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

<b>APPROPRIATION/BUDGET ACTIVITY</b>				<b>R-1 ITEM NOMENCLATURE</b>							
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				PE 0607384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>							
<b>COST (\$ in Millions)</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013 Base</b>	<b>FY 2013 OCO</b>	<b>FY 2013 Total</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	6.521	15.956	14.745	-	14.745	11.307	13.499	10.447	23.606	Continuing	Continuing
IP7: <i>INDIVIDUAL PROTECTION (OP SYS DEV)</i>	-	-	-	-	-	0.500	2.501	1.490	1.490	Continuing	Continuing
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
MB7: <i>MEDICAL BIOLOGICAL DEFENSE (OP SYS DEV)</i>	-	5.448	0.498	-	0.498	0.499	3.266	0.496	9.355	Continuing	Continuing
TE7: <i>TEST &amp; EVALUATION (OP SYS DEV)</i>	4.732	3.597	4.156	-	4.156	3.690	3.642	2.846	2.846	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element supports developmental efforts to upgrade systems in the Department of Defense (DoD) Chemical Biological Defense Program that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

Efforts in this program element support the upgrade of fielded CB defense equipment against emerging chemical threat agents and toxic industrial chemicals. Specifically this program includes: (1) the upgrade and modernization of information systems; (2) the Joint Program Executive Office for Chemical Biological Defense (JPEO-CBD) Software Support Activity (SSA); (3) the upgrade and modernization of medical systems; and (4) revitalization and technical upgrade of existing instrumentation and equipment at Dugway Proving Ground (DPG).

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013 Base</b>	<b>FY 2013 OCO</b>	<b>FY 2013 Total</b>
Previous President's Budget	6.634	15.956	9.872	-	9.872
Current President's Budget	6.521	15.956	14.745	-	14.745
Total Adjustments	-0.113	-	4.873	-	4.873
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.079	-			
• Other Adjustments	-0.034	-	4.873	-	4.873

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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: Research, Development, Test & Evaluation, Defense-Wide BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0607384BP: CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)	
<div>Change Summary Explanation</div> <div>Funding: FY13</div> <div>+\$4,873M Other Adjustments (IS7 +\$4,059K; MB7 +\$6K; TE7 +\$808K)</div> <div>Schedule: N/A</div> <div>Technical: N/A</div>		

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2013 Chemical and Biological Defense Program									<b>DATE:</b> February 2012		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0607384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>				<b>PROJECT</b> IP7: <i>INDIVIDUAL PROTECTION (OP SYS DEV)</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013 Base</b>	<b>FY 2013 OCO</b>	<b>FY 2013 Total</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
IP7: <i>INDIVIDUAL PROTECTION (OP SYS DEV)</i>	-	-	-	-	-	0.500	2.501	1.490	1.490	Continuing	Continuing
Quantity of RDT&E Articles											
<b>Note</b> This R-2A Plan is strictly for planning purposes; no funds are requested in this FY											
<b>A. Mission Description and Budget Item Justification</b> N/A											
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>									<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>
<b>Title:</b> N/A  <b>FY 2011 Accomplishments:</b> N/A									-	-	-
<b>Accomplishments/Planned Programs Subtotals</b>									-	-	-
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A											
<b>D. Acquisition Strategy</b> N/A											
<b>E. Performance Metrics</b> N/A											

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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: Research, Development, Test & Evaluation, Defense-Wide BA 7: Operational Systems Development				PE 0607384BP: CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)				IS7: INFORMATION SYSTEMS (OP SYS DEV)			
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
IS7: INFORMATION SYSTEMS (OP SYS DEV)	1.789	6.911	10.091	-	10.091	6.618	4.090	5.615	9.915	Continuing	Continuing
Quantity of RDT&E Articles											

## A. Mission Description and Budget Item Justification

This Project provides for the upgrade and modernization of fielded Information Systems including the Joint Effects Model (JEM) and the Joint Warning and Reporting Network (JWARN). Also this Project provides for the JPEO-CBD Software Support Activity (SSA).

The JEM is DoD's 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 Nuclear Biological Chemical (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 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 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

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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: Research, Development, Test & Evaluation, Defense-Wide BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0607384BP: CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)	PROJECT IS7: INFORMATION SYSTEMS (OP SYS DEV)		
Warfighter's ability to communicate 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
Title: 1) JEM Command and Control (C2) Modernization Efforts  FY 2012 Plans: Upgrade fielded JEM software due to changing C2 host architectures, systems, and standards in order to remain relevant on required, interoperable platforms. Perform test and evaluation of updated JEM software baseline.  FY 2013 Plans: Continue efforts to upgrade fielded JEM software due to changing C2 host architectures, systems, and standards in order to remain relevant on required, interoperable platforms. Perform test and evaluation of updated JEM software baseline.		-	0.796	0.831
Title: 2) JEM Pre-Planned Product Improvement (P3I)  FY 2012 Plans: Develop, test, and integrate previously fielded JEM software with science and technology upgrades and model enhancements to improve JEM accuracy and precision. Improve JEM architecture and overall performance through software updates and deficiency resolution.  FY 2013 Plans: Continue efforts to develop, test, and integrate previously fielded JEM software with science and technology upgrades and model enhancements to improve JEM accuracy and precision. Improve JEM architecture and overall performance through software updates and deficiency resolution.		-	1.963	1.469
Title: 3) JWARN  Description: System Modernization/Update Development  FY 2012 Plans: Initiate engineering and manufacturing development to upgrade existing, operational JWARN Systems in order to maintain interoperability, efficiency and functionality within the targeted C2 systems.  FY 2013 Plans: Continue engineering and manufacturing development to upgrade existing, operational JWARN Systems in order to maintain interoperability, efficiency and functionality within the targeted C2 systems.		-	1.687	4.124
Title: 4) JWARN  Description: Program Management Support		-	0.223	0.473

**UNCLASSIFIED**

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
FY 2012 Plans: Perform program financial management, scheduling, planning and reporting support to modernization effort of JWARN.				
FY 2013 Plans: Continue JWARN program financial management, scheduling, planning and reporting support to modernization effort.				
Title: 5) JWARN  Description: Test and Evaluation  FY 2012 Plans: Initiate required government developmental testing on JWARN software updates and modernization efforts.  FY 2013 Plans: Continue required governmental developmental testing on JWARN software updates and modernization efforts.		-	0.337	1.336
Title: 6) JWARN  Description: Technical Support  FY 2012 Plans: Initiate engineering and technical support efforts to support JWARN modernization.  FY 2013 Plans: Continue engineering and technical support for JWARN modernization efforts.		-	0.302	0.538
Title: 7) SSA Policies, Standards and Guidelines  FY 2011 Accomplishments: Provided ISP development support for JPEO-CBD programs. Continued to provide Modeling and Simulation (M&S) Accreditation Steering Group Support. Provided guidance and support to JPEO-CBD programs ensuring compliance with Service Net Centric requirements.  FY 2012 Plans: Continue to provide ISP development support for JPEO-CBD programs. Continue to provide Modeling and Simulation Accreditation Steering Group Support. Continue to provide guidance and support to JPEO-CBD programs ensuring compliance with Service Net Centric requirements.  FY 2013 Plans:		0.457	0.383	0.273

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2013 Chemical and Biological Defense Program		<b>DATE:</b> February 2012		
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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>
Provide ISP development support for JPEO-CBD programs and the Modeling and Simulation Accreditation Steering Group.				
<b>Title:</b> 8) SSA Integrated Architecture  <b>FY 2011 Accomplishments:</b> Provided and updated program of record integrated architectures. Provided Net-Centric Policy implementation assistance. Supported Common CBRN Sensor Interface (CCSI) Standard updates. Provided CCSI reference implementation. Provided support of enterprise tools and common capabilities to ensure relevance across CBRN programs.  <b>FY 2012 Plans:</b> Continue to provide and update program of record integrated architectures. Continue to provide Net-Centric Policy implementation assistance. Continue to support CCSI updates. Continue to provide CCSI reference implementation. Continue support of enterprise tools and common capabilities to ensure relevance across CBRN programs.  <b>FY 2013 Plans:</b> Provide and update program of record integrated architectures and provide Net-Centric Policy implementation assistance. Continue to support CCSI updates. Continue to provide CCSI reference implementation. Support the enterprise tools and common capabilities to ensure relevance across CBRN programs.		0.580	0.462	0.271
<b>Title:</b> 9) SSA Chemical, Biological, Radiological, Nuclear (CBRN) Data Model  <b>FY 2011 Accomplishments:</b> Provided CBRN Data Model implementation guidance including reference implementation. Analyzed requirements and assisted programs with implementation of the CBRN data model. Supported Data Model implementations and emerging CBRN programs including requirements for data elements in relation to Bio-surveillance initiatives.  <b>FY 2012 Plans:</b> Continue to provide Data Model Implementation Guidance. Continue to develop and provide CBRN Data Model implementation guidance including reference implementation. Continue to analyze requirements and assist programs with implementation of the CBRN data model. Continue to support data model changes. Support Data Model requirements for Bio-surveillance initiatives.  <b>FY 2013 Plans:</b> Provide changes to CBRN data models. Support Data Model requirements for Bio-surveillance initiatives.		0.579	0.465	0.289
<b>Title:</b> 10) SSA Information Assurance  <b>FY 2011 Accomplishments:</b>		0.173	0.202	0.487

**UNCLASSIFIED**

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2011</b>	<b>FY 2012</b>
Continued providing Information Assurance Site Compliance Testing for JPEO-CBD. Continued to provide Information Assurance Certification/Acceptance products and services for JPEO-CBD programs.			
<b>FY 2012 Plans:</b> Provide Information Assurance Site Compliance Testing for JPEO-CBD. Continue to provide Information Assurance Certification/Acceptance products and services.			
<b>FY 2013 Plans:</b> Provide Information Assurance Site Compliance Testing for JPEO-CBD. Continue to provide Information Assurance Certification/Acceptance products and services.			
<b>Title:</b> 11) SBIR		-	0.091
<b>FY 2012 Plans:</b> Small Business Innovative Research.			-
<b>Accomplishments/Planned Programs Subtotals</b>		1.789	6.911
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A			
<b>D. Acquisition Strategy</b> JEM			
<p>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&amp;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.</p> <p>JWARN</p> <p>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.</p>			



**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2013 Chemical and Biological Defense Program		<b>DATE:</b> February 2012
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0607384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	<b>PROJECT</b> IS7: <i>INFORMATION SYSTEMS (OP SYS DEV)</i>
<p>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.</p> <p>SSA</p> <p>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.</p> <p>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).</p> <p>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).</p> <p>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).</p> <p><b><u>E. Performance Metrics</u></b> N/A</p>		

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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				R-1 ITEM NOMENCLATURE				PROJECT					
0400: Research, Development, Test & Evaluation, Defense-Wide BA 7: Operational Systems Development				PE 0607384BP: CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)				IS7: INFORMATION SYSTEMS (OP SYS DEV)					
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
** JEM - SW SB - JEM	C/CPIF	Various:	-	1.961	Mar 2012	1.652	Apr 2013	-		1.652	Continuing	Continuing	0.000
** JWARN - SW S - JWARN	C/CPAF	TBD:	-	1.686	Feb 2012	2.625	Feb 2013	-		2.625	Continuing	Continuing	0.000
** SSA - HW S - Development Services	MIPR	SPAWAR System Center:San Diego, CA	2.002	0.702	Feb 2012	0.478	Feb 2013	-		0.478	Continuing	Continuing	0.000
Subtotal			2.002	4.349		4.755		-		4.755			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
** JEM - ES SB - JEM Increment 1	C/CPAF	Various:	-	0.798	Mar 2012	0.648	Apr 2013	-		0.648	Continuing	Continuing	0.000
** JWARN - TD/D SB - JWARN	MIPR	Various:	-	0.303	Feb 2012	1.336	Feb 2013	-		1.336	Continuing	Continuing	0.000
** SSA - ES S - Develop Support Activities	MIPR	SPAWAR Systems Center:San Diego, CA	2.040	0.300	Feb 2012	0.313	Feb 2013	-		0.313	Continuing	Continuing	0.000
Subtotal			2.040	1.401		2.297		-		2.297			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
** JWARN - DTE SB - JWARN	MIPR	Various:	0.100	0.337	Feb 2012	1.787	Feb 2013	-		1.787	Continuing	Continuing	0.000
** SSA - OTHT S - Integration Verification and Valuation (IV&V)	MIPR	SPAWAR Systems Center:San Diego, CA	2.138	0.510	Feb 2012	0.529	Feb 2013	-		0.529	Continuing	Continuing	0.000
Subtotal			2.238	0.847		2.316		-		2.316			0.000

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

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0607384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	<b>PROJECT</b> IS7: <i>INFORMATION SYSTEMS (OP SYS DEV)</i>
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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
** JWARN - PM/MS S - JWARN	MIPR	Various:	-	0.223	Feb 2012	0.723	Feb 2013	-		0.723	Continuing	Continuing	0.000
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/STTR	PO	HQ:AMC, Alexandria	-	0.091		-		-		-	Continuing	Continuing	0.000
Subtotal			-	0.314		0.723		-		0.723			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			6.280	6.911		10.091		-		10.091			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: Research, Development, Test & Evaluation, Defense-Wide BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0607384BP: CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)	PROJECT IS7: INFORMATION SYSTEMS (OP SYS DEV)	

	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
** JEM - Production and Deployment																												
JEM - Operational Systems Development																												
JEM - Service C2 Systems Modernization & Upgrades																												
** JWARN Incr. 2 - Material Development Decision																												
JWARN Incr. 2 - Analysis of Alternative																												
JWARN Incr. 2 - Milestone A Decision																												
JWARN Incr. 2 - Preliminary Design Review MS B																												
JWARN Incr. 2 - Test and Evaluation Master Plan																												
JWARN Incr. 2 - Capability Development Document																												
JWARN Incr. 2 - Milestone B Decision																												
JWARN Incr. 2 - Critical Design Review MSB																												
JWARN Incr. 2 - Capability Production Document																												
JWARN Incr. 2 - Development Testing																												
JWARN Incr. 2 - Operational Assessment																												
JWARN Incr. 2 - Milestone C Decision																												
JWARN Incr. 2 - Low-Rate Initial Production																												
JWARN Incr. 2 - Multi-Service Operational Testing (MOT&E)																												
** SSA - Provide Data Model Implementation Guidance																												

**UNCLASSIFIED**

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

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0607384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	<b>PROJECT</b> IS7: <i>INFORMATION SYSTEMS (OP SYS DEV)</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 - Provide Enterprise Architecture Products and Services																												
SSA - Provide Integration and Test, M&S, VV&A Certification and Accreditation																												
SSA - Demonstrate Technology Transition Capabilities																												
SSA - Provide CM Services for Common User Products and Services																												
SSA - Provide Net-Centric Assessment and assist programs with implementation of policy																												
SSA - Develop and provide CBRN Data Model implementation guidance, including reference implementations																												
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																												

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

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0607384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	<b>PROJECT</b> IS7: <i>INFORMATION SYSTEMS (OP SYS DEV)</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 - 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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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2013 Chemical and Biological Defense Program			<b>DATE:</b> February 2012
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0607384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	<b>PROJECT</b> IS7: <i>INFORMATION SYSTEMS (OP SYS DEV)</i>	

**Schedule Details**

<b>Events</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
** JEM - Production and Deployment	1	2011	4	2013
JEM - Operational Systems Development	4	2012	4	2017
JEM - Service C2 Systems Modernization & Upgrades	1	2012	2	2017
** 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
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 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

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

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0607384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	<b>PROJECT</b> IS7: <i>INFORMATION SYSTEMS (OP SYS DEV)</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
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
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				R-1 ITEM NOMENCLATURE				PROJECT			
0400: Research, Development, Test & Evaluation, Defense-Wide BA 7: Operational Systems Development				PE 0607384BP: CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)				MB7: MEDICAL BIOLOGICAL DEFENSE (OP SYS DEV)			
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
MB7: MEDICAL BIOLOGICAL DEFENSE (OP SYS DEV)	-	5.448	0.498	-	0.498	0.499	3.266	0.496	9.355	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

This Project provides for the upgrade and modernization of fielded Medical Biological defense equipment/systems including the Joint Biological Agent Identification and Diagnostic System (JBAIDS).

JBAIDS is an evolutionary development program. JBAIDS is a commercial off-the-shelf development/production effort started in August 2003 that focused on rapid development and fielding efforts to deliver a critical capability to identify bacteria and virus agents in environmental surveillance sample types. By 2005, 16 biological warfare (BW) agent surveillance detection kits were fielded along with the first JBAIDS in vitro diagnostic (IVD) assay cleared by the U.S. Food and Drug Administration (FDA). JBAIDS currently has seven IVD kits cleared by the FDA, e.g. Anthrax, Plague, Tularemia, Q-Fever, H5 Avian, Influenza A&B, etc. An expanded influenza detection panel covering six new assays were cleared on Sept 13, 2011. Additionally, the JBAIDS Platinum Path Extraction Kit (PPEK) Bridging Study contract was awarded on Oct 20, 2011; this study will allow the PPEK to be used on the Anthrax, Plague, and Tularemia IVD kits. JBAIDS achieved full operational capability (340 systems delivered all Services) in July 2011. Future JBAIDS efforts in 2012-2016 using MB7 RDT&E funding, will focus on adding new surveillance food and water pathogen detection assays and starting the Glanders (*Burkholderia*) IVD kit effort. Also the development team will focus on completing two Pre-Emergency Use Authorization (Pre-EUA's) packages annually for FDA review. These sustainment RDT&E funds will also be used to conduct software security information assurance (IA) updates on fielded software and monitor analyzer/laptop parts obsolescence.

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

	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>
<b>Title:</b> 1) JBAIDS	-	4.402	-
<b>FY 2012 Plans:</b> Initiate development and integration of additional surveillance assay and diagnostic kits.			
<b>Title:</b> 2) JBAIDS	-	0.424	0.295
<b>FY 2012 Plans:</b> Conduct annual Federal Information Security Management Act (FISMA) software compliance certifications and parts obsolescence.			
<b>FY 2013 Plans:</b> Conduct annual Federal Information Security Management Act (FISMA) software compliance certifications and parts obsolescence.			
<b>Title:</b> 3) JBAIDS	-	0.549	-

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2013 Chemical and Biological Defense Program			<b>DATE:</b> February 2012		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0607384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>		<b>PROJECT</b> MB7: <i>MEDICAL BIOLOGICAL DEFENSE (OP SYS DEV)</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>
<b>FY 2012 Plans:</b> Initiate Pre-Emergency Use Authorizations (EUA) packages for smallpox and orthopox.					
<b>Title:</b> 4) JBAIDS <b>FY 2013 Plans:</b> Initiate Pre-Emergency Use Authorizations (EUA) packages for Hantavirus.			-	-	0.203
<b>Title:</b> 5) SBIR <b>FY 2012 Plans:</b> Small Business Innovative Research.			-	0.073	-
<b>Accomplishments/Planned Programs Subtotals</b>			-	5.448	0.498
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A					
<b>D. Acquisition Strategy</b> JBAIDS  The Government JBAIDS program office plans an open competitive source selection to select the contractor to design and manufacture the additional surveillance assay kits to detect food and water pathogens (e.g., E coli, Salmonella, Cryptosporidium) along with diagnostic kits to detect Tier 2 Joint Operational Requirements Document (JORD) threat agents. Also, the JBAIDS program office plans to work with and MIPR funds to another JPEO-CBD activity (JPM-IS) to conduct the annual JBAIDS Federal Information Security Management Act (FISMA) software compliance certification in addition to any logistics sustainment issues associated with parts obsolescence. Additionally, the JBAIDS program office plans to partner with and MIPR funds to the US Army Medical Institute of Infectious Diseases (USAMRIID) to development FDA Pre-Emergency Use Authorization (EUA) packages for (e.g., Ebola, Marburg, and Smallpox diseases) that could be used as biological warfare threats to DoD military forces. JBAIDS program office will award a sole-source contract to the JBAIDS prime contractor, Idaho Technology Inc., to replace laptops and software operating systems in 340 deployed JBAIDS worldwide due to parts obsolescence and unsupportable Microsoft software (Microsoft XP Professional).					
<b>E. Performance Metrics</b> 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: Research, Development, Test & Evaluation, Defense-Wide BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0607384BP: CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)					PROJECT MB7: MEDICAL BIOLOGICAL DEFENSE (OP SYS DEV)				
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	
** JBAIDS - HW S - Assay development	C/FFP	TBD:	-	3.382	May 2012	-		-		-	Continuing	Continuing	0.000	
Subtotal			-	3.382		-		-		-			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	
** JBAIDS - TD/D SB - Software Update & Parts Obsolescence	C/FFP	TBD:	-	0.325	May 2012	0.295	May 2013	-		0.295	Continuing	Continuing	0.000	
Subtotal			-	0.325		0.295		-		0.295			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	
** JBAIDS - OTH T S - EUA packages	MIPR	USAMRIID:Fort Detrick, MD	-	0.249	Feb 2012	0.203	Feb 2013	-		0.203	Continuing	Continuing	0.000	
Subtotal			-	0.249		0.203		-		0.203			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	
** JBAIDS - PM/MS S - Project Management	MIPR	TBD:	-	0.150	Feb 2012	-		-		-	Continuing	Continuing	0.000	
PM/MS S - Project Management	PO	Goldbelt Raven LLC:Frederick, MD	-	0.769	May 2012	-		-		-	Continuing	Continuing	0.000	
PM/MS S - Project Management #2	Allot	CBMS:Fort Detrick, MD	-	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: Research, Development, Test & Evaluation, Defense-Wide BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0607384BP: CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)				PROJECT MB7: MEDICAL BIOLOGICAL DEFENSE (OP SYS DEV)				
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
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/STTR	PO	HQ:AMC, Alexandria	-	0.073		-		-		-	Continuing	Continuing	0.000
Subtotal			-	1.492		-		-		-			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			-	5.448		0.498		-		0.498			0.000

Remarks

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2013 Chemical and Biological Defense Program	<b>DATE:</b> February 2012
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0607384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	<b>PROJECT</b> MB7: <i>MEDICAL BIOLOGICAL DEFENSE (OP SYS DEV)</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
** JBAIDS - Pre-Emergency Use Authorization Packages																												
JBAIDS - Software compliance certification																												
JBAIDS - Surveillance & diagnostic assay kits (Food & Water, and Glanders)																												
JBAIDS - Replace/update laptops & operating systems																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2013 Chemical and Biological Defense Program			<b>DATE:</b> February 2012
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0607384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	<b>PROJECT</b> MB7: <i>MEDICAL BIOLOGICAL DEFENSE (OP SYS DEV)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
** JBAIDS - Pre-Emergency Use Authorization Packages	2	2012	4	2016
JBAIDS - Software compliance certification	2	2012	4	2016
JBAIDS - Surveillance & diagnostic assay kits (Food & Water, and Glanders)	2	2012	4	2014
JBAIDS - Replace/update laptops & operating systems	2	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				R-1 ITEM NOMENCLATURE				PROJECT			
0400: Research, Development, Test & Evaluation, Defense-Wide BA 7: Operational Systems Development				PE 0607384BP: CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)				TE7: TEST & EVALUATION (OP SYS DEV)			
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
TE7: TEST & EVALUATION (OP SYS DEV)	4.732	3.597	4.156	-	4.156	3.690	3.642	2.846	2.846	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

This Project provides revitalization and technology upgrades of existing instrumentation and equipment at West Desert Test Center (WDTC), located at Dugway Proving Ground (DPG), a Major Range and Test Facility Base (MRTFB), in support of their Chemical and Biological (CB) test mission.

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

	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>
<b>Title:</b> 1) WDTC - MRTFB - Life Sciences Test Facility	1.202	0.902	1.109
<b>FY 2011 Accomplishments:</b> Provided upgrades of the Life Sciences Test Facility instrumentation and equipment at West Desert Test Center (WDTC), located at Dugway Proving Ground (DPG), in support of their CB defense mission. This is the only U.S. facility equipped to test with aerosolized Bio-Safety Level 3 (BSL-3) agents. Upgrades and technology enhancements included the following: (1) Regular replacement of aging Aerodynamic Particle Sizers with newer Fluorescent Aerodynamic Particle Sizers; (2) Full characterization of biological aerosols in various conditions out in the field; (3) An automated dry powder dissemination system that will vary the concentration of aerosols in test chambers and in the field; (4) Procurement of aerosol samplers for chamber and field tests; (5) Enhancement of genotyping system to determine genetic identity of biological samples and procure genotyping analysis software to determine genetic identity of biological samples; (6) Upgrade of aerosol particles generation capabilities for standoff and point detector characterization; and, (7) Procurement of microbiological laboratory equipment needed to fully utilize BSL-3 laboratories.			
<b>FY 2012 Plans:</b> Continue to provide upgrades of the Life Sciences Test Facility instrumentation and equipment at WDTC, in support of their CB defense mission. This is the only U.S. facility equipped to test with aerosolized BSL-3 agents. Upgrades and technology enhancements include the following: (1) Regular replacement of aging Aerodynamic Particle Sizers with newer Fluorescent Aerodynamic Particle Sizers; (2) Full characterization of biological aerosols in various conditions out in the field; (3) An automated dry powder dissemination system that will vary the concentration of aerosols in test chambers and in the field; (4) Procure aerosol samplers for chamber and field tests; (5) Enhancing genotyping system and procure genotyping analysis software to determine genetic identity of biological samples; (6) Upgrade aerosol particles generation capabilities for standoff and point detector characterization; and, (7) Procurement of microbiological laboratory equipment needed to fully utilize BSL-3 laboratories.			
<b>FY 2013 Plans:</b>			

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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: Research, Development, Test & Evaluation, Defense-Wide BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0607384BP: CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)	PROJECT TE7: TEST & EVALUATION (OP SYS DEV)		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Continue to provide upgrades of the Life Sciences Test Facility instrumentation and equipment at WDTC, in support of their CB defense mission. This is the only U.S. facility equipped to test with aerosolized BSL-3 agents. Upgrades and technology enhancements include the following: (1) Regular replacement of aging Aerodynamic Particle Sizers with newer Fluorescent Aerodynamic Particle Sizers; (2) Full characterization of biological aerosols in various conditions out in the field; (3) An automated dry powder dissemination system that will vary the concentration of aerosols in test chambers and in the field; (4) Procure aerosol samplers for chamber and field tests; (5) Enhancing genotyping system and procure genotyping analysis software to determine genetic identity of biological samples; (6) Upgrade aerosol particles generation capabilities for standoff and point detector characterization; and, (7) Procurement of microbiological laboratory equipment needed to fully utilize BSL-3 laboratories.				
Title: 2) WDTC - MRTFB - Major Test Facilities		1.004	0.782	0.802
FY 2011 Accomplishments: Provided for modernization of existing instrumentation and equipment in the major test chambers at WDTC, in support of the CB defense mission. These consisted of the following: (1) the Materiel Test Facility which is a unique test chamber where real-world decontamination operations can be tested; (2) Building 4165, which houses updated surety test facilities and laboratories used for the testing of protective material with agents and simulants; and (3) Bldg 3445, which houses two large chambers where testing of large panel decontaminants, filter systems, and Individual Protection Equipment (IPE) in a chemical environment can be conducted; and the (4) Aerosol Test Facility, which houses chemical simulant vapor test chamber and an aerosol test chamber. Modernization of instrumentation in the chambers included: (1) Continued development of a chemical aerosol generation and sampling capability; and (2) Characterization of improved and/or articulated testing fixtures; and (3) Continued enhancement of Toxic Industrial Chemical (TIC) detection and test capability; and (4) Non-Traditional Agent test and detection capability.				
FY 2012 Plans: Continue to provide for modernization of existing instrumentation and equipment in the major test chambers at WDTC, in support of the CB defense mission. These consist of the following: (1) the MTF, which is a unique test chamber where real-world decontamination operations can be tested; (2) Building 4165, which houses updated surety test facilities and laboratories used for the testing of protective material with chemical agents and simulants; and the (3) Aerosol Test Facility, which houses simulant vapor test chamber and an aerosol test chamber. Modernization of instrumentation in the chambers includes: (1) Continue development of a aerosol generation and sampling capability; and (2) Characterization of improved and/or articulated testing fixtures; and (3) Continuous enhancement of TIC detection and test capability; and (4) NTA test and detection capability.				
FY 2013 Plans: Continue to provide for modernization of existing instrumentation and equipment in the major test chambers at WDTC, in support of the CB defense mission. These consist of the following: (1) the MTF which is a unique test chamber where real-world decontamination operations can be tested; (2) Building 4165, which houses updated surety test facilities and laboratories used for the testing of chemical protective material with chemical agents and simulants; and the (3) Aerosol Test Facility, which				



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2013 Chemical and Biological Defense Program		<b>DATE:</b> February 2012		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0607384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	<b>PROJECT</b> TE7: <i>TEST &amp; EVALUATION (OP SYS DEV)</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>
houses simulant vapor test chamber and an aerosol test chamber. Modernization of instrumentation in the chambers include: (1) Continue development of a aerosol generation and sampling capability; and (2) Characterization of improved and/or articulated testing fixtures; and (3) Continue enhancement of TIC detection and test capability; and (4) NTA test and detection capability.				
<b>Title:</b> 3) WDTC - MRTFB - CB Test Grids		1.042	0.779	0.884
<b>FY 2011 Accomplishments:</b> Enhanced existing instrumentation and equipment at the Target S, Downwind, and Tower Outdoor Test Grids at WDTC, in support of their CB defense mission. Efforts addressed requirements not addressed by the Program Director Test and Evaluation Support Services (PD TESS) Test Grid project. The Outdoor Test Grids are critical for all Developmental Tests/Operational Tests of CB defense systems. Continuing modernization efforts included: (1) Remotely controlled simulant dissemination systems; (2) Updated referee instruments; (3) Real-time data network; (4) Development of NTA field simulants and monitoring equipment.				
<b>FY 2012 Plans:</b> Continue to enhance existing instrumentation and equipment at the Target S, Downwind, and Tower Outdoor Test Grids at WDTC, in support of their CB defense mission. Efforts are to address requirements not addressed by the PD TESS Test Grid project. The CB Test Grid is critical for all Developmental Tests/Operational Tests of CB defense systems. Continuing modernization efforts will include: (1) Development of NTA field simulants and monitoring equipment; (2) Increased Toxic Industrial Chemicals (TIC) testing capability for both point and standoff referee systems; (3) Adding testing capability to support expanded use of Agent Like Organisms (ALOs); and (4) Continuous update of referee systems; (5) Raptor management and control to support testing without affecting eagles and migratory birds.				
<b>FY 2013 Plans:</b> Continue to enhance existing instrumentation and equipment at the Target S, Downwind, and Tower Outdoor Test Grids at WDTC, in support of their CB defense mission. Efforts are to address requirements not addressed by the PD TESS Test Grid project. The CB Test Grid is critical for all Developmental Tests/Operational Tests of CB defense systems. Continuing modernization efforts will include: (1) Development of NTA field simulants and monitoring equipment; (2) Increased TIC testing capability for both point and standoff referee systems; (3) Adding testing capability to support expanded use of ALOs; (4) Continuous update of referee systems; (5) Expanded efforts for raptor management and control to support testing without affecting eagles and migratory birds.				
<b>Title:</b> 4) WDTC - MRTFB - Combined Chemical Test Facility		1.484	1.087	1.361
<b>FY 2011 Accomplishments:</b> Provided for revitalization and upgrade of existing instrumentation and equipment at the Combined Chemical Test Facility (CCTF) at WDTC, in support of their CB test mission. The CCTF tests the capability of detectors, decontaminants, and protective systems to defend against toxic chemical agents. This project upgraded analytical and field instrumentation with current technology to				

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2013 Chemical and Biological Defense Program		<b>DATE:</b> February 2012		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0607384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	<b>PROJECT</b> TE7: <i>TEST &amp; EVALUATION (OP SYS DEV)</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>
include: (1) Characterization of new and upgraded test fixtures; (2) Control systems for small chambers; (3) Installation support for swatch testing capability; (4) Upgrade to CB Safari instrumentation in support of Navy ship collective protection test efforts; (5) Expanded test capabilities for large filter performance; (6) Referee agent instrumentation.  <b>FY 2012 Plans:</b> Provides for continued revitalization and upgrade of existing instrumentation and equipment at the CCTF at WDTC, in support of their CB test mission. The CCTF tests the capability of detectors, decontaminants, and protective systems to defend against toxic chemical agents. This project upgrades analytical and field instrumentation with current technology to include: (1) Characterization of new and upgraded test fixtures; and (2) Upgraded control systems for small chambers; (3) Swatch testing capability; (4) Installation support for swatch testing capability; (5) Upgrade to CB Safari instrumentation in support of Navy ship collective protection test efforts; (6) Expanded test capabilities for large filter performance; (7) Referee agent instrumentation.  <b>FY 2013 Plans:</b> Provides for continued revitalization and upgrade of existing instrumentation and equipment at the CCTF at WDTC, in support of their CB test mission. The CCTF tests the capability of detectors, decontaminants, and protective systems to defend against toxic chemical agents. This project upgrades analytical and field instrumentation with current technology to include: (1) Characterization of new and upgraded test fixtures; and (2) Upgraded control systems for small chambers; (3) Swatch testing capability; (4) Installation support for swatch testing capability; (5) Upgrade to CB Safari instrumentation in support of Navy ship collective protection test efforts; (6) Expanded test capabilities for large filter performance; (7) Referee agent instrumentation.				
<b>Title:</b> 5) SBIR  <b>FY 2012 Plans:</b> Small Business Innovative Research.		-	0.047	-
<b>Accomplishments/Planned Programs Subtotals</b>		4.732	3.597	4.156
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A				
<b>D. Acquisition Strategy</b> T&E UPGRAD  T&E Range Instrumentation/Technology Upgrades is a continuing project. It provides for technical upgrades to WDTC capabilities for Biological and Chemical testing of DoD CB materiel, weapons, and weapons systems from concept through production.				

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2013 Chemical and Biological Defense Program		<b>DATE:</b> February 2012
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0607384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	<b>PROJECT</b> TE7: <i>TEST &amp; EVALUATION (OP SYS DEV)</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: Research, Development, Test & Evaluation, Defense-Wide BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0607384BP: CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)				PROJECT TE7: TEST & EVALUATION (OP SYS DEV)						
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	
** T&E UPGRAD - OTHT S - Technology Upgrades - WDTC, UT	MIPR	West Desert Test Center:DPG, UT	9.537	3.550	Aug 2012	4.156	Aug 2013	-		4.156	Continuing	Continuing	0.000	
Subtotal			9.537	3.550		4.156		-		4.156			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	
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/ STTR	PO	HQ:AMC, Alexandria	-	0.047		-		-		-	Continuing	Continuing	0.000	
Subtotal			-	0.047		-		-		-			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			9.537	3.597		4.156		-		4.156			0.000	
Remarks														

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

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0607384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	<b>PROJECT</b> TE7: <i>TEST &amp; EVALUATION (OP SYS DEV)</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
** T&E UPGRAD - LSTF Instrumentation & Equip Upgrades, WDTC																												
T&E UPGRAD - Modernization of Major Test Chambers, WDTC																												
T&E UPGRAD - Enhance Instrumentation & Equip at Target S, Downwind, & Tower CB Test Grids, WDTC																												
T&E UPGRAD - Revitalize & Upgrade Instrumentation & Equip at Combined Chemical Test Facility, WDTC																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2013 Chemical and Biological Defense Program			<b>DATE:</b> February 2012
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0607384BP: <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	<b>PROJECT</b> TE7: <i>TEST &amp; EVALUATION (OP SYS DEV)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
** T&E UPGRAD - LSTF Instrumentation & Equip Upgrades, WDTC	1	2011	2	2016
T&E UPGRAD - Modernization of Major Test Chambers, WDTC	4	2011	4	2017
T&E UPGRAD - Enhance Instrumentation & Equip at Target S, Downwind, & Tower CB Test Grids, WDTC	1	2011	2	2016
T&E UPGRAD - Revitalize & Upgrade Instrumentation & Equip at Combined Chemical Test Facility, WDTC	1	2011	2	2016