

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Chemical and Biological Defense Program	Date: March 2014
--	-------------------------

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 0607384BP I <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>							
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	13.810	13.026	28.496	-	28.496	35.738	35.400	33.956	46.677	Continuing	Continuing
CA7: <i>CONTAMINATION AVOIDANCE OPERATIONAL SYS DEV</i>	-	-	-	0.500	-	0.500	5.000	5.000	5.000	10.000	Continuing	Continuing
CM7: <i>HOMELAND DEFENSE (OP SYS DEV)</i>	-	-	1.819	2.006	-	2.006	1.981	1.981	1.981	1.981	Continuing	Continuing
IP7: <i>INDIVIDUAL PROTECTION (OP SYS DEV)</i>	-	-	0.500	2.501	-	2.501	1.490	1.490	1.490	1.800	Continuing	Continuing
IS7: <i>INFORMATION SYSTEMS (OP SYS DEV)</i>	-	9.590	6.518	4.091	-	4.091	7.835	11.995	13.034	11.019	Continuing	Continuing
MB7: <i>MEDICAL BIOLOGICAL DEFENSE (OP SYS DEV)</i>	-	0.490	0.499	13.414	-	13.414	14.551	9.816	7.277	16.496	Continuing	Continuing
TE7: <i>TEST & EVALUATION (OP SYS DEV)</i>	-	3.730	3.690	5.984	-	5.984	4.881	5.118	5.174	5.381	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

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 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).

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Chemical and Biological Defense Program	Date: March 2014
--	-------------------------

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>
---	--

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	14.745	13.026	28.553	-	28.553
Current President's Budget	13.810	13.026	28.496	-	28.496
Total Adjustments	-0.935	-	-0.057	-	-0.057
• Congressional General Reductions	-0.020	-			
• Congressional Directed Reductions	-1.235	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.518	-			
• SBIR/STTR Transfer	-0.198	-			
• Other Adjustments	-	-	-0.057	-	-0.057

Change Summary Explanation

Funding: FY13: Reductions of \$1.2M slowed modernization efforts for JEM and JWARN and reduced funds to upgrade T&E at Dugway Proving Ground.

Schedule: N/A

Technical: N/A

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program										Date: March 2014																		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0607384BP / CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)				Project (Number/Name) CA7 / CONTAMINATION AVOIDANCE OPERATIONAL SYS DEV																			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost																
CA7: CONTAMINATION AVOIDANCE OPERATIONAL SYS DEV	-	-	-	0.500	-	0.500	5.000	5.000	5.000	10.000	Continuing	Continuing																
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-																		
<p># The FY 2015 OCO Request will be submitted at a later date.</p> <p>A. Mission Description and Budget Item Justification This project provides the technology upgrade and refresh effort for the Chemical Biological Radiological Nuclear Dismounted Reconnaissance Systems (CBRN DRS) with emerging technologies and capabilities which will address and mitigate equipment obsolescence.</p> <p>The CBRN Dismounted Reconnaissance Systems (CBRN DRS) consists of portable, commercial and government off-the-shelf equipment which provides personnel protection from current and emerging CBRN hazards through detection, identification, sample collection, decontamination, marking, and hazard reporting for CBRN threats. The system supports Dismounted Reconnaissance, Surveillance, and CBRN Site Assessment missions which enables more detailed and near real-time CBRN information flow for the Warfighter. The program will address emerging CBRN threat requirements in order to provide an enhanced capability for the future.</p> <p>B. Accomplishments/Planned Programs (\$ in Millions)</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td></td> <td align="center">FY 2013</td> <td align="center">FY 2014</td> <td align="center">FY 2015</td> </tr> <tr> <td>Title: 1) CBRN DRS</td> <td align="center">-</td> <td align="center">-</td> <td align="center">0.500</td> </tr> <tr> <td>FY 2015 Plans: Initiate market analyses on emerging technologies for potential upgrades to the system. Initiate obsolescence management activities for existing fielded components. Conduct initial testing of potential candidates.</td> <td></td> <td></td> <td></td> </tr> <tr> <td align="right">Accomplishments/Planned Programs Subtotals</td> <td align="center">-</td> <td align="center">-</td> <td align="center">0.500</td> </tr> </table> <p>C. Other Program Funding Summary (\$ in Millions) N/A</p> <p>Remarks</p> <p>D. Acquisition Strategy CBRN DISMOUNTED RECONNAISSANCE SYSTEMS</p>														FY 2013	FY 2014	FY 2015	Title: 1) CBRN DRS	-	-	0.500	FY 2015 Plans: Initiate market analyses on emerging technologies for potential upgrades to the system. Initiate obsolescence management activities for existing fielded components. Conduct initial testing of potential candidates.				Accomplishments/Planned Programs Subtotals	-	-	0.500
	FY 2013	FY 2014	FY 2015																									
Title: 1) CBRN DRS	-	-	0.500																									
FY 2015 Plans: Initiate market analyses on emerging technologies for potential upgrades to the system. Initiate obsolescence management activities for existing fielded components. Conduct initial testing of potential candidates.																												
Accomplishments/Planned Programs Subtotals	-	-	0.500																									

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) CA7 / <i>CONTAMINATION AVOIDANCE OPERATIONAL SYS DEV</i>
<p>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. This strategy employs an NDI acquisition concept to establish a simplified management framework to translate mission needs and emerging technology capabilities into a stable, affordable, and well-managed acquisition program.</p> <p><u>E. Performance Metrics</u> N/A</p>		

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program			Date: March 2014
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) CA7 / <i>CONTAMINATION AVOIDANCE OPERATIONAL SYS DEV</i>	

FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
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 - Development and testing of components to replace obsolete items and insert new technologies



UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program			Date: March 2014
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) CA7 / <i>CONTAMINATION AVOIDANCE OPERATIONAL SYS DEV</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
** CBRN DRS - Development and testing of components to replace obsolete items and insert new technologies	2	2015	4	2019

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program										Date: March 2014		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0607384BP / CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)				Project (Number/Name) CM7 / HOMELAND DEFENSE (OP SYS DEV)			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
CM7: HOMELAND DEFENSE (OP SYS DEV)	-	-	1.819	2.006	-	2.006	1.981	1.981	1.981	1.981	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
# The FY 2015 OCO Request will be submitted at a later date.												
A. Mission Description and Budget Item Justification												
The Weapons of Mass Destruction Civil Support Team (WMD CST) Program supports the fielded system upgrade and ongoing assessment and acquisition of commercial off-the-shelf (COTS) and government off-the-shelf (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 2013	FY 2014	FY 2015
Title: 1) WMD CST - System Engineering and Program Management										-	0.691	0.733
Description: System engineering and technical control, as well as the business management of the system/program.												
FY 2014 Plans: Provided System Engineering, technical control, and business management support of the COTS Life Cycle Management Program.												
FY 2015 Plans: Provides 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).												
Title: 2) WMD CST - Component Test and Evaluation										-	1.128	1.273
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.												
FY 2014 Plans: Conducted test and evaluation of CBRN COTS technology as part of the modernization strategy.												
FY 2015 Plans:												

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) CM7 / <i>HOMELAND DEFENSE (OP SYS DEV)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014
Provides 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.			
Accomplishments/Planned Programs Subtotals		-	1.819
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy WMD - CIVIL SUPPORT TEAMS (WMD CST)			
The Weapons of Mass Destruction Civil Support Team Program (WMD-CST) is a COTS based program that supports the ongoing system engineering assessment, validation, and modernization of both CBRN COTS and GOTS analytical detection, protection, decontamination and sampling capabilities fielded to the (57) WMD CST Teams in order to optimize/enhance their operational capabilities.			
E. Performance Metrics N/A			

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program	Date: March 2014
---	-------------------------

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) CM7 / <i>HOMELAND DEFENSE (OP SYS DEV)</i>
--	--	--

FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
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

** WMD CST - Upgrade Fielded Systems	
--------------------------------------	--

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program			Date: March 2014
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) CM7 / <i>HOMELAND DEFENSE (OP SYS DEV)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
** WMD CST - Upgrade Fielded Systems	2	2014	2	2019

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program										Date: March 2014		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0607384BP / CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)				Project (Number/Name) IP7 / INDIVIDUAL PROTECTION (OP SYS DEV)			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
IP7: INDIVIDUAL PROTECTION (OP SYS DEV)	-	-	0.500	2.501	-	2.501	1.490	1.490	1.490	1.800	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
# The FY 2015 OCO Request will be submitted at a later date.												
A. Mission Description and Budget Item Justification												
This Project provides for filter modernization and enhancements against Toxic Industrial Chemicals (TICs), Toxic Industrial Materials (TIMs) and Non-Traditional Agents (NTAs). These upgrades will be provided for fielded Protection systems including Joint Service General Purpose Mask (JSGPM) and Joint Service Aircrew Mask (JSAM) to enhance respiratory and ocular protection.												
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2013	FY 2014	FY 2015
Title: 1) JSGPM										-	0.500	2.501
FY 2014 Plans: Conduct developmental filter enhancement efforts for integration into JSGPM filters to increase protection against TICs, TIMs and NTAs.												
FY 2015 Plans: Build final prototypes for product qualification.												
Accomplishments/Planned Programs Subtotals										-	0.500	2.501
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost	
• JI0003: JOINT SERVICE GENERAL PURPOSE MASK (JSGPM)	51.199	85.343	61.131	-	61.131	54.146	59.340	49.026	-	-	360.185	
Remarks												
D. Acquisition Strategy												
JS GENERAL PURPOSE MASK (JSGPM)												

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) IP7 / <i>INDIVIDUAL PROTECTION (OP SYS DEV)</i>
<p>The JSGPM ARPI effort is using the M61 filter contracts awarded to 3M and Avon to develop improved filters for the JSGPM. There is a continual technology refreshment CLIN that allows for filter development tasks to be awarded under this contract. The tasks can be competed between the two awardees.</p> <p><u>E. Performance Metrics</u> N/A</p>		

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program **Date:** March 2014

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) IP7 / <i>INDIVIDUAL PROTECTION (OP SYS DEV)</i>
--	--	---

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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 - ARPI TD Contract Award																												
JSGPM - Bed Design Analysis (Technology 1)																												
JSGPM - TIC Prototype Development (Technology 1)																												
JSGPM - TIC Filter Testing (Technology 1)																												
JSGPM - Prototype Testing (Technology 1)																												
JSGPM - Bed Design Analysis (Technology 2)																												
JSGPM - Prototype Development (Technology 2)																												
JSGPM - Prototype Testing (Technology 2)																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program			Date: March 2014
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) IP7 / <i>INDIVIDUAL PROTECTION (OP SYS DEV)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
** JSGPM - ARPI TD Contract Award	2	2015	2	2015
JSGPM - Bed Design Analysis (Technology 1)	2	2013	3	2014
JSGPM - TIC Prototype Development (Technology 1)	2	2015	2	2016
JSGPM - TIC Filter Testing (Technology 1)	2	2016	4	2016
JSGPM - Prototype Testing (Technology 1)	1	2017	3	2017
JSGPM - Bed Design Analysis (Technology 2)	1	2015	3	2016
JSGPM - Prototype Development (Technology 2)	3	2016	1	2018
JSGPM - Prototype Testing (Technology 2)	2	2018	1	2019

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program										Date: March 2014		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0607384BP / CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)				Project (Number/Name) IS7 / INFORMATION SYSTEMS (OP SYS DEV)			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
IS7: INFORMATION SYSTEMS (OP SYS DEV)	-	9.590	6.518	4.091	-	4.091	7.835	11.995	13.034	11.019	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

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). This project also provides for the Software Support Activity (SSA).

Efforts included in this project are: (1) Joint Effects Model (JEM) IT Box; (2) the Joint Warning and Reporting Network (JWARN) IT Box; and (3) Software Support Activity (SSA).

JEM and JWARN will utilize the Joint Capabilities Integration and Development System (JCIDS) Manual prescribed Agile Information Technology Box "IT Box" construct for managing requirements for the follow-on increments of capability development. Use of the "IT Box" acquisition approach increases flexibility and will expedite fielding of Information System products through a series of Build Decisions (BDs) versus less frequent traditional DoD Milestone B and C decisions. Each program will use an Information Systems Initial Capabilities Document (IS ICD) to describe the required operational capabilities for the development effort. JEM's IS ICD was approved by the Joint Staff J8 Joint Requirements Office for Chemical, Biological, Radiological and Nuclear Defense (JRO-CBRND) in September 2013 and JWARN's IS ICD will be reviewed for approval in 2QFY14. After the IS ICD is approved, more detailed requirements will be captured in Requirements Definition Packages (RDP) and will be approved at the Functional Capability Board (FCB) level. In order to support an agile incremental approach, each program will ensure that the "IT Box" describes the entire IT program and not just a single increment. The supporting BDs will ensure incorporation of mature technology and development efforts culminating in incremental deliveries of capability to Joint and Service Command and Control (C2) architectures. These limited fielding efforts are based on providing capabilities with the most value to the operators based on Warfighter priorities/needs, maturation of the technology being incorporated and available resources supporting the effort. As software-intensive systems both JEM and JWARN have no separately identifiable unit production components. Both are designated ACAT III programs and unit cost calculations including Program Acquisition Unit Cost/Average Procurement Unit Cost (PAUC/APUC) and Operations and Sustainment (O&S) average annual per unit costs are not applicable.

The Joint Effects Model (JEM) is the DoD's only accredited model that has been operationally tested and deemed effective for predicting hazards associated with the release of contaminants into the environment. JEM is a software-only, ACAT III program that was originally developed as an increment 1 and is continuing development using the agile "IT Box" process described above. JEM is currently capable of modeling hazards in a variety of scenarios including: counterforce, passive defense, accident and/or incidents; high altitude releases, incident source prediction to include Non-Traditional Agent (NTA) events, urban CBRN/Toxic Industrial Hazard environments, human inhalation, contagious/infectious disease, population movements, efficacy of medical countermeasures, industrial transport; building interiors, and human performance degradation. Battlespace commanders and first responders must have a CBRN hazard prediction capability in order to make decisions that will

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) IS7 / <i>INFORMATION SYSTEMS (OP SYS DEV)</i>
<p>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. JEM IT Box adds capability to JEM Increment 1 including modeling of missile intercepts and improved modeling of hazard events in urban and littoral terrain. The IT Box version of JEM also includes improved architecture called Common CBRN Modeling Interface (CCMI). Together, CCMI and IT Box enable more rapid and less costly integration of Science and Technology updates, aligning with the S&T provider to provide the most current capability to the warfighter.</p> <p>JEM Increment 2, using IT Box Acquisition Strategy, adds capability to JEM Increment 1 including modeling of missile intercepts and improved modeling of hazard events in urban and littoral terrain. It also includes improved architecture called Common CBRN Modeling Interface (CCMI). Together, CCMI and IT Box enable more rapid and less costly integration of Science and Technology updates, aligning with the S&T provider to provide the most current capability to the warfighter. Battlespace commanders and first responders must have a 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.</p> <p>The Joint Warning and Reporting Network (JWARN) provides the Joint Forces with a comprehensive Early Warning (EW) analysis and response capability to minimize the effects of hostile Chemical, Biological, Radiological, and Nuclear (CBRN) attacks, incidents and accidents. It provides the operational capability to employ CBRN warning technology which will collect, analyze, identify, locate, report, and disseminate CBRN warnings. JWARN will transition from a Command and Control (C2) platform specific implementation to a Web-based Service Oriented Architecture (SOA) meeting the DoD's evolution to a more comprehensive Common Operating Environment (COE). JWARN Increment 2 will 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), medical information and evolving Bio-Surveillance 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 to improve the efficiency of limited CBRN personnel assets. This employment will transfer data automatically from existing sensors and to and from the future sensors to provide commanders with the capability to support operational decision making in a CBRN environment. 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. JWARN will be compatible and integrated with Joint Services Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) Systems and will operate as a standalone capability in the next increment of development. Activities include: logistical elements, support equipment, manuals and training required to operate and support the system.</p> <p>The Software Support Activity (SSA) is a Chem-Bio Defense user developmental support and service organization to facilitate net-centric interoperability of systems in acquisition for the Warfighter. The SSA provides the CBRN Warfighter with Joint Service solutions for Integrated Architectures, Data Management/Modeling, Information Assurance (IA), Interoperability Certifications, Verification, Validation and Accreditation (VV&A) to support interoperable and integrated net-centric, service-oriented solutions for CBRN systems. The SSA emphasizes development of reference implementations to guide Government and industry system and software developers to ensure that their products meet common interoperability standards. The latest technologies/products include the definition of a Common CBRN Sensor Integration Standard (CCSI) and the CBRN Data Model. These technologies and direct enablers for the development of CBRN integrated sensor networks and the dissemination</p>		

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program			Date: March 2014		
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)	Project (Number/Name) IS7 / INFORMATION SYSTEMS (OP SYS DEV)			
of CBRN information across all users. The SSA directly supports Chemical and Biological Defense Program (CBDP) initiatives by providing common service oriented architectures and frameworks for the collection and dissemination of Bio-Surveillance and other critical CBRN information.					
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2013	FY 2014	FY 2015
Title: 1) JEM Command and Control (C2) Modernization Efforts			0.730	0.646	0.322
FY 2013 Accomplishments: Upgraded fielded JEM software due to changing Army, Navy, Air Force, Marine Corps, SOCOM, and National Guard C2 host architectures, systems, and standards in order to maintain interoperability and avert cyber threats and vulnerabilities to host C2 systems, interoperable platforms. Performed test and evaluation of updated JEM software baseline.					
FY 2014 Plans: Update fielded JEM software due to changing Army, Navy, Air Force, Marine Corps, SOCOM, and National Guard C2 host architectures, systems, and standards in order to maintain interoperability and avert cyber threats and vulnerabilities to host C2 systems. Perform test and evaluation of updated JEM software baseline.					
FY 2015 Plans: Continue to update field JEM software due to changing Army, Navy, Air Force, Marine Corps, SOCOM, and National Guard C2 host architectures, systems, and standards in order to maintain interoperability and avert cyber threats and vulnerabilities to host C2 systems. Perform test and evaluation of updated JEM software baseline.					
Title: 2) JEM Pre-Planned Product Improvement (P3I)			1.130	1.151	1.069
FY 2013 Accomplishments: Developed, tested, and integrated previously fielded JEM software with science and technology upgrades and model enhancements to improve JEM accuracy and precision. Improved JEM architecture and overall performance through software updates and deficiency resolution.					
FY 2014 Plans: 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 2015 Plans: Continue 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.					
Title: 3) JWARN System Modernization/Update Development			3.688	2.321	0.914
FY 2013 Accomplishments:					

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program			Date: March 2014		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>		Project (Number/Name) IS7 / <i>INFORMATION SYSTEMS (OP SYS DEV)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2013	FY 2014	FY 2015
Conducted engineering and manufacturing development to upgrade existing, operational JWARN Systems in order to maintain interoperability, efficiency and functionality within the targeted C2 systems while utilizing the IT BOX construct and Agile Software development processes. FY 2014 Plans: Conduct engineering and manufacturing development to upgrade existing, operational JWARN Systems in order to maintain interoperability, efficiency and functionality within the targeted C2 systems while utilizing the IT BOX construct and Agile Software development processes. FY 2015 Plans: Conduct engineering and manufacturing development to upgrade existing, operational JWARN Systems in order to maintain interoperability, efficiency and functionality within the targeted C2 systems while utilizing the IT BOX construct and Agile Software development processes.					
Title: 4) JWARN IT BOX Program Management Support FY 2013 Accomplishments: Conducted JWARN program financial management, scheduling, planning and reporting support to modernization effort under the IT BOX construct and Agile Software development processes. FY 2014 Plans: Conduct JWARN program financial management, scheduling, planning and reporting support to modernization effort under the IT BOX construct and Agile Software development processes. FY 2015 Plans: Continue JWARN program financial management, scheduling, planning and reporting support to modernization effort under the IT BOX construct and Agile Software development processes.			1.117	0.337	0.227
Title: 5) JWARN IT BOX Test & Evaluation (T&E) FY 2013 Accomplishments: Conducted required governmental developmental and operational testing on JWARN software updates and modernization efforts under the IT BOX construct and Agile Software testing processes. FY 2014 Plans: Conduct required governmental developmental and operational testing on JWARN software updates and modernization efforts under the IT BOX construct and Agile Software testing processes. FY 2015 Plans:			1.051	0.507	0.227

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program			Date: March 2014		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 0607384BP / CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)	Project (Number/Name) IS7 / INFORMATION SYSTEMS (OP SYS DEV)		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2013	FY 2014	FY 2015
Continue required governmental developmental and operational testing on JWARN software updates and modernization efforts under the IT BOX construct and Agile Software testing processes.					
Title: 6) JWARN IT BOX Technical Support FY 2013 Accomplishments: Conducted engineering and technical support for JWARN modernization efforts within the IT BOX construct and Agile Software development processes and integration of software within targeted C2 systems. FY 2014 Plans: Conduct engineering and technical support for JWARN modernization efforts efforts within the IT BOX construct and Agile Software development processes and integration of software within targeted C2 systems. FY 2015 Plans: Continue engineering and technical support for JWARN modernization efforts efforts within the IT BOX construct and Agile Software development processes and integration of software within targeted C2 systems.			0.809	0.337	0.113
Title: 7) SSA Policies, Standards and Guidelines FY 2013 Accomplishments: Provided ISP development support for JPEO-CBD programs and the Modeling and Simulation Accreditation Steering Group. FY 2014 Plans: Support programs in Interoperability and Supportability (I&S) certification, Information Support Plan (ISP), and Data and Service Exposure Verification and Registration. Register systems in the Army Portfolio Management Solution/Army Information Technology Registry (APMS/AITR). FY 2015 Plans: Continue to support programs in the Interoperability and Supportability (I&S) certification, Information Support Plan (ISP), and Data and Service Exposure Verification and Registration. Update existing programs and register new programs in the Army Portfolio Management Solution/Army Information Technology Registry (APMS/AITR).			0.213	0.252	0.266
Title: 8) SSA Integrated Architecture FY 2013 Accomplishments: Provided and updated program of record integrated architectures and provide Net-Centric Policy implementation assistance. Continued to support CCSI updates. Continued to provide CCSI reference implementation. Supported the enterprise tools and common capabilities to ensure relevance across CBRN programs. FY 2014 Plans:			0.228	0.251	0.247

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014		
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)	Project (Number/Name) IS7 / INFORMATION SYSTEMS (OP SYS DEV)		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
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. FY 2015 Plans: Continue to 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.				
Title: 9) SSA Chemical, Biological, Radiological, Nuclear (CBRN) Data Model FY 2013 Accomplishments: Provided changes to CBRN data models. Supported data model requirements for CDBP Bio-surveillance initiatives. FY 2014 Plans: Assist programs achieve a mandated net-centric environment by providing enabling tools which include the CBRN Data Model and Data Dictionary, which define Common CBRN semantics and syntax and the CBRN Extensible Markup Language (XML) schemas that define reusable XML types for information exchange throughout the enterprise. FY 2015 Plans: Continue to assist programs achieve a mandated net-centric environment by providing enabling tools which include the CBRN Data Model and Data Dictionary, which define Common CBRN semantics and syntax and the CBRN Extensible Markup Language (XML) schemas that define reusable XML types for information exchange throughout the enterprise.		0.227	0.267	0.253
Title: 10) SSA Information Assurance FY 2013 Accomplishments: Provided Information Assurance Site Compliance Testing. Continued to provide Information Assurance Certification/Acceptance products and services. FY 2014 Plans: Maintain proper Information Assurance accreditation of any system within the CBDP portfolio throughout its life-cycle. This includes periodic re-accreditation of JPEO CBDP systems. FY 2015 Plans: Continue to maintain proper Information Assurance accreditation of any system within the CBDP portfolio throughout its life-cycle. This includes periodic re-accreditation of JPEO CBDP systems.		0.397	0.449	0.453
Accomplishments/Planned Programs Subtotals		9.590	6.518	4.091

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) IS7 / <i>INFORMATION SYSTEMS (OP SYS DEV)</i>
C. Other Program Funding Summary (\$ in Millions) N/A Remarks D. Acquisition Strategy JOINT EFFECTS MODEL (JEM) JEM Increment 2 acquisition will utilize the JROC's "IT Box" construct for software development. The intent is to provide the next generation of capability with current and future technologies, as stated in the IS ICD, in less time and away from an incremental delivery approach. This effort is being acquired through a Request for Proposal (RFP) to Industry under full and open competition. The program plans to award multiple development contracts in a competitive prototyping phase prior to downselecting a single JEM developer and integrator. JOINT WARNING & REPORTING NETWORK (JWARN) JWARN Increment 2 acquisition will utilize the JROC's "IT Box" construct for software requirements management and development. The intent is to provide the next generation of capability with current and future technologies, as stated in the IS ICD, in less time and away from an incremental delivery approach. This effort is being executed under a Cost-Plus-Award Term Incentive structure to gain maximum benefit to the Government in maintaining the fielded baseline and future software capability development and was awarded under a full and open competition Request for Proposal (RFP). The JWARN Program will procure a Sensor Connectivity Capability (SCC) (hardware materiel solution) in order to facilitate the transfer of CBRN sensor information from legacy CBRN sensors to DoD networks. This solution will be external to the CBRN Sensors and Service-identified network transmission device(s). SOFTWARE SUPPORT ACTIVITY (SSA) The SSA provides enterprise-wide services and coordination across all CBDP programs 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). Phase 1a identifies CBDP programs that deal with data or software, and have an IT component. This will be followed by coordination 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 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		

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program **Date:** March 2014

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)	Project (Number/Name) IS7 / INFORMATION SYSTEMS (OP SYS DEV)
--	---	--

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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 (GCCS-M)																												
JEM - Operational Systems Development																												
JEM - Full Deployment Decision (GCCS-M)																												
JEM - Service C2 Systems Modernization & Upgrades																												
** JWARN - Production and Deployment																												
JWARN - Full Deployment Decision - GCCS-M																												
JWARN - Service C2 Systems Modernization and Upgrades																												
JWARN - Operational Assessment (OA) - Army Command Post Web																												
JWARN - FOT&E - Army Command Post Web (NIE 14.1)																												
JWARN - Baseline Requirements Definition Package (RDP) 1																												
JWARN - Build Decision (BD) 1																												
JWARN - Baseline Critical Design Review (Software)																												
JWARN - Baseline Requirements Definition Package (RDP) 2																												
JWARN - Baseline Requirements Definition Package (RDP) 3																												
JWARN - Build Decision (BD) 3																												
JWARN - Initial Multi-Service Operational Testing (MOT&E)																												

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program **Date:** March 2014

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) IS7 / <i>INFORMATION SYSTEMS (OP SYS DEV)</i>
--	--	---

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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
JWARN - Government Development Testing (DT)																												
** SSA - Provide Data Model Implementation Guidance																												
SSA - Provide Enterprise Architecture Products and Services																												
SSA - Provide Information Assurance Site Compliance Testing																												
SSA - Develop and provide CBRN Data Model implementation guidance, including reference implementations																												
SSA - Sustain CBRN Data Model																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program			Date: March 2014
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) IS7 / <i>INFORMATION SYSTEMS (OP SYS DEV)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
** JEM - Production and Deployment (GCCS-M)	1	2013	3	2014
JEM - Operational Systems Development	1	2013	4	2017
JEM - Full Deployment Decision (GCCS-M)	1	2013	1	2013
JEM - Service C2 Systems Modernization & Upgrades	1	2013	2	2017
** JWARN - Production and Deployment	1	2013	4	2015
JWARN - Full Deployment Decision - GCCS-M	1	2013	1	2013
JWARN - Service C2 Systems Modernization and Upgrades	2	2013	4	2016
JWARN - Operational Assessment (OA) - Army Command Post Web	3	2013	4	2014
JWARN - FOT&E - Army Command Post Web (NIE 14.1)	1	2014	1	2015
JWARN - Baseline Requirements Definition Package (RDP) 1	4	2014	4	2014
JWARN - Build Decision (BD) 1	1	2015	1	2015
JWARN - Baseline Critical Design Review (Software)	3	2014	1	2015
JWARN - Baseline Requirements Definition Package (RDP) 2	3	2015	3	2015
JWARN - Baseline Requirements Definition Package (RDP) 3	2	2016	2	2016
JWARN - Build Decision (BD) 3	3	2016	3	2016
JWARN - Initial Multi-Service Operational Testing (MOT&E)	4	2015	2	2016
JWARN - Government Development Testing (DT)	2	2014	3	2018
** SSA - Provide Data Model Implementation Guidance	1	2013	4	2018
SSA - Provide Enterprise Architecture Products and Services	1	2013	4	2018
SSA - Provide Information Assurance Site Compliance Testing	1	2013	4	2018
SSA - Develop and provide CBRN Data Model implementation guidance, including reference implementations	1	2013	4	2018

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program			Date: March 2014
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)	Project (Number/Name) IS7 / INFORMATION SYSTEMS (OP SYS DEV)	

Events	Start		End	
	Quarter	Year	Quarter	Year
SSA - Sustain CBRN Data Model	1	2013	4	2018

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program										Date: March 2014		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0607384BP / CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)				Project (Number/Name) MB7 / MEDICAL BIOLOGICAL DEFENSE (OP SYS DEV)			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
MB7: MEDICAL BIOLOGICAL DEFENSE (OP SYS DEV)	-	0.490	0.499	13.414	-	13.414	14.551	9.816	7.277	16.496	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

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 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 bacterial and viral agents in environmental surveillance and clinical specimen 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, JBAIDS achieved full operational capability (340 systems delivered all Services) in July 2011. JBAIDS efforts in 2012-2015 will focus on adding surveillance food and water pathogen detection assays. Also, the development team will focus on completing Pre-Emergency Use Authorization (Pre-EUA's) packages annually for FDA review. The operational development RDT&E funds will be used to oversee the configuration management of the system to include the conduct of annual software security information assurance (IA) updates on fielded software and monitor analyzer/laptop parts obsolescence.

The NGDS is envisioned to be an evolutionary acquisition family of systems to provide increments of capability over time across many echelons of the Combat Health Support System. The mission of the NGDS is to provide CBRN warfare threat identification and FDA-cleared diagnostics to inform individual patient treatment, CBRN situational awareness, and disease surveillance. NGDS Increment 1 Deployable Component will significantly improve diagnostic capabilities for deployable combat health support units (role 3) while also improving operational suitability and affordability. The term "Role" is used to describe the stratification of the four tiers in which medical support is organized, on a progressive basis, to conduct treatment, evacuation, resupply, and functions essential to the maintenance of the health of the force. Role 3 support is normally provided at Division or Service equivalent level and includes specialist laboratory resources. The NGDS Increment 1 Deployable Component is intended to replace the legacy Joint Biological Agent Identification and Diagnostic System (JBAIDS) beginning in FY17. The NGDS Increment 1 Service Laboratory Component is intended to provide high throughput Biological threat identification, characterization and diagnostics to fixed site CONUS and OCONUS laboratories operated by the Army, Navy and Air Force in coordination with the Armed Forces Health Surveillance Center. NGDS Increment 2 is intended to provide advanced diagnostics for biological pathogens and toxins, diagnostics for chemical and radiological exposures and to provide capability to lower echelons of care.

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

	FY 2013	FY 2014	FY 2015
Title: 1) Joint Biological Agent Identification and Diagnostic System (JBAIDS)	0.030	0.295	1.016
FY 2013 Accomplishments:			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program			Date: March 2014		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 0607384BP / CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)	Project (Number/Name) MB7 / MEDICAL BIOLOGICAL DEFENSE (OP SYS DEV)		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2013	FY 2014	FY 2015
Conducted required Department of Defense Information Assurance Certification and Accreditation Process (DIACAP) and parts obsolescence. FY 2014 Plans: Conduct annual FISMA software compliance certifications, parts obsolescence studies. Continue and complete Defense Logistics Agency Electronic-cataloging (E-Cat), system-sustainment requirements, Contractor Logistics Support, and analyzer refurbishment. FY 2015 Plans: Conduct annual FISMA software compliance certifications, parts obsolescence, system-sustainment, and configuration management studies.					
Title: 2) JBAIDS FY 2013 Accomplishments: Continued submission of Pre-Emergency Use Authorizations (EUA) packages to the FDA. FY 2014 Plans: Continue submission of Pre-EUA packages to the FDA. FY 2015 Plans: Continue Pre-EUA package development and submission to the FDA.			0.037	0.204	0.550
Title: 3) JBAIDS FY 2013 Accomplishments: Initiated Defense Logistics Agency (DLA) Electronic-Cataloging (E-Cat).			0.100	-	-
Title: 4) JBAIDS FY 2013 Accomplishments: Initiated system-sustainment requirements, Contractor Logistics Support (CLS), and analyzer refurbishment. FY 2015 Plans: Initiate laptop and software operating system replacement.			0.323	-	1.700
Title: 5) NGDS - Increment 1 FY 2015 Plans: Continue FDA clearance of Plague, Tularemia and Q-Fever IVD assays			-	-	4.000
Title: 6) NGDS - Increment 1			-	-	1.500

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) MB7 / <i>MEDICAL BIOLOGICAL DEFENSE (OP SYS DEV)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014
FY 2015 Plans: Initiate Assay optimization for pan-Burkholderia IVD panel and Alpha virus IVD panel.			
Title: 7) NGDS - Increment 1		-	-
FY 2015 Plans: Continue Development and Testing of 22 Environmental Assays.			4.648
Accomplishments/Planned Programs Subtotals		0.490	0.499
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy JOINT BIO AGENT IDENT AND DIAG SYSTEM (JBAIDS)			
<p>The original Equipment Manufacturer (OEM) was selected to design and manufacture additional surveillance assay kits to detect food and water pathogens, along with diagnostic kits to detect additional threat agents. The program plans 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 continues to partner with the US Army Medical Institute of Infectious Diseases (USAMRIID), other DoD and US Government laboratories to develop FDA Pre-Emergency Use Authorization (EUA) packages for biological warfare agents (BWA's) that could be used as biological warfare threats to DoD military forces.</p> <p>NEXT GENERATION DIAGNOSTICS SYSTEM (NGDS)</p> <p>The Next Generation Diagnostics System (NGDS) will develop and field a family of enhanced CBRN analytical and diagnostic systems to the Joint force through an evolutionary acquisition strategy. NGDS Increment 1 Deployable Component will develop FDA cleared Biological Warfare Agent (BWA) in vitro diagnostic (IVD) assays for an existing Commercial diagnostic device with a well established FDA regulatory history and a pipeline of commercial non-BWA infectious disease diagnostic tests. Additional DoD-unique BWA diagnostic and environmental surveillance capabilities will be added to the downselected instrument after MS C. BA4 funds are used for NGDS Incr 1 throughout the FY12-15 Technology Development phase in accordance with the streamlined MS A to MS C acquisition strategy. Specifically, NGDS Incr 1 BA4 funds are used to conduct competitive prototyping, early operational assessments, development of 6 BWA IVD assays (Anthrax, Ebola, Marburg, Plague, Tularemia and Q-Fever), 22 BWA surveillance assays and multiservice operational test prior to MS C.</p>			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) MB7 / <i>MEDICAL BIOLOGICAL DEFENSE (OP SYS DEV)</i>
<p>NGDS Increment 2 will use BA4 funds FY14-16 to conduct technology development prior to MS B. The acquisition strategy and capability to be developed will be determined by the results of the Analysis of Alternatives to be completed 2QFY14. NGDS Incr 2 is intended to be complementary to NGDS Incr 1 to expand the breath of diagnostics to CBRN threats, pre-symptomatic diagnostics and far forward echelons of care.</p> <p><u>E. Performance Metrics</u> N/A</p>		

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program **Date:** March 2014

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) MB7 / <i>MEDICAL BIOLOGICAL DEFENSE (OP SYS DEV)</i>
--	--	--

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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 - Surveillance Assays (Food & Water)																												
JBAIDS - Department of Defense Information Assurance Certification and Accreditation Process																												
JBAIDS - Defense Logistics Agency Electronic-Cataloging																												
JBAIDS - Contractor Logistics Support, System-Sustainment, and Analyzer Refurbishment																												
** NGDS - JBAIDS - Pre-Emergency Use Authorization Packages																												
NGDS - JBAIDS - Software compliance certification																												
NGDS - JBAIDS - Surveillance (Food & Water)																												
NGDS - Increment 1 Environmental Assay Development																												
NGDS - Increment 1 Multi Service Operational Test																												
NGDS - NGDS Incr. 1 follow on IVD assay development (Plague, Tularemia, Q-Fever)																												
NGDS - NGDS Incr. 2 follow on Assay Development																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program			Date: March 2014
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) MB7 / <i>MEDICAL BIOLOGICAL DEFENSE (OP SYS DEV)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
** JBAIDS - Pre-Emergency Use Authorization Packages	1	2013	4	2013
JBAIDS - Surveillance Assays (Food & Water)	1	2013	4	2013
JBAIDS - Department of Defense Information Assurance Certification and Accreditation Process	4	2013	4	2014
JBAIDS - Defense Logistics Agency Electronic-Cataloging	4	2013	4	2014
JBAIDS - Contractor Logistics Support, System-Sustainment, and Analyzer Refurbishment	4	2013	4	2014
** NGDS - JBAIDS - Pre-Emergency Use Authorization Packages	1	2014	4	2016
NGDS - JBAIDS - Software compliance certification	1	2014	4	2016
NGDS - JBAIDS - Surveillance (Food & Water)	1	2014	3	2015
NGDS - Increment 1 Environmental Assay Development	2	2013	4	2016
NGDS - Increment 1 Multi Service Operational Test	1	2015	3	2016
NGDS - NGDS Incr. 1 follow on IVD assay development (Plague, Tularemia, Q-Fever)	3	2015	4	2016
NGDS - NGDS Incr. 2 follow on Assay Development	4	2018	4	2018

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program										Date: March 2014		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0607384BP / CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)				Project (Number/Name) TE7 / TEST & EVALUATION (OP SYS DEV)			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
TE7: TEST & EVALUATION (OP SYS DEV)	-	3.730	3.690	5.984	-	5.984	4.881	5.118	5.174	5.381	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
# The FY 2015 OCO Request will be submitted at a later date.												
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)										FY 2013	FY 2014	FY 2015
Title: 1) WDTC - MRTFB - Life Sciences Test Facility										1.018	1.080	2.454
FY 2013 Accomplishments: Continued to provide instrumentation and equipment upgrades to Life Sciences Test Facility (LSTF) at the West Desert Test Center (WDTC), in support of the Chemical and Biological (CB) Defense mission. This is the only U.S. laboratory equipped to test for aerosolized bio-safety level-3 (BSL-3) agents. Upgrades and technology enhancements included: (1) Continued upgrade of aging Aerodynamic Particle Sizers (APS) with ultraviolet APS (UV-APS); (2) Outfitting of a second Aerosol Simulant Exposure Chamber (ASEC) for BSL-1 and BSL-2 testing; (3) Optical Deoxyribonucleic acid (DNA) Mapping System; (4) A Mass Spectrophotometer (Mass Spec) for enhanced identity determination of biological samples; and (5) Enhanced aerosol particle generation equipment for point-tactical-detector challenge. FY13 accomplishments include upgrade of Digital polymerase chain reaction (PCR) equipment.												
FY 2014 Plans: Continues to provide instrumentation and equipment upgrades to LSTF at the WDTC, in support of the CB Defense mission. This is the only U.S. laboratory equipped to test for aerosolized bio-safety level-3 (BSL-3) agents. Upgrades and technology enhancements included: (1) Coupled Mass Spec-PCR genotyping system and bundled analysis software to be used to determine identity of all bacterial and viral constituents in biological samples; (2) Referee instrumentation aimed at characterizing bio-Non-Traditional Agent (NTA) (advanced bio threat) and other simulant samples. (3) Immunological identification system; and (4) Enhanced simulant development capability.												
FY 2015 Plans: Continues to provide instrumentation and equipment upgrades to LSTF at the WDTC, in support of the CB Defense mission. This is the only U.S. laboratory equipped to test for aerosolized BSL-3 agents. Increased programming funds procurement of BSL-3												

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014		
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) TE7 / <i>TEST & EVALUATION (OP SYS DEV)</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
biological laboratory equipment for the LSTF Annex which is scheduled for completion in FY15. This equipment is required to re-establish full capability of the LSTF upon completion of the Annex.				
Title: 2) WDTC - MRTFB - Major Test Chambers		0.790	0.630	0.641
FY 2013 Accomplishments: Continued 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 Materiel Test Facility (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, decontamination technologies, and detection systems with chemical agents and simulants; and (3) Building 3445 chambers support filter and collective protection testing. Modernization in the chambers includes: (1) Development of an aerosol generation and sampling capability specifically for use with agent fate work; (2) Upgrades to aerosol chambers; (3) Upgrades to surety communications radio systems. These are multi-year efforts.				
FY 2014 Plans: Continues 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, decontamination technologies, and detection systems with chemical agents and simulants; and (3) Building 3445 chambers support filter and collective protection testing. Modernization in the chambers includes: (1) Continue development of an aerosol generation and sampling capability; and (2) Characterization of improved and/or articulated testing fixtures; and (3) Continuous enhancement of Toxic Industrial Chemical detection.				
FY 2015 Plans: Continues to provide for modernization of existing instrumentation and equipment in the major test chambers at WDTC, in support of the CB defense mission. These chambers 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, decontamination technologies, and detection systems with chemical agents and simulants; and (3) Building 3445 chambers support filter and collective protection testing. Modernization in the chambers includes: (1) Continue enhancements of an aerosol generation and sampling capability; (2) Continue development of the agent fate aerosol capability; (3) Upgrades to agent surety monitor and analytical instrumentation; (4) Continue Small Item Decontamination (SID) recirculating bath upgrade; (5) Upgrade to the large scale filtration fixture to allow toxic agents and systems other than single-pass filtration to be tested; (6) Characterization of improved and/or articulated testing fixtures; (7) Continuous enhancement of Toxic Industrial Chemical detection; and (8) Non-Traditional Agent test and detection capability.				
Title: 3) WDTC - MRTFB - CB Test Grid		0.581	0.750	0.764

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program			Date: March 2014		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>		Project (Number/Name) TE7 / <i>TEST & EVALUATION (OP SYS DEV)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2013	FY 2014	FY 2015
<p><i>FY 2013 Accomplishments:</i> Continued to enhance existing instrumentation and equipment at multiple test grids (Target S, Downwind, Tower Outdoor Test Grids, etc.) at WDTC, in support of the CB defense mission. DPG's vast area combined with its remote location allow for all sizes of CB and explosive test events, including large scale Toxic Industrial Materials (TIC) release capability, and are supported by state of the art meteorological and referee capability. Continued modernization efforts included: (1) Development of agent to simulant correlation, dissemination equipment, and monitoring systems for additional field simulants; (2) Improve both point and standoff referee systems for TIC; (3) Adding testing capability to support expanded use of Agent Like Organisms (ALOs); (4) Required upgrade of referee systems (LIDAR, DIAL, etc.); (5) Wireless tracking system for test grid equipment; and (6) Development of transportable standoff chamber to allow remote calibration of active and passive standoff systems for improved test accuracy. FY13 accomplishments include upgrades to high speed and infrared (IR) cameras.</p> <p><i>FY 2014 Plans:</i> Continues to enhance existing instrumentation and equipment at multiple test grids (Target S, Downwind, Tower Outdoor Test Grids, etc.) at WDTC, in support of the CB defense mission. DPG's vast area combined with its remote location allow for all sizes of CB and explosive test events, including large scale TIC release capability, and are supported by state of the art meteorological and referee capability. Continuing modernization efforts will include: (1) Development of agent to simulant correlation, dissemination equipment, and monitoring systems for additional field simulants; (2) Required upgrades to point and standoff field referee systems; (3) Upgrade of communications and data analysis capabilities at command posts; (4) Enhanced aerosol dissemination systems; (5) Upgraded high speed cameras; and (6) Development of in house capability to calibrate infrared (IR) cameras to reduce cost and turnaround time.</p> <p><i>FY 2015 Plans:</i> Continue to enhance existing instrumentation and equipment at multiple test grids (Target S, Downwind, Tower Outdoor Test Grids, etc.) at WDTC, in support of the CB defense mission. DPG's vast area combined with its remote location allow for all sizes of CB and explosive test events, including large scale TIC release capability, and are supported by state of the art meteorological and referee capability. Continuing modernization efforts will include: (1) Development of agent to simulant correlation, dissemination equipment, and monitoring systems for additional field simulants; (2) Required upgrades to point and standoff field referee systems; (3) Upgrade of communications and data analysis capabilities at command posts; (4) Enhanced aerosol dissemination systems; (5) Upgrade high speed cameras; and (6) Development of in-house capability to calibrate IR cameras to reduce cost and turnaround time. Enhancements to Test Grid provides near real time data analysis and rapid test adaptation to minimize costs and increase effectiveness of testing.</p>					
<i>Title:</i> 4) WDTC - MRTFB - Combined Chemical Test Facility			1.341	1.230	2.125
<i>FY 2013 Accomplishments:</i>					

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014		
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) TE7 / <i>TEST & EVALUATION (OP SYS DEV)</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
<p>Provided for continued 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 upgrades current technology to include: (1) Characterization of new and upgraded test fixtures; (2) Upgraded control systems for swatch, protective component, and detection testing test fixtures; (3) Continued upgrade of CB Navy Safari instrumentation to hardened components compatible with a marine environment; (4) Upgraded swatch test capability to include VX and other low volatility agents; (5) Chemical agent referee and analytical instrumentation; and (6) Improved automation for current chemical synthesis capability.</p> <p><i>FY 2014 Plans:</i> Provide 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 current technology to include: (1) Characterization of new and upgraded test fixtures; (2) Upgrade control systems for swatch, protective component, and detection testing test fixtures; (3) Continue upgrade of CB Navy Safari instrumentation to hardened components compatible with a marine environment; (4) Validate low volatility swatch test capability; (5) Enhancements to agent referees and analytical instrumentation; and (6) Expand filter test capability to include additional toxic industrial chemicals and simulants, and additional types of filtration systems.</p> <p><i>FY 2015 Plans:</i> Provide for continued revitalization and upgrade of existing instrumentation and equipment at the CCTF at WDTC in support of their chemical test mission. The CCTF tests the capability of detectors, decontaminants, and protective systems to defend against toxic chemical agents. Increased programming in FY15 initiates replacement of chemical laboratory fume hoods and hood controllers throughout the chemical labs. Modernization results in improved test fixtures which reduce risk to personnel and testing results.</p>				
Accomplishments/Planned Programs Subtotals		3.730	3.690	5.984
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
D. Acquisition Strategy				
T&E RANGE INSTRUMENT/TECH UPGRADE (T&E UPGRADE)				
<p>Test and evaluation Range Instrumentation/Technology Upgrades is a continuing project. It provides for technical upgrades to WDTC capabilities for Chemical and Biological testing of DoD CB materiel, weapons, and weapons systems from concept through production.</p>				

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) TE7 / <i>TEST & EVALUATION (OP SYS DEV)</i>

E. Performance Metrics

N/A

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program **Date:** March 2014

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) TE7 / <i>TEST & EVALUATION (OP SYS DEV)</i>
--	--	---

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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 & Equipment at Chemical Biological (CB) Test Grids, WDTC																												
T&E UPGRAD - Revitalize & Upgrade Instrumentation & Equipment at Combined Chemical Test Facility, WDTC																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program			Date: March 2014
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607384BP / <i>CHEMICAL/BIOLOGICAL DEFENSE (OP SYS DEV)</i>	Project (Number/Name) TE7 / <i>TEST & EVALUATION (OP SYS DEV)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
** T&E UPGRAD - LSTF Instrumentation & Equip Upgrades, WDTC	1	2013	4	2019
T&E UPGRAD - Modernization of Major Test Chambers, WDTC	1	2013	4	2019
T&E UPGRAD - Enhance Instrumentation & Equipment at Chemical Biological (CB) Test Grids, WDTC	1	2013	4	2019
T&E UPGRAD - Revitalize & Upgrade Instrumentation & Equipment at Combined Chemical Test Facility, WDTC	1	2013	4	2019