began accelerated materials aging study.</p> <p>FY 2012 Plans: Complete Non-CB mode DT of the Family of Systems (FoS) in littoral and desert environments. Complete RAM Analysis, static and dynamic system verification testing on the FoS. Conduct DT system field challenge, 30 day continuous operations verification</p>		7.274	5.667	2.297

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CO5: <i>COLLECTIVE PROTECTION (SDD)</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
testing, OA, logistics/MANPRINT demonstration and post field static system verification testing. Begin post field Government component level DT consisting of Barrier Materials Swatch Testing, and Air-Purification Component Testing. FY 2013 Plans: Complete post field Government component level DT to include barrier material swatch testing and passive air-purification component testing. Initiate production verification testing on low rate initial production FoS.				
Title: 4) JECF - Multi-Service Operational Test & Evaluation Description: Conduct Government system level Operational Testing (OT) of the Family of Systems (FoS) to be conducted in the field (littoral and desert environments). FY 2013 Plans: Begin Multi-service Operational Test & Evaluation of Low Rate Initial Production units.		-	-	0.449
Title: 5) JECF - Systems Engineering IPT Description: Provide technical direction to the Contractor team. Establish and maintain a robust and disciplined Systems Engineering process IAW Department of Defense (DoD) and Joint Program Executive Office for Chemical Biological Defense (JPEO-CBD) policy and guidance. FY 2011 Accomplishments: Updated and maintained the RTM to track when requirements have been verified as test results became available. Ensured FoS ready for and participate in CDR. Prepared Post-CDR Assessment. Participated in Configuration Control Boards. Monitored manufacture of Government system level DT prototypes. Provided support for Contractor system level DT and Government agent and simulant component level DT. Assisted in the planning and conduct of Government system level DT. FY 2012 Plans: Develop, update and/or review program documentation in preparation for MS C. Provide support for Government system level DT. Ensure FoS ready for and participate in System Verification Review, Functional Configuration Audit and Production Readiness Review. Update and maintain the RTM to track when requirements have been verified as test results become available. Coordinate with JRO to assist in development of the Capability Production Document based on system level testing and trades analysis. Work with the contractor to identify corrective action for any test failures. FY 2013 Plans: Update and maintain the RTM to track when requirements have been verified as test results become available. Participate in Configuration Control Board.		1.252	0.840	0.500
Title: 6) JECF - Test and Evaluation IPT		1.122	0.750	0.500

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012			
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>		PROJECT CO5: <i>COLLECTIVE PROTECTION (SDD)</i>		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2011	FY 2012	FY 2013
<p>Description: Lead and oversee all aspects of the JECF Integrated Test (IT) program.</p> <p>FY 2011 Accomplishments: Developed and reviewed test plans, procedures and reports. Ensured FoS were ready for and participated in CDR. Participated in Configuration Control Boards. Witnessed Contractor system level DT. Prepared for and participated in Government system level DT. Witnessed contractor system level DT and reviewed test procedures and reports. Reviewed Technical Manuals and prepare for validation.</p> <p>FY 2012 Plans: Participate in Government system level DT and Technical Manual validation. Review and assess results from component and system level DT and provide to Users for incorporation into the Capability Production Document. Ensure FoS ready for and participate in System Verification Review, Functional Configuration Audit and Production Readiness Review. Develop, update and/or review program documentation in preparation for MS C.</p> <p>FY 2013 Plans: Continue participation in Government lead system level DT and operational assessment. Conduct test failure scoring conferences as necessary.</p>					
<p>Title: 7) JECF - Integrated Logistics Support IPT</p> <p>Description: Oversee and provide supportability planning guidance to the EMD contractor in addressing logistic support elements including maintenance philosophy, manpower & personnel, supply support, Tech Data, support & test equipment, training and training support.</p> <p>FY 2011 Accomplishments: Began the analysis to identify surge requirements and industries ability to support. Began the Business Case Analysis to determine the best approach for logistic support and sustainment. Drafted Materiel Fielding Plan. Ensured FoS ready for and participate in CDR. Participated in Configuration Control Board as necessary. Provided information to support the Joint Independent Logistics Assessment (JILA). Began the development of Navy Training System Plan. Witnessed Contractor system level DT and reviewed test procedures and reports. Reviewed Technical Manuals and prepare for Validation.</p> <p>FY 2012 Plans: Develop, update and/or review program documentation in preparation for MS C. Draft material fielding plan. Provide support for Government system level DT, including coordination of Logistics/MANPRINT Demonstration. Review Technical Manuals and witness Validation. Ensure FoS ready for and participate in System Verification Review, Functional Configuration Audit and Production Readiness Review. Provide information to support the JILA. Complete Navy Training System Plan. Continue the</p>			0.692	0.500	0.381

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CO5: <i>COLLECTIVE PROTECTION (SDD)</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Business Case Analysis to determine the best approach for logistic support and sustainment. Participate in Configuration Control Board as necessary. Provide information to support the JILA. FY 2013 Plans: Report out at MS C the results of the BCA and surge requirements analysis. Participate in Configuration Control Board as necessary. Provide information to support the JILA.				
Title: 8) JECF - Program Management and Contract Administration Description: Oversee the day-to-day program execution including guidance and direction to the JECF IPTs, financial management and tracking, budget preparation, schedule planning and monitoring, and JPEO-CBD/JPM-Protection reporting requirements including but not limited to weekly highlight reports, monthly Acquisition Status Reports and quarterly program review briefs. Perform EMD contract management and administration. FY 2011 Accomplishments: Focused on Contractor system level DT, CDR and CDR Assessment, Technical manual development, Level of Repair Analysis, and Government system level DT prototypes and testing. FY 2012 Plans: Focus on Technical Manual development and Validation, Government system level DT (including Logistics/MANPRINT demonstration) and OA, System Verification Review, Functional Configuration Audit and Production Readiness Review and MS C planning and preparation. FY 2013 Plans: Exercise option in contract for Low Rate Initial Production (LRIP). Focus on Production Readiness Review, LRIP, PVT and MOT&E. Begin preparation for FRP Decision.		1.155	1.230	0.950
Title: 9) JECF - Program Management Description: Provide strategic tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support. FY 2011 Accomplishments: Provided strategic planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support. FY 2012 Plans:		2.688	1.921	1.218

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CO5: <i>COLLECTIVE PROTECTION (SDD)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2011	FY 2012	FY 2013
Provide strategic planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support. FY 2013 Plans: Provide strategic planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support.			
Title: 10) SBIR FY 2012 Plans: Small Business Innovative Research.	-	0.149	-
Accomplishments/Planned Programs Subtotals	18.227	11.307	10.642

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• JP1111: <i>JOINT EXPEDITIONARY COLLECTIVE PROTECTION (JECP)</i>	0.000	0.000	0.000		0.000	4.055	10.160	10.200	10.200	Continuing	Continuing

D. Acquisition Strategy
JECP

Strategy based on evolutionary development in consonance with the Joint Requirements Office (JRO)/User developed capability documents. During the Pre-MS A Concept Refinement Phase, conducted a tailored Analysis of Alternatives (AoA) leveraging the market survey, test results and lessons learned from the FY05 ColPro Technology Readiness Evaluation (TRE). During the Technology Development Phase following MS A, technology demonstrations were conducted to mitigate risk and identify affordable mature technologies that individually or together meet the Warfighters needs. Following MS B, a Statement of Work (SOW) and System Performance Specification (SPS) were used to award competitive cost plus incentive fee contract to build prototypes that are being subjected to robust engineering developmental testing and Operational Assessment during the Engineering and Manufacturing Development phase. Following MS C, award a Fixed Price Incentive Successive Target (FPIS) option for Low Rate Initial Production (LRIP) to support formal Developmental Testing (DT) and Multi-Service Operational Test & Evaluation (MOT&E). Following a successful Full Rate Production (FRP) decision, award a FPIS option with five one-year ordering periods. Full and open competition will be used with an updated SPS to award follow-on production contracts. Following JECP achieving Full Operational Capability, the Expeditionary Collective Protection-Enhanced Program will provide solutions to meet emerging and evolving User needs.

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CO5: <i>COLLECTIVE PROTECTION (SDD)</i>

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CO5: <i>COLLECTIVE PROTECTION (SDD)</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** JECP - HW S - Prototype Development	C/CPIF	Science Applications International Corporation:San Diego, CA	12.426	0.250	Feb 2012	4.347	Feb 2013	-		4.347	0.000	17.023	0.000
Subtotal			12.426	0.250		4.347		-		4.347	0.000	17.023	0.000

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** JECP - ES S - Systems Engineering IPT	MIPR	Various:	5.337	0.840	Nov 2011	0.500	Nov 2012	-		0.500	0.000	6.677	0.000
ILS S - Integrated Logistics IPT	MIPR	Various:	2.679	0.500	Nov 2011	0.381	Nov 2012	-		0.381	0.000	3.560	0.000
Subtotal			8.016	1.340		0.881		-		0.881	0.000	10.237	0.000

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** JECP - OTHB SB - Test & Evaluation IPT	MIPR	Various:	5.105	0.750	Nov 2011	0.500	Nov 2012	-		0.500	0.000	6.355	0.000
DTE S - Prototype Production Qualification Testing	MIPR	Various:	7.596	5.667	Feb 2012	-		-		-	0.000	13.263	0.000
DTE S - Low Rate Initial Production Units Production Verification Testing	MIPR	Various:	-	-		2.297	Feb 2013	-		2.297	0.000	2.297	0.000
OTE S - Low Rate Initial Production Multi-Service Operational Testing	MIPR	Various:	-	-		0.449	Nov 2012	-		0.449	0.000	0.449	0.000
Subtotal			12.701	6.417		3.246		-		3.246	0.000	22.364	0.000

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CO5: <i>COLLECTIVE PROTECTION (SDD)</i>
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	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
** JECR - Critical Design Review	■																															
JECR - Performance Specification Testing (PST)	■	■	■	■																												
JECR - Operational Assessment (OA)							■	■																								
JECR - Production Qualification Testing (PQT)			■	■	■	■	■	■																								
JECR - Capability Production Document (CPD)											■	■																				
JECR - Milestone C Decision											■	■																				
JECR - Low-Rate Initial Production Contract Option											■	■																				
JECR - Production Verification Testing (PVT)											■	■	■	■	■	■																
JECR - Multi-service Operational Test and Evaluation															■	■																
JECR - Full Rate Production Decision Review																■	■															
JECR - Initial Operational Capability																				■	■											

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Chemical and Biological Defense Program		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT CO5: <i>COLLECTIVE PROTECTION (SDD)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
** JECR - Critical Design Review	2	2011	2	2011
JECR - Performance Specification Testing (PST)	1	2011	1	2012
JECR - Operational Assessment (OA)	3	2012	3	2012
JECR - Production Qualification Testing (PQT)	4	2011	1	2013
JECR - Capability Production Document (CPD)	2	2013	2	2013
JECR - Milestone C Decision	2	2013	2	2013
JECR - Low-Rate Initial Production Contract Option	2	2013	2	2013
JECR - Production Verification Testing (PVT)	2	2013	2	2014
JECR - Multi-service Operational Test and Evaluation	2	2014	2	2014
JECR - Full Rate Production Decision Review	3	2014	3	2014
JECR - Initial Operational Capability	4	2015	4	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program								DATE: February 2012			
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>				PROJECT DE5: <i>DECONTAMINATION SYSTEMS (SDD)</i>			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
DE5: <i>DECONTAMINATION SYSTEMS (SDD)</i>	7.594	-	9.324	-	9.324	8.652	10.938	9.129	9.466	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This project provides Engineering and Manufacturing Development (EMD) for: (1) Contaminated Human Remains Decontamination (CHRP); (2) the Decontamination Family of Systems (DFoS); (3) Joint Platform Interior Decontamination (JPID); and (4) the Joint Service Sensitive Equipment Decontamination (JSSED) programs.

The Contaminated Human Remains Pouch (CHRP) effort will provide the capability to protect personnel handling and processing human remains contaminated with Chemical, Biological, Radiological, or Nuclear (CBRN) contamination. The CHRP will fulfill gaps as described in the Mortuary Affairs (MA) Initial Capabilities Document (ICD) for safe intra-theater handling and transport of contaminated human remains (CHR). The CHRP will provide protection by containing contaminated human remains (CHR) during recovery and transport from the point of fatality to the Mortuary Affairs (MA) Activity. The CHRP will contain fluid and vapor CBRN hazards associated with the CHR to reduce the spread of contamination and reduce the hazard to personnel handling the CHR. Successful development and procurement of the CHRP will provide Warfighters with the capability to safely handle, transport, and temporarily store or inter CHR in a theater of operations.

The Decontamination Family of Systems (DFoS) program facilitates the rapid transition of mature Science and Technology (S&T) research developments to existing Decontamination or Contamination Mitigation ICD Programs of Record and guides S&T community efforts toward meeting the needs of the Warfighter. Leveraging the outcome of the Materiel Development Decision (3QFY11) directed Analysis of Alternatives, DFoS will develop a Family of Systems, to include equipment, to improve decontamination processes, and decontaminant solutions to meet the capability gaps for decontaminating NTA and chemical and biological warfare agents from personnel, equipment, vehicle interiors/exterior, terrain, and fixed facilities.

The Joint Platform Interior Decontamination (JPID) program will provide decontamination capabilities for interiors of vehicles, ships, fixed site facilities, mobile maintenance facilities, aircraft and sensitive equipment inherent to the platform during air, ground and sea operations in hostile and non-hostile environments that have been exposed to chemical, biological, radiological and nuclear (CBRN) agents/contamination. To accommodate the array of Service mission sets, the potential for varying system and/or technology configurations may be required. The JPID Preferred System Concept (PSC) may consist of multiple solution sets that provide increments of capability or one solution to address the various platforms and threats identified under the program. No funding beyond FY12.

The Joint Service Sensitive Equipment Decontamination System (JSSED) program provides a thorough decontamination capability against chemical and biological warfare agents for high value or critical sensitive equipment that cannot be decontaminated using existing methods without damage. JSSED efforts will be addressed under the JPID program of record from FY11 forward.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2011	FY 2012	FY 2013
Title: 1) CHRP	-	-	1.773

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT DE5: <i>DECONTAMINATION SYSTEMS (SDD)</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
FY 2013 Plans: Initiate engineering, testing and logistics planning and documentation to support Contaminated Human Remains Pouch (CHRP) test and evaluation to include liquid and vapor live agent swatch and system permeation, durability, material compatibility, environmental effects, and operational testing.				
Title: 2) CHRP FY 2013 Plans: Award contract(s) to procure 80 CHRP systems (at \$2 thousand each) for Developmental Testing (DT) and Multi-service Operational Test and Evaluation (MOT&E).		-	-	0.160
Title: 3) DFoS - RSDL FY 2011 Accomplishments: Conducted testing of the efficacy of Reactive Skin Decontamination Lotion (RSDL)/oxime for NTA decontamination on skin, including porcine skin and animal studies.		2.185	-	-
Title: 4) DFoS FY 2013 Plans: Validate the decontamination wipes, the selected chemical decontaminant(s) with a decontaminant delivery system, the decontamination assurance spray with the selected decontaminant(s), and RSDL through evaluations such as full scale use of the systems, interference testing, and compatibility testing.		-	-	7.391
Title: 5) JPID FY 2011 Accomplishments: Transitioned JPID requirements from the management umbrella of Joint Material Decontamination System (JMDS)/JSSED to a stand-alone program of record (pre-MS A); activities included the initiation of the Integrated Product Teams (IPT), document development, conducting Industry Day and releasing the Request for Proposal (RFP).		2.157	-	-
Title: 6) JSSED FY 2011 Accomplishments: Conducted engineering, testing and logistics planning and documentation to support transition of program efforts into JPID.		3.252	-	-
Accomplishments/Planned Programs Subtotals		7.594	-	9.324

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT DE5: <i>DECONTAMINATION SYSTEMS (SDD)</i>
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C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• JD0050: <i>DECONTAMINATION FAMILY OF SYSTEMS (DFoS)</i>	0.000	0.000	0.506		0.506	2.127	4.612	17.401	24.198	Continuing	Continuing
• JD0055: <i>JOINT SERVICE PERSONNEL/SKIN DECON SYSTEM (JSPDS)</i>	3.350	6.466	0.000		0.000	0.000	0.000	0.000	0.000	0.000	9.816
• JD0063: <i>CONTAMINATED HUMAN REMAINS POUCH (CHRP)</i>	0.000	0.000	0.000		0.000	0.506	0.791	1.288	0.821	Continuing	Continuing

D. Acquisition Strategy

CHRP

The Contaminated Human Remains Pouch (CHRP) effort will utilize an incremental acquisition strategy to provide the capability to protect personnel handling and processing human remains contaminated with Chemical, Biological, Radiological, or Nuclear (CBRN) contamination. The CHRP acquisition will leverage Commercial-off-the-Shelf (COTS)/Non-developmental Item (NDI) technologies that will lead to a fielded capability to fulfill gaps as described in the Mortuary Affairs (MA) Initial Capabilities Document (ICD) for safe intra-theater handling and transport of contaminated human remains (CHR). Successful development and procurement of the CHRP will provide Warfighters with the capability to safely handle, transport, and temporarily store or inter CHR in a theater of operations. CHRP will employ a competitive prototyping effort to facilitate the identification and evaluation of COTS/NDI capabilities that can meet the CHRP requirements. A RFP will solicit industry for COTS/NDI technologies and may result in multiple contract awards to allow for competition throughout the acquisition process and minimize cost and schedule risk.

DFoS

The Decontamination Family of Systems (DFoS) will utilize an incremental acquisition strategy to transition various developmental technology efforts (COTS, Joint Science Technology Office (JSTO), Defense Threat Reduction Agency (DTRA) efforts, etc.) to meet high priority Warfighter capability gaps. DFoS will support Major Defense Acquisition Programs (MDAPs) and Programs of Record by guiding S&T efforts and transitioning mature technologies to meet program requirements. The DFoS acquisition will leverage differing technologies in each subsystem to fulfill Warfighter capability gaps. The JSEW, GPD, & CIDAS Programs will employ a CP effort to facilitate the identification and evaluation of technologies (at a minimum Technology Readiness Level (TRL) 4) that can meet the Contamination Mitigation ICD requirements. A multi-phased Analysis of Alternatives (AoA) will be conducted to identify and evaluate the operational effectiveness of potential material solutions to satisfy Service requirements. As each AoA phase is completed, individual systems and their respective phases of entry will be identified. Industry and government labs will be solicited and through competitive prototyping, materiel solutions will be down-selected for continued development and fielding as a new or enhanced joint force capability.

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	DE5: <i>DECONTAMINATION SYSTEMS (SDD)</i>

The CHRP effort will leverage Commercial-off-the shelf (COTS)/Non-developmental Item (NDI) technologies that will lead to a fielded capability to fulfill gaps as described in the ICD.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT DE5: <i>DECONTAMINATION SYSTEMS (SDD)</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** CHRP - CHRP Prototype Development Contract	C/FFP	Various:	-	-		0.160	Feb 2013	-		0.160	Continuing	Continuing	0.000
Subtotal			-	-		0.160		-		0.160			0.000

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** CHRP - IPT Technical Support	MIPR	Various:	-	-		0.150	Feb 2013	-		0.150	Continuing	Continuing	0.000
Subtotal			-	-		0.150		-		0.150			0.000

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** CHRP - Document Development and Test Planning	MIPR	Various:	-	-		0.150	Feb 2013	-		0.150	Continuing	Continuing	0.000
Developmental Testing	MIPR	Various:	-	-		0.624	Feb 2013	-		0.624	Continuing	Continuing	0.000
Operational Testing	MIPR	Various:	-	-		0.400	May 2013	-		0.400	Continuing	Continuing	0.000
** DfOS - DTE C - UNS NTA Decon Assurance Spray	MIPR	TBD:	-	-		1.746	Feb 2013	-		1.746	Continuing	Continuing	0.000
DTE C - UNS NTA Reactive Skin Decontamination Lotion (RSDL)	C/CPFF	Battelle:Columbus, OH	2.300	-		1.200	Feb 2013	-		1.200	Continuing	Continuing	0.000
DTE C - UNS NTA Chemical Decon/Decon Wipes	MIPR	TBD:	-	-		2.745	Feb 2013	-		2.745	Continuing	Continuing	0.000
Subtotal			2.300	-		6.865		-		6.865			0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT DE5: <i>DECONTAMINATION SYSTEMS (SDD)</i>
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Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** CHRP - PM/MS S - Program Management Support, Integrated Product Team and Technical Support	MIPR	Various:	-	-		0.449	Feb 2013	-		0.449	Continuing	Continuing	0.000
** DfOS - PM/MS SB - Program Management Support, Integrated Product Team and Technical Support	MIPR	Various:	2.158	-		1.700	Feb 2013	-		1.700	Continuing	Continuing	0.000
Subtotal			2.158	-		2.149		-		2.149			0.000
Project Cost Totals			4.458	-		9.324		-		9.324			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Chemical and Biological Defense Program			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT DE5: <i>DECONTAMINATION SYSTEMS (SDD)</i>	

	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
** CHRP - CHRP MS A		■																										
CHRP - CHRP RFP and Contract Activities			■	■																								
CHRP - CHRP Competitive Prototyping							■	■																				
CHRP - CHRP PDR								■	■																			
CHRP - CHRP CDD								■	■	■																		
CHRP - CHRP TEMP (MS B)									■	■																		
CHRP - CHRP MS B											■	■																
CHRP - CHRP DT												■	■															
CHRP - CHRP OT													■	■														
CHRP - CHRP CDR													■	■														
CHRP - CHRP CPD														■	■	■												
CHRP - CHRP TEMP (MS C/FRP)															■	■												
CHRP - CHRP MS C																■	■											
CHRP - CHRP FRP																	■	■	■	■	■	■	■	■	■	■	■	
** DFoS - NTA Chemical Decon Initial Efficacy Testing			■	■																								
DFoS - NTA Chemical Decon Downselect							■	■																				
DFoS - NTA Chemical Decon Coupon Efficacy, Material Compatibility and Detector Compatibility Testing								■	■	■																		
DFoS - NTA Chemical Decon Operational Assessment												■	■															
DFoS - NTA Chemical Decon Capabilities and Limitations Memo													■	■														
DFoS - NTA Decon Assurance Spray Sensitivity Testing				■	■																							

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT DE5: <i>DECONTAMINATION SYSTEMS (SDD)</i>
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	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
DFoS - NTA Decon Assurance Spray Interference and Compatibility testing					██████████																							
DFoS - NTA Decon Assurance Spray Operational Assessment																												
DFoS - NTA Decon Assurance Spray Capabilities and Limitations Memo																												
** JPID - JPID MS A																												
JPID - JPID ICD																												
JPID - JPID MS and Contracting Documentation																												
** JSSED - Fabricate Prototypes																												
JSSED - Contract closeout																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Chemical and Biological Defense Program		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT DE5: <i>DECONTAMINATION SYSTEMS (SDD)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
** CHRP - CHRP MS A	2	2011	2	2011
CHRP - CHRP RFP and Contract Activities	3	2011	1	2012
CHRP - CHRP Competitive Prototyping	2	2012	3	2012
CHRP - CHRP PDR	3	2012	3	2012
CHRP - CHRP CDD	3	2012	1	2013
CHRP - CHRP TEMP (MS B)	4	2012	1	2013
CHRP - CHRP MS B	2	2013	2	2013
CHRP - CHRP DT	3	2013	3	2013
CHRP - CHRP OT	4	2013	4	2013
CHRP - CHRP CDR	4	2013	4	2013
CHRP - CHRP CPD	4	2013	2	2014
CHRP - CHRP TEMP (MS C/FRP)	2	2014	3	2014
CHRP - CHRP MS C	3	2014	3	2014
CHRP - CHRP FRP	3	2014	4	2017
** DFoS - NTA Chemical Decon Initial Efficacy Testing	3	2011	4	2011
DFoS - NTA Chemical Decon Downselect	1	2012	1	2012
DFoS - NTA Chemical Decon Coupon Efficacy, Material Compatibility and Detector Compatibility Testing	1	2012	1	2013
DFoS - NTA Chemical Decon Operational Assessment	2	2013	2	2013
DFoS - NTA Chemical Decon Capabilities and Limitations Memo	2	2013	3	2013
DFoS - NTA Decon Assurance Spray Sensitivity Testing	3	2011	1	2012
DFoS - NTA Decon Assurance Spray Interference and Compatibility testing	1	2012	1	2013

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT DE5: <i>DECONTAMINATION SYSTEMS (SDD)</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
DFoS - NTA Decon Assurance Spray Operational Assessment	2	2013	2	2013
DFoS - NTA Decon Assurance Spray Capabilities and Limitations Memo	2	2013	3	2013
** JPID - JPID MS A	1	2011	1	2011
JPID - JPID ICD	2	2011	2	2011
JPID - JPID MS and Contracting Documentation	2	2011	4	2011
** JSSED - Fabricate Prototypes	1	2011	1	2011
JSSED - Contract closeout	3	2011	4	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>				PROJECT IP5: <i>INDIVIDUAL PROTECTION (SDD)</i>			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
IP5: <i>INDIVIDUAL PROTECTION (SDD)</i>	20.862	11.490	13.971	-	13.971	17.046	1.603	1.990	6.370	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This project provides Engineering and Manufacturing Development (EMD) and Low Rate Initial Production (EMD/LRIP) for individual protection equipment, with the goal of providing equipment that allows the individual soldier, sailor, airman, or marine to operate in a contaminated Nuclear, Biological and Chemical (NBC) environment with little or no degradation of his/her performance.

Included in this program are:

(1) The Joint Service Aircrew Mask (JSAM) is an Acquisition Category (ACAT) III Family of Systems (FoS) respiratory protection system being incrementally developed. The JSAM Apache MPU-6 mask is for use with the Apache Integrated Helmet And Display Sighting System, JSAM MBU-25 (V)/P Fixed Wing (FW) respirator is being developed for use on a limited number of U.S. Air Force Fixed Wing aircraft, and the JSAM MPU-5 Rotary Wing (RW) mask is being developed for use in the majority of Department of Defense RW aircraft. The goal of the overall JSAM project is to develop, manufacture, field and sustain an aircrew respirator system that, in conjunction with a below-the-neck (BTN) clothing ensemble, will provide the capability for all aircrew to fly throughout their full operating envelope in an actual or perceived Chemical and Biological (CB) warfare environment. The JSAM will be a lightweight CB protective mask that will be worn as CB protection for most Army, Air Force, Navy and Marine RW and FW aircrew members. The JSAM FW will be the first and only CB protective mask in the DoD inventory that can provide anti-G protection, up to nine times the vertical force (Gz), for aircrew in high-performance aircraft. All JSAM variants will be compatible with most BTN CB ensembles and existing aircrew life support equipment. They will include a protective hood assembly, CB filter, blower assembly, and an intercom for ground communication. They will also provide flame and thermal protection, demist/emergency demist, and anti-drowning features.

(2) The Uniform Integrated Protection Ensemble (UIPE). The objective of UIPE is to fully integrate chemical, biological, radiological, nuclear (CBRN) and toxic industrial material (TIM) protection into an ensemble, identical in fit and form to the combat uniform (including mask-helmet integration and protective boots and gloves), thus negating the need for separate protective ensemble components. This integrated protection approach will result in increased Warfighter operational performance in a CBRN environment. The UIPE program will develop, integrate, test, procure and field incremental capability solutions that are modular in function and offer improvements in form and fit over current systems; the program will explore trade-space in areas such as protection level, heat stress, durability, antimicrobial properties, flame resistance, launderability, self-detoxification, and protection time in order to provide capabilities that afford maximum utility to the Warfighter. Where appropriate modeling and simulation tools will be used to lower UIPE program risks, reduce costs, and ensure a high confidence in selected technologies. UIPE is aimed specifically at providing enhanced individual protection capabilities to the Warfighter through reduction of physiological and psychological effects associated with CBRN protective garment thermal burden, weight, and bulk. UIPE requirements are supported by an Initial Capability Document (ICD) and Capability Development Document (CDD), and a MS A. UIPE is in Engineering and Manufacturing Development (EMD) phase and will ultimately provide CB protective equipment with improved operational capability to the U.S. Navy and U.S. Special Operations Command.

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT IP5: <i>INDIVIDUAL PROTECTION (SDD)</i>		
<p>(3) The Joint Service General Purpose Mask (JSGPM) Advanced Respiratory Protection Initiative (ARPI): This project funds the advanced component development and prototypes of an improved filtration and protection capability against highest priority Toxic Industrial Chemical (TIC) threats, addressing a current and significant capability gap to the operating force. The effort is supported by the Capabilities Production Document for the JSGPM, which outlines the need for a robust TIC/TIM protection capability. It is expected that new capabilities demonstrated through the activities in this project will be leveraged and integrated into future increments of UIPE.</p>				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
<p>Title: 1) JSAM</p> <p>FY 2011 Accomplishments: JSAM MPU-5 (RW) - Completed Multi-Service Developmental Flight Testing. Procured 400 articles (\$3.750K each) for developmental test in FY12-13.</p> <p>JSAM MBU-25 (V)/P (FW) - Continued DT for top four priority aircraft platforms (F-22, MC-12W, F-18 and MV-22).</p> <p>FY 2012 Plans: JSAM MPU-5 (RW) - Complete Manufacturing Readiness Assessment. Finalize configuration for MOT&E. Complete definition of performance envelope. Continue logistics and training planning. Conduct developmental tests (e.g., chemical agent, simulant, environmental, and logistics tests) and develop reports.</p> <p>JSAM MBU-25 (V)/P (FW) - Complete DT for F-22, MC-12W, F-18 and MV-22 aircraft platforms. Start OT for top four priority aircraft. Conduct logistics demonstration.</p>		18.483	7.815	-
<p>Title: 2) JSAM FW</p> <p>FY 2013 Plans: Complete Operation Test. Conduct PRR and JILA, finalize evaluator test reports and complete documentation for MS C.</p>		-	-	3.486
<p>Title: 3) JSAM RW</p> <p>FY 2013 Plans: Conduct airworthiness testing. Prepare assets for operational testing. Develop test plans. Conduct developmental tests (e.g., chemical agent, simulant, environmental, and logistics tests) and develop reports. Prepare milestone documentation. Conduct formal system reviews (i.e., System Verification Review and Production Readiness Review). Conduct training.</p>		-	-	6.612
<p>Title: 4) JSGPM</p> <p>FY 2011 Accomplishments:</p>		2.379	-	2.004

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT IP5: <i>INDIVIDUAL PROTECTION (SDD)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2011	FY 2012	FY 2013
<p>JSGPM (ARPI) - Conducted government testing to ensure carbons transitioned to JSGPM filters to improve TIC protection meeting the user requirements. Conducted government testing on novel filtration candidates considered for UIPE.</p> <p>JSGPM - Continued testing End of Service Indicator (ESLI) and completed transition to production in FY12.</p> <p>FY 2013 Plans: JSGPM (ARPI) - Begin the EMD phase of ZZ-AT media (zirconium hydroxide) based filter transitioning from Tech Base that is applicable to replace or improve fielded protection. Prepare for EMD contract.</p>			
<p>Title: 5) UIPE</p> <p>FY 2012 Plans: UIPE - Prepare for and conduct MS B decision. Enter Engineering and Manufacturing Development (EMD) phase. Award contracts. Conduct Critical Design Review (CDR) and EMD phase competitive prototyping. Initiate integrated developmental testing and operational testing (DT/OT). Assess down-selected UIPE candidates in field and laboratory test events to evaluate performance with respect to reduction of thermal burden, protection against CB agents, and mission suitability. Prepare for and conduct MS C Low Rate Initial Production (LRIP) decision. Exercise LRIP contract option(s).</p> <p>FY 2013 Plans: UIPE - Conduct Production Readiness Review (PRR), Manufacturing Readiness Assessment (MRA) and Technology Readiness Assessment (TRA). Complete Logistics Demonstration. Perform Physical Configuration Audit (PCA). Conduct Operational Test Readiness Review (OTRR) and First Article Test (FAT). Initiate Multi-service Operational Test and Evaluation (MOT&E). Perform System Verification Review (SVR). Prepare for and conduct Full Rate Production (FRP) decision.</p>	-	3.524	1.869
<p>Title: 6) SBIR</p> <p>FY 2012 Plans: Small Business Innovative Research.</p>	-	0.151	-
Accomplishments/Planned Programs Subtotals	20.862	11.490	13.971

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2013</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u>	<u>Total Cost</u>
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• JI0002: <i>JS AIRCREW MASK (JSAM)</i>	4.543	11.853	14.878		14.878	30.143	38.111	26.796	10.169	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT IP5: <i>INDIVIDUAL PROTECTION (SDD)</i>
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C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• JI0003: <i>JOINT SERVICE GENERAL PURPOSE MASK (JSGPM/JSCEM)</i>	51.265	58.523	48.466		48.466	46.657	99.151	70.882	123.496	Continuing	Continuing
• MA0401: <i>CBRN UNIFORM INTEGRATED PROTECTION ENSEMBLE (UIPE)</i>	0.000	1.000	10.376		10.376	13.772	12.948	17.101	17.101	Continuing	Continuing

D. Acquisition Strategy

JSAM

The overall JSAM acquisition approach is incremental and phased due to the complexity of interfacing with almost 200 aircraft types and models with different mission sets, ALSE, cockpit layouts, priorities, etc., and funding limitations. The JSAM must be compatible with current CB ensembles, provide flame protection, and reduce heat stress imposed by existing aircrew CB protective masks. The JSAM must also be compatible with existing aircrew life support equipment (ALSE) and aircraft systems including weapons Systems (FoS) is a modular system that satisfies the requirements for different aircraft types and mission areas. JSAM will replace all existing Pressure Breathing for Gravity (PBG) and non-PBG CB aircrew respirators for all fixed and rotary wing aircrew. JSAM is a respirator for individual aircrew that provides above-the-shoulder head, eye, respiratory, and percutaneous protection against CB warfare agents, and continuous protection JSAM MBU-25 FW utilizes an incremental acquisition strategy to provide aircrew of all Services with individual head-eye-respiratory protection against Chemical-Biological (CB) warfare agents.

The JSAM MBU-25 FW effort will test and field the top four most critical aircraft platforms through an SDD contract. An RFP will be released to solicit industry for JSAM FW procurement using a full and open competition.

JSAM RW MPU-5 Low Rate Production (LRIP) and Full Rate Production (FRP) assets will be procured using contract options. JSAM RW MPU-5 will provide individual head-eye-respiratory protection against Chemical-Biological (CB) warfare agents to pilots and aircrew of all rotary wing aircraft in the DoD inventory except the Army AH-64A/D Helicopter. JSAM RW MPU-5 Engineering and Manufacturing Development activities are performed via a contract awarded using a full and open competition, best value contracting strategy. The existing contract includes options for LRIP and FRP. A full and open competition, best value contracting strategy will be utilized to support additional Full Rate Production upon completion of the existing contract requirements and execution of options.

JSGPM

JSGPM (ARPI): The Advanced Respiratory Protection Initiative (ARPI) will address improved masks protection, filter protection against TICs/TIMs and improved profile and breathing resistance; and wearability compatibility/integration. This will be accomplished by: 1) Class-Based Analysis, 2) Filtration Advanced Screening Test (FAST), Desorption Study; and Advanced CBRN Filtration efforts. Accomplishments to date include development of the prioritization approach and class based

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program DATE: February 2012

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	IP5: <i>INDIVIDUAL PROTECTION (SDD)</i>

analysis; development of challenge levels for performance curve through modeling; FAST of ASZM-TDA, BSC, and EUMC against the priority TIC LIST; test of representative chemicals demonstrating the applicability of the class based analysis, and Scientific literature review of filter desorption.

UIPE

Strategy based on incremental development in accordance with prescribed Chemical Biological Radiological Nuclear Defense Joint Requirements Office (CBRND-JRO) approved capabilities documents. The objective of the Uniform Integrated Protection Ensemble (UIPE) is to fully integrate chemical, biological, radiological, nuclear (CBRN) and toxic industrial material (TIM) protection into an ensemble, identical in fit and form to the combat uniform (including mask-helmet integration, protective boots and gloves), thus negating the need for separate protective ensemble components. This integrated protection approach will result in increased Warfighter operational performance in a CBRN environment.

UIPE is aimed specifically at providing enhanced individual protection capabilities to the Warfighter through reduction of physiological and psychological effects associated with CBRN protective garment thermal burden, weight, and bulk. UIPE will pursue a Modified Commercial-Off-The-Shelf/Non-Developmental Item (COTS/NDI) Acquisition Strategy; full and open competition will be used. Following Milestone (MS) B approval, contracts will be awarded and integrated Developmental Test/Operational Test (DT/OT) will be initiated on selected candidate system(s) during the Engineering and Manufacturing Development (EMD) phase. At the end of EMD, those candidates meeting UIPE requirements and that offer best value to the Government will move forward into Low Rate Initial Production (LRIP) and Multi-Service Operational Test and Evaluation (MOT&E). Following MOT&E, effective and suitable systems will be considered for Full-Rate Production (FRP). UIPE requirements are supported by an Initial Capability Document (ICD) and Capability Development Document (CDD). UIPE will ultimately provide CB protective equipment with improved operational capability to the U.S. Navy and U.S. Special Operations Command.

Future increments of UIPE shall be defined via separate capabilities documents. Each successive increment will follow a similar path/process from MS A or MS B through MS C/FRP and will leverage preceding efforts to the greatest extent possible, maintaining commonality and synergy across all increments.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT IP5: <i>INDIVIDUAL PROTECTION (SDD)</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
** JSAM - HW S - Contractor Development MPU-5	C/CPAF	AVOX:Lancaster, NY	25.445	0.055	Feb 2012	-		-		-	Continuing	Continuing	7.209
** JSAM RW - HW S - JSAM RW	MIPR	Various:	-	-		0.530	Feb 2013	-		0.530	Continuing	Continuing	0.000
** JSGPM - HW C - ZZAT Filter	MIPR	Various:	-	-		0.600	Feb 2013	-		0.600	Continuing	Continuing	0.000
** UIPE - HW S - Prototype Garment Development	C/FFP	TBD:	-	0.200	Feb 2012	0.018	Feb 2013	-		0.018	Continuing	Continuing	0.000
Subtotal			25.445	0.255		1.148		-		1.148			7.209

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
** JSAM - ES S - JSAM RW	MIPR	Various:	1.623	0.890	Feb 2012	-		-		-	Continuing	Continuing	0.000
** JSAM FW - ES S - JSAM FW	MIPR	Various:	-	-		0.760	Feb 2013	-		0.760	Continuing	Continuing	0.000
** JSAM RW - ES S - JSAM RW	MIPR	Various:	-	-		1.790	Feb 2013	-		1.790	Continuing	Continuing	0.000
** JSGPM - TD/D SB - JSGPM Filter	MIPR	ECBC:APG, MD	0.666	-		0.179	Feb 2013	-		0.179	Continuing	Continuing	0.000
ES C - JSGPM Filter	MIPR	NRL:Washington, DC	0.500	-		0.100	Feb 2013	-		0.100	Continuing	Continuing	0.000
** UIPE - ES S - Prototype Garment - Manufacturing Readiness Assessment	C/FFP	TBD:	-	0.095	Feb 2012	0.055	Nov 2012	-		0.055	Continuing	Continuing	0.000
Subtotal			2.789	0.985		2.884		-		2.884			0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** JSAM - OTHS SB - Govt Dev Test	MIPR	Various:	20.403	2.944	Feb 2012	-		-		-	Continuing	Continuing	0.092
OTE S - Govt Operational Test MBU-25/26	MIPR	Various:	19.230	1.536	Feb 2012	-		-		-	Continuing	Continuing	0.404
OTHT SB - Govt Operational Test MPU-5	MIPR	Various:	6.354	1.203	Feb 2012	-		-		-	Continuing	Continuing	0.185
** JSAM FW - OTE S - JSAM FW	MIPR	Various:	-	-		1.985	Feb 2013	-		1.985	Continuing	Continuing	0.000
** JSAM RW - OTE S - JSAM RW	MIPR	Various:	-	-		3.313	Feb 2013	-		3.313	Continuing	Continuing	0.000
** JSGPM - DTE SB - JSGPM Filter Testing	MIPR	Various:	4.710	-		0.625	Feb 2013	-		0.625	Continuing	Continuing	0.000
** UIPE - DTE S - Prototype Garment - Integrated DT/OT	MIPR	Various:	-	1.121	Feb 2012	0.653	Feb 2013	-		0.653	Continuing	Continuing	0.000
OTHT S - Test and Evaluation IPT Support	MIPR	Various:	-	0.788	Nov 2011	0.370	Nov 2012	-		0.370	Continuing	Continuing	0.000
Subtotal			50.697	7.592		6.946		-		6.946			0.681

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** JSAM - PM/MS SB - Program Management	MIPR	Various:	21.480	1.187	Feb 2012	-		-		-	Continuing	Continuing	5.421
** JSAM FW - PM/MS S - JSAM FW	MIPR	Various:	-	-		0.741	Feb 2013	-		0.741	Continuing	Continuing	0.000
** JSAM RW - PM/MS S - JSAM RW	MIPR	Various:	-	-		0.979	Feb 2013	-		0.979	Continuing	Continuing	0.000
** JSGPM - PM/MS C - Program Management Conduct Market Survey Analysis	MIPR	Various:	0.800	-		0.400	Feb 2013	-		0.400	Continuing	Continuing	0.000

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT IP5: <i>INDIVIDUAL PROTECTION (SDD)</i>
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	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
** JSAM FW - JSAM - DT MBU-25 FW	██████████																											
JSAM FW - JSAM - OT&E MBU-25 FW					██████████																							
JSAM FW - JSAM - MS C MBU-25 FW									██████████																			
JSAM FW - JSAM - IOC MBU-25																	██████████											
** JSAM RW - JSAM RW Developmental Testing	██████████																											
JSAM RW - JSAM RW Production Qualification Test Asset Production					██████████																							
JSAM RW - JSAM RW Production Qualification Testing									██████████																			
JSAM RW - JSAM RW Airworthiness Test									██████████																			
JSAM RW - JSAM RW MS C									██████████																			
JSAM RW - JSAM RW MOT&E													██████████															
JSAM RW - JSAM RW FRP																	██████████											
JSAM RW - JSAM RW IOC																					██████████							
JSAM RW - JSAM RW IPR					██████████																							
** JSGPM - Conduct System Demonstration									██████████																			
JSGPM - JSGPM Filter Qualification Testing	██████████																											
JSGPM - JSGPM (ARPI) Candidate Screening	██████████																											
JSGPM - JSGPM (ARPI) Class Based Analysis					██████████																							
JSGPM - JSGPM (ARPI) Down-Select					██████████																							
JSGPM - JSGPM (ARPI) Advanced Design Transition Assessments	██████████																											
JSGPM - JSGPM (ARPI) Method Verification	██████████																											
JSGPM - JSGPM (ARPI) Integration Testing					██████████																							

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT IP5: <i>INDIVIDUAL PROTECTION (SDD)</i>
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	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
JSGPM - JSGPM (ARPI) TD Contract Award																												
JSGPM - TIC Filter Sorbent Evaluation				■																								
JSGPM - TIC Filter TECH Transition								■																				
JSGPM - TIC Filter Demo																												
JSGPM - TIC Filter Prototype (JSTO Technology 1)																												
JSGPM - JSGPM Prototype Development																												
JSGPM - JSGPM Prototype Testing (JSTO Technology 2)																												
** UIPE - Final RFP Released				■																								
UIPE - Milestone B								■																				
UIPE - EMD Contract Award								■																				
UIPE - Critical Design Review								■																				
UIPE - Integrated DT/OT																												
UIPE - Approved CPD																												
UIPE - Milestone C / LRIP								■																				
UIPE - Multi-service Operational Test & Evaluation																												
UIPE - Full Rate Production																												
UIPE - SOCOM IOC																												
UIPE - US Navy IOC																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT IP5: <i>INDIVIDUAL PROTECTION (SDD)</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
** JSAM FW - JSAM - DT MBU-25 FW	2	2011	4	2012
JSAM FW - JSAM - OT&E MBU-25 FW	3	2012	4	2012
JSAM FW - JSAM - MS C MBU-25 FW	4	2013	4	2013
JSAM FW - JSAM - IOC MBU-25	2	2016	2	2016
** JSAM RW - JSAM RW Developmental Testing	1	2011	4	2011
JSAM RW - JSAM RW Production Qualification Test Asset Production	1	2012	4	2012
JSAM RW - JSAM RW Production Qualification Testing	4	2012	3	2013
JSAM RW - JSAM RW Airworthiness Test	4	2012	2	2014
JSAM RW - JSAM RW MS C	3	2013	3	2013
JSAM RW - JSAM RW MOT&E	4	2014	2	2015
JSAM RW - JSAM RW FRP	3	2015	3	2015
JSAM RW - JSAM RW IOC	2	2016	2	2016
JSAM RW - JSAM RW IPR	4	2011	4	2011
** JSGPM - Conduct System Demonstration	2	2013	4	2013
JSGPM - JSGPM Filter Qualification Testing	1	2011	2	2011
JSGPM - JSGPM (ARPI) Candidate Screening	1	2011	3	2011
JSGPM - JSGPM (ARPI) Class Based Analysis	2	2011	2	2011
JSGPM - JSGPM (ARPI) Down-Select	4	2011	4	2011
JSGPM - JSGPM (ARPI) Advanced Design Transition Assessments	2	2011	4	2011
JSGPM - JSGPM (ARPI) Method Verification	2	2011	4	2011
JSGPM - JSGPM (ARPI) Integration Testing	2	2012	4	2012
JSGPM - JSGPM (ARPI) TD Contract Award	1	2013	1	2013

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

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Events	Start		End	
	Quarter	Year	Quarter	Year
JSGPM - TIC Filter Sorbent Evaluation	4	2011	4	2011
JSGPM - TIC Filter TECH Transition	2	2012	2	2012
JSGPM - TIC Filter Demo	2	2013	2	2014
JSGPM - TIC Filter Prototype (JSTO Technology 1)	3	2013	3	2014
JSGPM - JSGPM Prototype Development	1	2015	4	2016
JSGPM - JSGPM Prototype Testing (JSTO Technology 2)	1	2017	3	2017
** UIPE - Final RFP Released	2	2011	2	2011
UIPE - Milestone B	1	2012	1	2012
UIPE - EMD Contract Award	2	2012	2	2012
UIPE - Critical Design Review	2	2012	2	2012
UIPE - Integrated DT/OT	2	2012	1	2013
UIPE - Approved CPD	1	2012	1	2013
UIPE - Milestone C / LRIP	3	2012	3	2012
UIPE - Multi-service Operational Test & Evaluation	3	2013	4	2013
UIPE - Full Rate Production	4	2013	4	2013
UIPE - SOCOM IOC	4	2014	4	2014
UIPE - US Navy IOC	3	2016	3	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT IS5: <i>INFORMATION SYSTEMS (SDD)</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
IS5: <i>INFORMATION SYSTEMS (SDD)</i>	15.689	2.423	2.045	-	2.045	11.794	9.884	24.826	23.267	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This project supports System Development and Demonstration and Low Rate Initial Production (SDD/LRIP).

Efforts included in this project are: (1) Joint Effects Model (JEM); (2) the Joint Warning and Reporting Network (JWARN); and (3) the Joint Program Executive Office for Chemical Biological Defense (JPEO-CBD) Software Support Activity (SSA).

The JEM is Department of Defense's (DoD) only accredited model for predicting hazards associated with the release of contaminants into the environment. JEM is being developed in separate increments and is capable of modeling hazards in a variety of scenarios including: counterforce, passive defense, accident and/or incidents; high altitude releases, urban NBC environments; building interiors, and human performance degradation. Battle space commanders and first responders must have a Chemical, Biological, Radiological, Nuclear (CBRN) hazard prediction capability in order to make decisions that will minimize risks of CBRN contamination and enable them to continue mission operations. JEM operates in an integrated fashion with operational and tactical Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) systems, and in a standalone mode. JEM interfaces and communicates with the other programs such as JWARN, weather systems, intelligence systems, and various databases.

The Joint Warning and Reporting Network (JWARN) will provide the Joint Forces with a comprehensive Integrated Early Warning, Analysis and Response capability to minimize the effects of hostile CBRN attacks, as well as accidents and incidents. It will provide the operational capability to employ CBRN warning technology which will collect, analyze, identify, locate, report, and disseminate warnings. JWARN will be compatible and integrated with Joint Service C4ISR Systems. JWARN will transition from platform specific Common Operating Environment (COE) standards to a Web-based Service Oriented Architecture (SOA). JWARN will also provide an expansion of sensors that will connect to JWARN, increased automation of message handling, improved false alarm filtering, integration of route-planning calculator, and interoperability with additional command and control (C2) systems. JWARN will be located in Command and Control Centers at the appropriate level and will be employed by CBRN defense specialists and other designated personnel. This employment will transfer data automatically from existing and future sensors to provide commanders with the capability to support operational decision making in a CBRN environment. JWARN will provide additional data processing to support the production of plans and reports, and access to specific CBRN information to improve the efficiency of limited CBRN personnel assets. JWARN will integrate existing sensors into a sensor network or host C2 system, but does not provide the sensors that will be employed in the operating environment. The JWARN capability described above will be developed utilizing an incremental approach based on Service requirements and host system architecture.

The JPEO-CBD SSA is a JPEO-CBD enterprise-wide, user developmental support and service organization focusing on development assistance and net-centric interoperability. The SSA provides the CBRN Warfighter with Joint Service solutions for Integrated Architectures, Information Assurance, Verification, Validation and Accreditation (VV&A) and Data Management; interoperable and integrated net-centric, Service-oriented, composable solutions for CBD; and infusion of

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT IS5: <i>INFORMATION SYSTEMS (SDD)</i>
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latest technologies into programs of record. CBRN user community and related communities of interest have need for CBRN "plug and play" capability to allow interoperability and re-configurability across the enterprise. The requirement for net-centric, composable solutions provides the near term foundation for the Warfighter's ability to communicate his CBRN solutions and interoperate with other Service operational systems. It also supports a longer term ability to interoperate with related agencies and to reduce the Warfighter's CBRN footprint as technologies improve.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2011	FY 2012	FY 2013
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Title: 1) JEM Independent Verification, Validation, and Accreditation FY 2011 Accomplishments: Continued independent verification, validation, and accreditation of JEM software and related models.	0.278	-	-
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Title: 2) JEM Program Management FY 2011 Accomplishments: Provided strategic, tactical planning, program/financial management, costing, contracting, scheduling and acquisition oversight support of fielded product all Services. Prepared and executed a follow-on Full Deployment Decision (FDD) for selected Command and Control systems. FY 2013 Plans: Perform program/financial management, costing, contracting, scheduling and acquisition oversight support of fielded product all Services. Complete execution of the follow-on Full Deployment Decision (FDD) for selected Command and Control systems.	0.233	-	0.152
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Title: 3) JEM Accession of Technology Improvements FY 2011 Accomplishments: Integrated transitioned Tech Base technology and capabilities into JEM software. Analyzed existing and future software architectures. Continued migrating JEM software to evolving host platforms (Service C2 systems). Incorporated Urban Dispersion Modeling enhancements, Missile Intercept, Backtracking to Source, enhanced STRATCOM Support, and Human Effects. Continued to review and evaluate existing JEM internal architecture for improved performance and potential operational cost savings.	0.567	-	-
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Title: 4) JEM Developmental Test and Evaluation FY 2011 Accomplishments: Continued to perform Governmental DT on updates to the JEM and evolving baselines in support of future User and Operational Assessments in preparation for milestone events. Verified and validated transitioned S&T code and developed models. Conducted test in support of follow-on accreditation and operational test. Initiated interoperability, network and system security certifications of multiple service C4I/host systems and three computer operating systems (Windows XP, Vista and UNIX).	0.439	-	-
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Title: 5) JEM	0.454	-	-
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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT IS5: <i>INFORMATION SYSTEMS (SDD)</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Description: JEM Program Development				
FY 2011 Accomplishments: Continued software upgrades on JEM baseline to support the evolving C4I host system updates.				
Title: 6) JWARN		7.494	-	-
Description: JWARN Program Development				
FY 2011 Accomplishments: Performed software upgrades and updates on JWARN baseline in parallel with evolving Command, Control, Communications, Computers, and Intelligence (C4I) host system upgrades. Continued development of software code in support of modernization efforts to keep pace with host C2 systems.				
Title: 7) JWARN		0.284	-	-
Description: JWARN Operational demonstrations and tests.				
FY 2011 Accomplishments: Prepared, conducted and supported operational demonstrations and tests for service specific FOT&E events. Generated test results and reports to support.				
Title: 8) JWARN		2.596	-	-
Description: JWARN Program Management				
FY 2011 Accomplishments: Perform program/financial management, costing, contracting, scheduling and acquisition oversight support of fielded JWARN product all Services.				
Title: 9) SSA Policies, Standards and Guidelines		0.216	0.244	0.198
FY 2011 Accomplishments: Continued monitoring compliance with Federal Information Security Management Act (FISMA) and DoD Acquisition policies required to sustain certification on Service specific IT platforms. Updated acquisition documentation for CBRN IT systems. Reviewed and updated Enterprise Verification, Validation, and Accreditation (VV&A) guidelines and processes, including M&S strategic support and accreditation support.				
FY 2012 Plans:				

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012		
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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Continue updates to acquisition documentation for CBRN IT systems based on changes in policy, procedures, and guidelines. Continue surveillance of Federal Information Security Management Act (FISMA) and DoD Acquisition policies necessary to maintain certification on deployed service platforms. Provide M&S strategic and accreditation support. FY 2013 Plans: Update acquisition documentation for CBRN IT systems based on changes in policy, procedures, and guidelines. Continue surveillance of Federal Information Security Management Act (FISMA) and DoD Acquisition policies necessary to maintain certification on deployed service platforms. Provide M&S strategic and accreditation support.				
Title: 10) SSA Integrated Architecture FY 2011 Accomplishments: Continued documentation of CB Information Systems data flows, data requirements, services and applications as well as IT infrastructure and technical standards for host systems. Updated and maintained the Integrated Architecture for JPEO-CBD Enterprise in accordance with DoD/AF and industry standards. Provided Net-Centric Assessment for programs. Updated Common CBRN Interface standards, including a CCSI and develop new interfaces as required. FY 2012 Plans: Continue required modifications to the Integrated Architecture for JPEO-CBD Enterprise on host platforms. Continue efforts to document CB Information Systems infrastructure and technical standards. Continue to provide Net-Centric Assessment for programs. Review and update the Common CBRN Interface standards on operational systems, including a CCSI. Develop new interfaces as required. FY 2013 Plans: Continue required modifications to the Integrated Architecture for JPEO-CBD Enterprise on host platforms and document the infrastructure and technical standards. Conduct Net-Centric Assessments for programs. Review and update the Common CBRN Interface standards on operational systems, including a CCSI.		0.513	0.308	0.239
Title: 11) SSA Enterprise Support and Services FY 2011 Accomplishments: Provided support processes and services for Architectures, Data, Information Assurance, Help Desk, Modeling and Simulation, Science and Technology, and Standards and Policy. Compiled performance metrics for services rendered. FY 2012 Plans:		0.278	0.163	0.156

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Continue to provide support processes and services for Architectures, Data, Information Assurance, Modeling and Simulation, Science and Technology, and Standards and Policy. Modify support processes and services necessary to maintain relevancy in accordance with DoD standards, policies, and guidelines. FY 2013 Plans: Support processes and services for Architectures, Data, Information Assurance, Modeling and Simulation, Science and Technology, and Standards and Policy.				
Title: 12) SSA Chemical, Biological, Radiological, Nuclear (CBRN) Data Model FY 2011 Accomplishments: Collaborated and exchanged information for use in CBRN Data models. Developed CBRN data dissemination across multiple users utilizing Universal Core (UCore) concepts and technologies previously demonstrated in the UCORE Pilot. Refined CBRN data model to be used as an enterprise wide model for the CBRN Center of Excellence (COE). FY 2012 Plans: Continue to provide CBRN Data Model development for Community of Interest. FY 2013 Plans: Refine CBRN Data Model to maintain relevancy for Community of Interest.		1.334	0.153	0.174
Title: 13) SSA Information Assurance FY 2011 Accomplishments: Conducted reviews and maintain Authorization to Operate on host systems. Maintained situational awareness and initiated actions to improve or restore IA posture. Completed documentation required to provide Information Assurance certification and acceptance services for developing JPEO-CBD programs. FY 2012 Plans: Continue situational awareness and initiate actions to improve or restore IA posture to keep systems certified in accordance with DoD standards for JPEO-CBD information system programs. FY 2013 Plans: Maintain situational awareness and initiate actions to improve or restore IA posture to keep systems certified in accordance with DoD standards for JPEO-CBD information system programs.		0.718	0.601	0.449
Title: 14) SSA Policy and Standards Repository FY 2011 Accomplishments:		0.140	0.359	0.349

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT IS5: <i>INFORMATION SYSTEMS (SDD)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2011	FY 2012	FY 2013
Reviewed data for relevancy and updated the repository for applicable Enterprise policies, standards, and guidelines. FY 2012 Plans: Update the repository for applicable Enterprise policies, standards, and guidelines. FY 2013 Plans: Maintain the repository for applicable Enterprise policies, standards, and guidelines.			
Title: 15) SSA Technology Transition Support FY 2011 Accomplishments: Provided Technology Transition support services (common components and services) for JPM IS and CBD programs. FY 2012 Plans: Continue to provide Technology Transition support services (common components and services)for JPM IS and CBD programs. FY 2013 Plans: Provide Technology Transition support services (common components and services)for JPM IS and CBD programs.	0.145	0.563	0.328
Title: 16) SBIR FY 2012 Plans: Small Business Innovative Research.	-	0.032	-
Accomplishments/Planned Programs Subtotals	15.689	2.423	2.045

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• IS7: <i>INFORMATION SYSTEMS (OP SYS DEV)</i>	1.789	6.911	10.091		10.091	6.618	4.090	5.615	9.915	Continuing	Continuing
• G47101: <i>JOINT WARNING & REPORTING NETWORK (JWARN)</i>	6.783	3.880	2.646		2.646	1.112	0.766	0.456	4.589	Continuing	Continuing
• JC0208: <i>JOINT EFFECTS MODEL (JEM)</i>	3.421	0.000	0.000		0.000	0.000	1.343	1.553	1.553	Continuing	Continuing

D. Acquisition Strategy

JEM

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT IS5: <i>INFORMATION SYSTEMS (SDD)</i>

The Joint Effects Model (JEM) is following an evolutionary acquisition approach that will allow rapid fielding of existing technologies while further research and development (R&D) continues in order to mature the technologies required for subsequent versions of JEM. JEM is now being fielded in increments of capabilities. Each increment will retain the functionality of the preceding increment. The JEM development effort will be aligned with the evolving Joint Program Executive Office for Chemical Biological Defense (JPEO-CBD) architectures and technologies, as well as, with Service Command and Control (C2) systems. JEM will develop three distinct increments of software. JEM is a web-services based application and has been granted an Interoperability Certificate by the Joint Interoperability Test Command (JITC). The program plans to award competitive contracts using fixed price or cost-plus as appropriate.

JWARN

JWARN will develop and provide Integrated Early Warning capabilities to specified (Common Operating Environment (COE-based)) operational-level Service Command and Control (C2) systems at the Global Command and Control System (GCCS) level, extend the integration effort into the Service tactical (non COE-based) C2 systems, provide connectivity to legacy and newly developed sensors, and complete the development of JWARN.

JWARN will extend these baseline capabilities to emerging, net-centric, Service C2 systems and Service CBRN sensors and detectors as they are developed and fielded. JWARN will also ensure CBRN warning and reporting capabilities remain synchronized with the changing demands of the Warfighter while keeping pace with evolving C2 systems and their architectures, and will further evolve by integrating next generation sensors, detectors and emerging Medical and Biological Surveillance requirements into the CBRN Enterprise.

SSA

The JPEO-CBD Software Support Activity (SSA) is a JPEO-CBD user support organization spanning and supporting all Joint Project Managers (JPMs) and JPEO-CBD Directorates. The SSA provides enterprise-wide services and coordination across all JPEO-CBD Programs of Record (PORs) that contain data or software, or are capable of linking to the Global Information Grid (GIG). The SSA facilitates interoperability, integration, and supportability of existing and developing IT and National Security Systems (NSS) across the JPEO and all JPMs.

Phase 1a identifies JPEO-CBD JPMs and programs that deal with data or software, and have an IT component. This will be followed by coordination with the JPMs and programs to facilitate the concepts of interoperability, integration and supportability of enterprise-wide services. Next follows work with user communities to develop and demonstrate enterprise-wide common architectures, products and services. (BA5 - System Development and Demonstration).

Phase 1b established management and control measures for tracking and reporting progress of the various elements described in Phases 1 and 2. This includes establishing, tracking, and performing configuration management of inventories and databases of IT systems and their states of interoperability and information assurance compliance. (BA5 - System Development and Demonstration).

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	IS5: <i>INFORMATION SYSTEMS (SDD)</i>

Phase 2 will support the application of the enterprise-wide architectures, products and services into the programs, with verification of compliance with the defined products and services. (BA7 - Operational Systems Development).

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT IS5: <i>INFORMATION SYSTEMS (SDD)</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** SSA - HW S - Product Development	MIPR	SPAWAR Systems Center:San Diego, CA	6.418	1.350	Feb 2012	-		-		-	Continuing	Continuing	0.000
Subtotal			6.418	1.350		-		-		-			0.000

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** SSA - ES S - Support Costs	MIPR	SPAWAR Systems Center:San Diego, CA	7.182	0.517	Feb 2012	0.486	Feb 2013	-		0.486	Continuing	Continuing	0.000
Subtotal			7.182	0.517		0.486		-		0.486			0.000

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** SSA - DTE S - Test and Evaluation	MIPR	SPAWAR Systems Center:San Diego, CA	3.650	0.321	Feb 2012	1.223	Feb 2013	-		1.223	Continuing	Continuing	0.000
Subtotal			3.650	0.321		1.223		-		1.223			0.000

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** JEM - PM/MS S - Program Office - Planning and Programming	MIPR	SPAWAR Systems Command:San Diego, CA	5.983	-		0.152	Feb 2013	-		0.152	Continuing	Continuing	0.000
** SSA - PM/MS S - Management Services	MIPR	SPAWAR Systems Center:San Diego, CA	3.527	0.203	Feb 2012	0.184	Feb 2013	-		0.184	Continuing	Continuing	0.000

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT IS5: <i>INFORMATION SYSTEMS (SDD)</i>
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	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
SSA - Architecture advisory services to support Warfighter Enterprise and Program Integrated Architectures																												
SSA - Demonstrate, Verify, Test Technology Transition capabilities especially for Common Components and Services																												
SSA - Provide Information Assurance Certification/Acceptance products/services, including compliance testing																												
SSA - Provide Modeling, Simulation, VV&A, Integration/Test support and interoperability demonstrations.																												
SSA - Provide FISMA and J6 Interoperability certification support																												
SSA - Provide CBRN Interface Standards, including reference implementations, e.g. Common CBRN Sensor Interface																												
SSA - Sustain CBRN Data Model																												
SSA - Sustain CCSI, including investigation, as an industry standard																												
SSA - Sustain Common Components products, process and services																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT IS5: <i>INFORMATION SYSTEMS (SDD)</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
** JEM - Production and Deployment	1	2011	4	2013
JEM - Milestone B (MS B)	4	2013	4	2013
JEM - Engineering and Manufacturing Development	4	2013	4	2014
JEM - Capability Production Document (CPD)	2	2014	3	2014
JEM - Operational Assessment (OA)	2	2014	3	2014
JEM - Follow-on Test and Evaluation (GCCS-M)	1	2012	2	2012
JEM - Milestone C (MS C)	4	2014	4	2014
JEM - Full Deployment Decision (GCCS-M)	2	2012	3	2012
JEM - Multi-Service Operational Test and Evaluation (MOT&E)/LOG Demo	1	2015	2	2015
JEM - Standalone Full Deployment Decision	3	2015	3	2015
JEM - C2 FOT&E	2	2015	4	2017
JEM - Standalone IOC	1	2015	1	2015
** JWARN Incr. 2 - Material Development Decision	1	2012	3	2012
JWARN Incr. 2 - Analysis of Alternative	2	2012	2	2013
JWARN Incr. 2 - Milestone A Decision	2	2013	2	2013
JWARN Incr. 2 - Preliminary Design Review MS B	4	2015	4	2015
JWARN Incr. 2 - Test and Evaluation Master Plan	1	2015	4	2015
JWARN Incr. 2 - Capability Development Document	1	2015	4	2015
JWARN Incr. 2 - Milestone B Decision	2	2016	2	2016
JWARN Incr. 2 - Critical Design Review MSB	4	2016	4	2016
JWARN Incr. 2 - Capability Production Document	3	2016	3	2017
JWARN Incr. 2 - Development Testing	4	2012	4	2017

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT IS5: <i>INFORMATION SYSTEMS (SDD)</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
JWARN Incr. 2 - Operational Assessment	2	2016	4	2017
JWARN Incr. 2 - Milestone C Decision	4	2017	4	2017
JWARN Incr. 2 - Low-Rate Initial Production	4	2017	4	2017
JWARN Incr. 2 - Multi-Service Operational Testing (MOT&E)	4	2017	4	2017
** SSA - Provide Data Model Implementation Guidance	1	2011	4	2015
SSA - Provide Enterprise Architecture Products and Services	1	2011	4	2015
SSA - Provide Information Assurance Site Compliance Testing	1	2011	4	2015
SSA - Provide Integration and Test, M&S, VV&A Certification and Accreditation	1	2011	4	2015
SSA - Demonstrate Technology Transition Capabilities	1	2011	4	2015
SSA - Provide CM Services for Common User Products and Services	1	2011	4	2015
SSA - Provide Net-Centric Assessment and assist programs with implementation of policy	1	2011	4	2015
SSA - Develop and provide CBRN Data Model implementation guidance, including reference implementations	1	2011	4	2015
SSA - Architecture advisory services to support Warfighter Enterprise and Program Integrated Architectures	1	2011	4	2015
SSA - Demonstrate, Verify, Test Technology Transition capabilities especially for Common Components and Services	1	2011	4	2015
SSA - Provide Information Assurance Certification/Acceptance products/services, including compliance testing	1	2011	4	2015
SSA - Provide Modeling, Simulation, VV&A, Integration/Test support and interoperability demonstrations.	1	2011	4	2015
SSA - Provide FISMA and J6 Interoperability certification support	1	2011	4	2015
SSA - Provide CBRN Interface Standards, including reference implementations, e.g. Common CBRN Sensor Interface	1	2011	4	2015
SSA - Sustain CBRN Data Model	1	2011	4	2015
SSA - Sustain CCSI, including investigation, as an industry standard	1	2011	4	2015

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT IS5: <i>INFORMATION SYSTEMS (SDD)</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
SSA - Sustain Common Components products, process and services	1	2011	4	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>				PROJECT MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>	75.657	216.715	214.056	-	214.056	246.295	187.101	213.001	238.653	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This project (MB5) provides Engineering and Manufacturing Development (EMD) for efforts (post Milestone B), which provide a rapid response capability from identification of pathogens to the delivery of medical countermeasures. Specifically, this project includes: the Medical Countermeasures Initiative (MCMI), efforts in support of biosurveillance, and individual medical drugs and vaccines, such as Recombinant Botulinum A/B and Plague vaccines, and the efforts to store and conduct required testing on Investigational New Drug (IND) vaccines used to protect lab workers in the Special Immunization Program (SIP).

This project funds the development of reagents, assays, and diagnostic equipment for biological warfare agents (BWA) and expands chemical and biological detection capabilities. It's primary mission is enhancing CBRN information sharing across the Department of Defense's (DoD) medical surveillance, public health, and chemical/biological defense communities to enhance chemical and biological medical health situational awareness and coordinate integrated CBRN system solutions.

Effective with the FY13 program, the MCMI program is now known as the ADM program. ADM provides core and drug development services to include the establishment, commissioning, validation, and attainment of Current Good Manufacturing Practice (cGMP)/Current Good Laboratory Practice (cGLP) for a Medical Countermeasure (MCM) Advanced Development and Manufacturing (ADM) capability for the Department of Defense (DoD). Future funding will be used to maintain the facility in a state of readiness to support MCM product development, FDA licensure and manufacture of MCMs. The ADM is one component of the Medical Countermeasures Initiative (MCMI), the others are a Test and Evaluation (T&E) facility to be established at Ft. Detrick, MD and an S&T component. The efforts described address only the ADM capability.

The ADM effort is being executed in two phases. Phase I is for the establishment, commissioning, and validation of the MCM capability. This project funds the establishment of a facility(ies) to be located in the United States and its territories. Two ADM suites, at Biosurety Level (BSL) 3 will be established during the base contract period, with options to incrementally increase capacity. In Phase II the contractor team will support and maintain that capability in a state of readiness to support MCM development (under the animal rule as applicable) and manufacturing and assist in training personnel in its use. This includes transition and integration of new technologies, from pre-Investigational New Drug Application phase with readiness to support simultaneous operations, through FDA licensure.

Two major medical programs critical to accomplishing the Biosurveillance mission are supported under this project in order to streamline collaboration and integration efforts, maintain continuity and efficiency, and to minimize duplication of efforts. Specifically, these efforts include but are not limited to the Critical Reagents Program (CRP), and Next Generation Diagnostic System (NGDS), These efforts address the President's priority of developing a robust portfolio of cross-cutting resources and materiel solutions that support the National Security Strategy, National Military Strategy to Combat Weapons of Mass Destruction, the National Strategy for Countering Biological Threats, and the needs of the Warfighter.

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>
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The Critical Reagents Program's (CRP) strategy establishes a core research and development capability to develop biological threat agent, genomic reference materials (antigens, nucleic acids, and antibodies) and detection and diagnostic assays for biothreat agent detection that shall be horizontally inserted across multiple detection and diagnostic platforms. In addition, this strategy will implement a formal, validated, advanced development process to transition new assays into production and integration with the appropriate detection/diagnostic platform.

The Next Generation Diagnostic System addresses the mission needs identified in the CBRN Field Analytics ICD (2010). The mission of the Next Generation Diagnostic System is to provide chemical, biological, and radiological analytical diagnostic systems. NGDS Increment 1 materiel solutions will significantly improve analytical and diagnostic capability across the continuum of biological warfare threats and operations (peacetime, wartime, and deployed). NGDS Increment 1 medical diagnostic capabilities will provide health care providers with more timely and accurate information to inform individual patient treatment. Increment 1 clinical analytical and interconnectivity capabilities will provide commanders with situational awareness of biological warfare hazards to support Force Protection and Force Health Protection decision making.

The (1) Hemorrhagic Fever Virus (HFV) Therapeutic Medical Countermeasures (MCM), which will provide broad spectrum (multi-agent), platform-based therapeutics against Ebola and Marburg viruses; (2) Emerging Infectious Disease (EID) MCM Increment 1, Many conditions result in the inability to provide effective vaccines to service members and civilians. Effective vaccines do not exist for all known strains of influenza virus. The emergence of a new pandemic strain with no existing effective vaccine or therapeutic is highly likely. EID-Flu will provide a broad spectrum EID MCM to protect service members from naturally occurring, biologically or genetically engineered Influenza viruses. EID Flu, a rapidly adaptable, broad spectrum therapeutic.

The Joint Vaccine Acquisition Program (JVAP) under Chemical Biological Medical Systems (CBMS) funds the technology development phase for vaccines that are directed against validated biological warfare (BW) weapons to include bacteria, viruses, and toxins of biological origin. Effective medical countermeasures to negate the threat of these BW agents are urgently needed. Vaccines have been identified as the most efficient countermeasure against the validated threat of BW weapons. Products under development in this budget item include Recombinant Botulinum A/B and Plague vaccines. Efforts for medical biological defense product development involve production scale-up studies and validation, non-clinical studies, consistency manufacturing, and expanded clinical human safety studies. The results of these efforts, and those conducted during the EMD phase, will be used to submit a Biologic License Application (BLA) to the Food and Drug Administration (FDA) for product licensure. To evaluate vaccine effectiveness, pivotal animal studies will be conducted concurrently with the Phase 3 clinical trial to satisfy the requirements of the FDA's "Animal Rule". Upon FDA licensure, the product will transition to full-scale licensed production. JVAP anticipates that the FDA will approve these products using the Animal Rule, which allows for the demonstration of efficacy in relevant animal model(s). JVAP also has the mission to maintain IND vaccines in Good Manufacturing Practice (GMP) storage and to conduct the periodic potency and sterility testing of these materials to support submissions to the FDA. These IND vaccines will be used to provide additional levels of protection to laboratory workers in the Special Immunizations Program (SIP) conducting research on these diseases.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2011	FY 2012	FY 2013
Title: 1) SBIR	-	2.867	-
FY 2012 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Small Business Innovative Research.				
Title: 2) MCMi FY 2012 Plans: Retrofit facility(ies) in the United States (US) or US territories. Begin to establish two modular manufacturing suites to biosurety level three (3) standards. The facility shall have contract manufacturing organization (CMO); contract research organization (CRO); test and evaluation (T&E) and fill/finish components.		-	40.013	-
Title: 3) MCMi FY 2012 Plans: The engineering contractor (engineering and architectural design and studies) will complete and deliver for Government review and acceptance an integrated master plan (IMP) and a detailed manufacturing capability plan.		-	13.801	-
Title: 4) MCMi FY 2012 Plans: Procure, install, and test ADM equipment to include single use bioreactors.		-	40.000	-
Title: 5) MCMi FY 2012 Plans: Provide for ADM facility utilities to include electricity, steam, water, water for injection (WFI) and heating, ventilation and air conditioning.		-	4.463	-
Title: 6) MCMi FY 2012 Plans: Provide initial staffing of the ADM facility by contractor personnel. Staff will have core competencies to maintain the facility in a state of readiness.		-	2.048	-
Title: 7) ADM - Equipment and Installation. FY 2013 Plans: Continue the procurement and installation of equipment.		-	-	23.702
Title: 8) ADM - Staffing FY 2013 Plans:		-	-	2.478

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Continue ADM staffing with Contractor personnel. Contractor Personnel will have core competencies to maintain the facility in a state of readiness.				
Title: 9) ADM - Facility Utilities FY 2013 Plans: Provide for Facilities support (utilities, waste disposal).		-	-	5.048
Title: 10) ADM - Equipment Test and Commissioning FY 2013 Plans: Conduct equipment test and commissioning. Prepare for independent validation and attainment of Food and Drug (FDA) Current Good Manufacturing Practice (cGMP) and Current Good Laboratory Practice (cGLP) certification. Validation processes include Design Qualification, Installation Qualification, Operational Qualification, Performance Qualification. Contractor complete and deliver for Government Review and Acceptance a Facility Operation Feasibility Plan.		-	-	10.210
Title: 11) CRP FY 2011 Accomplishments: Continue development/expansion of biological select agents reference materials to known and emerging threats. FY 2012 Plans: Continue development/expansion of biological select agents reference materials to known and emerging threats. FY 2013 Plans: Continue development/expansion of biological select agents reference materials to known and emerging threats.		2.119	1.960	1.530
Title: 12) CRP FY 2011 Accomplishments: Continue development of immunoassays and nucleic acid based genomic assays to support fielded and developmental systems. FY 2012 Plans: Continue development of immunoassays and nucleic acid based genomic assays to support fielded and developmental systems. FY 2013 Plans: Continue development of immunoassays and nucleic acid based genomic assays to support fielded and developmental systems.		1.000	1.170	0.925
Title: 13) CRP FY 2011 Accomplishments:		0.640	0.670	0.540

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Continue quality assurance (QA)/quality control (QC) testing to encompass the transition and fielding of biological detection assays. FY 2012 Plans: Continue QA/QC testing to encompass the transition and fielding of biological detection assays. FY 2013 Plans: Continue QA/QC testing to encompass the transition and fielding of biological detection assays.				
Title: 14) CRP FY 2011 Accomplishments: Continue to maintain ISO certification. FY 2012 Plans: Continue to maintain ISO certification. FY 2013 Plans: Continue to maintain ISO certification.		0.889	0.870	0.695
Title: 15) CRP FY 2012 Plans: Biosurveillance - Continue development and integration of medical surveillance enhancement tools that facilitate surveillance and sensor/detector/diagnostic information exchange. FY 2013 Plans: Biosurveillance - Continue development and integration of medical surveillance enhancement tools that facilitate surveillance and sensor/detector/diagnostic information exchange.		-	1.315	0.528
Title: 16) CRP FY 2012 Plans: Biosurveillance - Continue surveillance assessments that identify public health threats and capabilities in countries where US forces are present and deploy threat assessment tools. FY 2013 Plans: Biosurveillance - Continue surveillance assessments that identify public health threats and capabilities in countries where US forces are present and deploy threat assessment tools.		-	2.987	1.179
Title: 17) NGDS Increment 1		-	3.885	2.456

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
FY 2012 Plans: Conduct operational assessment of commercial prototype candidate. Initiate Government pre-clinical trial preparations. Conduct assay optimization.				
FY 2013 Plans: Initiate BWA analytical risk assessments and tests, and assay shelflife assessments. Complete pre-clinical trial preparations				
Title: 18) NGDS Increment 1		-	1.042	0.840
FY 2012 Plans: Initiate and conduct Operational Test Agencies (OTA) support activities for Increment 1.				
FY 2013 Plans: Complete OTA support activities for Increment 1.				
Title: 19) NGDS Increment 1		-	-	6.531
FY 2013 Plans: Initiate clinical trials for 510(k) submission to FDA for cleared assay on Increment 1 modified COTS platforms. Initiate connectivity assessment on selected COTS platforms.				
Title: 20) EID FLU		-	-	32.912
Description: Emerging Infectious Diseases (EID), Increment 1, Influenza (Flu) - Milestone A approval was received during February 2011 to move into Technology Development (TD) phase for a broad spectrum Medical Countermeasure (MCM) against Influenza, to include H1N1. Milestone B approval in 1QFY13, program will move into Engineering and Manufacturing Development (EM&D) phase.				
FY 2013 Plans: EID FLU Phase 3 multi-center human clinical trials in support of FDA approval for an Influenza therapeutic. Trials will demonstrate safety and efficacy of a novel, broad-spectrum Influenza MCM.				
Title: 21) HFV		-	14.241	16.402
Description: Hemorrhagic Fever Virus (HFV) Therapeutic Medical Countermeasures (MCM), which will provide broad spectrum (multi-agent), platform-based therapeutics against Ebola and Marburg viruses. TMT efforts to be conducted for the medical countermeasures during this period include Phase 1 human clinical safety trials, non-clinical studies to demonstrate safety and efficacy, and animal model development / refinement. DoD anticipates the FDA will require use of the Animal Rule for the HFV				

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
therapeutic medical countermeasures, which allows for the demonstration of efficacy in relevant animal model(s) when human testing is not ethically feasible.				
<p>FY 2012 Plans: Complete Phase 1 Human Safety Clinical Trial, Milestone B and advance to Engineering and Manufacturing Development Phase. Initiate Phase 2 Human Safety Trial (Multiple Ascending Dose). Initiate Pivotal Animal Efficacy Studies.</p> <p>FY 2013 Plans: Continue Phase 2 Human Safety Clinical Trial and Pivotal Animal Efficacy Studies.</p>				
<p>Title: 22) VAC BOT - Recombinant Botulinum Vaccine</p> <p>FY 2011 Accomplishments: Continued manufacturing large scale process validation for serotypes A and B.</p> <p>FY 2012 Plans: Complete manufacturing large scale process validation for serotypes A and B. Initiate manufacturing of consistency lots for serotypes A and B.</p> <p>FY 2013 Plans: Complete manufacturing of consistency lots for serotypes A and B.</p>		31.322	24.881	9.305
<p>Title: 23) VAC BOT - Recombinant Botulinum Vaccine</p> <p>FY 2011 Accomplishments: Continued non-clinical testing. Completed Phase 2 passive transfer studies. Continued requirement for safeguarding biological select agents and toxins.</p> <p>FY 2012 Plans: Continue non-clinical testing. Initiate reproductive toxicity testing and pivotal efficacy testing. Continue requirement for safeguarding biological select agents and toxins.</p> <p>FY 2013 Plans: Continue reproductive toxicity testing and pivotal efficacy testing. Continue requirements for safeguarding biological select agents and toxins, and Milestone C.</p>		5.323	4.302	17.904
<p>Title: 24) VAC BOT - Recombinant Botulinum Vaccine</p> <p>FY 2011 Accomplishments:</p>		2.139	1.573	32.500

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Continued Phase 2 clinical trial to evaluate safety and duration of immune response. FY 2012 Plans: Complete Phase 2 clinical trial and initiate Phase 3 clinical trial planning to evaluate expanded safety in thousands of volunteers. FY 2013 Plans: Continue Phase 3 clinical trial and Milestone C.				
Title: 25) VAC PLG FY 2011 Accomplishments: Continued non-clinical studies, to include additional FDA required passive transfer studies. Initiated non-human primate break through efficacy study. Continued requirement for safeguarding biological select agents and toxins. FY 2012 Plans: Continue non-clinical studies, to include additional FDA required passive transfer studies. Continue requirement for safeguarding biological select agents and toxins. Initiate reproductive toxicity testing. FY 2013 Plans: Continue non clinical studies, to include additional FDA required passive transfer studies. Continue requirement for safeguarding biological select agents and toxins. Initiate pivotal animal efficacy studies. Complete reproductive toxicity testing.		6.942	9.414	9.196
Title: 26) VAC PLG FY 2011 Accomplishments: Continued Phase 2b clinical trial to select final vaccination schedule. FY 2012 Plans: Continue Phase 2b clinical trial. FY 2013 Plans: Continue Phase 2b clinical trial. Initiate Phase 3 clinical trial to evaluate expanded safety and efficacy in thousands of volunteers.		5.725	17.578	29.969
Title: 27) VAC PLG FY 2011 Accomplishments: Continued large scale manufacturing process validation and assay validation. Initiated cleaning validation. FY 2012 Plans:		15.260	18.630	1.362

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2011	FY 2012	FY 2013
Complete large scale manufacturing process validation, assay validation, and cleaning validation. Initiate consistency lot production. FY 2013 Plans: Complete consistency lot production and testing.			
Title: 28) VAC PLG FY 2011 Accomplishments: Provided strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contacting, scheduling, acquisition oversight and technical support. FY 2012 Plans: Provide strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contacting, scheduling, acquisition oversight and technical support. FY 2013 Plans: Provide strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contacting, scheduling, acquisition oversight, technical support and Milestone C.	4.298	6.730	5.449
Title: 29) VAC SIP FY 2012 Plans: Conduct storage, distribution, potency testing, and biosurety compliance activities in support of the Special Immunization Program. FY 2013 Plans: Conduct storage, distribution, potency testing, and biosurety compliance activities in support of the Special Immunization Program.	-	2.275	2.395
Accomplishments/Planned Programs Subtotals	75.657	216.715	214.056

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• MB7: <i>MEDICAL BIOLOGICAL DEFENSE (OP SYS DEV)</i>	0.000	5.448	0.498		0.498	0.499	3.266	0.496	9.355	Continuing	Continuing
• JM8788: <i>NEXT GENERATION DIAGNOSTICS SYSTEM (NGDS)</i>	0.000	2.965	26.934		26.934	14.154	0.000	0.000	0.000	0.000	44.053
• JX0005: <i>DOD BIOLOGICAL VACCINE PROCUREMENT</i>	4.777	0.180	0.185		0.185	4.482	19.949	21.514	26.101	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• JX0210: <i>CRITICAL REAGENTS PROGRAM (CRP)</i>	0.000	0.998	1.012		1.012	1.011	1.011	1.005	1.005	Continuing	Continuing

D. Acquisition Strategy

MCMI

The Medical Counter Measures Initiative (MCMI) began in response to White House Memorandum of 29 December 2009. The MCMI has three components: Science and Technology (S&T), Advanced Development and Manufacturing (ADM) and Test and Evaluation. The efforts described herein are for the establishment, commissioning, facility validation and maintenance of the agile and flexible Advanced Development and Manufacturing (ADM) capability. The ADM will be a dedicated DoD enduring capability that provides DoD MCM development with a set of core services (Contract Manufacturing Organization (CMO), Contract/Clinical Research Organization (CRO), Test and Evaluation (T&E), Fill and Finish (F&F)) to increase efficiency and apply lessons learned to future MCM developments. The ADM Capability will use a FAR based ten (10) year [two (2) year base with four (4) two (2) year options] Cost Plus Fixed fee (CPFF) contract - Full and Open competition with best value to the government. A Request for Proposal (RFP) was released in August 2011, and contract award is planned for 2QFY12. The establishment of the CMO component of the ADM will occur within the base period while the other core service components (CRO, T&E, F&F) will be available shortly after the contract award. The CMO will utilize modular and disposable/single use equipment to allow for flexibility in manufacturing various MCM products within the same facility. The contractor will complete facility commissioning, support independent validation, and attain Current Good Manufacturing Practice (cGMP) and Current Good Laboratory Practice (cGLP) status within 24 months following contract award and provide expertise necessary to maintain the facility in readiness to support the development and manufacture of MCMs, and conduct training. The DoD will continue to issue future separate contracts for specific MCM products - i.e. the MCM "pipeline".

ADM

The Medical Counter Measures Initiative (MCMI) began in response to White House Memorandum of 29 December 2009. The MCMI has three components: Science and Technology (S&T), Advanced Development and Manufacturing (ADM) and Test and Evaluation. The efforts described herein are for the establishment, commissioning, facility validation and maintenance of the agile and flexible Advanced Development and Manufacturing (ADM) capability. The ADM will be a dedicated DoD enduring capability that provides DoD MCM development with a set of core services (Contract Manufacturing Organization (CMO), Contract/Clinical Research Organization (CRO), Test and Evaluation (T&E), Fill and Finish (F&F)) to increase efficiency and apply lessons learned to future MCM developments. The ADM Capability will use a FAR based ten (10) year [two (2) year base with four (4) two (2) year options] Cost Plus Fixed fee (CPFF) contract - Full and Open competition with best value to the government. A Request for Proposal (RFP) was released in August 2011, and contract award is planned for 2QFY12. The establishment of the CMO component of the ADM will occur within the base period while the other core service components (CRO, T&E, F&F) will be available shortly after the contract award. The CMO will utilize modular and disposable/single use equipment to allow for flexibility in manufacturing various MCM products within the same facility. The contractor will complete facility commissioning, support independent validation, and attain Current Good Manufacturing Practice (cGMP) and Current Good Laboratory

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>

Practice (cGLP) status within 24 months following contract award and provide expertise necessary to maintain the facility in readiness to support the development and manufacture of MCMs, and conduct training. The DoD will continue to issue future separate contracts for specific MCM products - i.e. the MCM "pipeline".

CRP

The Critical Reagents Program's (CRP) strategy establishes a core research and development capability to develop biological threat agent, genomic reference materials (antigens, nucleic acids, and antibodies) and detection and diagnostic assays for biothreat agent detection that shall be horizontally inserted across multiple detection and diagnostic platforms. In addition, this strategy will implement a formal, validated advanced development process to transition new assays into production and integration with the appropriate detection/diagnostic platform.

NGDS

The Next Generation Diagnostic System (NGDS) will develop and field an enhanced CBRN analytical and diagnostic system to the Joint force through an evolutionary acquisition strategy. NGDS Increment 1 will follow a modified Commercial Off The Shelf (COTS) acquisition strategy to field BWA diagnostic analytical devices to the Combat Health Support System. Additional DoD-unique capabilities will be added to the initial commercial capabilities FY14-17. Increment 1 MS A is planned 2nd Qtr FY12. FY12 BA4 funds will be used to conduct operational assessments on the commercial prototypes immediately following MS A. It is anticipated that NGDS Increment 1 will proceed from MS A to MS C in accordance with the modified COTS acquisition strategy and based on the demonstrated military utility from FY12-14 Competitive Prototyping and independent medical testing by AMEDD, and achieving submittal of a 510(k) application for FDA clearance of one BWA assay.

EID FLU

The program goal for increment 1 is the delivery of FDA-approved therapeutic against Orthomyxoviridae viruses - the cause of seasonal, epidemic, and pandemic influenza. The objective is the delivery of an FDA-approved Post Exposure Prophylactic (PEP) and/or therapeutic against Orthomyxoviridae viruses - the cause of seasonal, epidemic, and pandemic influenza, for use by to the Warfighter. The acquisition strategy uses a parallel evaluation of drug candidates to achieve competitive prototyping in the Technology Development Phase. A technically mature candidate to meet Warfighter needs is being sought to reduce risk and accelerate delivery of MCM. The Technology Readiness Level of candidate will determine the point of entry into the FDA clinical trial process. Activities during this phase will be tailored to the technical level of the candidate and will include conducting pre-clinical animal safety studies and completion of human safety and efficacy trials required for FDA approval. The performer(s) will submit a New Drug Application(s) for the Influenza therapeutic during the EMD Phase. During the Production and Deployment Phase, full rate manufacturing and stockpile production will be pursued. If the FDA mandates post-marketing surveillance studies, they will be conducted during Production and Deployment.

HFV

The acquisition strategy uses a parallel evaluation of drug candidates against the lethal Ebola and Marburg viruses to achieve competitive prototyping in the Technology Development Phase. Activities during this phase include conducting a pre-clinical animal safety studies, submission of Investigation New Drug

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>

Applications, and completion of Phase 1 human safety trials. Following a successful Milestone B and entry into Engineering and Manufacturing Development, the program will conduct Phase 2 human clinical safety, definitive animal efficacy, and toxicology studies, required for FDA approval. The performer(s) will submit a New Drug Application(s) for the Ebola and Marburg therapeutics during the EMD Phase. During the Production and Deployment Phase, full rate manufacturing and stockpile production will be pursued. If the FDA mandates post-marketing surveillance studies, they will be conducted during Production and Deployment. This Department of Defense program is the Public Health Emergency Countermeasures lead for the development of this therapeutic, and is leveraging expertise across the Federal and International sectors to ensure programmatic success.

VAC BOT

A prime systems contractor will function as the "responsible head" and license holder and will perform all ancillary, regulatory, quality assurance, and data management as required by the FDA. The current budget supports development through FDA licensure of a recombinant bivalent (A and B) botulinum vaccine. Other serotypes will be developed through an evolutionary approach, as funding becomes available.

The management lead for the program shifted to Joint Vaccine Acquisition Program (JVAP) at Milestone A. The Advanced Component Development and Prototypes (ACD&P) phase included the manufacture of candidate current Good Manufacturing Practices (cGMP) lots, animal safety testing, and initial clinical trials. During this phase, the vaccine was evaluated for safety and immunogenicity in a small human trial (Phase 1).

During the Engineering and Manufacturing Development (EMD) phase, the JVAP prime systems contract (PSC) will stabilize the vaccine formulation, validate the manufacturing processes and testing protocols, optimize the delivery systems and manufacture consistency lots. Phase 2 clinical trials are performed during this phase to provide additional safety data and determine dose and schedule. The Phase 3 clinical trial also is conducted during this phase to demonstrate safety in an expanded volunteer population. To evaluate efficacy, pivotal animal studies will be conducted concurrently with the Phase 3 clinical trial to satisfy FDA requirements for the "Animal Rule." The Milestone C, also the Low Rate Initial Production (LRIP) decision, will be conducted after the manufacturing process has been validated and consistency lots have been produced. At the Milestone C, approval is granted to produce the Initial Operational Capability (IOC) of vaccine material. A Biologics Licensure Application is submitted to the FDA with all clinical, nonclinical, and manufacturing data. The FDA grants licensure to products that are determined to be safe and efficacious.

This Department of Defense program is the Public Health Emergency Countermeasures lead for the development of this vaccine.

VAC PLG

The management lead for the program shifted to JVAP at Milestone A. The Advanced Component Development and Prototypes (ACD&P) phase included the manufacture of candidate current Good Manufacturing Practices (cGMP) lots, animal safety testing, and initial clinical trials. During this phase, the vaccine was evaluated for safety and immunogenicity in a small human trial (Phase 1).

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>

Chemical Biological Medical Systems (CBMS) was mitigating technical program risk in the Plague Vaccine program by temporarily supporting development of both a US vaccine candidate and a United Kingdom vaccine candidate. During the 2008 Resource Allocation Decision, the US Plague Vaccine candidate was selected for development through licensure under JVAP's Prime Systems Contract. A Project Arrangement is in place with the United Kingdom and Canada.

During the Engineering and Manufacturing Development phase (EMD), the vaccine developer will stabilize the vaccine formulation, validate the manufacturing processes and testing protocols, optimize the delivery systems, and manufacture consistency lots. Phase 2 clinical trials are performed during this phase to provide additional safety data and determine dose and schedule. The Phase 3 clinical trial is also conducted during this phase to demonstrate safety in an expanded volunteer population. To evaluate efficacy, pivotal animal studies will be conducted concurrently with the Phase 3 clinical trial to satisfy the requirements of the FDA's "Animal Rule." The Milestone C, also the Low Rate Initial Production (LRIP) decision, will be conducted after the manufacturing process has been validated and consistency lots have been produced. At the Milestone C, approval is granted to produce the Initial Operational Capability (IOC) of vaccine material. A Biologics Licensure Application is submitted to the FDA with all clinical, nonclinical, and manufacturing data. The FDA grants licensure to products that are determined to be safe and efficacious.

This Department of Defense program is the Public Health Emergency Countermeasures lead for the development of this vaccine.

VAC SIP

The Special Immunization Program (SIP) is not an acquisition program, per se. The SIP effort is to store IND vaccines used to potentially provide additional protection to laboratory workers performing research on the infectious agents for Tularemia, Eastern Equine Encephalitis (EEE), Western Equine Encephalitis (WEE), Venezuelan Equine Encephalitis (VEE), and Q-Fever. Efforts include Good Manufacturing Practices (GMP) storage and periodic potency testing to support the FDA regulated Investigational New Drug (IND) reporting requirements. This Department of Defense program supports the Federal interagency with this effort, as well as academic and industry partners.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
** MCMI - HW S - Initiate ADM capability	C/CPFF	TBD:	-	40.013	Feb 2012	-		-		-	Continuing	Continuing	0.000
HW SB - Procure, Install and Test Equipment	C/CPFF	TBD:	-	40.000	Feb 2012	-		-		-	Continuing	Continuing	0.000
HW SB - Facility Utilities	C/CPFF	TBD:	-	4.463	Feb 2012	-		-		-	Continuing	Continuing	0.000
** ADM - HW S - Establish and Commission, Procure Equipment, Engineering, Establish BSL-3	C/CPFF	TBD:	-	-		23.702	Feb 2013	-		23.702	Continuing	Continuing	0.000
** CRP - HW C - CRP - Scale-up of Select Biological Threat Agent Reference Materials	MIPR	USAMRIID/DPG:	10.204	2.000	Feb 2012	1.315	May 2013	-		1.315	Continuing	Continuing	0.000
HW C - CRP - Development of Select Biological Threat Agent Reference Materials and Assays	MIPR	RDECOM/NMRC:	2.461	0.760	Feb 2012	0.578	May 2013	-		0.578	Continuing	Continuing	0.000
HW C - BSV - Surveillance concept assessments Support	SS/FFP	TBD:	3.000	2.963	Feb 2012	0.969	Feb 2013	-		0.969	Continuing	Continuing	0.000
HW C - BSV - Tool enhancement/sensor information exchange	MIPR	TBD:	0.785	0.258	Feb 2012	-	Feb 2013	-		-	Continuing	Continuing	0.000
** NGDS - SW C - Initiate development of one BWA FDA assay for Increment 1	C/CPIF	TBD:	-	-		6.006	Feb 2013	-		6.006	Continuing	Continuing	0.000
** EID FLU - SW SB - TMT EID FLU	C/CPFF	TBD:	-	-		28.117	May 2013	-		28.117	Continuing	Continuing	0.000
** HFV - HW S - Pivotal Animal Efficacy Studies	C/CPIF	TBD:	-	-		14.012	May 2013	-		14.012	Continuing	Continuing	0.000
** VAC BOT - HW S - Manufacturing, Validation and Consistency Lot Production	C/CPAF	DynPort Vaccine Company:Frederick, MD	58.247	11.069	Feb 2012	28.558	Feb 2013	-		28.558	Continuing	Continuing	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
** VAC PLG - HW S - Manufacturing, Validation, and Consistency Lot Production	C/CPAF	DynPort Vaccine Company:Frederick, MD	67.341	27.150	Feb 2012	5.080	Feb 2013	-		5.080	Continuing	Continuing	0.000
Subtotal			142.038	128.676		108.337		-		108.337			0.000

Remarks
 RDECOM - Research, Development & Engineering Command
 NMRC - Naval Medical Research Center
 USAMRIID - US Army Medical Research Institute of Infectious Diseases
 DPG - Dugway Proving Ground
 NAVSEA - Naval Sea System Command

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
** MCMI - ES SB - Integrated Master Plan / Detailed Manufacturing Capability Plan	C/CPFF	TBD:	-	13.801	Feb 2012	-		-		-	Continuing	Continuing	0.000
ES SB - ADM facility staffing	C/CPFF	TBD:	-	2.048	Feb 2012	-		-		-	Continuing	Continuing	0.000
** ADM - ES C - Medical Utilities	C/CPFF	TBD:	-	-		5.048	Feb 2013	-		5.048	Continuing	Continuing	0.000
ES C - Medical Personnel (Contractor Staffing)	C/CPFF	TBD:	-	-		2.478	Feb 2013	-		2.478	Continuing	Continuing	0.000
ES C - Medical Commissioning	C/CPFF	TBD:	-	-		10.210	Feb 2013	-		10.210	Continuing	Continuing	0.000
** CRP - ES C - CRP - Select Biological Threat Agent Reference Material Support	MIPR	USAMRIID/RDECOM:	2.358	0.633	Feb 2012	0.520	May 2012	-		0.520	Continuing	Continuing	0.000
ES C - CRP - Select Biological Threat Agent Reference Material Regulatory/Quality Assurance (QA) Support	MIPR	DPG:UT	1.201	0.135	Feb 2012	0.130	May 2012	-		0.130	Continuing	Continuing	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
** VAC BOT - TD/D C - Regulatory Integration (Environmental and FDA Documentation) and Delivery System	C/CPAF	DynPort Vaccine Company:Frederick, MD	7.642	1.676	Feb 2012	3.686	Feb 2013	-		3.686	Continuing	Continuing	0.000
** VAC PLG - TD/D C - Regulatory Integration (Environmental and FDA Documentation) and Delivery System	C/CPAF	DynPort Vaccine Company:Frederick, MD	12.341	1.215	Feb 2012	1.517	Feb 2013	-		1.517	Continuing	Continuing	0.000
** VAC SIP - VAC SIP - Storage, and Distribution of Vaccines	MIPR	USAMRIID:Fort Detrick, MD	-	2.070	Feb 2012	2.130	Feb 2013	-		2.130	Continuing	Continuing	0.000
Subtotal			23.542	21.578		25.719		-		25.719			0.000

Remarks
 DTIC - Defense Technical Information Center
 NMRC - Naval Medical Research Center
 RDECOM - Research, Development & Engineering Command
 USAMRIID - US Army Medical Research Institute of Infectious Diseases
 DPG - Dugway Proving Ground

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
** NGDS - OTHS SB - Test and evaluation oversight	MIPR	ATEC/OPTEVFOR/ AFOTEC/DOTE:	-	0.450	Feb 2012	0.450	Feb 2013	-		0.450	Continuing	Continuing	0.000
DTE C - Prototype fly-off	MIPR	Dugway Proving Ground:Dugway, UT	-	2.634	Feb 2012	2.000	Feb 2013	-		2.000	Continuing	Continuing	0.000
OTHT C - Prototype fly-off support	PO	TBD:	-	0.593	Feb 2012	-		-		-	Continuing	Continuing	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>
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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
** VAC BOT - DTE C - Testing, Evaluation, and Clinical Trials	C/CPAF	DynPort Vaccine Company:Frederick, MD	46.671	11.934	Feb 2012	21.377	Feb 2013	-		21.377	Continuing	Continuing	0.000
** VAC PLG - DTE C - PLG - Clinical Trials	C/CPAF	DynPort Vaccine Company:Frederick, MD	67.128	18.080	Feb 2012	32.000	Feb 2013	-		32.000	Continuing	Continuing	0.000
Subtotal			113.799	33.691		55.827		-		55.827			0.000

Remarks
 DTIC - Defense Technical Information Center
 NMRC - Naval Medical Research Center
 RDECOM - Research, Development & Engineering Command
 USAMRIID - US Army Medical Research Institute of Infectious Diseases

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/STTR	PO	HQ:AMC, Alexandria	-	2.867		-		-		-	Continuing	Continuing	0.000
** CRP - PM/MS C - Product Management Support	Allot	CBMS:Fort Detrick, MD	1.872	0.433	Feb 2012	0.460	Feb 2013	-		0.460	Continuing	Continuing	0.000
PM/MS C - Product Management Support	SS/FFP	Goldbelt Raven LLC:Frederick, MD	5.346	1.540	May 2012	1.265	May 2013	-		1.265	Continuing	Continuing	0.000
PM/MS C - Chem Bio Medical Systems Office	Allot	CBMS:Fort Detrick, MD	1.632	0.250	Aug 2012	0.160	Aug 2013	-		0.160	Continuing	Continuing	0.000
** NGDS - PM/MS C - NGDS - Product Management Support	C/FFP	Goldbelt Raven LLC:Frederick, MD	-	0.750	May 2012	0.750	Nov 2012	-		0.750	Continuing	Continuing	0.000
PM/MS C - NGDS - Product Management Support	Allot	JPEO:APG, MD	-	0.250	Feb 2012	0.371	Nov 2012	-		0.371	Continuing	Continuing	0.000
PM/MS C - NGDS - Joint Program Executive Office	Allot	CBMS:Fort Detrick, MD	-	0.250	Feb 2012	0.250	Nov 2012	-		0.250	Continuing	Continuing	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>
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Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** EID FLU - PM/MS SB - TMT Operational Cost	Various	TBD:	-	-		3.088	Feb 2013	-		3.088	Continuing	Continuing	0.000
PM/MS SB - Management Support	Allot	JPEOCBD:Edgewood, MD	-	-		1.707	Feb 2013	-		1.707	Continuing	Continuing	0.000
** HFV - PM/MS SB - Management Support	Allot	JPEOCBD:Edgewood, MD	-	4.011	Feb 2012	0.851	Feb 2013	-		0.851	Continuing	Continuing	0.000
JPM-TMT OPERATIONAL COST	Various	JPM TMT:Fort Belvoir, VA	-	6.400	Feb 2012	1.539	Feb 2013	-		1.539	Continuing	Continuing	0.000
PM/MS SB - A&AS	C/FFP	KALMAN CO INC:VIRGINIA BEACH, VA	-	3.830	Feb 2012	-		-		-	Continuing	Continuing	0.000
** VAC BOT - PM/MS S - Program Management/ Program Manager Support	Allot	JPEO:APG, MD	4.000	1.668	Feb 2012	2.388	Feb 2013	-		2.388	Continuing	Continuing	0.000
PM/MS S - Joint Vaccine Acquisition Program Management	Allot	CBMS:Fort Detrick, MD	9.448	2.871	Feb 2012	2.500	Feb 2013	-		2.500	Continuing	Continuing	0.000
PM/MS S - Contractor Systems Engineering/Program Management Support	SS/FFP	Goldbelt Raven LLC:Frederick, MD	5.636	1.538	Feb 2012	1.200	Feb 2013	-		1.200	Continuing	Continuing	0.000
** VAC PLG - PM/MS S - Joint Vaccine Acquisition Program Management Office	Allot	CBMS:Fort Detrick, MD	7.331	1.692	Feb 2012	1.362	Feb 2013	-		1.362	Continuing	Continuing	0.000
PM/MS S - Program Management Support	Allot	JPEO:APG, MD	11.573	4.215	Feb 2012	6.017	Feb 2013	-		6.017	Continuing	Continuing	0.000
** VAC SIP - PM/MS SB - Management Support	Allot	CBMS:Fort Detrick, MD	-	0.205	Feb 2012	0.265	Feb 2013	-		0.265	Continuing	Continuing	0.000
Subtotal			46.838	32.770		24.173		-		24.173			0.000

	Total Prior Years Cost	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	326.217	216.715	214.056	-	214.056			0.000

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>
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	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
** MCMi - MCMi - Contract Award																												
MCMi - MCMi - Facilities (Retrofit, BSL-3 renovation)																												
MCMi - MCMi - Procure ADM Equipment																												
MCMi - MCMi - Commissioning, Facility Validation																												
MCMi - MCMi - Maintain ADM Capability																												
** ADM - Contract Award																												
ADM - Integrated Master Plan																												
ADM - Manufacturing Capability Plan																												
ADM - Facility Operations Feasibility Plan																												
ADM - Procure Equipment																												
ADM - Establish ADM Facilities																												
ADM - Commissioning and Validation																												
ADM - Qualification And Commissioning Report																												
ADM - Maintain Capability																												
** CRP - Expand Select Biological Threat Agent Reference Materials																												
CRP - Development of ECL Immunoassays & PCR Genomic Assays																												
CRP - Development and Implementation of Quality Initiatives, Validation Program, and Systems Engineering																												
CRP - ISO certification																												
CRP - Enabling early warning tools and information exchange																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>
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	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
VAC PLG - Biological Licensure Application (BLA) Submission																												
VAC PLG - FDA Licensure																												
VAC PLG - Ongoing Manufacturing, Testing Efforts/Regulatory																												
** VAC SIP - Storage, distribution, potency testing, biosurety compliance activities																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
** MCMI - MCMi - Contract Award	2	2012	2	2012
MCMI - MCMi - Facilities (Retrofit, BSL-3 renovation)	3	2012	3	2014
MCMI - MCMi - Procure ADM Equipment	3	2012	4	2014
MCMI - MCMi - Commissioning, Facility Validation	1	2014	3	2014
MCMI - MCMi - Maintain ADM Capability	4	2014	4	2017
** ADM - Contract Award	2	2012	2	2012
ADM - Integrated Master Plan	3	2012	3	2012
ADM - Manufacturing Capability Plan	3	2012	4	2012
ADM - Facility Operations Feasibility Plan	3	2012	3	2013
ADM - Procure Equipment	3	2012	4	2013
ADM - Establish ADM Facilities	3	2012	2	2014
ADM - Commissioning and Validation	4	2013	3	2014
ADM - Qualification And Commissioning Report	1	2014	4	2014
ADM - Maintain Capability	4	2014	4	2017
** CRP - Expand Select Biological Threat Agent Reference Materials	1	2011	2	2014
CRP - Development of ECL Immunoassays & PCR Genomic Assays	1	2011	2	2015
CRP - Development and Implementation of Quality Initiatives, Validation Program, and Systems Engineering	1	2011	2	2015
CRP - ISO certification	1	2011	4	2014
CRP - Enabling early warning tools and information exchange	1	2011	4	2014
CRP - Surveillance capabilities	1	2011	4	2014
** NGDS - Test and evaluation support Inc 1	2	2012	3	2013

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MB5: <i>MEDICAL BIOLOGICAL DEFENSE (SDD)</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
** EID FLU - Required Clinical Trials for EID/FLU	3	2012	4	2014
** HFV - Milestone B Decision	3	2013	3	2013
HFV - Phase 2 Trials for HFV MCMs	1	2013	1	2013
** VAC BOT - VAC rBV A/B - Process Validation - Large Scale	1	2011	1	2012
VAC BOT - VAC rBV A/B - Non-Clinical Testing	1	2011	2	2014
VAC BOT - VAC rBV A/B - Phase 2 Clinical Trial (A/B)	1	2011	2	2012
VAC BOT - VAC rBV A/B - Consistency Lot Production	1	2012	2	2013
VAC BOT - VAC rBV A/B - Phase 3 Clinical Trial (A/B)	4	2012	4	2015
VAC BOT - VAC rBV A/B - Milestone C/LRIP	3	2013	3	2013
VAC BOT - VAC rBV A/B - Biological Licensure Application (BLA) Submission	4	2015	4	2015
VAC BOT - VAC rBV A/B - FDA Licensure	4	2016	4	2016
VAC BOT - Ongoing Manufacturing, Testing Efforts/Regulatory	4	2015	4	2016
** VAC PLG - Non-Clinical Studies	1	2011	4	2014
VAC PLG - Phase 2b Clinical Trial	1	2011	1	2014
VAC PLG - Process Validation - Large Scale	1	2011	2	2012
VAC PLG - Consistency Lot Production	2	2012	2	2013
VAC PLG - Milestone C/LRIP	3	2013	3	2013
VAC PLG - Phase 3 Clinical Trial	1	2013	4	2015
VAC PLG - Biological Licensure Application (BLA) Submission	4	2015	4	2015
VAC PLG - FDA Licensure	4	2016	4	2016
VAC PLG - Ongoing Manufacturing, Testing Efforts/Regulatory	4	2015	4	2016
** VAC SIP - Storage, distribution, potency testing, biosurety compliance activities	1	2012	4	2017

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>				PROJECT MC5: <i>MEDICAL CHEMICAL DEFENSE (SDD)</i>			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
MC5: <i>MEDICAL CHEMICAL DEFENSE (SDD)</i>	3.801	2.407	9.642	-	9.642	41.257	45.477	50.862	58.935	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This Project provides for the development of medical materiel and other medical equipment items necessary to provide an effective capability for medical defense against chemical agent threats facing U.S. forces in the field. This project supports efforts in the Engineering and Manufacturing Development (EMD) phase of the acquisition strategy for prophylactic, pre-treatment, and therapeutic drugs and diagnostic medical devices for the protection, treatment, detection, and medical management of chemical warfare agent exposures. Project funds research and development of safety studies, manufacturing scale-up, process validation, drug interaction, performance test, and submission of the Food and Drug Administration (FDA) drug licensure application(s). This program currently funds: (1) Advanced Anticonvulsant System (AAS), which consists of the drug midazolam in an autoinjector, to be used as a treatment for nerve agent-induced seizures and will be a replacement for the currently-fielded Convulsant Antidote for Nerve Agent (CANNA) autoinjector, which uses diazepam; and (2) Bioscavenger, a new capability, to be used as a prophylaxis against nerve agents.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2011	FY 2012	FY 2013
Title: 1) AAS FY 2011 Accomplishments: Continued process development and current Good Manufacturing Practices (cGMP) requirements. FY 2012 Plans: Complete process development and current Good Manufacturing Practices (cGMP) requirements.	2.782	2.026	-
Title: 2) AAS FY 2011 Accomplishments: Completed Good Laboratory Practices (GLP) animal efficacy studies.	0.391	-	-
Title: 3) AAS FY 2011 Accomplishments: Continued preparation of New Drug Application (NDA). FY 2012 Plans: Complete preparation of New Drug Application (NDA) and submit to FDA.	0.628	0.311	-
Title: 4) BSCAV	-	0.039	-

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MC5: <i>MEDICAL CHEMICAL DEFENSE (SDD)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2011	FY 2012	FY 2013
<i>FY 2012 Plans:</i> Initiate manufacturing and process development at small scale to support bioequivalence bridging studies and alternate indication studies (Non-Traditional Agents (NTAs)).			
<i>Title:</i> 5) BSCAV	-	-	1.545
<i>FY 2013 Plans:</i> Complete studies for alternative manufacturing technologies (NTA).			
<i>Title:</i> 6) BSCAV	-	-	2.285
<i>FY 2013 Plans:</i> Complete studies for Post Exposure Prophylaxis (PEP) indication (NTA).			
<i>Title:</i> 7) BSCAV	-	-	2.050
<i>FY 2013 Plans:</i> Complete small-scale manufacturing process qualification.			
<i>Title:</i> 8) BSCAV	-	-	1.826
<i>FY 2013 Plans:</i> Initiate Pharmacokinetic (PK) and efficacy bioequivalence bridging studies (NTA).			
<i>Title:</i> 9) BSCAV	-	-	1.936
<i>FY 2013 Plans:</i> Complete current Good Manufacturing Practices (cGMP) manufacturing process validation to support delivery of a capability for a limited user group.			
<i>Title:</i> 10) SBIR	-	0.031	-
<i>FY 2012 Plans:</i> Small Business Innovative Research.			
Accomplishments/Planned Programs Subtotals	3.801	2.407	9.642

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MC5: <i>MEDICAL CHEMICAL DEFENSE (SDD)</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• JM6677: <i>ADVANCED ANTICONVULSANT SYSTEM (AAS)</i>	0.000	0.000	4.466		4.466	8.951	0.000	0.000	0.000	0.000	13.417

D. Acquisition Strategy

AAS

The Medical Identification and Treatment Systems (MITS) Joint Product Management Office is managing the development of Advanced Anticonvulsant System, which consists of midazolam in an autoinjector. Midazolam, injected intramuscularly, will treat traditional nerve agent and non-traditional agent-induced seizures and prevent subsequent neurological damage. Midazolam is more water-soluble than diazepam (the currently fielded medication to control nerve agent-induced seizures) and terminates nerve agent-induced seizures more quickly than diazepam. AAS will not eliminate the need for other protective and therapeutic systems.

A contractor shall be responsible for conducting activities associated with drug development in a manner consistent with eventual approval by the Food and Drug Administration (FDA). The contractor shall sponsor the drug to the FDA and hold all approvals and/or licenses. During the Engineering and Manufacturing Development (EMD) Phase, large scale manufacturing, Phase 2 human clinical safety studies and definitive animal efficacy studies will be conducted. FDA approval of the countermeasure is an exit criterion for the EMD phase. During the Production and Deployment Phase, sufficient quantities of product to meet Initial Operational Capability will be purchased. Subsequent purchases will be made by the Defense Logistics Agency. Any post-marketing surveillance requested by the FDA will be the responsibility of the contractor. The DoD is collaborating closely with the Department of Health and Human Services (HHS) with the development of midazolam for both civilian and DoD applications.

BSCAV

Bioscavenger acquisition strategy uses a serial evaluation of candidates to achieve competitive prototyping in the Technology Development Phase. Initially, the Medical Identification and Treatment Systems (MITS) Joint Product Management Office (JPMO) exercised management oversight and a commercial partner as the system integrator during the Technology Development Phase to examine a human plasma-derived butyrylcholinesterase. Activities included small scale manufacturing, conduct of pre-clinical animal safety studies, submission of an Investigational New Drug (IND) application, and completion of a Phase 1 human clinical safety study. Subsequently, the MITS JPMO evaluated a goat-derived recombinant butyrylcholinesterase candidate and multiple small molecule candidates. The small molecule candidates were not pursued beyond initial toxicology/safety testing in animals. For goat-derived Bioscavenger, activities included small scale manufacturing, conduct of pre-clinical animal safety studies, submission of an IND application, completion of a Phase 1 human clinical safety study and conduct of preliminary animal efficacy studies. The goat-derived Bioscavenger candidate was discontinued after the product failed to demonstrate sufficient product performance in the preliminary animal efficacy studies. During FY11, the program completed a system engineering trade off analysis resulting in a reduction of the initial operating capability/full operational capability (IOC/FOC) quantities and consequently an estimated cost avoidance of \$1.14B over the product life.

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MC5: <i>MEDICAL CHEMICAL DEFENSE (SDD)</i>

The path forward will include a formal Request For Proposal (RFP) to select the best value for the government for a prophylaxis to support an initial limited user group. Concurrently the MITS JPMO will conduct an analysis of alternative manufacturing technologies and investigate additional product indications. Subsequently, an expanded force solution prophylaxis will be pursued, once appropriate technologies have matured. Following a successful Milestone B and entry into Engineering and Manufacturing Development (EMD), the MITS JPMO will continue to exercise management oversight with system integration support of a commercial partner to ensure that manufacturing of the product is in accordance with Food and Drug Administration (FDA) regulations and guidelines. The RFP for product manufacturing will include options for transition to the Medical Countermeasures Initiative (MCCI) Advanced Development Manufacturing (ADM) capability. Prior to FDA licensure, a commercial partner will perform a Phase 2 human clinical safety study, definitive animal efficacy studies, and toxicology studies. The system integrator will also develop and manufacture a product formulation and delivery system and will submit a New Drug Application and seek FDA approval. The EMD phase will culminate in FDA licensure of the Bioscavenger. During the Production and Deployment phase, the MITS JPMO, in conjunction with a commercial partner, will pursue full rate production and conduct any FDA-mandated post-marketing surveillance studies.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MC5: <i>MEDICAL CHEMICAL DEFENSE (SDD)</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** AAS - HW S - AAS - cGMP Manufacturing Requirements	C/CPIF	Meridian Medical Technologies:Columbia, MD	7.692	1.545	Feb 2012	-		-		-	Continuing	Continuing	0.000
** BSCAV - HW S - BSCAV - Small-scale Manufacturing	C/CPIF	TBD:	-	0.039	Feb 2012	-		-		-	Continuing	Continuing	0.000
HW C - BSCAV - Small-scale manufacturing	C/CPIF	TBD:	-	-		1.550	Nov 2012	-		1.550	Continuing	Continuing	0.000
HW C - BSCAV - Alternate Manufacturing	C/CPIF	TBD:	-	-		1.195	Feb 2013	-		1.195	Continuing	Continuing	0.000
HW S - BSCAV - cGMP Manufacturing	C/CPIF	TBD:	-	-		1.586	May 2013	-		1.586	Continuing	Continuing	0.000
Subtotal			7.692	1.584		4.331		-		4.331			0.000

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** AAS - ES S - AAS - Regulatory Integration and NDA Support Efforts	C/CPIF	Meridian Medical Technologies:Columbia, MD	2.213	0.311	Aug 2012	-		-		-	Continuing	Continuing	0.000
** BSCAV - ES S - BSACV - Regulatory Support	MIPR	TBD:	-	-		0.100	Feb 2013	-		0.100	Continuing	Continuing	0.000
ES S - BSCAV - Regulatory Support	MIPR	USAMMDA:Fort Detrick, MD	-	-		0.200	May 2013	-		0.200	Continuing	Continuing	0.000
Subtotal			2.213	0.311		0.300		-		0.300			0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MC5: <i>MEDICAL CHEMICAL DEFENSE (SDD)</i>
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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** BSCAV - OTHS - BSCAV - Bioequivalence Bridging Study	C/CPIF	TBD:	-	-		1.300	May 2013	-		1.300	Continuing	Continuing	0.000
OTHS - BSCAV - PEP Studies	C/CPIF	TBD:	-	-		1.975	Feb 2013	-		1.975	Continuing	Continuing	0.000
Subtotal			-	-		3.275		-		3.275			0.000

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** AAS - PM/MS S - AAS - Chem Bio Medical Systems	Allot	CBMS:Fort Detrick, MD	1.620	0.481	Feb 2012	-		-		-	Continuing	Continuing	0.000
** BSCAV - PM/MS S - BSCAV - CBMS Management Support	Allot	CBMS:Fort Detrick, MD	-	-		0.360	Aug 2013	-		0.360	Continuing	Continuing	0.000
PM/MS S - BSCAV - Product Management Support	SS/FFP	Goldbelt Raven LLC:Frederick, MD	-	-		0.626	Feb 2013	-		0.626	Continuing	Continuing	0.000
PM/MS S - BSCAV - JPEO Project Management Support	Allot	JPEO-CBD:APG, MD	-	-		0.600	Nov 2012	-		0.600	Continuing	Continuing	0.000
PM/MS C - BSCAV - JPEO Program Management Support	Allot	JPEO-CBD:APG, MD	-	-		0.150	Feb 2013	-		0.150	Continuing	Continuing	0.000
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/STTR	PO	HQ:AMC, Alexandria	-	0.031		-		-		-	Continuing	Continuing	0.000
Subtotal			1.620	0.512		1.736		-		1.736			0.000

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		11.525	2.407		9.642	-		9.642			0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MC5: <i>MEDICAL CHEMICAL DEFENSE (SDD)</i>
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	Total Prior Years Cost	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
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Remarks

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MC5: <i>MEDICAL CHEMICAL DEFENSE (SDD)</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
** AAS - GLP Definitive Animal Efficacy Studies	1	2011	2	2011
AAS - New Drug Application (NDA) Preparation and Submission	1	2011	4	2012
AAS - Process development and cGMP Manufacturing Requirements	1	2011	2	2012
AAS - Milestone C	1	2013	1	2013
** BSCAV - Alternate Manufacturing Studies	3	2011	4	2013
BSCAV - Alternate Indication (PEP) Studies	4	2011	4	2013
BSCAV - Milestone B	3	2012	3	2012
BSCAV - Manufacturing & process qualification at small scale	1	2013	4	2013
BSCAV - cGMP Process Validation	1	2013	4	2013
BSCAV - Conduct PK and efficacy bridging studies	4	2013	1	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MR5: <i>MEDICAL RADIOLOGICAL DEFENSE (SDD)</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
MR5: <i>MEDICAL RADIOLOGICAL DEFENSE (SDD)</i>	-	-	2.027	-	2.027	16.610	18.103	6.101	7.115	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

Operational forces have an immediate need to survive, safely operate, and sustain operations in a radiological/nuclear (R/N) threat environment across a continuum of global, contingency, special operations/low intensity conflict, homeland defense, and other high-risk missions. There are no FDA-approved prophylactics, treatments, or biodosimetry capabilities against radiation exposure. Treatment of R/N casualties depends on effective use of multiple medical capabilities in an integrated manner. Thus, this program supports the development of medical radiological countermeasures (MRADC) using a family-of-systems approach to provide a full spectrum capability to protect against the radiation threat which includes prophylactic, treatment, and biodosimetry capabilities. Individual countermeasure solutions will be developed using a single step to a full capability (FDA approval) strategy. Multiple contractors will serve as individual product integrators throughout development and will be responsible for conducting activities associated with drug development in a manner consistent with eventual approval by the FDA. Each contractor will sponsor the drug to the FDA and hold all approvals and/or licenses. The Technology Development phase includes pre-clinical studies, completion of manufacturing scale up, Phase 1 human clinical safety studies and initiation of manufacturing scale up activities, potentially utilizing the Medical Countermeasures Initiative (MCMI) Advanced Development Manufacturing (ADM) capability. During the Engineering and Manufacturing Development (EMD) phase, large scale manufacturing, Phase 2 human clinical safety studies and definitive animal efficacy studies will be conducted. FDA approval of the countermeasure is an exit criterion for the EMD phase. During the Production and Deployment Phase, sufficient quantities of product to meet Initial Operational Capability (IOC) and Full Operational Capability (FOC) will be purchased. Subsequent purchases will be made by the Defense Logistics Agency (DLA). Any post-marketing surveillance studies requested by the FDA will be conducted.

Medical Radiological Countermeasures (MRADC) efforts include development of multiple countermeasures required to protect U.S. Forces against a myriad of injuries caused by exposure to radiation and to restore casualties to pre-exposure health. MRADC shall reverse or limit radiation injury resulting in increased survival, decreased incapacity, and sustained operational effectiveness. In addition, MRADC shall be effective against a broad range of radiation sources and types and shall be useable throughout the full spectrum of healthcare operations.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2011	FY 2012	FY 2013
Title: 1) MRADC TX	-	-	0.825
FY 2013 Plans: Initiate definitive animal efficacy studies.			
Title: 2) MRADC TX	-	-	1.202
FY 2013 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MR5: <i>MEDICAL RADIOLOGICAL DEFENSE (SDD)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2011	FY 2012	FY 2013
Initiate manufacturing scale-up activities.			
Accomplishments/Planned Programs Subtotals	-	-	2.027

C. Other Program Funding Summary (\$ in Millions)

N/A

D. Acquisition Strategy

MRADC

Medical Identification and Treatment Systems (MITS) Joint Product Management Office is the life-cycle manager of Medical Radiation Countermeasures (MRADC) for the Department of Defense (DoD). The DoD is working very closely with the Department of Health and Human Services (HHS), which also has a radiation countermeasure program. In support of the Integrated National Biodefense Portfolio, a Memorandum of Understanding (MOU) was established between HHS and DoD to prevent duplication of efforts and create synergies in the development of MRADC. In support of the MOU, the establishment of an interagency working group provides oversight and guidance to both agency programs and allows leveraging of knowledge and successes to advance the DoD MRADC program. Under the MOU, MITS executes Interagency Agreements with the Biomedical Advanced Research and Development Authority (BARDA), HHS' advanced developer, to promote the science of MRADC.

This project funds the advanced development of candidate therapeutic medical countermeasures to mitigate the consequences of exposure to ionizing radiation from nuclear or radiological attacks. There are currently no FDA-approved products to treat Acute Radiation Syndrome (ARS). Exposure to ionizing radiation causes ARS which includes damage to blood-forming cells (hematopoietic system), gastrointestinal system, and central nervous system. Medical countermeasures must be approved by the Food and Drug Administration (FDA) for human use prior to fielding. Testing the efficacy of candidate drugs against lethal radiation exposure cannot be conducted in humans; therefore, surrogate animal models must be used to obtain FDA approval.

Medical Radiological Countermeasures (MRADC) efforts include development of multiple countermeasures required to protect U.S. Forces against a myriad of injuries caused by exposure to radiation and to restore casualties to pre-exposure health. MRADC shall reverse or limit radiation injury resulting in increased survival, decreased incapacity, and sustained operational effectiveness. In addition, MRADC shall be effective against a broad range of radiation sources and types and shall be useable throughout the full spectrum of healthcare operations.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MR5: <i>MEDICAL RADIOLOGICAL DEFENSE (SDD)</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** MRADC - HW C - MRADC - Manufacturing Scale-Up	C/CPIF	TBD:	-	-		0.912	Feb 2013	-		0.912	Continuing	Continuing	0.000
Subtotal			-	-		0.912		-		0.912			0.000

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** MRADC - DTE C - MRADC - Animal Efficacy Studies	C/CPIF	TBD:	-	-		0.713	May 2013	-		0.713	Continuing	Continuing	0.000
Subtotal			-	-		0.713		-		0.713			0.000

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** MRADC - PM/MS C - MRADC - Management Support	Allot	CBMS:Fort Detrick, MD	-	-		0.402	Nov 2012	-		0.402	Continuing	Continuing	0.000
Subtotal			-	-		0.402		-		0.402			0.000

			Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		2.027		-		2.027			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Chemical and Biological Defense Program			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MR5: <i>MEDICAL RADIOLOGICAL DEFENSE (SDD)</i>	

	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
** MRADC - Conduct Milestone B																												
MRADC - Animal Efficacy Studies																												
MRADC - Manufacturing Scale-Up																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Chemical and Biological Defense Program		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT MR5: <i>MEDICAL RADIOLOGICAL DEFENSE (SDD)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
** MRADC - Conduct Milestone B	1	2013	1	2013
MRADC - Animal Efficacy Studies	1	2013	3	2015
MRADC - Manufacturing Scale-Up	1	2013	3	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT TE5: <i>TEST & EVALUATION (SDD)</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
TE5: <i>TEST & EVALUATION (SDD)</i>	30.653	11.043	6.394	-	6.394	20.202	12.033	14.200	14.200	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This funding supports the Joint Project Manager Nuclear, Biological, Chemical Contamination Avoidance Product Director, Test Equipment, Strategy, and Support (PD TESS) efforts. PD TESS provides test infrastructure products for testing and evaluating chemical and biological defense systems throughout the life cycle acquisition process in support of the Milestone Decision Authority, Joint Project Managers, and the Test and Evaluation (T&E) community. PD TESS test infrastructure products are aligned in four groups to include: (1) Chemical Laboratory (Sense); (2) Biological Laboratory (Sense); (3) Field Simulant Test (Sense); (4) Individual Protection, Collective Protection and Decontamination (Shield and Sustain).

(1) Chemical Laboratory (Sense): The product for this area is the Dynamic Test Chamber (DTC) for chemical point sensors, and Non-Traditional Agent Defense Test System (NTADTS). The Dynamic Test Chamber provides a new capability for testing chemical point detection systems against chemical warfare agents in various environmental conditions. The NTADTS provides a new capability at Edgewood Chemical Biological Center to conduct highly toxic material testing using new emerging threats. The NTADTS supports testing of Decontamination, Collective Protection, Individual Protection, and Contamination Avoidance products. The CBD programs supported are: the Joint Chemical Agent Detector (JCAD) and Improved Point Detection System (IPDS), Next Generation Chemical Point Detection (NGCPD) System; Joint Protective Aircrew Ensemble (JPAGE); Joint Services Aircrew Mask (JSAM) - Fixed Wing (FW), Rotary Wing (RW), and Joint Strike Fighter (JSF) variants; Joint Service Chemical Environment Survivability Mask (JSCESM); Joint Chemical Ensemble (JCE); Uniform Individual Protective Ensemble (UIPE); Joint Service Lightweight Integrated Suit Technology (JSLIST); and Joint Chemical/Biological Coverall for Combat Vehicle Crewmen (JC3).

(2) Sense Laboratory (Biological): The product for this area is the Whole System Live Agent Test (WSLAT) "Full System" Chamber. The WSLAT "Full System" Chamber supports testing of all biological point detection systems in production configuration in biological live agent environments. The chemical biological defense (CBD) programs supported are: the Joint Biological Point Detection System (JBPDS)/JBPDS Block II; and the Joint Biological Standoff Detection System (JBSDS) Increment 2.

(3) Field Simulant (Sense): The product for this area is a fully instrumented simulant Test Grid. The Test Grid effort provides a fully instrumented 20 km by 40 km field chemical and biological simulant test capability that integrates cloud tracking equipment; meteorological equipment; and test data network. The CBD programs supported are: the Joint NBC Reconnaissance System (JNBCRS); the Joint Biological Standoff Detection System (JBSDS); the Joint Biological Point Detection System (JBPDS); the Joint Expeditionary Collective Protection (JECPP) System; Joint Biological Tactical Detection System (JBTDTS); and Next Generation Chemical Point Detectors (NGCPD).

(4) Individual Protection, Collective Protection and Decontamination (Shield and Sustain): IPEMS provides an articulated robotic mannequin that simulates Warfighters activities and includes under ensemble agent sensing capability for evaluating IPE against chemical warfare agents. IPEMS consists of an articulated robotic mannequin, exposure chamber, control room, and real time under-ensemble sensor system. The CBD programs supported are: Joint Protective Aircrew Ensemble

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT TE5: <i>TEST & EVALUATION (SDD)</i>		
(JPACE); Joint Service General Purpose Mask (JSGPM); Joint Service Aircrew Mask (JSAM) - Fixed Wing (FW), Rotary Wing (RW), and Joint Strike Fighter (JSF) variants; Joint Service Chemical Environment Survivability Mask (JSCESM); Joint Chemical Ensemble (JCE); Uniform Individual Protective Ensemble (UIPE); Joint Service Lightweight Integrated Suit Technology (JSLIST); and Joint Chemical/Biological Coverall for Combat Vehicle Crewmen (JC3).				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Title: 1) PD TESS - Dynamic Test Chamber (DTC)		0.983	-	0.100
FY 2011 Accomplishments: Initiated and completed testing of humidity, pressure, temperature, and dissemination components. Initiated and completed verification testing.				
FY 2013 Plans: Upgrade and validation of the DTC.				
Title: 2) PD TESS - Non-Traditional Agent Defense Test System (NTADTS)		-	2.070	5.762
FY 2012 Plans: Initiate fabrication and installation of the NTA Defense Test System.				
FY 2013 Plans: Initiate validation.				
Title: 3) PD TESS - WSLAT		4.504	2.600	-
FY 2011 Accomplishments: Continued to build and fabricate WSLAT chamber.				
FY 2012 Plans: Initiate and complete installation. Verify and validate chamber.				
Title: 4) PD TESS - Test Grid		14.113	2.260	-
FY 2011 Accomplishments: Develop a biological referee capability.				
FY 2012 Plans: Conduct and study dissemination, point and standoff referee systems. Perform characterization test and insert bio referee equipment in the Test Grid network.				
Title: 5) PD TESS - Individual Protection Ensemble Mannequin System (IPEMS)		11.053	3.965	0.532
FY 2011 Accomplishments:				

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT TE5: <i>TEST & EVALUATION (SDD)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2011	FY 2012	FY 2013
Continued IPEMS fabrication and installation. Initiated IPEMS verification testing. FY 2012 Plans: Continue IPEMS fabrication, installation, and verification and validation testing. FY 2013 Plans: Complete IPEMS validation testing.			
Title: 6) SBIR FY 2012 Plans: Small Business Innovative Research.	-	0.148	-
Accomplishments/Planned Programs Subtotals	30.653	11.043	6.394

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• TE7: <i>TEST & EVALUATION (OP SYS DEV)</i>	4.732	3.597	4.156		4.156	3.690	3.642	2.846	2.846	Continuing	Continuing

D. Acquisition Strategy
PD TESS

The PD TESS program provides for the development and acquisition of new and enhanced test infrastructure to support the sense, shield, shape, and sustain mission areas for the Chemical and Biological Defense Program (CBDP). The efforts are supported through competitive contract actions, academia, and other Government agencies. Infrastructure solutions will leverage commercially available systems to provide state-of-the-art capabilities that address current and future CBDP test and evaluation needs.

E. Performance Metrics
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT TE5: <i>TEST & EVALUATION (SDD)</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** PD TESS - HW S - DTC Fabrication/Installation	C/CPFF	John Hopkins Univ - Applied Physics Lab:Laurel, MD	3.974	-		0.100	May 2013	-		0.100	Continuing	Continuing	0.000
HW S - WSLAT Chamber Fabrication/Installation	C/CPFF	Teledyne Brown Engineering:Huntsville, AL	11.433	1.952	Feb 2012	-		-		-	Continuing	Continuing	0.000
HW S - Test Grid Instrumentation Data Network	C/CPFF	ITT Information Systems:Alexandria, VA	13.244	1.060	Feb 2012	-		-		-	Continuing	Continuing	0.000
SW SB - IPEMS Mannequin System Fabricate/Install/Validate/Verify	C/CPFF	MRIGlobal:Kansas City, MO	44.569	2.513	Feb 2012	0.532	Feb 2013	-		0.532	Continuing	Continuing	0.000
HWS - NTA Defense Test System Design/Fabrication/Installation	MIPR	Various:	-	0.970	Feb 2012	1.355	Feb 2013	-		1.355	Continuing	Continuing	0.000
HW S - NTA Defense Test System Design, Fabrication, Install	C/CPFF	MRIGlobal:Kansas City, MO	-	-		3.453	Feb 2013	-		3.453	Continuing	Continuing	0.000
Subtotal			73.220	6.495		5.440		-		5.440			0.000

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** PD TESS - PM/MS S - Program Management/Systems Engineering Support	MIPR	JPM NBC CA:APG, MD	3.184	4.400	Nov 2011	0.954	Nov 2012	-		0.954	Continuing	Continuing	0.000
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/STTR	PO	HQ:AMC, Alexandria	-	0.148		-		-		-	Continuing	Continuing	0.000
Subtotal			3.184	4.548		0.954		-		0.954			0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Chemical and Biological Defense Program							DATE: February 2012				
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>				PROJECT TE5: <i>TEST & EVALUATION (SDD)</i>				
	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	76.404	11.043		6.394		-		6.394			0.000

Remarks

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Chemical and Biological Defense Program		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (SDD)</i>	PROJECT TE5: <i>TEST & EVALUATION (SDD)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
** PD TESS - NTADTS - Design/Fabrication/Installation	1	2011	1	2014
PD TESS - IPE Mannequin Design, Build, Install	1	2011	2	2013
PD TESS - DTC Fabrication/Installation (4QFY11 - ORI, POSS, FCR)	1	2011	4	2011
PD TESS - WSLAT Chamber Design/Fabrication/Validation	1	2011	2	2012
PD TESS - Test Grid - Develop the Test Grid Biological Component and conduct characterization tests.	1	2011	4	2012
PD TESS - DTC - Validation	3	2013	3	2013