Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Chemical and Biological Defense Program										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*							
COST ($ in Millions)	**FY 2009 Actual**	**FY 2010 Estimate**	**FY 2011 Base Estimate**	**FY 2011 OCO Estimate**	**FY 2011 Total Estimate**	**FY 2012 Estimate**	**FY 2013 Estimate**	**FY 2014 Estimate**	**FY 2015 Estimate**	**Cost To Complete**	**Total Cost**
Total Program Element	286.529	300.317	407.162	0.000	407.162	413.610	368.621	308.708	228.651	Continuing	Continuing
CA5: *CONTAMINATION AVOIDANCE (SDD)*	46.316	78.042	124.936	0.000	124.936	117.729	110.250	89.493	58.830	Continuing	Continuing
CM5: *HOMELAND DEFENSE (SDD)*	3.897	8.638	1.166	0.000	1.166	3.822	0.000	2.361	2.413	Continuing	Continuing
CO5: *COLLECTIVE PROTECTION (SDD)*	13.323	12.002	18.459	0.000	18.459	11.671	10.267	7.835	0.000	Continuing	Continuing
DE5: *DECONTAMINATION SYSTEMS (SDD)*	16.611	36.786	28.499	0.000	28.499	23.944	25.770	14.701	5.928	Continuing	Continuing
IP5: *INDIVIDUAL PROTECTION (SDD)*	18.363	21.094	9.678	0.000	9.678	4.833	3.044	0.756	0.563	Continuing	Continuing
IS5: *INFORMATION SYSTEMS (SDD)*	45.694	27.301	13.844	0.000	13.844	24.984	24.872	25.345	25.775	Continuing	Continuing
MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*	87.676	57.558	141.680	0.000	141.680	161.732	159.144	141.481	111.671	Continuing	Continuing
MC5: *MEDICAL CHEMICAL DEFENSE (SDD)*	14.203	14.027	51.856	0.000	51.856	47.835	28.771	12.122	8.171	Continuing	Continuing
MR5: *MEDICAL RADIOLOGICAL DEFENSE (SDD)*	3.002	8.276	1.143	0.000	1.143	4.817	2.265	0.000	0.000	Continuing	Continuing
TE5: *TEST & EVALUATION (SDD)*	37.444	36.593	15.901	0.000	15.901	12.243	4.238	14.614	15.300	Continuing	Continuing

A. Mission Description and Budget Item Justification

Operational forces have an immediate need to survive, safely operate, and sustain operations in a chemical and biological agent threat environment across the continuum of global, contingency, special operations/low-intensity conflict, counter-narcotics, and other high risk missions. Operating forces have a critical need for defense against worldwide proliferation of Chemical and Biological (CB) warfare capabilities and for medical treatment of casualties in medical treatment facilities.

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Chemical and Biological Defense Program	DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*

Congress has directed centralized management of Department of Defense (DoD) CB Defense initiatives, both medical and non-medical. This program element supports the System Development and Demonstration (SDD) of CB defensive equipment, both medical and non-medical. These projects have been restructured to consolidate Joint and Service-unique tasks within four commodity areas: contamination avoidance, force protection (individual and collective), decontamination, and medical countermeasures. The consolidation will provide for development and operational testing of equipment for Joint Service as well as Service-unique requirements.

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

Weapons of Mass Destruction Civil Support Team (WMD CST) efforts provide for testing and development of a Unified Command Suite (UCS) and an Analytical Laboratory Platform (ALS) for these teams.

The medical chemical defense system development program funds improved medical equipment and drugs essential to counteracting lethal and performance-degrading effects of chemical threats and medical equipment essential to meeting medical requirements on the integrated battlefield with emphasis on decreased size/weight and high mobility, yet supporting large numbers of combat casualties. Additionally, foreign medical materiel may be procured for exploitation of advanced technology and development to meet medical defense goals. This program element supports the development of prophylactic and therapeutic drugs and rapid identification and diagnostic systems. This program also funds development of a Transformational Rapid Drug Discovery and Development Capability (TRDDDC). Transformational Medical Technology Initiatives (TMTI) efforts in this area will include the continual build out of both a genomic sequencing and a bio-chemical informatics capability for the DoD.

DoD Biological Defense mission requires the detection of validated biological threat agents to provide early warning capabilities on mobile and fixed platforms. This program element will provide theater protection through the development of point and stand-off detection systems. The detection system concept will provide detection, identification, warning, and sample collection for verification that a biological agent attack has occurred. This program element also provides for the development of biological defense medical programs. DoD Biological Defense medical mission will address: (1) protective vaccines - vaccination capability against the most probable biological threat agents; (2) identification - clinical identification of biological threat agents through medical evaluation and laboratory analysis to augment early warning capabilities.

The projects in this program element support efforts in the system development phases of the acquisition strategy and are therefore correctly placed in Budget Activity 5.

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Chemical and Biological Defense Program	DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*

B. Program Change Summary ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	300.149	332.895	0.000	0.000	0.000
Current President's Budget	286.529	300.317	407.162	0.000	407.162
Total Adjustments	-13.620	-32.578	407.162	0.000	407.162
• Congressional General Reductions		-48.658			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		16.080			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-5.116	0.000			
• SBIR/STTR Transfer	-3.504	0.000			
• Other Adjustments	-5.000	0.000	407.162	0.000	407.162

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2009	FY 2010
Project: DE5: *DECONTAMINATION SYSTEMS (SDD)*		
Congressional Add: *1) Chemical and Biological Threat Reduction Coating*	0.000	2.390
Congressional Add: *2) Self-Decontaminating Polymer System for Chemical and Biological Warfare Agents.*	0.000	2.788
Congressional Add: *3) Self Contained Automated Vehicle Washing Systems with microwave decontamination*	0.000	1.593
Congressional Add: *4) Protective Self-Decontaminating Surfaces*	0.000	1.593
Congressional Add Subtotals for Project: DE5	0.000	8.364
Project: IP5: *INDIVIDUAL PROTECTION (SDD)*		
Congressional Add: *1) JSAM*	1.582	2.390
Congressional Add Subtotals for Project: IP5	1.582	2.390
Project: TE5: *TEST & EVALUATION (SDD)*		
Congressional Add: *1) Real Time Monitoring of Chemical Agents*	0.000	1.275

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APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2009	FY 2010
Congressional Add Subtotals for Project: TE5	0.000	1.275
Congressional Add Totals for all Projects	1.582	12.029

Change Summary Explanation

Funding: N/A - Adjustments less than 10% of total program.

Schedule: N/A

Technical: N/A

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*				PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*			
COST ($ in Millions)	**FY 2009 Actual**	**FY 2010 Estimate**	**FY 2011 Base Estimate**	**FY 2011 OCO Estimate**	**FY 2011 Total Estimate**	**FY 2012 Estimate**	**FY 2013 Estimate**	**FY 2014 Estimate**	**FY 2015 Estimate**	**Cost To Complete**	**Total Cost**
CA5: *CONTAMINATION AVOIDANCE (SDD)*	46.316	78.042	124.936	0.000	124.936	117.729	110.250	89.493	58.830	Continuing	Continuing
Quantity of RDT&E Articles	89	0	0		0	0	0	0	0		

A. Mission Description and Budget Item Justification

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

Efforts funded in this project are: (1) Chemical, Biological, Radiological, and Nuclear Dismounted Reconnaissance Systems (CBRN DRS, formerly JNBCRS Increment 2); (2) Joint Biological Point Detection System (JBPDS); (3) Joint Biological Stand-off Detection System (JBSDS); (4) Joint Biological Tactical Detection System (JBTDS); (5) Joint Chemical Agent Detector (JCAD); (6) Joint Service Chemical Biological and Chemical Reconnaissance Systems Increments 2 and 3 (JNBCRS 2 and 3); (7) Major Defense Acquisition Program (MDAP) Support; (8) Next Generation Chemical Standoff Detection (NGCSD); (9) Non-Traditional Agent (NTA) Detection Support; and (10) Non-Traditional Agent Detection Sensor Suite Integration for NBC Reconnaissance Systems (SSI NBCRS) (formerly JNBCRS Increment 3).

The CBRN Dismounted Reconnaissance Systems (CBRN DRS) program fills a mission critical need to enhance CBRN reconnaissance platoon capabilities. The program consists of two phases. Phase I is the Dismounted Reconnaissance (DR) Sets, Kits and Outfits (SKO) configuration which fulfills an immediate critical need consisting of Commercial Off-The-Shelf (COTS) and Government Off-The-Shelf (GOTS) equipment integrated into a modular, transportable container for dismounted operations. It will form the basis for Phase II which is the Monitoring and Survey (MS) SKO. The MS SKO will feature technology insertion, the addition of net-centric capability and tailoring to focus on the Service-specific needs, to include NTA detection. The term "JNBCRS Increment 2" is replaced by the term "CBRN DRS" in FY10.

The JBPDS is a Joint Service biological detector system for the Services. The Army platforms include the JBPDS on the Biological Integrated Detection System (BIDS) and the Stryker Nuclear Biological Chemical Reconnaissance Vehicle (NBCRV). The Navy has identified select surface ships for installation of the JBPDS. The JBPDS is a fully automated system that increases the number of agents that can be identified by the current BIDS P3I and Interim Bio Agent Detector System (IBADS). Build 2, the JBPDS upgrade to Increment 1, will be developed. Build 2 will reduce lifecycle costs, improve reliability, and address system obsolescence concerns. The Build 2 program will incorporate one technology base transition of the Rapid Agent Aerosol Detector (RAAD) into a size, weight and power requirement to lower false alarms in the JBPDS which will help lower consumable use and reduce operations and support costs during its life cycle. Other JBPDS subsystem improvements are also focused on reductions to operational cost and obsolescence issues.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** CA5: *CONTAMINATION AVOIDANCE (SDD)*

The JBSDS is employing an incremental acquisition strategy. JBSDS Increment 1 is the first standoff early warning biological detection (BD) system for the Joint Services. The system will be capable of providing near real time detection of biological attacks/incidents and standoff early detection/warning (Detect to Warn) of biological Warfare (BW) agents at fixed sites or in static mode on vehicles. It will be capable of providing standoff detection, ranging, tracking, discrimination (man-made vs. natural occurring aerosols) of BW aerosol clouds for advanced warning, reporting, and protection. The JBSDS will augment and integrate with existing BD systems to provide a BD network capable of near real time detection and warning theater-wide to limit the effects of biological agent hazards against U.S. forces at the tactical and operational levels of war. The JBSDS can be employed in support of various areas (e.g., fixed sites, Air Ports of Debarkation/Sea Ports of Debarkation (APODs/SPODs), amphibious landing sites, etc.), or on platforms (ships, aircraft or ground vehicles).

The JBSDS Increment 2 builds on the capabilities demonstrated during the development of JBSDS Increment 1. The JBSDS Increment 2 system will focus on providing 24-hour operations (Increment 1 is night-time only), improving the false alarm rate and detection sensitivity, while decreasing size, weight and power. The JBSDS Increment 2 will also integrate with the global information network to provide near real time detection and warning theater-wide to limit the effect of biological agent hazards against U.S. forces at the tactical and operational levels of war. JBSDS Increment 3 will build on Increment 2 and focus on the development of a system that will operate on-the-move on mobile platforms as determined by the Warfighter.

The Joint Biological Tactical Detection System (JBTDS) Increment 1 will develop, integrate, test and produce a lightweight, low cost biological surveillance system that will detect, collect and identify biological warfare agent aerosols. JBTDS will provide warning through the Joint Warning And Reporting Network (JWARN) and an archive sample for follow-on analyses. JBTDS will provide near-real-time local audio and visual alarm. JBTDS components will be man portable and battery operable. JBTDS will be used organically at Brigade and below and at Forward Operating Bases (FOB) to provide notification of a hazard and enhanced battle space awareness to protect and preserve the force. When networked, JBTDS will augment existing biological detection systems to provide a theater-wide seamless array capable of biological detection, identification, and warning.

The JCAD program employs an incremental acquisition strategy to develop a miniaturized, rugged, and portable point chemical agent detector that automatically and simultaneously detects, identifies, quantifies, and alerts in the presence of nerve, blister, and blood chemical warfare agents. The M4 JCAD entered full rate production in September 2008 and will be produced through FY10. The attainable JCAD Increment 2 capabilities within the JCAD Increment 1 objectives were incorporated into a product improvement of the M4 JCAD (M4E1). Production of the M4E1 is scheduled to begin in FY11. JCAD will be used for wheeled vehicles, stand alone, and individual soldier applications. The M4 JCAD will replace the M8A1 and the M22 Automatic Chemical Agent Alarms (ACAA/ACADA). The M4E1 may additionally replace the Chemical Agent Monitor (CAM) and Improved Chemical Agent Monitor (ICAM) and other legacy systems currently used by the individual Services.

The JNBCRS Increment 2 (which has been renamed to CBRN Dismounted Reconnaissance Systems for FY10) fills a mission critical need to enhance CBRN reconnaissance platoon capabilities. The program consists of two Phases. Phase I is the dismounted reconnaissance (DR) sets, kits and outfits (SKO) configuration which provides an immediate critical need consisting of COTS and GOTS integrated into a modular, transportable container for dismounted operations. It will form the

basis for Phase II which is the Monitoring and Survey (MS) SKO. JNBCRS Increment 2 initiated as a Joint Urgent Operational Needs Statement (JUONS) system to support the DR mission. The MS SKO will feature technology insertion, the addition of net-centric capability, and tailoring to focus on the service-specific needs, to include NTA detection.

The JNBCRS Increment 3 will provide Chemical Biological Mass Spectrometer (CBMS) and Joint Contaminated Surface Detector (JCSD) capability to the Stryker Product Improvement Program and Future Mounted Armored Reconnaissance Platforms. The CBMS Bio effort will add the biological warfare agent detection and identification capability to the existing chemical liquid, and developmental Toxic Industrial Chemical (TIC) capabilities. The integration of liquid chemical and biological aerosol detection, within a single sensor; saves size, weight, and power on the platform. The JCSD will provide an improved mobile reconnaissance capability and on-the-move, non-contact, detection and identification of Chemical Warfare Agents (CWAs), TICs, and other Non-Traditional Agents (NTAs) using laser induced Raman Spectroscopy. Target surfaces are illuminated by laser light, and contaminants in the field of view are identified through analysis of their Raman backscatter signal against a wide library of Raman spectra. The JNBCRS Increment 3 supports transition to SSI NBCRS starting in FY10.

The Major Defense Acquisition Program (MDAP) Support program will integrate System of Systems (SoS) solutions across the Armed Services for (MDAP) having Chemical and Biological Radiological and Nuclear (CBRN) survivability requirements. The program will demonstrate modular, net-centric, "plug and play" capabilities for mounted and dismounted CBRN reconnaissance that will establish a common CBRN reconnaissance architecture across the services.

The Joint Science Lightweight Standoff Chemical Agent Detection (JSLSCAD) effort initiated the component improvements and the Technology Readiness Assessment (TRA) for the System of Systems (SoS) approach to address the CB early warning mission within the Next Generation Chemical Standoff Detection (NGCSD) program. The NGCSD SoS approach will increase the range of standoff detection and decrease detection time.

The NGCSD effort will provide early warning for both traditional and non-traditional chemical agent attacks at fixed sites, forward operating bases and on Service designated vehicles and ships. This effort will develop and integrate new standoff sensor technologies for future standoff systems. The detection system will interoperate with the Services and Joint Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) architectures.

The Non-Traditional Agent (NTA) Detection program will develop and procure detection system(s) through incremental evolution that will afford Warfighter's the ability to attain situational awareness and respond to emerging hazards. The program will provide a near term capability to detect priority emerging threat materials with common core technologies for detection and identification. The common technologies can be further exploited in future increments to address lab deployable, fixed site and handheld applications.

The SSI NBCRS will provide Chemical Biological Mass Spectrometer (CBMS) and Joint Contaminated Surface Detector (JCSD) capability to the Stryker Product Improvement Program and Future Mounted Armored Reconnaissance Platforms. The CBMS Bio effort will add the biological warfare agent detection and identification capability to the existing chemical liquid, and developmental Toxic Industrial Chemical (TIC) capabilities. The integration of liquid chemical and biological aerosol

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

detection, within a single sensor; saves size, weight, and power on the platform. The JCSD will provide an improved mobile reconnaissance capability and on-the-move, non-contact, detection and identification of Chemical Warfare Agents (CWAs), TICs, and other Non-Traditional Agents (NTAs) using laser induced Raman Spectroscopy. Target surfaces are illuminated by laser light, and contaminants in the field of view are identified through analysis of their Raman backscatter signal against a wide library of Raman spectra. The SSI NBCRS was transitioned from JNBCRS Increment 3 in FY10.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
1) CBRN DRS	0.000	0.718	1.407	0.000	1.407
FY 2010 Plans: Conduct engineering support (Govt). *FY 2011 Base Plans:* Continue engineering support (Govt).					
2) CBRN DRS	0.000	2.819	2.696	0.000	2.696
FY 2010 Plans: Initiate Developmental Testing to support Low Rate Initial Production (LRIP) decision. *FY 2011 Base Plans:* Complete Developmental Testing to support LRIP decision.					
3) CBRN DRS	0.000	2.300	2.800	0.000	2.800
FY 2010 Plans: Initiate Operational Assessment. *FY 2011 Base Plans:* Complete Operational Assessment.					
4) CBRN DRS	0.000	2.400	6.600	0.000	6.600

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Initiate development of sensor interface compliance. *FY 2011 Base Plans:* Complete development of sensor interface compliance.					
5) CBRN DRS *FY 2010 Plans:* Initiate, design and develop NTA capability. *FY 2011 Base Plans:* Continue design and integration of NTA enhancements. Initiate testing for enhancements.	0.000	2.200	31.883	0.000	31.883
6) CONGRESSIONAL ADD ITEM *FY 2010 Plans:* Congressional Add Item - Detection and Remediation of Biological/Chemical Weapons.	0.000	1.992	0.000	0.000	0.000
7) JBPDS *FY 2009 Accomplishments:* Initiated strategic and tactical planning, government system engineering, program/financial management, costing, contracting, scheduling, acquisition oversight and technical support. *FY 2010 Plans:* Continue strategic and tactical planning, government system engineering, program/financial management, costing, contracting, scheduling, acquisition oversight and technical support.	0.600	1.920	1.800	0.000	1.800

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Continue strategic and tactical planning, government system engineering, program/financial management, costing, contracting, scheduling, acquisition oversight and technical support.					
8) JBPDS *FY 2010 Plans:* Initiate development of the new Identifier Line Replaceable Unit (LRU) for the JBPDS Build 2 system. *FY 2011 Base Plans:* Initiate integration of the new Identifier Line Replaceable Unit (LRU) into the JBPDS Build 2 system.	0.000	6.099	7.582	0.000	7.582
9) JBPDS *FY 2009 Accomplishments:* Conducted engineering development, integration and testing of the JBPDS onto a new trailer platform with a 5kW generator.	2.950	0.000	0.000	0.000	0.000
10) JBPDS *FY 2010 Plans:* Initiate the development and testing of new consumables for the JBPDS Build 2 Identifier LRU (transition from lateral flow assay to electro chemical luminescence (ECL) assay). *FY 2011 Base Plans:* Continue development and testing of consumables.	0.000	2.000	3.800	0.000	3.800
11) JBPDS	1.731	2.480	3.000	0.000	3.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Initiated a Form-Fit design version of the new Rapid Agent Aerosol Detector (RAAD) Line Replaceable Unit (LRU) for the JBPDS Build 2 system. *FY 2010 Plans:* Continue development of the new Detector (RAAD) Line Replaceable Unit (LRU) for the JBPDS Build 2 system. *FY 2011 Base Plans:* Continue development of the new Detector Line Replaceable Unit (LRU) for the JBPDS Build 2 system.					
12) JBPDS *FY 2011 Base Plans:* Initiate the development and component level testing of the JBPDS Build 2 system.	0.000	0.000	1.200	0.000	1.200
13) JBSDS Increment 2 *FY 2009 Accomplishments:* Provided strategic and tactical planning, government system engineering, program/financial management, costing, contracting, scheduling, acquisition oversight and technical support.	3.043	0.000	0.000	0.000	0.000
14) JBSDS Increment 2 *FY 2009 Accomplishments:* Conducted Fluorescence System Development for Technology Demonstration V.	0.796	0.000	0.000	0.000	0.000
15) JBSDS Increment 2	2.596	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Continued Modeling and Simulation.					
16) JBSDS Increment 2 *FY 2009 Accomplishments:* Conducted Agent Performance Assessment.	2.186	0.000	0.000	0.000	0.000
17) JBSDS Increment 1 *FY 2009 Accomplishments:* Provided Test Support.	0.493	0.000	0.000	0.000	0.000
18) JBSDS Increment 2 *FY 2009 Accomplishments:* Developed Test Equipment for Technology Demonstration V.	1.056	0.000	0.000	0.000	0.000
19) JBTDS *FY 2009 Accomplishments:* Initiated strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support.	0.262	0.000	0.000	0.000	0.000
20) JCAD *FY 2009 Accomplishments:* Purchased M4E1 JCAD systems (Quantity of 89 at $6,820 each for a total cost of $707,000).	0.607	0.000	0.000	0.000	0.000
21) JCAD	5.631	3.360	0.000	0.000	0.000

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Conducted M4E1 JCAD Developmental Tests to include surety chamber ($3.2 million) and chamber upgrade testing ($782 thousand). *FY 2010 Plans:* Conduct M4E1 JCAD Developmental Tests to include surety chamber ($2.175 million), MIL-STD-810/ EMI ($490 thousand), and false alarm and other testing ($695 thousand).					
22) JCAD *FY 2009 Accomplishments:* Provided Program Management Support. *FY 2010 Plans:* Provide Systems Engineering ($1.556 million), Program Management ($950 thousand), and T&E IPT Support ($700 thousand). *FY 2011 Base Plans:* Provide Program Management and Systems Engineering Support.	1.062	3.206	1.733	0.000	1.733
23) JCAD *FY 2010 Plans:* Conduct M4E1 JCAD Operational Test and Evaluation.	0.000	1.510	0.000	0.000	0.000
24) JCAD *FY 2011 Base Plans:* Conduct M4E1 JCAD Multi-Service Operational Test and Evaluation (MOT&E).	0.000	0.000	8.000	0.000	8.000
25) JNBCRS INC 2	9.794	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Continued development of Joint Urgent Operational Needs (JUONS) and initiated development of program documentation, award contract for Integrated Logistics Support (ILS), design and test of DR-SKO.					
26) JNBCRS INC 2 *FY 2009 Accomplishments:* Continued DT/OT planning and other test agency support for JUONS.	2.500	0.000	0.000	0.000	0.000
27) JNBCRS INC 2 *FY 2009 Accomplishments:* Continued Systems Engineering Support (Govt) for JUONS and DR-SKO.	0.459	0.000	0.000	0.000	0.000
28) JNBCRS INC 3 *FY 2009 Accomplishments:* Completed design and development testing of Chemical Biological sensors.	1.578	0.000	0.000	0.000	0.000
29) JNBCRS INC 3 *FY 2009 Accomplishments:* Completed development of Common CBRN Sensor Interface (CCSI) prototype detectors.	0.436	0.000	0.000	0.000	0.000
30) JNBCRS INC 3 *FY 2009 Accomplishments:* Completed design of CCSI prototype detector housing (e.g. cradle).	0.052	0.000	0.000	0.000	0.000
31) JNBCRS 3	0.433	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Completed engineering support.					
32) JSLSCAD *FY 2009 Accomplishments:* Provided Test Site Support for Next Generation Chemical Standoff Detection (NGCSD).	0.485	0.000	0.000	0.000	0.000
33) JSLSCAD *FY 2009 Accomplishments:* Conducted Sensor Hardware Development to Support the NGCSD Operational Demonstration.	0.245	0.000	0.000	0.000	0.000
34) JSLSCAD *FY 2009 Accomplishments:* Conducted Integrated Sensor Development and Testing from multiple vendors to support the NGCSD Operational Demonstration.	1.085	0.000	0.000	0.000	0.000
35) MDAP SPRT *FY 2009 Accomplishments:* Continued analysis and development of SoS architecture that supports MDAP operational CBRN requirements and provides Chemical Biological Radiological Nuclear (CBRN) defense capabilities.	2.125	0.000	0.000	0.000	0.000
36) MDAP SPRT *FY 2009 Accomplishments:* Continued Developmental Test (DT) to validate and verify SoS concept prior to MDAP integration.	3.410	0.000	0.000	0.000	0.000
37) MDAP SPRT	0.701	3.095	2.155	0.000	2.155

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Provide strategic tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support. *FY 2009 Accomplishments:* Continued strategic/tactical planning, government systems engineering, financial management, technology assessment, contracting, scheduling, acquisition oversight and technical support. *FY 2010 Plans:* Continue strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight, and technical support. *FY 2011 Base Plans:* Continue strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight, and technical support.					
38) MDAP SPRT Development of modular CBRN sensing capabilities for the Small Unmanned Ground Vehicle (SUGV). *FY 2010 Plans:* Initiate development of modular CBRN sensing capabilities that will enable commander's to tailor their Chemical, Biological, Radiological and Nuclear (CBRN) detection efforts, while decreasing false positive readings. *FY 2011 Base Plans:* Continue development of modular CBRN sensing capabilities for the Small Unmanned Ground Vehicle (SUGV).	0.000	1.528	1.100	0.000	1.100
39) MDAP SPRT	0.000	1.683	0.000	0.000	0.000

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Perform Decision Support Software modeling and simulation and trade-off analysis.					
40) MDAP SPRT Collective protection/decontamination capabilities to meet Joint Strike Fighter (JSF) survivability requirements *FY 2010 Plans:* Continue the design and testing of collective protection/decontamination capabilities to meet Joint Strike Fighter (JSF) survivability requirements *FY 2011 Base Plans:* Transition and design SoS integration of collective protection/decontamination capabilities to meet Joint Strike Fighter (JSF) survivability requirements	0.000	2.905	6.005	0.000	6.005
41) NGCSD *FY 2011 Base Plans:* Continue development and integration of multi-sensor detection system and algorithms.	0.000	0.000	9.363	0.000	9.363
42) NGCSD *FY 2010 Plans:* Initiate multi-sensor system integration contract.	0.000	1.500	0.000	0.000	0.000
43) NGCSD *FY 2011 Base Plans:* Initiate overarching Joint Service support for capability document development, CONOPS, Tactic, Techniques and Procedures (TTPs), etc.	0.000	0.000	0.400	0.000	0.400

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
44) NGCSD *FY 2011 Base Plans:* Initiate engineering support for development of NGCSD.	0.000	0.000	1.500	0.000	1.500
45) NGCSD *FY 2011 Base Plans:* Initiate logistics planning efforts for manuals, maintenance, sparing, etc.	0.000	0.000	0.600	0.000	0.600
46) NGCSD *FY 2010 Plans:* Initiate JPEO-CBD Integrated Program Assistance Team (IPAT) support for Material Development Decision (MDD). *FY 2011 Base Plans:* Continue JPEO-CBD Integrated Program Assistance Team (IPAT) support for Material Development Decision (MDD).	0.000	1.500	0.750	0.000	0.750
47) NGCSD *FY 2010 Plans:* Initiate and complete test methodology development.	0.000	3.615	0.000	0.000	0.000
48) NTA DETECT *FY 2010 Plans:* Initiate Commercial Off-the-Shelf (COTS)/Government Off-the-Shelf (GOTS) evaluation for Installation Force Protection Mission Areas.	0.000	1.350	2.912	0.000	2.912

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Continue DT and initiate OA of COTS/GOTS for application in the Force Protection, Sensitive Site Assessment and Consequence Management mission areas.					
49) NTA DETECT *FY 2010 Plans:* Initiate integration of COTS components and library build for the Lab Deployable Mass Spectrometer. *FY 2011 Base Plans:* Continue integration and initiate DT for Lab Deployable DESI Mass Spectrometer for Consequence Management and Sensitive Site Assessment.	0.000	1.683	2.087	0.000	2.087
50) NTA DETECT *FY 2010 Plans:* Initiate engineering to support reduced form factor for the Man Portable Mass Spectrometer. *FY 2011 Base Plans:* Continue engineering and integration for the Man Portable DESI Mass Spectrometer.	0.000	3.075	2.338	0.000	2.338
51) NTA DETECT *FY 2010 Plans:* Initiate Developmental Testing (DT) and Operational Assessment (OA) to support initial capability of the mass spectrometer. *FY 2011 Base Plans:* Continue DT and OA of the DESI mass spectrometer.	0.000	8.252	3.189	0.000	3.189
52) SSI NBCRS	0.000	1.184	1.108	0.000	1.108

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: (CBMS) Initiate engineering support, leveraging efforts initiated under Joint NBC Reconnaissance System (JNBCRS) INC 3. *FY 2011 Base Plans:* (CBMS) Continue engineering support.					
53) SSI NBCRS *FY 2010 Plans:* (CBMS) Initiate chemical biological capability sensor development using competitive prototyping. *FY 2011 Base Plans:* (CBMS) Continue chemical biological capability sensor development using competitive prototyping.	0.000	8.000	4.200	0.000	4.200
54) SSI NBCRS *FY 2010 Plans:* (CBMS) Initiate Chemical Biological (CB) capability sensor Developmental Test and Evaluation (DT&E) planning. *FY 2011 Base Plans:* (CBMS) Continue CB capability sensor DT&E planning and initiate T&E efforts.	0.000	0.224	0.955	0.000	0.955
55) SSI NBCRS *FY 2010 Plans:* (JCSD) Initiate engineering support, leveraging efforts performed under JNBCRS INC 3.	0.000	1.000	1.107	0.000	1.107

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: (JCSD) Continue engineering support.					
56) SSI NBCRS *FY 2011 Base Plans:* (JCSD) Initiate sensor system development and demonstration using competitive prototyping.	0.000	0.000	8.080	0.000	8.080
57) SSI NBCRS *FY 2011 Base Plans:* (JCSD) Initiate sensor DT&E planning and initiate T&E efforts.	0.000	0.000	1.086	0.000	1.086
58) SSI NBCRS *FY 2011 Base Plans:* (SSI NBCRS) Initiate platform integration and system support of improved CB capable sensors for competitive prototype evaluation.	0.000	0.000	2.000	0.000	2.000
59) SSI NBCRS *FY 2010 Plans:* (SSI NBCRS) Initiate JPEO Integrated Program Assistance Team (IPAT) support for Stryker NBCRV path forward. *FY 2011 Base Plans:* (SSI NBCRS) Continue JPEO IPAT support for Stryker NBCRV path forward.	0.000	1.500	1.500	0.000	1.500
60) SSI NBCRS *FY 2010 Plans:* Congressional add for development of Man Portable Sensors for Dismounted Reconnaissance.	0.000	1.992	0.000	0.000	0.000

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
61) SBIR	0.000	0.952	0.000	0.000	0.000
FY 2010 Plans: Small Business Innovative Research.					
Accomplishments/Planned Programs Subtotals	46.316	78.042	124.936	0.000	124.936

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• JC0100: *JOINT BIO POINT DETECTION SYSTEM (JBPDS)*	75.545	41.976	43.555		43.555	41.252	52.776	73.164	71.894	Continuing	Continuing
• JC0101: *JS CHEM/BIO/RAD AGENT WATER MONITOR (JCBRAWM)*	6.000	3.184	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• JC0250: *JOINT BIO STANDOFF DETECTOR SYSTEM (JBSDS)*	4.000	0.000	0.000		0.000	0.273	19.840	20.834	35.728	Continuing	Continuing
• JC1500: *NBC RECON VEHICLE (NBCRV)*	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• JC4500: *NEXT GENERATION CHEMICAL STANDOFF DETECTION (NGCSD)*	0.000	0.000	0.000		0.000	0.000	9.840	12.120	21.799	Continuing	Continuing
• JF0100: *JOINT CHEMICAL AGENT DETECTOR (JCAD)*	58.406	27.694	40.071		40.071	45.805	52.762	53.330	63.217	Continuing	Continuing
• JN0900: *NON TRADITIONAL AGENT DETECTION (NTAD)*	0.000	0.000	4.178		4.178	4.075	3.376	6.745	8.918	Continuing	Continuing
• MC0100: *JOINT NBC RECONNAISSANCE SYSTEM (JNBCRS)*	32.699	32.421	22.511		22.511	65.779	122.214	50.385	0.000	Continuing	Continuing

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

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• MC0101: *CBRN DISMOUNTED RECONNAISSANCE SYSTEMS (CBRN DRS)*	0.000	11.415	15.414		15.414	24.056	33.504	56.718	53.938	Continuing	Continuing
• MC0102: *JOINT CONTAMINATED SURFACE DETECTOR (JCSD)*	0.000	0.000	0.000		0.000	0.000	0.000	5.288	40.072	Continuing	Continuing
• MX0001: *JOINT BIO TACTICAL DETECTION SYSTEM (JBTDS)*	0.000	0.000	0.000		0.000	8.080	19.060	29.237	33.933	Continuing	Continuing

D. Acquisition Strategy

CBRN DRS

The Chemical Biological Radiological Nuclear Dismounted Reconnaissance Systems (CBRN DRS) program uses spiral development with an evolutionary component/ suite upgrade acquisition approach. Funding finalizes the design to provide the Services with enhanced full spectrum CBRN detection capability to support strategic, operational, and tactical objectives at lower life cycle costs. CBRN DRS will enhance the Situational Awareness (SA) by providing a dismounted ability to detect chemical, biological and radiological hazards across the Range of Military Operations (ROMO) and employ contamination avoidance activities to prevent disruption to operations and organizations.

JBPDS

The Joint Biological Point Detection System (JBPDS) uses an open systems approach to insert maturing and validated technologies as part of the overall acquisition strategy to expedite fielding of a credible force protection. The JBPDS Build 2 program will use results from a business case analysis to upgrade the system's line replaceable units (LRUs) to reduce life cycle costs, improve reliability, and address system obsolescence concerns. Per Director, Operational Test and Evaluation (DOT&E) Memorandum dated July 9, 2002, the program will continue to support the development of a Whole System Live Agent Test (WSLAT) capability.

JBSDS

The Joint Bio Stand-off Detector System (JBSDS) is employing an incremental acquisition strategy. JBSDS Increment 1 is the first standoff early warning biological detection (BD) system for the Joint Services. The JBSDS Increment 2 system will focus on providing 24-hour operations (Increment 1 is night-time only), improving

the false alarm rate and detection sensitivity, while decreasing size, weight and power. The JBSDS Increment 2 will also integrate with the global information network to provide near real time detection and warning theater-wide to limit the effect of biological agent hazards against U.S. forces at the tactical and operational levels of war. JBSDS Increment 3 will build on Increment 2 and focus on the development of a system that will operate on-the-move on mobile platforms as determined by the Warfighter.

JBTDS

The Joint Biological Tactical Detection (JBTDS) program will pursue an evolutionary incremental approach to provide capability to the Warfighter. The JBTDS program will develop, integrate, test, procure and field systems that improve biological aerosol detection, identification, and sampling capabilities. The JBTDS program will also reduce size, weight, power consumption, and logistic footprint over current systems. Test Readiness Evaluations (TRE) and Competitive Prototyping will support the JBTDS Engineering and Manufacturing Development (EMD) phase by identifying mature technologies and reducing overall risk. Modeling and simulation tools will be used in order to lower program risks, reduce costs and ensure a higher confidence in selected technologies.

JCAD

The current strategy employs a product improvement of the M4 JCAD to reduce Life Cycle costs, transition to a competitive procurement contract, and attain objective capability. Three competitive fixed-price contracts for the M4E1 were awarded in Sep 2007 for prototypes and options for full rate production. Competitive prototype testing was conducted and one system was selected for continued development. The production options will be exercised in FY11 following a successful production cut-in decision.

JNBCRS 2

The CBRN DRS (formerly JNBCRS Inc 2) fills a mission critical need to enhance Chemical, Biological, Radiological and Nuclear (CBRN) dismounted reconnaissance platoon capabilities. The program consists of two Phases. Phase I is the dismounted reconnaissance (DR) sets kits and outfits (SKO) configuration which provides an immediate critical need consisting of COTS and GOTS integrated into a modular, transportable container for dismounted operations. It will form the basis for Phase II which is the Monitoring and Survey (MS) SKO. The MS SKO will feature technology insertion, the addition of net-centric capability, and tailoring to focus on the service-specific needs, to include NTA detection.

JNBCRS 3

The JNBCRS Increment 3 program will develop and test system improvements to increase the military utility of the Stryker Product Improvement Program and Future Mounted Armored Reconnaissance Platforms. Separate Full and Open contracts will be awarded for both the CBMS Chem/Bio sensor and JCSD capabilities.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

Competitively awarding these contracts will reduce the acquisition life cycle costs, weight, power requirements, and size for the reconnaissance platforms. The JCSD program transitioned from the CBRN Unmanned Ground Reconnaissance (CUGR) Advanced Concept Technology Demonstration (ACTD) into the Technology Development phase in FY09. The JNBCRS Increment 3 program supports transition to SSI NBCRS starting in FY10.

JSLSCAD

The acquisition strategy for the Joint Service Lightweight Standoff Chemical Agent Detector (JSLSCAD) production phase focused upon a dual path to procure required systems and concurrently develop and test system improvements to increase the military utility. The Milestone Decision Authority (MDA) approved procurement of additional JSLSCAD LRIP systems in February 2008. The Government awarded a Fixed Price Incentive contract to GD-ATP in July 2008 for production of systems to fulfill the Nuclear Biological Chemical Reconnaissance Vehicle (NBCRV) Extended LRIP requirements and additional delivery orders will be exercised for full rate production of systems to fulfill the remaining NBCRV requirements. The JSLSCAD program office awarded multiple contracts to support system engineering, software development, test and evaluation, and system support efforts to increase standoff detection capabilities to rapidly respond to evolving system integration requirements with minimal contractual lead time. All these efforts are being integrated into the Next Generation Chemical Standoff Detection (NGCSD) program.

MDAP SPRT

Major Defense Acquisition Program (MDAP) Support program will integrate System of Systems (SoS) solutions across the Armed Service's for Major Defense Acquisition Programs (MDAP) having Chemical and Biological Radiological and Nuclear (CBRN) survivability requirements. The MDAP program will achieve these SoS solutions by: (1) leading CBRN architecture development and System Engineering efforts that result in enterprise concepts that address requirements; (2) establishing agreements with the MDAPs on roles and responsibilities with respect to funding deliverables and integration; (3) demonstrating modular, net-centric, "plug and play" capabilities for mounted and dismounted CBRN reconnaissance requirements; (4) developing design and test schedules which synchronize support for CBRN capability integration with MDAPs' schedules; and (5) providing integrated program management across the CBRN commodity areas to deliver capabilities on time that support MDAP goals.

NGCSD

The Next Generation Chemical Standoff Detection (NGCSD) program, which was initiated under the JSLSCAD program, will award Indefinite Delivery/Indefinite Quantity contract(s) to support system engineering, software development, test and evaluation, and system support efforts to increase standoff detection capabilities. This contract type will allow the program office to rapidly respond to evolving system integration requirements and emerging test results with minimal contractual lead time. This will optimize the program goal of inserting the latest software and standoff detection technology into the host platforms in the shortest possible time.

NTA DETECT

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** CA5: *CONTAMINATION AVOIDANCE (SDD)*

The Non-Traditional Agent (NTA) program will provide a detection capability through spiral evolutionary that will afford the Warfighter ability to attain situational awareness and respond to unknown and emerging hazards. The program provide a near term capability to detect priority emerging threat materials with common core technologies to detect and identify threats that can further be explored for lab deployable, fixed site and handheld applications. Leveraging COTS/GOTS assessments will be used in order to lower program risks, reduce costs, and ensure a higher confidence in selected technologies. The program will continue to address next priority mission areas and threats by continuing to qualify identified detection equipment.

SSI NBCRS

The Sensor Suite and Integration for Nuclear Biological Chemical Reconnaissance System (SSI NBCRS) program, transitioned from Joint Nuclear Biological Chemical Reconnaissance System (JNBCRS) Increment 3 in FY10, will develop and test platform specific prototype Chemical Biological Mass Spectrometer (CBMS) and Joint Contaminated Surface Detector (JCSD) capabilities. System development will be performed by separate full and open contract solicitations for CBMS and JCSD respectively, and will demonstrate a technology readiness level (TRL) of seven in laboratory and field testing. The contract efforts will finalize the technical approach and produce at least three prototypes of each system. Extensive laboratory and early user testing will be conducted prior to integration, test and evaluation into the JNBCRS. Upon successful completion of the JNBCRS integration, test and evaluation, a Milestone C In-Process Review (IPR) will be held to approve low-rate initial production of the CBMS and JCSD. The CBMS and JCSD will be introduced to the Stryker Fleets via Sensor Suite Improvements starting in FY15.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*	

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** CBRN DRS - DR SKO Program Development	C/CPIF	ICX Pittsburgh, PA	0.000	1.000	Jan 2010	4.500	Jan 2011	0.000		4.500	0.000	5.500	0.000
DR SKO Program Development	C/CPIF	ICX Pittsburgh, PA	0.000	1.400	Jan 2010	2.100	Jan 2011	0.000		2.100	0.000	3.500	0.000
DR SKO NTA Enhancements	C/FP	TBD	0.000	2.200	Jan 2010	15.023	Jul 2011	0.000		15.023	0.000	17.223	0.000
** CONG - Congressional Interest Item - Add Detection and Remediation of Bio/ Chem Weapons	C/CPFF	TBD	0.000	1.992	Jan 2010	0.000		0.000		0.000	0.000	1.992	0.000
** JBPDS - HW SB - Identifier development, modification and integration	C/CPFF	General Dynamics-Armament and Technical Charlotte, NC	0.000	2.740	Apr 2010	1.460	Jan 2011	0.000		1.460	0.000	4.200	0.000
HW SB - JBPDS Build II development, modification and integration	C/CPFF	General Dynamics-Armament and Technical Charlotte, NC	0.000	2.577	Apr 2010	0.905	Jan 2011	0.000		0.905	0.000	3.482	0.000
HW C - Development of new consumables for new Identifier	MIPR	JPM CBMS Ft. Detrick, MD	0.000	0.911	Oct 2009	1.229	Oct 2010	0.000		1.229	0.000	2.140	0.000
HW S - Hardware Cost - Purchase Build II Hardware for test	C/FFP	General Dynamics -	0.000	0.000		3.923	Jan 2011	0.000		3.923	0.000	3.923	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*	

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
		Armament and Technical Charlotte, NC											
HW SB - New Detector (RAAD) development, modification and integration	C/CPFF	General Dynamics - Armament & Technical Charlotte, NC	0.000	1.541	Jan 2010	1.389	Jan 2011	0.000		1.389	0.000	2.930	0.000
** MDAP SPRT - SW S - Develop Modular CBRN Sensing Capability	C/CPAF	TBD	0.000	1.528	Jan 2010	0.000		0.000		0.000	0.000	1.528	0.000
SW S - Decision Support Software Modeling and Simulation and Trade-Off Analysis	C/CPAF	TBD	0.000	1.683	Jan 2010	0.000		0.000		0.000	0.000	1.683	0.000
HW S - JSF Decon Shelter	MIPR	Various	0.000	1.800	Jan 2010	2.200	Jan 2011	0.000		2.200	0.000	4.000	0.000
HW S - JSF Decon	MIPR	Various	0.000	1.000	Jan 2010	3.805	Jan 2011	0.000		3.805	0.000	4.805	0.000
HW S - CBRN Sensor for SUGV	MIPR	Various	0.000	0.000		1.100	Jan 2011	0.000		1.100	0.000	1.100	0.000
** NGCSD - SW SB - Prototype System Development & Integration	C/CPFF	TBD	0.000	0.000		9.363	Jan 2011	0.000		9.363	0.000	9.363	0.000
SW C - System Integration Contract	C/CPFF	TBD	0.000	1.500	Jan 2010	0.000		0.000		0.000	0.000	1.500	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
** NTA DETECT - HW S - DESI Mass Spec	C/CPAF	ICX Arlington, VA	0.000	2.475	Jan 2010	1.474	Jan 2011	0.000		1.474	0.000	3.949	0.000
HW S - GOTS/COTS Dual Use Assessment	C/CPAF	Battelle Crystal City, VA	0.000	1.104	Jan 2010	1.000	Jan 2011	0.000		1.000	0.000	2.104	0.000
SW S - DESI Mass Spec Library Development	MIPR	RDECOM Aberdeen Proving Ground, MD	0.000	0.950	Oct 2009	0.370	Oct 2010	0.000		0.370	0.000	1.320	0.000
HW S - COTS Enzyme based technologies	C/CPAF	Agentase - ICX Pittsburgh, PA	0.000	0.000		1.100	Jan 2011	0.000		1.100	0.000	1.100	0.000
** SSI NBCRS - SW SB - (CBMS) Chemical Biological Sensor Capability Development	C/CPIF	TBD	0.000	8.000	Apr 2010	4.200	Jan 2011	0.000		4.200	0.000	12.200	0.000
HW C - (JSCD) Sensor System Development and Demonstration	C/CPIF	TBD	0.000	0.000		8.080	Jan 2011	0.000		8.080	0.000	8.080	0.000
HW S - (SSI NBCRS) Sensor Platform Integration	C/CPIF	TBD	0.000	0.000		2.000	Jan 2011	0.000		2.000	0.000	2.000	0.000
HW C - Develop Man Portable Sensors for Dismounted Reconnaissance	C/CPIF	TBD	0.000	1.992	Jan 2010	0.000		0.000		0.000	0.000	1.992	0.000
		Subtotal	0.000	36.393		65.221		0.000		65.221	0.000	101.614	0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** CBRN DRS - ES S - NTA Enhancements	C/CPIF	Various TBD	0.000	0.000		3.860	Jan 2011	0.000		3.860	0.000	3.860	0.000
** JBPDS - ILS SB - New Identifier/Collector/ Detector logistics and support documentation	C/CPFF	General Dynamics - Armament and Technical Charlotte, NC	0.000	0.671	Jan 2010	2.213	Jan 2011	0.000		2.213	0.000	2.884	0.000
** NGCSD - TD/D SB - Logistics Planning and Development	MIPR	Various	0.000	0.000		0.600	Jan 2011	0.000		0.600	0.000	0.600	0.000
** NTA DETECT - ES SB - Mass Spectrometer Analysis and Evaluation	PO	TBD	0.000	0.675	Oct 2009	0.325	Oct 2010	0.000		0.325	0.000	1.000	0.000
		Subtotal	0.000	1.346		6.998		0.000		6.998	0.000	8.344	0.000

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** CBRN DRS - DTE S - DR SKO	MIPR	ATEC Alexandria, VA	0.000	2.300	Jan 2010	2.696	Jan 2011	0.000		2.696	0.000	4.996	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
DTE S - DR SKO Developmental Testing	MIPR	ATEC Alexandria, VA	0.000	2.819	Jan 2010	2.800	Jan 2011	0.000		2.800	0.000	5.619	0.000
DTE S - NTA Enhancements	MIPR	ATEC Alexandria, VA	0.000	0.000		11.800	Jan 2011	0.000		11.800	0.000	11.800	0.000
** JBPDS - DTE SB - New Identifier/Collector/ Detector developmental testing	C/CPFF	General Dynamics - Armament and Technical Charlotte, NC	0.000	1.689	Jan 2010	3.513	Jan 2011	0.000		3.513	0.000	5.202	0.000
OTE C - Identifier consumable testing	MIPR	JPM CBMS Ft Detrick, MD	0.000	0.450	Oct 2009	0.950	Oct 2010	0.000		0.950	0.000	1.400	0.000
** JCAD - DTE S - M4E1 JCAD Developmental Test	MIPR	Various	34.815	3.360	Jan 2010	0.000		0.000		0.000	0.000	38.175	0.000
OTE S - M4E1 JCAD Operational Test and Evaluation	MIPR	Various	4.980	1.510	Jan 2010	0.000		0.000		0.000	0.000	6.490	0.000
OTE S - M4E1 Multi-Service Operational Test and Evaluation	MIPR	Various	0.000	0.000		8.000	Jan 2011	0.000		8.000	0.000	8.000	0.000
** NGCSD - OTHT S - Test Methodology Development	MIPR	Various	0.000	3.615	Apr 2010	0.000		0.000		0.000	0.000	3.615	0.000
** NTA DETECT - DTE S - Developmental Test Mass Spectrometer	MIPR	ECBC APG, MD	0.000	8.252	Oct 2009	2.400	Oct 2010	0.000		2.400	0.000	10.652	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
** SSI NBCRS - OTHT SB - (CBMS) Developmental Testing	MIPR	Various	0.000	0.224	Jan 2010	0.955	Jan 2011	0.000		0.955	0.000	1.179	0.000
DTE C - (JCSD) Developmental Testing	MIPR	Various	0.000	0.000		1.086	Jan 2011	0.000		1.086	0.000	1.086	0.000
		Subtotal	39.795	24.219		34.200		0.000		34.200	0.000	98.214	0.000

Remarks

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** CBRN DRS - PM/ MS-S - Program Management and System Engineering Support	PO	JPM NBC CA APG, MD	0.000	0.718	Oct 2009	1.407	Oct 2010	0.000		1.407	0.000	2.125	0.000
PM/MS S - NTA Enhancements Program Management and System Engineering Support	PO	JPM NBC CA APG, MD	0.000	0.000		1.200	Oct 2010	0.000		1.200	0.000	1.200	0.000
	MIPR	JPM BD	2.446	0.938	Oct 2009	0.886	Oct 2010	0.000		0.886	0.000	4.270	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
** JBPDS - PM/MS S - Project Management		APG, MD											
PM/MS S - Project Management, JPEO MGMT	PO	JPEO CBD Falls Church, VA	0.000	0.982	Jan 2010	0.914	Jan 2011	0.000		0.914	0.000	1.896	0.000
** JCAD - PM/MS S - Joint Service Support	MIPR	Various	2.998	3.206	Jan 2010	1.733	Jan 2011	0.000		1.733	0.000	7.937	0.000
** MDAP SPRT - PM/MS SB - Management & Oversight	MIPR	Various	0.000	3.200	Jan 2010	2.155	Jan 2011	0.000		2.155	0.000	5.355	0.000
** NGCSD - PM/MS S - Program Management and Systems Engineering Support	MIPR	JPM NBC CA APG, MD	0.000	0.000		1.500	Oct 2010	0.000		1.500	0.000	1.500	0.000
PM/MS SB - Joint Service Combat Developer Support	MIPR	Various	0.000	0.000		0.400	Jan 2011	0.000		0.400	0.000	0.400	0.000
PM/MS S - Program Management and Systems Engineering Support	MIPR	JPEO-CBD Falls Church, VA	0.000	1.500	Jan 2010	0.750	Oct 2009	0.000		0.750	0.000	2.250	0.000
** NTA DETECT - PM/MS S - Program Management support	PO	JPEO Falls Church, VA	0.000	0.904	Jul 2010	3.857	Jul 2011	0.000		3.857	0.000	4.761	0.000
** SSI NBCRS - PM/MS S - (CBMS) Program	MIPR	JPM NBC CA APG, MD	0.000	1.184	Oct 2009	1.108	Oct 2010	0.000		1.108	0.000	2.292	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010 Cost	FY 2010 Award Date	FY 2011 Base Cost	FY 2011 Base Award Date	FY 2011 OCO Cost	FY 2011 OCO Award Date	FY 2011 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Management and Systems Engineering Support													
PM/MS S - (JCSD) Program Management and Systems Engineering Support	MIPR	JPM NBC CA APG, MD	0.000	1.000	Oct 2009	1.107	Oct 2010	0.000		1.107	0.000	2.107	0.000
PM/MS S - (SSI NBCRS) Program Management and Systems Engineering Support	MIPR	JPEO-CBD Falls Church, VA	0.000	1.500	Jan 2010	1.500	Oct 2010	0.000		1.500	0.000	3.000	0.000
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/STTR	MIPR	HQ AMC, Alexandria	0.000	0.952		0.000		0.000		0.000	0.000	0.952	0.000
		Subtotal	5.444	16.084		18.517		0.000		18.517	0.000	40.045	0.000

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	45.239	78.042		124.936		0.000		124.936	0.000	248.217	0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*		PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

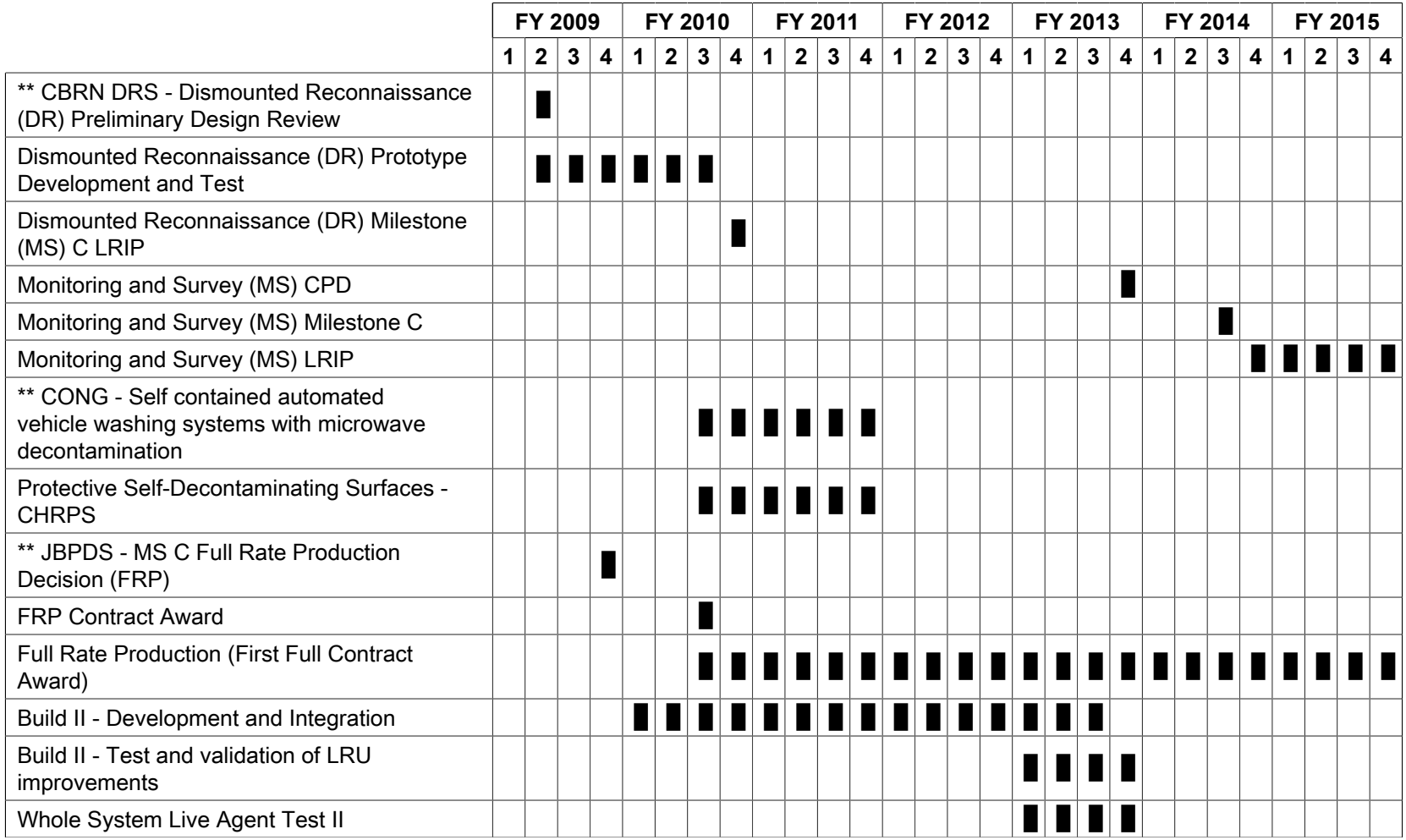

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*		PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

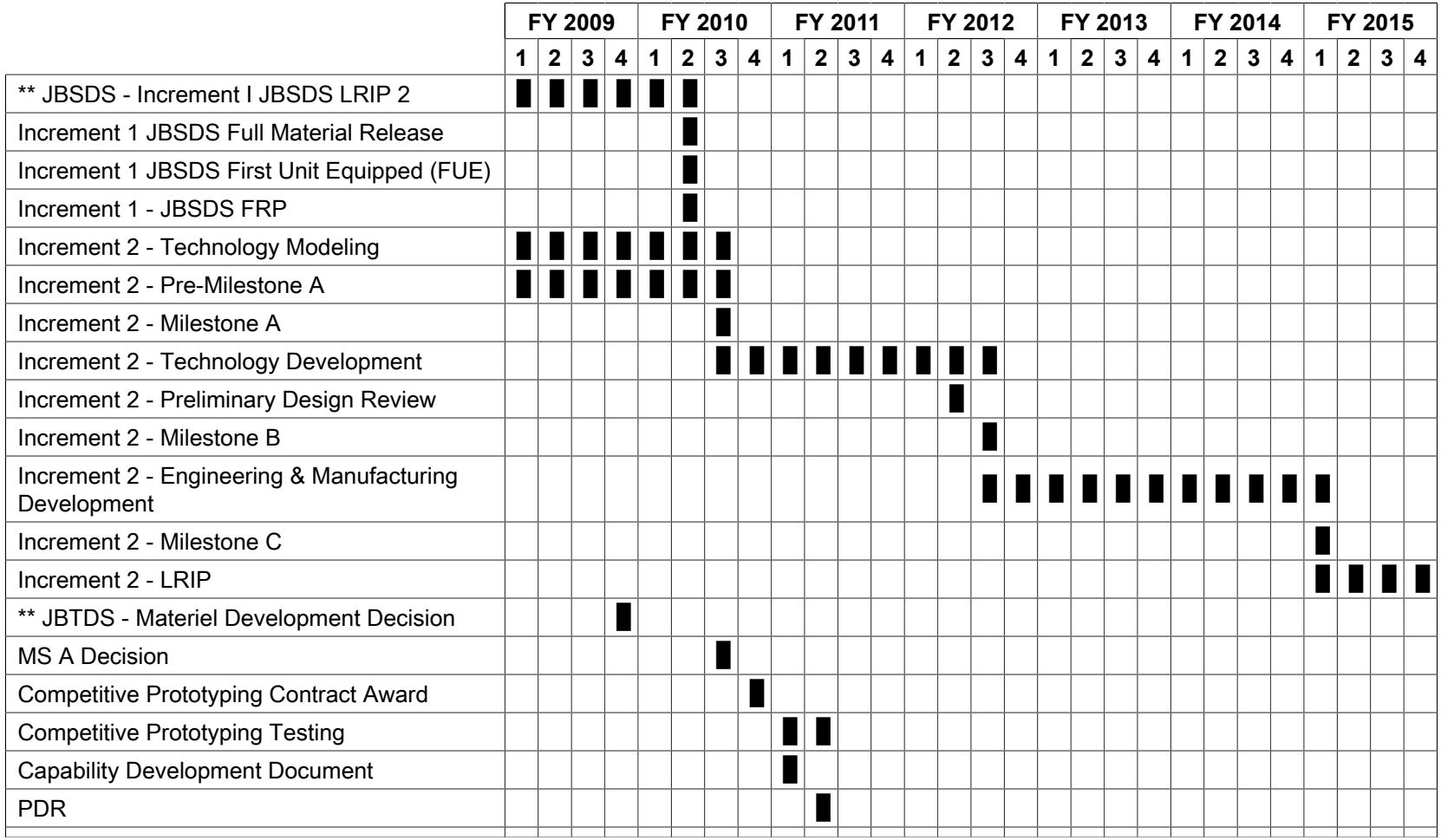

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*		PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

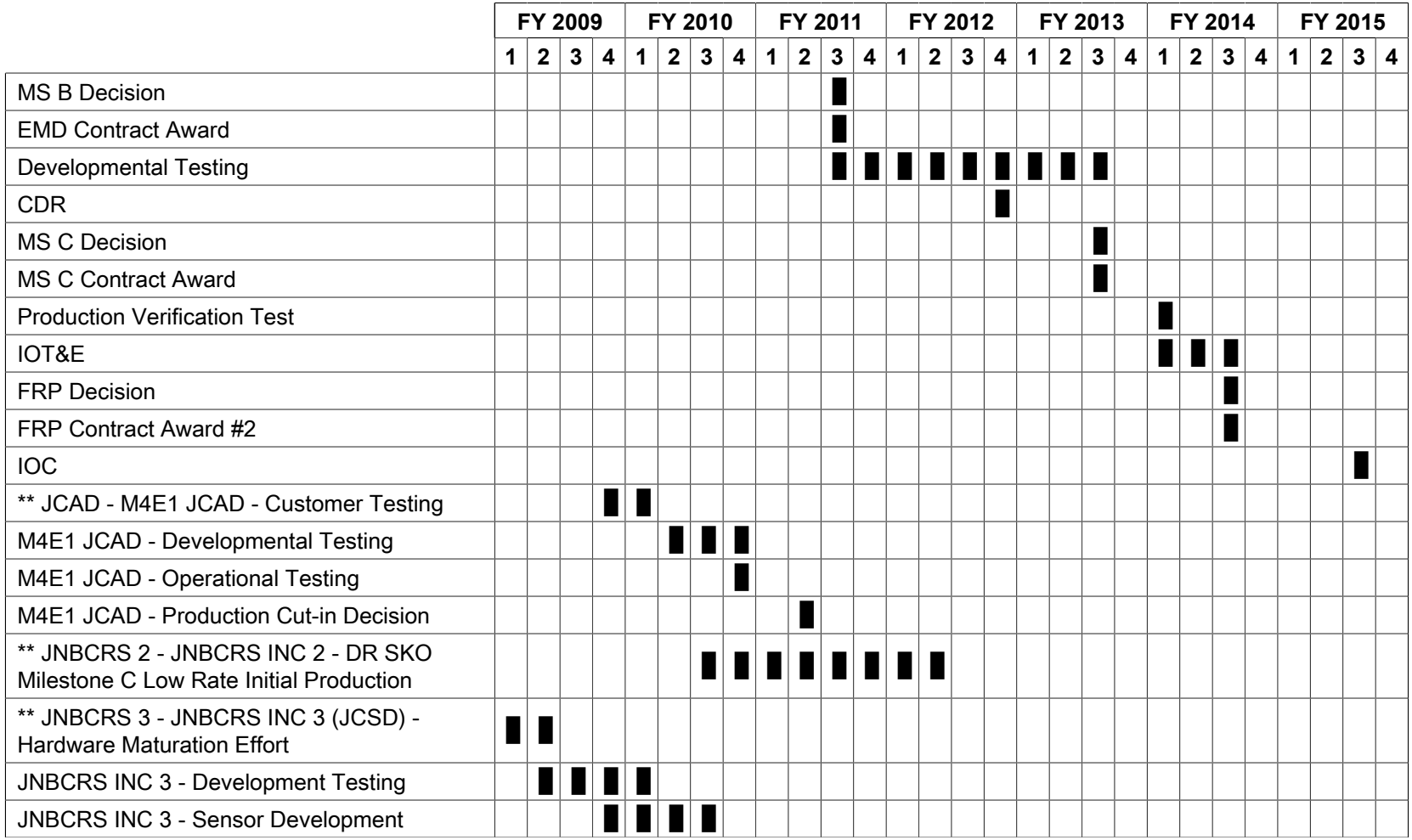

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*		PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

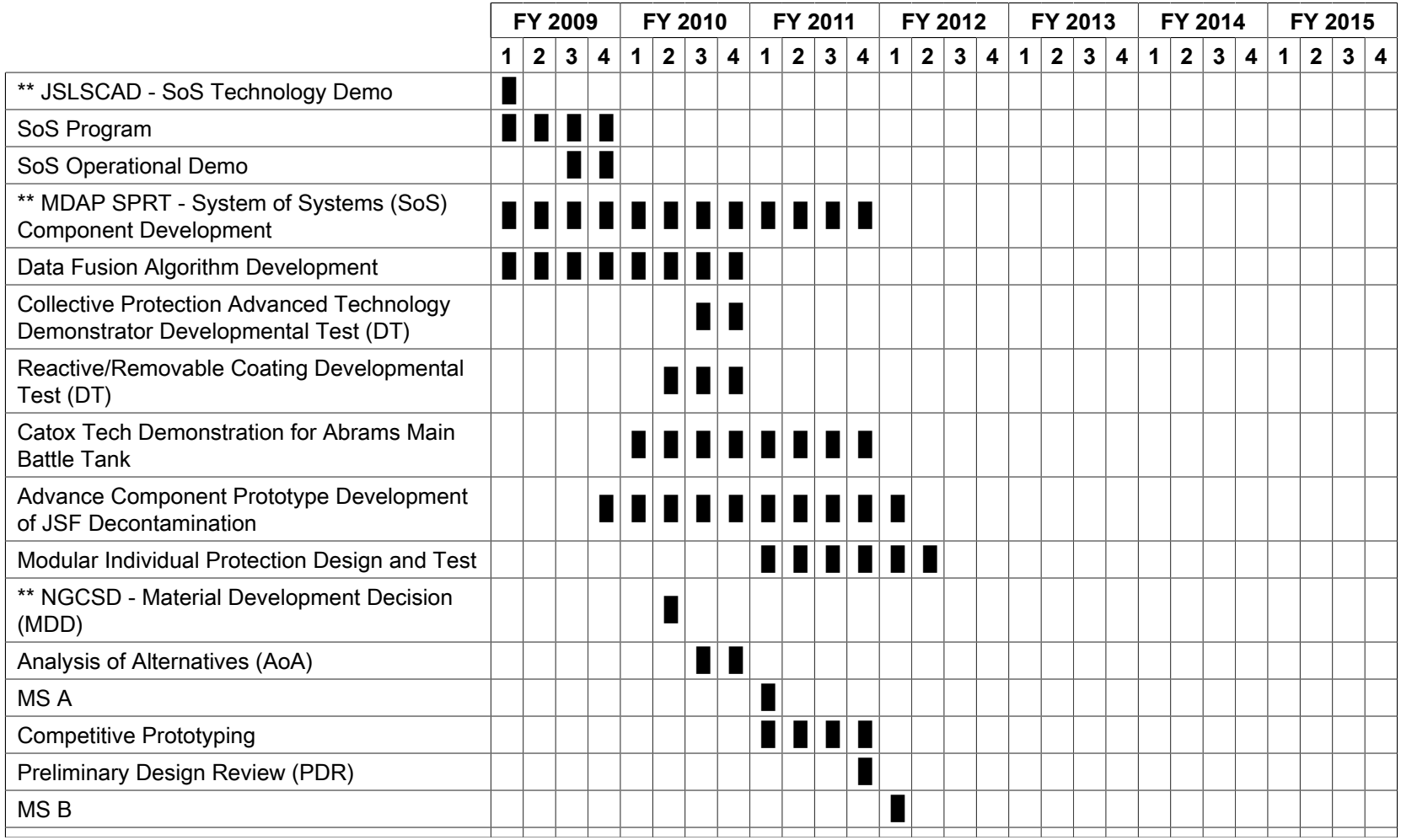

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*		PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

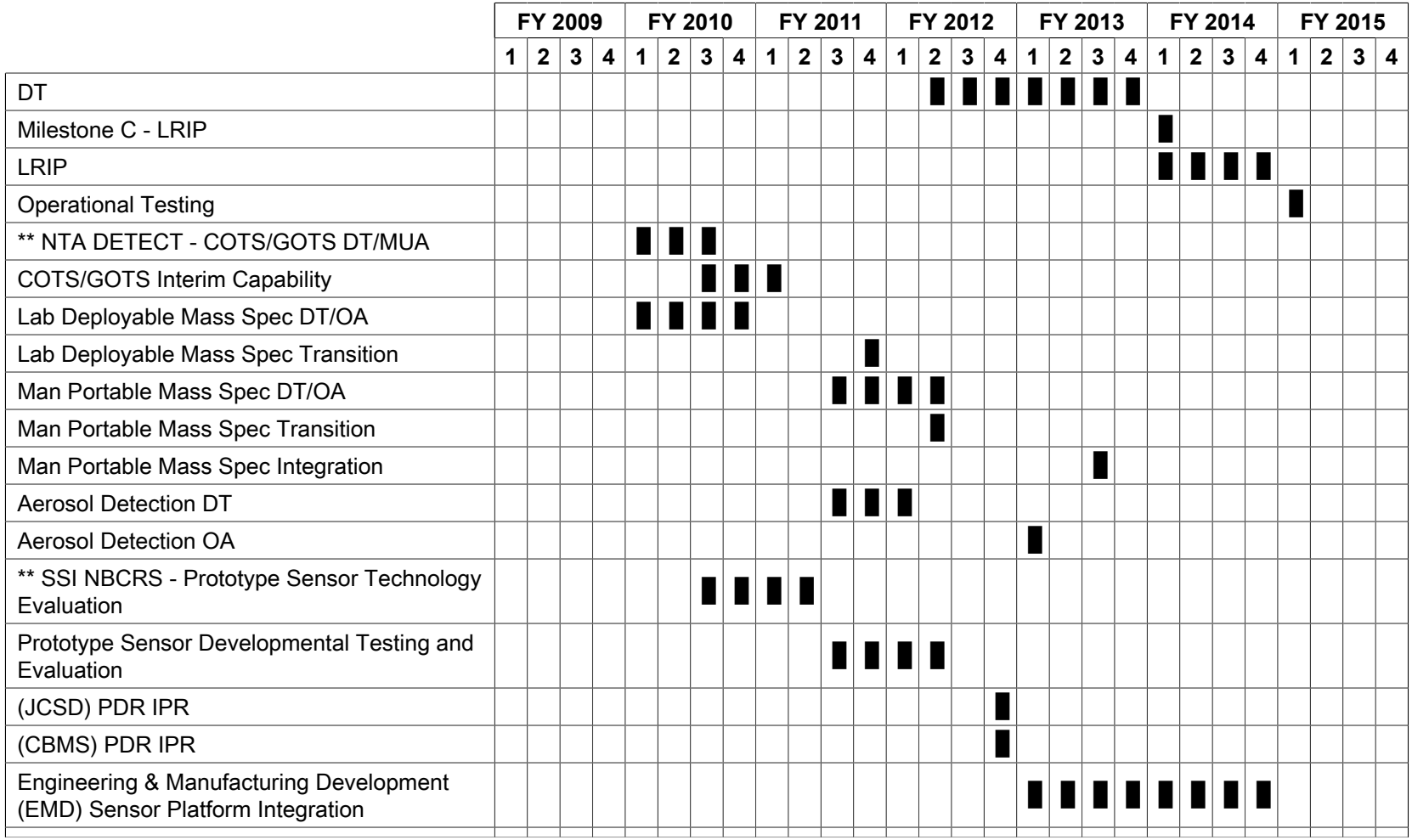

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

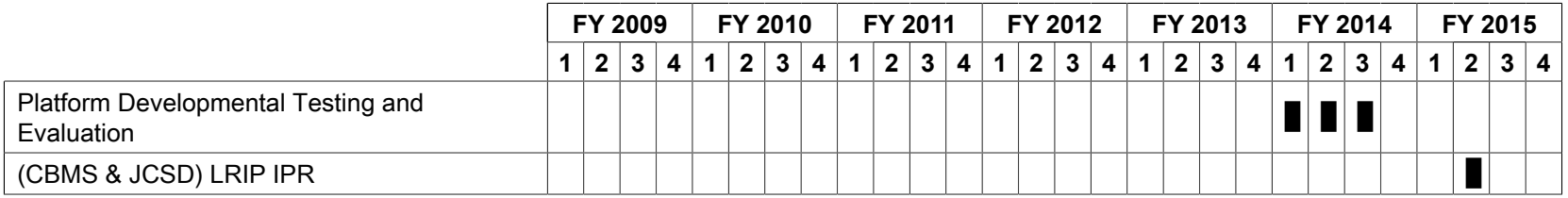

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** CA5: *CONTAMINATION AVOIDANCE (SDD)*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
** CBRN DRS - Dismounted Reconnaissance (DR) Preliminary Design Review	2	2009	2	2009
Dismounted Reconnaissance (DR) Prototype Development and Test	2	2009	3	2010
Dismounted Reconnaissance (DR) Milestone (MS) C LRIP	4	2010	4	2010
Monitoring and Survey (MS) CPD	4	2013	4	2013
Monitoring and Survey (MS) Milestone C	3	2014	3	2014
Monitoring and Survey (MS) LRIP	4	2014	2	2016
** CONG - Self contained automated vehicle washing systems with microwave decontamination	3	2010	4	2011
Protective Self-Decontaminating Surfaces - CHRPS	3	2010	4	2011
** JBPDS - MS C Full Rate Production Decision (FRP)	4	2009	4	2009
FRP Contract Award	3	2010	3	2010
Full Rate Production (First Full Contract Award)	3	2010	4	2016
Build II - Development and Integration	1	2010	3	2013
Build II - Test and validation of LRU improvements	1	2013	4	2013
Whole System Live Agent Test II	1	2013	4	2013
** JBSDS - Increment I JBSDS LRIP 2	2	2008	2	2010
Increment 1 JBSDS Full Material Release	2	2010	2	2010
Increment 1 JBSDS First Unit Equipped (FUE)	2	2010	2	2010
Increment 1 - JBSDS FRP	2	2010	2	2010

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

	Start		End	
Event	Quarter	Year	Quarter	Year
Increment 2 - Technology Modeling	4	2004	3	2010
Increment 2 - Pre-Milestone A	1	2008	3	2010
Increment 2 - Milestone A	3	2010	3	2010
Increment 2 - Technology Development	3	2010	3	2012
Increment 2 - Preliminary Design Review	2	2012	2	2012
Increment 2 - Milestone B	3	2012	3	2012
Increment 2 - Engineering & Manufacturing Development	3	2012	1	2015
Increment 2 - Milestone C	1	2015	1	2015
Increment 2 - LRIP	1	2015	2	2017
** JBTDS - Materiel Development Decision	4	2009	4	2009
MS A Decision	3	2010	3	2010
Competitive Prototyping Contract Award	4	2010	4	2010
Competitive Prototyping Testing	1	2011	2	2011
Capability Development Document	1	2011	1	2011
PDR	2	2011	2	2011
MS B Decision	3	2011	3	2011
EMD Contract Award	3	2011	3	2011
Developmental Testing	3	2011	3	2013
CDR	4	2012	4	2012
MS C Decision	3	2013	3	2013

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

	Start		End	
Event	Quarter	Year	Quarter	Year
MS C Contract Award	3	2013	3	2013
Production Verification Test	1	2014	1	2014
IOT&E	1	2014	3	2014
FRP Decision	3	2014	3	2014
FRP Contract Award #2	3	2014	3	2014
IOC	3	2015	3	2015
** JCAD - M4E1 JCAD - Customer Testing	4	2009	1	2010
M4E1 JCAD - Developmental Testing	2	2010	4	2010
M4E1 JCAD - Operational Testing	4	2010	4	2010
M4E1 JCAD - Production Cut-in Decision	2	2011	2	2011
** JNBCRS 2 - JNBCRS INC 2 - DR SKO Milestone C Low Rate Initial Production	3	2010	2	2012
** JNBCRS 3 - JNBCRS INC 3 (JCSD) - Hardware Maturation Effort	1	2008	2	2009
JNBCRS INC 3 - Development Testing	2	2009	1	2010
JNBCRS INC 3 - Sensor Development	4	2009	3	2010
** JSLSCAD - SoS Technology Demo	4	2008	1	2009
SoS Program	4	2008	4	2009
SoS Operational Demo	3	2009	4	2009
** MDAP SPRT - System of Systems (SoS) Component Development	2	2007	4	2011
Data Fusion Algorithm Development	2	2007	4	2010
Collective Protection Advanced Technology Demonstrator Developmental Test (DT)	3	2010	4	2010

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** CA5: *CONTAMINATION AVOIDANCE (SDD)*

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
Reactive/Removable Coating Developmental Test (DT)	2	2010	4	2010
Catox Tech Demonstration for Abrams Main Battle Tank	1	2010	4	2011
Advance Component Prototype Development of JSF Decontamination	4	2009	1	2012
Modular Individual Protection Design and Test	1	2011	2	2012
** NGCSD - Material Development Decision (MDD)	2	2010	2	2010
Analysis of Alternatives (AoA)	3	2010	4	2010
MS A	1	2011	1	2011
Competitive Prototyping	1	2011	4	2011
Preliminary Design Review (PDR)	4	2011	4	2011
MS B	1	2012	1	2012
DT	2	2012	4	2013
Milestone C - LRIP	1	2014	1	2014
LRIP	1	2014	4	2014
Operational Testing	1	2015	1	2015
** NTA DETECT - COTS/GOTS DT/MUA	1	2010	3	2010
COTS/GOTS Interim Capability	3	2010	1	2011
Lab Deployable Mass Spec DT/OA	1	2010	4	2010
Lab Deployable Mass Spec Transition	4	2011	4	2011
Man Portable Mass Spec DT/OA	3	2011	2	2012
Man Portable Mass Spec Transition	2	2012	2	2012

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CA5: *CONTAMINATION AVOIDANCE (SDD)*

	Start		End	
Event	Quarter	Year	Quarter	Year
Man Portable Mass Spec Integration	3	2013	3	2013
Aerosol Detection DT	3	2011	1	2012
Aerosol Detection OA	1	2013	1	2013
** SSI NBCRS - Prototype Sensor Technology Evaluation	3	2010	2	2011
Prototype Sensor Developmental Testing and Evaluation	3	2011	2	2012
(JCSD) PDR IPR	4	2012	4	2012
(CBMS) PDR IPR	4	2012	4	2012
Engineering & Manufacturing Development (EMD) Sensor Platform Integration	1	2013	4	2014
Platform Developmental Testing and Evaluation	1	2014	3	2014
(CBMS & JCSD) LRIP IPR	2	2015	2	2015

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CM5: *HOMELAND DEFENSE (SDD)*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
CM5: *HOMELAND DEFENSE (SDD)*	3.897	8.638	1.166	0.000	1.166	3.822	0.000	2.361	2.413	Continuing	Continuing
Quantity of RDT&E Articles	0	0	3		3	0	0	0	0		

A. Mission Description and Budget Item Justification

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

The CB Installation Protection Program (CBIPP) supports the development of analytical methodologies to expand/enhance the operational capabilities of currently fielded CBRN detection, identification and protection technologies against emerging threats to include Toxic Industrial Chemicals (TICs), Chemical Warfare Agents (CWAs), and Biological Warfare Agents (BWAs). Detection and identification of these substances is currently difficult and time-consuming. Current systems lack extensive libraries to support rapid identification. Identification may also involve multiple, expensive technologies. The ability to rapidly detect and identify a TIC is essential to effectively control and mitigate its effects, thus protecting personnel. This program also supports the evaluation of emerging CBRN detection, identification, information management and decision support technologies to DoD response units to maintain required state of the art capabilities.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
1) CALS	0.000	0.499	0.150	0.000	0.150

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CM5: *HOMELAND DEFENSE (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Initiate Program Office planning and programming. *FY 2011 Base Plans:* Continue Program Office planning and programming.					
2) CALS *FY 2010 Plans:* Initiate System Engineering and Logistics Support. *FY 2011 Base Plans:* Continue System Engineering and Logistics Support.	0.000	0.971	0.150	0.000	0.150
3) CALS *FY 2010 Plans:* Initiate Subsystem Design and Development - Open Architecture Design Analytics and Laboratory Information Management. *FY 2011 Base Plans:* Complete Subsystem Design and Development - Open Architecture Design Analytics and Laboratory Information Management.	0.000	3.464	0.000	0.000	0.000
4) CALS *FY 2010 Plans:* Initiate/conduct Developmental Testing.	0.000	0.732	0.566	0.000	0.566

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CM5: *HOMELAND DEFENSE (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Conduct Developmental Testing.					
5) CALS *FY 2011 Base Plans:* Conduct system prototype refurbishment and refinement.	0.000	0.000	0.300	0.000	0.300
6) CBIPP *FY 2009 Accomplishments:* Supported development of analytical methodologies to expand CBRN detection, identification, and protection capabilities.	0.750	0.000	0.000	0.000	0.000
7) CBIPP *FY 2010 Plans:* Supports the development of methodologies used to perform CBRN detection and evaluation under various environmental conditions.	0.000	1.091	0.000	0.000	0.000
8) CBIPP *FY 2010 Plans:* Supports the evaluation of CBRN detection, identification, information management and decision support technologies.	0.000	1.770	0.000	0.000	0.000
9) CBIPP *FY 2009 Accomplishments:* Supported the evaluation of CBRN detection, identification, information management, and decision support technologies.	1.697	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CM5: *HOMELAND DEFENSE (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
10) WMD CST *FY 2009 Accomplishments:* Conducted Program Office planning and programming.	0.450	0.000	0.000	0.000	0.000
11) WMD CST *FY 2009 Accomplishments:* Conducted Systems Engineering and Logistics Support.	1.000	0.000	0.000	0.000	0.000
12) SBIR *FY 2010 Plans:* Small Business Innovative Research.	0.000	0.111	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	3.897	8.638	1.166	0.000	1.166

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• JS0004: *WMD - CIVIL SUPPORT TEAMS (WMD CST)*	8.300	11.765	39.862		39.862	33.402	37.398	44.817	47.159	Continuing	Continuing
• JS0500: *CB INSTALLATION/ FORCE PROTECTION PROGRAM (FORCE PROT)*	80.103	53.623	50.773		50.773	60.324	59.836	57.840	54.455	Continuing	Continuing

D. Acquisition Strategy

CALS

The Common Analytical Laboratory System (CALS) will follow an incremental approach designed to address known joint force capability requirements for Chemical, Biological, Radiological and Nuclear (CBRN) detection which includes Toxic Industrial Chemicals (TICs), Toxic Industrial Materials (TIMs), Chemical Warfare Agents

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CM5: *HOMELAND DEFENSE (SDD)*

(CWAs), Biological Warfare Agents (BWAs). CALS will address situational awareness by leveraging efforts underway with JPEO-CBD to the extent possible. CALS will accommodate these component requirements within a modular and scalable concept framework.

FORCE PROT

The Special Study for System Methodology Development will support the development of analytical methodologies to expand/enhance the operational capabilities of currently fielded CBRN detection, identification and protection technologies against emerging threats to include TIC, CWA, and BWA threats.

The Special Study for CBRN Defense Technology Evaluation will support the evaluation of emerging CBRN detection, identification, information management and decision support technologies to DoD response units to maintain required state-of-the-art capabilities.

WMD CST

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

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CM5: *HOMELAND DEFENSE (SDD)*

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** CALS - HW SB - Analytical Subsystem Design and Development	C/CPIF	TBD	0.000	2.252	Jan 2010	0.000		0.000		0.000	0.000	2.252	0.000
SW SB - Information Technology Subsystem Development	C/CPIF	TBD	0.000	1.042	Jan 2010	0.000		0.000		0.000	0.000	1.042	0.000
HW S - Analytical Protocol Development	MIPR	TBD	0.000	0.170	Apr 2010	0.000		0.000		0.000	0.000	0.170	0.000
HW S - CALS Prototype Systems	C/CPIF	TBD	0.000	0.000		0.300	Jul 2011	0.000		0.300	0.000	0.300	0.000
** FORCE PROT - HW S - System Protocol Development	C/FP	TBD	0.000	1.091	Oct 2009	0.000		0.000		0.000	0.000	1.091	0.000
		Subtotal	0.000	4.555		0.300		0.000		0.300	0.000	4.855	0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CM5: *HOMELAND DEFENSE (SDD)*

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** CALS - ES S - Engineering Support	MIPR	Edgewood Chemical and Biological Center Edgewood. MD	0.000	0.499	Oct 2009	0.150	Jan 2011	0.000		0.150	0.000	0.649	0.000
		Subtotal	0.000	0.499		0.150		0.000		0.150	0.000	0.649	0.000

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** CALS - DTE SB - Analytical System Developmental Testing	MIPR	TBD	0.000	0.732	Apr 2010	0.000		0.000		0.000	0.000	0.732	0.000
DTE S - System Developmental Testing	MIPR	TBD	0.000	0.000		0.566	Jul 2011	0.000		0.566	0.000	0.566	0.000
** FORCE PROT - OTHT C - System Component Testing	C/FP	TBD	0.000	1.770	Oct 2009	0.000		0.000		0.000	0.000	1.770	0.000
		Subtotal	0.000	2.502		0.566		0.000		0.566	0.000	3.068	0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CM5: *HOMELAND DEFENSE (SDD)*

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** CALS - PM/MS HW - Program Office - Planning and Programming	MIPR	Edgewood Chemical Biological Center Edgewood, MD	0.000	0.971	Oct 2009	0.150	Jan 2011	0.000		0.150	0.000	1.121	0.000
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/STTR	MIPR	HQ AMC, Alexandria	0.000	0.111		0.000		0.000		0.000	0.000	0.111	0.000
		Subtotal	0.000	1.082		0.150		0.000		0.150	0.000	1.232	0.000

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	8.638		1.166		0.000		1.166	0.000	9.804	0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*		PROJECT CM5: *HOMELAND DEFENSE (SDD)*

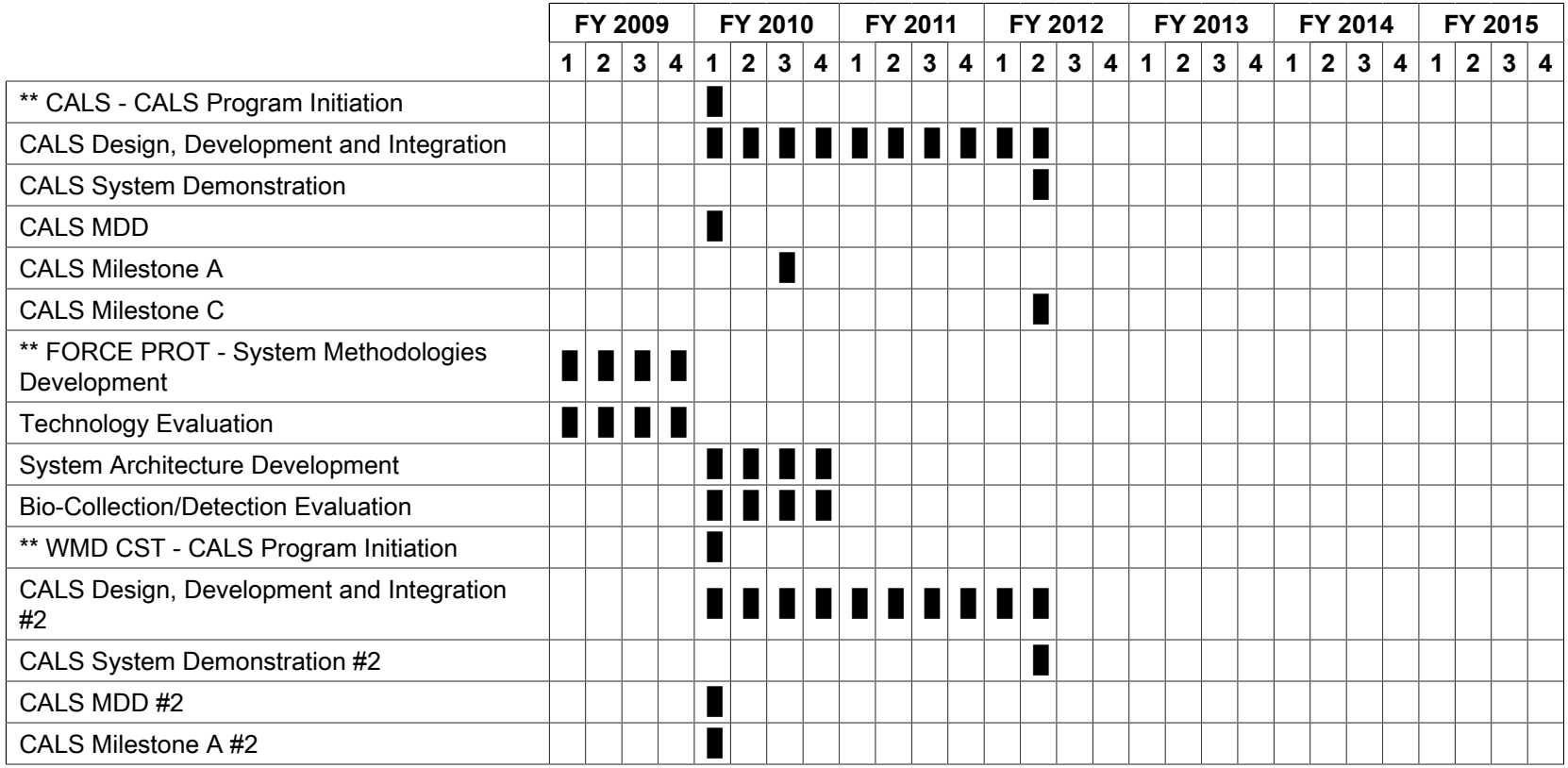

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** CM5: *HOMELAND DEFENSE (SDD)*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
** CALS - CALS Program Initiation	1	2010	1	2010
CALS Design, Development and Integration	1	2010	2	2012
CALS System Demonstration	2	2012	2	2012
CALS MDD	1	2010	1	2010
CALS Milestone A	3	2010	3	2010
CALS Milestone C	2	2012	2	2012
** FORCE PROT - System Methodologies Development	1	2009	4	2009
Technology Evaluation	1	2009	4	2009
System Architecture Development	1	2010	4	2010
Bio-Collection/Detection Evaluation	1	2010	4	2010
** WMD CST - CALS Program Initiation	1	2010	1	2010
CALS Design, Development and Integration #2	1	2010	2	2012
CALS System Demonstration #2	2	2012	2	2012
CALS MDD #2	1	2010	1	2010
CALS Milestone A #2	1	2010	1	2010

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CO5: *COLLECTIVE PROTECTION (SDD)*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
CO5: *COLLECTIVE PROTECTION (SDD)*	13.323	12.002	18.459	0.000	18.459	11.671	10.267	7.835	0.000	Continuing	Continuing
Quantity of RDT&E Articles	0	72	0		0	0	72	0	0		

A. Mission Description and Budget Item Justification

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

Systems funded under this project are: Joint Expeditionary Collective Protection (JECP).

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
1) JECP - Engineering and Manufacturing Development (EMD) Contract	3.630	3.212	1.330	0.000	1.330
Engineering and Manufacturing Development Contract to design, develop, integrate and test the prototype Joint Expeditionary Collective Protection (JECP) Family of Systems (FoS) that meet the requirements of the Capability Development Document (CDD) and System Performance Specification (SPS).					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CO5: *COLLECTIVE PROTECTION (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Completed preliminary design activities including updates to trade studies based on the outcome of the System Requirements Review (SRR). Developed preliminary drawings and 3D models of components and subsystems. Finalized the allocated baseline comprised of the Requirements Allocation Matrix, Physical Interfaces Document (which graphically depicted each system's physical interfaces), system and component diagrams (which provided functional and physical characteristics) and Configuration Items (CI) list (which defined each distinct CI and its components). Conducted Preliminary Design Review (PDR) and initiated detailed design activities. Conducted Contractor component level testing for risk reduction and component down-select. Manufactured test items for Government agent and simulant component level Developmental Test (DT). *FY 2010 Plans:* Continue detailed design activities; conduct Critical Design Review (CDR). Manufacture prototype systems for Contractor system level DT. Begin Contractor system level DT (including environmental and electromagnetic interference testing). Begin manufacture of prototypes for Government system level DT. Prototypes consist of: 24 tent kits (4 configurations, 6 units each) at approximately $75 thousand each; 12 structure kits at approximately $56 thousand each; 6 stand alone (SA) man-portable at approximately $7 thousand each; 6 SA small at approximately $22 thousand each; 6 SA medium at approximately $67 thousand each; 6 SA large at approximately $167 thousand each; 9 single person airlocks at approximately $5 thousand each; and 9 multi-person airlocks at approximately $30 thousand each. Estimated total cost of all prototypes: $4.365 million. *FY 2011 Base Plans:* Complete manufacture of prototypes for Government system level DT. Provide support for Government system level DT of all 9 configurations of the FoS including training, maintenance, troubleshooting and repair.					
2) JECP - Simulant Select and Test Fixture Validation	0.300	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CO5: *COLLECTIVE PROTECTION (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Identify simulants to be used during Government system level developmental testing (DT). *FY 2009 Accomplishments:* Completed testing with selected simulants, Verification & Validation (V&V) of the Near Real Time (NRT) fixtures and started the development of the final report.					
3) JECP - Government Component Level Developmental Testing Conduct Government component level developmental testing (DT) using agent and simulant to determine compliance with SPS protection requirements. Used test data from agent and simulant testing to establish a defendable agent to simulant relationship (ASR). Develop component level empirical models to provide to the JECP System Performance Model (SPM). *FY 2009 Accomplishments:* Developed Design of Experiment (DoE) to ensure optimum results are achieved from the Government component level DT that is conducted. Began Government component level DT consisting of Barrier Materials Swatch Testing, Air-Purification System Testing and Chemical/Biological (CB) Closures Testing. *FY 2010 Plans:* Complete Barrier Materials Swatch Testing, Air-Purification System Testing and CB Closures Testing. Establish the ASR and develop component level empirical models to provide to the JECP SPM team.	2.616	2.216	0.000	0.000	0.000
4) JECP - Test Support Equipment Procure test support equipment. *FY 2009 Accomplishments:* Procured various fielded tents needed to test the tent kits. Tents procured included the Alaska Small Shelter System, the Modular Command Post System, the TEMPER Tent and the Base-X 305 tent.	1.100	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CO5: *COLLECTIVE PROTECTION (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
5) JECP - Government System Level Testing Conduct Government system level Developmental Testing (DT) and combined DT/Operational Testing (OT) of the Family of Systems (FoS) to be conducted both in the chamber and in the field (littoral and desert environments). *FY 2010 Plans:* Develop Design of Experiment (DoE) to ensure optimum results are achieved from the Government system level Developmental Testing (DT) that is conducted. Begin Non-CB mode Operational Testing (OT) of the Family of Systems (FoS) in littoral and desert environments. *FY 2011 Base Plans:* Finish Non-CB mode OT. Begin Reliability and Maintainability Analysis, static and dynamic system verification testing, and combined DT/OT system field challenge on the FoS.	0.000	1.345	9.310	0.000	9.310
6) JECP - Enhanced M98 Filter Set Testing Enhanced M98 Filter Set testing is an effort to validate and test improved filtration technology. *FY 2011 Base Plans:* Enhanced M98 Filter Set testing is an effort to validate and test improved filtration technology. New sorbent materials have been identified as potential alternate sources to the currently fielded ASZM-T that is used in the gas filter of the M98. Tests will be performed to compare the baseline sorbent and the new sorbents.	0.000	0.000	2.350	0.000	2.350
7) JECP - Systems Engineering IPT Provide technical direction to the Contractor team. Establish and maintain a robust and disciplined Systems Engineering process IAW DoD and JPEO-CBD policy and guidance.	0.942	1.061	0.750	0.000	0.750

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CO5: *COLLECTIVE PROTECTION (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Established the Functional baseline by developing and placing the System Performance Specification (SPS) and the Requirements Traceability Management (RTM) under configuration control. Planned and conducted the System Functional Review. Identified new risks and managed existing risks as delegated. Identified Environmental Safety Occupational Health (ESOH) hazards and managed corresponding ESOH hazard risks. Assisted in HSI assessments and reviews. *FY 2010 Plans:* Update and maintain the RTM to track when requirements have been verified as test results become available. Participate in Configuration Control Board as the detailed design evolves and drawings are developed and updated. *FY 2011 Base Plans:* Develop, update and/or review program documentation in preparation for MS C (as documented above for MS B).					
8) JECP - Test and Evaluation IPT Lead and oversee all aspects of the JECP Integrated Test (IT) program *FY 2009 Accomplishments:* Identified requirements for a System Performance Model (SPM) through development of the JECP SPM Software Requirement Spec. Coordinated model development. Conducted integrated test planning, coordination, and test readiness reviews associated with contractor and government component level testing. Developed and/or reviewed test plans, procedures and reports and participated in test events as needed. Developed and/or reviewed Design of Experiment and associated Test Matrices in support of government component level DT and models as necessary. Reviewed contractor component level test data and reports (including reliability test results and KPP failures).	1.100	0.940	1.000	0.000	1.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CO5: *COLLECTIVE PROTECTION (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Conduct integrated test planning, coordination, and test readiness reviews associated with government component level testing and contractor and government system level testing. Develop test plans, procedures and reports and participate in test events as needed. Develop Design of Experiment and associated Test Matrices in support of government system level testing. Review component level test data and reports (including reliability test results and KPP failures). *FY 2011 Base Plans:* Develop and/or review test plans, procedures and reports and participate in government system level DT and combined DT/OT events as needed. Develop, update and/or review program documentation in preparation for MS C (as documented above for MS B).					
9) JECP - Integrated Logistics Support IPT Oversee and provide supportability planning guidance to the EMD contractor in addressing logistic support elements including maintenance philosophy, manpower & personnel, supply support, Tech Data, support & test equipment, training and training support. *FY 2009 Accomplishments:* Initiated a Business Case Analysis (BCA) to determine the scope of implementing Performance Based Logistics (PBL) and evaluate whether organic or Contractor Logistics Support is the most effective approach. *FY 2010 Plans:* Continue the Business Case Analysis (BCA) to determine the scope of implementing PBL. Continue evaluation as to whether organic or Contractor Logistics Support is the most effective approach. Begin an analysis to identify surge requirements and industries ability to support.	0.469	0.650	0.500	0.000	0.500

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CO5: *COLLECTIVE PROTECTION (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Complete the analysis to identify surge requirements and industries ability to support. Report out at MS C the results of the BCA and surge requirements analysis. Develop, update and/or review program documentation in preparation for MS C (as documented above for MS B).					
10) JECP - Program Management and Contract Administration Oversee the day-to-day program execution including guidance and direction to the JECP IPTs, financial management and tracking, budget preparation, schedule planning and monitoring, and JPEO-CBD/ JPM-ColPro reporting requirements including but not limited to weekly highlight reports, monthly Acquisition Status Reports and quarterly program review briefs. Perform EMD contract management and administration. *FY 2009 Accomplishments:* Planned and prepared for SRR, SFR and PDR. *FY 2010 Plans:* Focus on CDR and Post-CQT review planning and preparation. *FY 2011 Base Plans:* Focus on MS C planning and preparation.	1.501	1.180	1.132	0.000	1.132
11) JECP - Management Oversight Provide strategic tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support. *FY 2009 Accomplishments:* Provided strategic tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support.	1.665	1.243	2.087	0.000	2.087

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Provide strategic tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support. *FY 2011 Base Plans:* Provide strategic tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support.					
12) SBIR *FY 2010 Plans:* Small Business Innovative Research.	0.000	0.155	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	13.323	12.002	18.459	0.000	18.459

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• JN0014: *COLLECTIVE PROT SYS AMPHIB BACKFIT (CPS BKFT)*	18.219	11.963	5.869		5.869	0.000	0.000	0.000	0.000	Continuing	Continuing
• JP0911: *CP FIELD HOSPITALS (CPFH)*	5.333	3.435	1.929		1.929	3.498	1.539	0.000	0.000	Continuing	Continuing
• JP1111: *JOINT EXPEDITIONARY COLLECTIVE PROTECTION (JECP)*	0.000	0.000	0.000		0.000	0.000	4.714	20.863	44.885	Continuing	Continuing
	14.121	17.438	19.744		19.744	20.241	20.683	29.265	29.478	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• R12301: *CB PROTECTIVE SHELTER (CBPS)*											

D. Acquisition Strategy

JECP

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

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CO5: *COLLECTIVE PROTECTION (SDD)*	

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** JECP - HW S - Prototype Development	C/CPIF	Science Applications International Corporation San Diego, CA	8.477	3.212	Jan 2010	1.330	Jan 2011	0.000		1.330	0.000	13.019	0.000
		Subtotal	8.477	3.212		1.330		0.000		1.330	0.000	13.019	0.000

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** JECP - ES S - Systems Engineering IPT	MIPR	Various	3.234	1.061	Oct 2009	0.750	Oct 2010	0.000		0.750	0.000	5.045	0.000
ILS S - Integrated Logistics IPT	MIPR	Various	0.851	0.650	Oct 2009	0.500	Oct 2010	0.000		0.500	0.000	2.001	0.000
		Subtotal	4.085	1.711		1.250		0.000		1.250	0.000	7.046	0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
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Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** JECP - OTHT SB - Test & Evaluation IPT	MIPR	Various	3.645	0.940	Oct 2009	1.000	Oct 2010	0.000		1.000	0.000	5.585	0.000
OTHT SB - Prototype Performance Specification Testing	MIPR	Various	2.616	2.216	Oct 2009	0.000		0.000		0.000	0.000	4.832	0.000
DTE S - Prototype Production Qualification Testing	MIPR	Various	0.000	1.345	Jul 2010	9.310	Oct 2010	0.000		9.310	0.000	10.655	0.000
OTHT C - M98 Filter Set	MIPR	Various	0.000	0.000		2.350	Jan 2011	0.000		2.350	0.000	2.350	0.000
		Subtotal	6.261	4.501		12.660		0.000		12.660	0.000	23.422	0.000

Remarks

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** JECP - PM/MS S - APMO Support	MIPR	NSWC Dahlgren Dahlgren, VA	2.316	1.034	Oct 2009	1.000	Oct 2010	0.000		1.000	0.000	4.350	0.000
PM/MS S - APMO Contractor Support	C/FP	Solutions Development Corporation Dahlgren, VA	0.428	0.146	Jan 2010	0.132	Jan 2011	0.000		0.132	0.000	0.706	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
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Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
PM/MS S - JPM-ColPro Support	MIPR	NSWC Dahlgren Dahlgren, VA	0.673	0.570	Oct 2009	1.501	Oct 2010	0.000		1.501	0.000	2.744	0.000
PM/MS S - JPEO-CBD Support	MIPR	JPEO CBD Falls Church, VA	3.116	0.673	Oct 2009	0.586	Oct 2010	0.000		0.586	0.000	4.375	0.000
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/STTR	MIPR	HQ AMC, Alexandria	0.000	0.155		0.000		0.000		0.000	0.000	0.155	0.000
		Subtotal	6.533	2.578		3.219		0.000		3.219	0.000	12.330	0.000

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	25.356	12.002		18.459		0.000		18.459	0.000	55.817	0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT CO5: *COLLECTIVE PROTECTION (SDD)*	

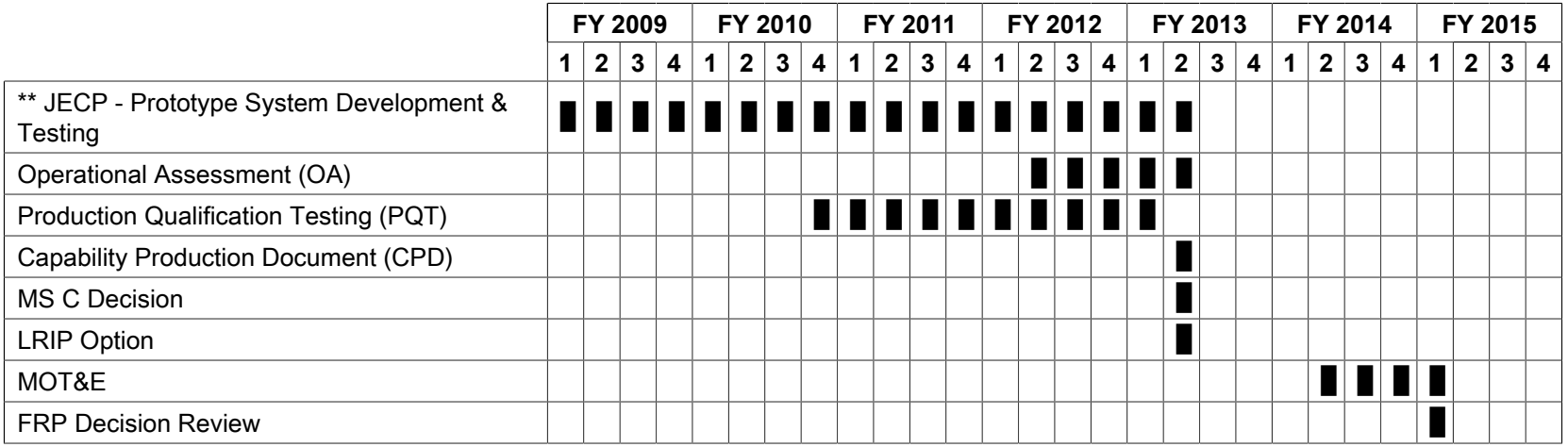

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** CO5: *COLLECTIVE PROTECTION (SDD)*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
** JECP - Prototype System Development & Testing	4	2008	2	2013
Operational Assessment (OA)	2	2012	2	2013
Production Qualification Testing (PQT)	4	2010	1	2013
Capability Production Document (CPD)	2	2013	2	2013
MS C Decision	2	2013	2	2013
LRIP Option	2	2013	2	2013
MOT&E	2	2014	1	2015
FRP Decision Review	1	2015	1	2015

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*				PROJECT DE5: *DECONTAMINATION SYSTEMS (SDD)*			
COST ($ in Millions)	**FY 2009 Actual**	**FY 2010 Estimate**	**FY 2011 Base Estimate**	**FY 2011 OCO Estimate**	**FY 2011 Total Estimate**	**FY 2012 Estimate**	**FY 2013 Estimate**	**FY 2014 Estimate**	**FY 2015 Estimate**	**Cost To Complete**	**Total Cost**
DE5: *DECONTAMINATION SYSTEMS (SDD)*	16.611	36.786	28.499	0.000	28.499	23.944	25.770	14.701	5.928	Continuing	Continuing
Quantity of RDT&E Articles	0	14	13		13	0	0	0	0		

A. Mission Description and Budget Item Justification

This project funds System Development and Demonstration (SDD) for: (1) Decontamination Competitive Prototype; (2) the Decontamination Family of Systems (DFoS); (3) the Human Remains Decontamination System (HRDS); (4) Joint Platform Interior Decon (JPID); and (5) the Joint Service Sensitive Equipment Decontamination (JSSED).

The Decontamination Competitive Prototype (DC PROTO) effort will support the JSSED and JPID programs of record by performing risk mitigation and will identify a solution for the Joint Strike Fighter (JSF) peculiar interior/exterior decontamination requirement and to support their Live Fire testing in FY13. DC PROTO will evaluate prototype systems that will demonstrate the best decontamination technology for JSSED/JPID to increase sensitive equipment and platform interior decontamination capabilities. DC PROTO will evaluate other technologies that can be inserted into the JSSED/JPID programs to increase the capability of the selected JSSED/JPID technology while supporting the JSF test requirements.

The Decontamination Family of Systems (DFoS) program facilitates the rapid transition of mature Science & Technology research developments to existing JPM - Decon Programs of Record (PoR) and guides S&T community efforts toward meeting the needs of the Warfighter. Leveraging the outcomes of the Material Development Decision (MDD) (3rd Qtr FY10) directed Analysis of Alternatives, DFoS will develop a Family of Systems, to include equipment, to improve decontamination processes and decontaminant solutions to meet the capability gaps for decontaminating NTA and chemical and biological warfare agents from personnel, equipment, vehicle, ship, and aircraft interiors/exteriors, terrain and fixed facility interiors/exteriors.

The Human Remains Decontamination System (HRDS), Increment I, will utilize mature technologies to provide the capability for safe intra-theater handling and storage of Contaminated Human Remains (CHR) associated with a Chemical Warfare Agent (CWA) event. HRDS will be a Family-of-Systems (FoS) designed to leverage differing technology and requirements readiness across three systems: (1) a Contaminated Human Remains Pouch (CHRP) to support the initial recovery of CHR from Point of Fatality to a Mortuary Affairs Decontamination Collection Point (MADCP), (2) a Contaminated Remains Transfer Case System (CHRTS) capability to store or transport CHR post MADCP operations, and (3) a Remains Decontamination System (RDS) to support the capability to store or transport CHR post MADCP operations. The HRDS will provide the Services the capability to: 1) Safely recover, handle, and transport contaminated human remains prior to decontamination at a Mortuary Affairs Decontamination Control Point (MADCP); 2) Enable mortuary affairs units to safely perform their mission with a critical task being that of extensively

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documenting decedent data and obtaining DNA samples to facilitate positive identification of remains; 3) Fully decontaminate human remains (external), and; 4) Safely allow transport of decontaminated human remains from the MADCP to a final destination in the continental United States for final disposition.

The Joint Service Sensitive Equipment Decontamination System (JSSED) and Joint Platform Interior Decontamination (JPID) programs are based on a single technology and are being executed together by the Joint Material Decontamination System (JMDS) program office. These systems will fill the capability to decontaminate chemical and biological warfare agents from individual sensitive equipment, vehicle/aircraft/building interiors and the sensitive equipment within and the associated cargo. The JSSED will provide the first ever capability to decontaminate chemical and biological warfare agents from individual sensitive equipment that are high value or critical sensitive individual electronics and optics that cannot be decontaminated using existing methods without damage. The JPID will provide first ever capability to decontaminate chemical and biological warfare agents from platform interiors such as the interiors of vehicle/aircraft/building and the sensitive equipment within and the associated cargo. These capabilities allow the saving and reuse of contaminated critical and high value assets and avoid costly replacement of those assets. Neither of these capabilities currently exists in DoD.

Protective Self-Decontaminating Surfaces - CHRPS (Congressional Interest Item): Prototype field validation tests of VRCKappler Chemical Biohazard Protective systems. Lab test bacterial infections, deceases and contaminated human remains pouches (CHRPs). Field and live test nerve gas and radiological agents.

Self Contained Automated Vehicle Washing Systems with Microwave Decontamination (Congressional Interest Item): Provide a large-vehicle washing and decontamination system with zero emissions to air or groundwater. Move from the prototype stage to full scale, portable decontamination wash down system.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
1) DC PROTO *FY 2010 Plans:* Conduct market survey/Industry Day/Sources Sought.	0.000	0.104	0.000	0.000	0.000
2) DC PROTO *FY 2010 Plans:* Select mature technologies capable of meeting JSSED and JPID requirements. Evaluate and test these technologies as compared against JSSED and JPID requirements. Conduct live agent efficacy and material compatibility testing.	0.000	8.657	0.000	0.000	0.000

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
3) DC PROTO *FY 2011 Base Plans:* Continue material compatibility test and conduct early operational assessment and system integration evaluations on selected technologies for multiple airframes, tactical vehicles and sensitive equipment.	0.000	0.000	5.484	0.000	5.484
4) DFS *FY 2009 Accomplishments:* Conducted Industry Day/Request for Information/Evaluation of commercially available decontaminants (decon); developed prototype decon kit.	0.490	0.000	0.000	0.000	0.000
5) DFS *FY 2009 Accomplishments:* Standardized non-traditional agent (NTA) test methodology for decon; designed/developed/ demonstrated prototype environmentally controlled test fixture capability.	1.710	0.000	0.000	0.000	0.000
6) DFS *FY 2010 Plans:* Initiate development and evaluation test efforts for Surfactant System Technology, and Contamination Indicator/Decontamination Assurance Spray (DAS).	0.000	1.490	0.000	0.000	0.000
7) DFS *FY 2010 Plans:* Initiate the development effort to evaluate an aircraft decontaminant.	0.000	1.460	0.000	0.000	0.000
8) DFS	0.000	0.000	7.075	0.000	7.075

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Conduct efficacy and deliver production representative articles/material compatibility testing/ demonstrate manufacturing processes for Decon Wipes and eClO2.					
9) DFS *FY 2011 Base Plans:* Conduct testing and evaluation of Improved Reactive Sorbent/RSDL Reformulation/Identification-Assurance Sprays/Agent Disclosure Sprays and Protective Coatings.	0.000	0.000	1.436	0.000	1.436
10) DFS *FY 2011 Base Plans:* Conduct technology and manufacturing readiness assessments/initiate efficacy and material compatibility testing/transition Surfactant System and Contamination Indicator/DAS technologies to DFoS.	0.000	0.000	2.759	0.000	2.759
11) HRDS *FY 2010 Plans:* Conduct developmental testing and analysis of the Contaminated Human Remains Transfer Case (CHRT)	0.000	3.694	0.000	0.000	0.000
12) JPID *FY 2010 Plans:* Design and development of prototypes and logistics planning.	0.000	4.778	0.000	0.000	0.000
13) JPID	0.000	1.500	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Fabrication of 5 JPID prototypes (at $300 thousand each) for agent testing.					
14) JPID *FY 2011 Base Plans:* Complete Developmental Testing, conduct Early Operational Assessment and support MS C efforts.	0.000	0.000	5.791	0.000	5.791
15) JPID *FY 2011 Base Plans:* Fabrication of 9 JPID prototypes (at $300 thousand each) for Operational Assessment testing.	0.000	0.000	2.700	0.000	2.700
16) JSSED *FY 2009 Accomplishments:* Completed assessment of the efficacy of HPV as a technology risk reduction.	0.375	0.000	0.000	0.000	0.000
17) JSSED *FY 2009 Accomplishments:* Initiated Prototype design and development.	14.036	0.000	0.000	0.000	0.000
18) JSSED *FY 2010 Plans:* Conduct Developmental Testing and logistics demonstration.	0.000	3.674	0.000	0.000	0.000
19) JSSED *FY 2010 Plans:* Fabricate 9 JSSED Prototypes (at $300 thousand each) for Developmental Testing.	0.000	2.700	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
20) JSSED *FY 2011 Base Plans:* Complete Early Operational Assessment and conduct MS C.	0.000	0.000	2.054	0.000	2.054
21) JSSED *FY 2011 Base Plans:* Fabricate 4 JSSED Prototypes (at $300 thousand each) for Operational Assessment testing.	0.000	0.000	1.200	0.000	1.200
22) SBIR *FY 2010 Plans:* Small Business Innovative Research.	0.000	0.365	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	16.611	28.422	28.499	0.000	28.499

	FY 2009	FY 2010
Congressional Add: 1) Chemical and Biological Threat Reduction Coating *FY 2010 Plans:* Congressional Interest Item - Chemical and Biological Threat Reduction Coating	0.000	2.390
Congressional Add: 2) Self-Decontaminating Polymer System for Chemical and Biological Warfare Agents. *FY 2010 Plans:* Congressional Interest Item - Self-Decontaminating Polymer System for Chemical and Biological Warfare Agents.	0.000	2.788

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010
Congressional Add: 3) Self Contained Automated Vehicle Washing Systems with microwave decontamination *FY 2010 Plans:* Congressional Interest Item - Self Contained Automated Vehicle Washing Systems with microwave decontamination.	0.000	1.593
Congressional Add: 4) Protective Self-Decontaminating Surfaces *FY 2010 Plans:* Congressional Interest Item - Protective Self-Decontaminating Surfaces - CHRPS.	0.000	1.593
Congressional Adds Subtotals	0.000	8.364

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• JD0050: *DECONTAMINANT SYSTEM OF SYSTEMS*	0.000	0.000	0.000		0.000	3.280	4.468	6.884	7.029	Continuing	Continuing
• JD0055: *JOINT SERVICE PERSONNEL/SKIN DECON SYSTEM (JSPDS)*	8.280	4.466	0.000		0.000	0.000	0.000	8.645	9.105	Continuing	Continuing
• JD0056: *JS TRANS DECON SYSTEM - SMALL SCALE (JSTDS-SS)*	12.124	21.940	18.160		18.160	12.924	7.900	5.455	4.459	Continuing	Continuing
• JD0060: *JOINT PLATFORM INTERIOR DECON (JPID)*	0.000	0.000	0.000		0.000	4.097	14.064	18.977	25.604	Continuing	Continuing
	0.000	0.000	0.000		0.000	14.648	0.000	0.000	0.000	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT DE5: *DECONTAMINATION SYSTEMS (SDD)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• JD0061: *JS SENSITIVE EQUIP DECON (JSSED)*											

D. Acquisition Strategy

DC PROTO

DC PROTO will conduct a Sources Sought for a prototype suitable for sensitive equipment and platform interior decontamination prototypes. The competitive prototype results will be integrated into the JSSED and JPID programs for program risk reduction.

DFS

DFoS will utilize an incremental acquisition strategy to transition various developmental technology efforts (COTS, JSTO, DTRA efforts, etc.) to fill current and future capability gaps. DFoS will support MDAPs and Programs of Record (POR) by guiding S&T efforts and transitioning mature technologies to meet program requirements. The DFoS acquisition will be managed as a Family-of-Systems (FoS), leveraging differing technologies in each subsystem to fulfill Warfighter capability gaps. A multi-phased Analysis of Alternatives (AoA) will be conducted to identify and evaluate the operational effectiveness of potential material solutions to satisfy Service requirements. As each AoA phase is completed, individual systems and their respective phases of entry will be identified. Industry will be solicited and through competitive prototyping, material solutions will be down-selected for continued development and fielding as a new joint force capability.

HRDS

The Human Remains Decontamination System (HRDS) acquisition will be managed as a Family-of-Systems (FoS), leveraging differing technologies in each subsystem to fulfill Warfighter capability gaps. A multi-phased Analysis of Alternatives (AoA) is being conducted for the HRDS FoS to identify and evaluate the operational effectiveness of potential material solutions to satisfy Service requirements. As each AoA phase is completed, individual systems and their respective phases of entry will be identified. Industry will be solicited and through competitive prototyping, material solutions will be down-selected for continued development and fielding as a new joint force capability.

JSSED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT DE5: *DECONTAMINATION SYSTEMS (SDD)*

The Joint Service Sensitive Equipment Decontamination (JSSED) programs will be acquired as part of the overarching Joint Material Decontamination System (JMDS) evolutionary acquisition strategy that covers both the Joint Platform Interior Decontamination (JPID) and the JSSED. This strategy will use a single technology to meet the individual sensitive equipment through incremental development. The JSSED strategies is under the JMDS contracting strategy that awarded one single base Engineering and Manufacturing Development (EMD) contract (Cost Plus Incentive Fee) with Low Rate Initial Production and Full Rate Production options (Fixed Price Successive Target) in open competition. The JMDS program will integrate the competitive prototype effort into the JMDS Milestone C/LRIP Decision.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT DE5: *DECONTAMINATION SYSTEMS (SDD)*	

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
** CONG - Congressional Interest Item - HW C - Chemical and Biological Threat Reduction Coating	C/CPFF	TBD	0.000	2.390	Apr 2010	0.000		0.000		0.000	0.000	2.390	0.000
Congressional Interest Item - HW C - Self Decontaminating Polymer System for Chemical and Biological Warfare Agents	C/CPFF	TBD	0.000	2.788	Apr 2010	0.000		0.000		0.000	0.000	2.788	0.000
** DFS - HW S - Decon wipes	MIPR	RDECOM-Natick MA	0.000	0.000		1.792	Jan 2011	0.000		1.792	0.000	1.792	0.000
HW S - Electro-chemically Generated Chlorine Dioxide (eCl02)	MIPR	RDECOM-Natick MA	0.000	0.000		2.000	Jan 2011	0.000		2.000	0.000	2.000	0.000
HW C - Surfactant System	MIPR	Defense Threat Reduction Agency (DTRA) Ft. Belvoir, VA	0.000	0.188	Oct 2009	0.000		0.000		0.000	0.000	0.188	0.000
HW C - Contaminant Indicator/ Decon Assurance Spray	MIPR	Defense Threat Reduction Agency (DTRA) Ft. Belvoir, VA	0.000	0.200	Oct 2009	0.600	Apr 2011	0.000		0.600	0.000	0.800	0.000
HW C - Aircraft Decon	MIPR	RDECOM-Natick MA	0.000	0.945	Jan 2010	0.000		0.000		0.000	0.000	0.945	0.000
	C/CPFF	TBD	0.000	1.593	Apr 2010	0.000		0.000		0.000	0.000	1.593	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT DE5: *DECONTAMINATION SYSTEMS (SDD)*

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
Congressional Interest Item - HW C - Self Contained Automated Vehicle Washing Systems with microwave decontamination													
** HRDS - Congressional Interest Item - HW C - Protective Self-Decontaminating Surfaces - CHRPS	C/CPFF	TBD	0.000	1.593	Apr 2010	0.000		0.000		0.000	0.000	1.593	0.000
** JPID - HW C - SDD Contract, EMD Contract and fabrication	C/CPIF	Teledyne Brown Engineering Huntsville, AL	0.000	3.000	Jan 2010	2.815	Jan 2011	0.000		2.815	0.000	5.815	0.000
** JSSED - HW S - EMD Contract - System Development and Fabrication	C/CPIF	Teledyne Brown Engineering - Huntsville AL	15.764	3.000	Jan 2010	0.500	Jan 2011	0.000		0.500	0.000	19.264	0.000
		Subtotal	15.764	15.697		7.707		0.000		7.707	0.000	39.168	0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
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Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
** DC PROTO - Market Survey/Sources Sought Assessment	MIPR	RDECOM Natick, MA	0.000	0.104	Oct 2009	0.000		0.000		0.000	0.000	0.104	0.000
** DFS - ES S - IPT Technical Support	MIPR	Various	0.226	0.200	Jan 2010	1.124	Jan 2011	0.000		1.124	0.687	2.237	0.000
** HRDS - TD/D SB - SME Technical Support	MIPR	TBD	0.000	0.643	Jan 2010	0.000		0.000		0.000	0.000	0.643	0.000
		Subtotal	0.226	0.947		1.124		0.000		1.124	0.687	2.984	0.000

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
** DC PROTO - Competitive Prototype Testing	MIPR	TBD	0.000	8.144	Apr 2010	4.892	Oct 2010	0.000		4.892	0.000	13.036	0.000
** DFS - DTE S - Electro-Chemically Generated Chlorine Dioxide (eClO2)	MIPR	TBD	0.000	0.000		1.134	Jan 2011	0.000		1.134	0.221	1.355	0.000
DTE S - Decon Wipes	MIPR	TBD	0.000	0.000		0.981	Jan 2011	0.000		0.981	0.165	1.146	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT DE5: *DECONTAMINATION SYSTEMS (SDD)*

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
OTHT SB - Improved Reactive Sorbent	MIPR	TBD	0.000	0.000		0.571	Oct 2010	0.000		0.571	0.000	0.571	0.000
DTE C - Surfactant System	MIPR	Army Evaluation Center Alexandria, VA	0.000	0.188	Jan 2010	0.650	Jan 2011	0.000		0.650	0.094	0.932	0.000
DTE C - Contaminant Indicator/Decon Assurance Spray	MIPR	TBD	0.000	0.200	Apr 2010	0.875	Apr 2011	0.000		0.875	0.188	1.263	0.000
DTE C - Reactive Skin Decontamination Lotion Reformulation	MIPR	TBD	0.000	0.000		0.225	Apr 2011	0.000		0.225	0.000	0.225	0.000
** HRDS - OTHT SB - Prototype Planning and Testing	MIPR	TBD	0.000	1.390	Apr 2010	0.000		0.000		0.000	0.000	1.390	0.000
** JPID - JPID Development Testing	MIPR	ATEC Aberdeen Proving Ground, MD	0.000	2.478	Oct 2009	3.960	Oct 2010	0.000		3.960	0.000	6.438	0.000
** JSSED - OTHT SB - JSSED/JMDS developmental test planning/execution	MIPR	ATEC Aberdeen, MD	1.244	1.500	Oct 2009	2.062	Oct 2010	0.000		2.062	0.000	4.806	0.000
		Subtotal	1.244	13.900		15.350		0.000		15.350	0.668	31.162	0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT DE5: *DECONTAMINATION SYSTEMS (SDD)*

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
** DC PROTO - Program Management Support	MIPR	RDECOM Natick, MA	0.000	0.513	Oct 2009	0.592	Oct 2010	0.000		0.592	0.000	1.105	0.000
** DFS - PM/MS S - DFoS Integrated Product Team Support	MIPR	RDECOM-Natick MA	0.870	0.674	Oct 2009	0.865	Oct 2010	0.000		0.865	0.000	2.409	0.000
PM/MS S - Program Support	MIPR	Marine Corps Systems Command Quantico, VA	0.265	0.355	Jan 2010	0.453	Jan 2011	0.000		0.453	0.000	1.073	0.000
** HRDS - PM/MS SB - Program Office Support	MIPR	RDECOM-Natick MA	0.000	1.661	Jan 2010	0.000		0.000		0.000	0.000	1.661	0.000
** JPID - JPID Service Integrated Product Team Support	MIPR	Various	0.000	0.800	Oct 2009	1.716	Oct 2010	0.000		1.716	0.000	2.516	0.000
** JSSED - PM/MS S - JSSED/JMDS Service Integrated Product Team Support	MIPR	Various	6.673	1.874	Oct 2009	0.692	Oct 2010	0.000		0.692	0.000	9.239	0.000
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/STTR	MIPR	HQ AMC, Alexandria	0.000	0.365		0.000		0.000		0.000	0.000	0.365	0.000
		Subtotal	7.808	6.242		4.318		0.000		4.318	0.000	18.368	0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT DE5: *DECONTAMINATION SYSTEMS (SDD)*	

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	25.042	36.786		28.499		0.000		28.499	1.355	91.682	0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT DE5: *DECONTAMINATION SYSTEMS (SDD)*	

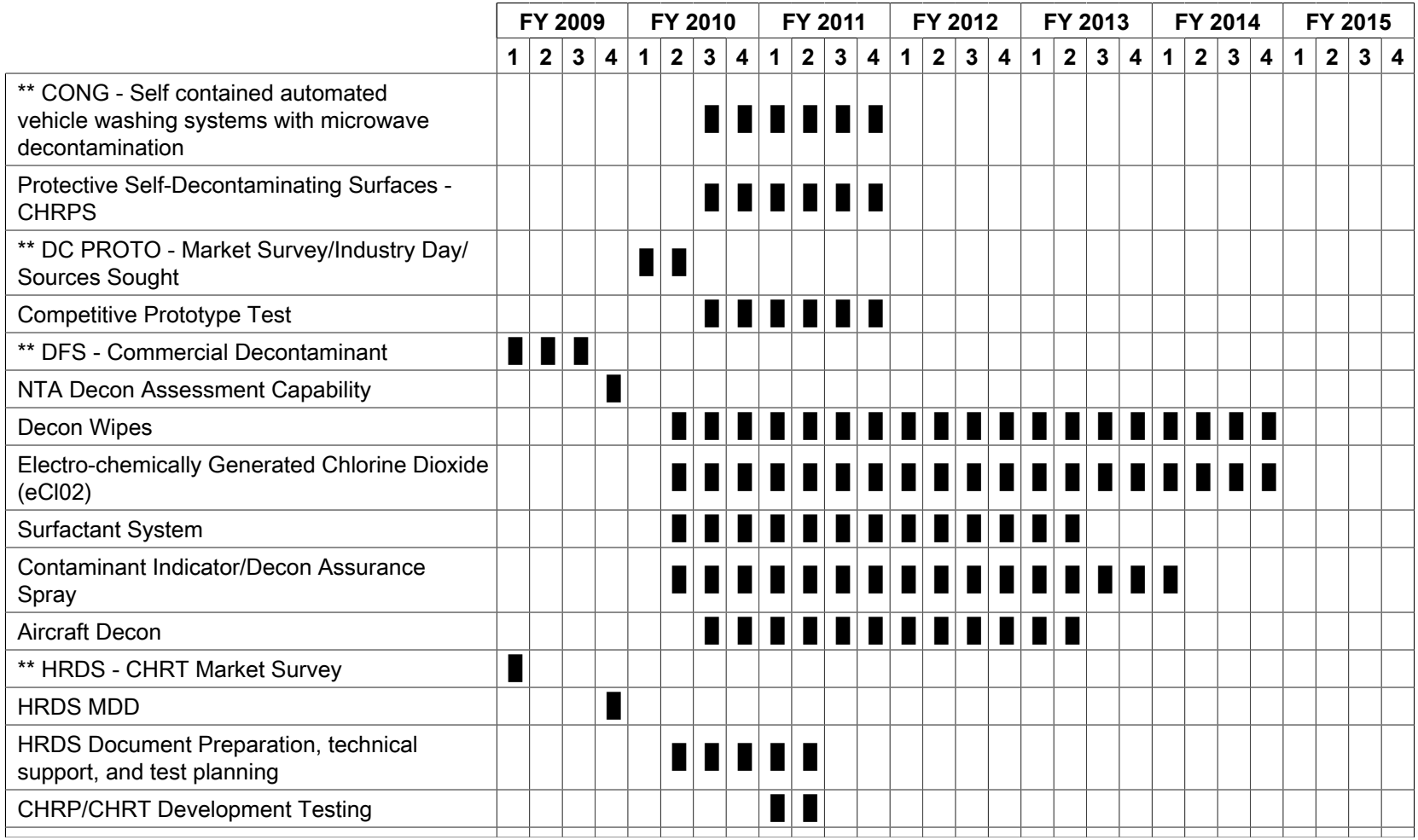

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*		PROJECT DE5: *DECONTAMINATION SYSTEMS (SDD)*

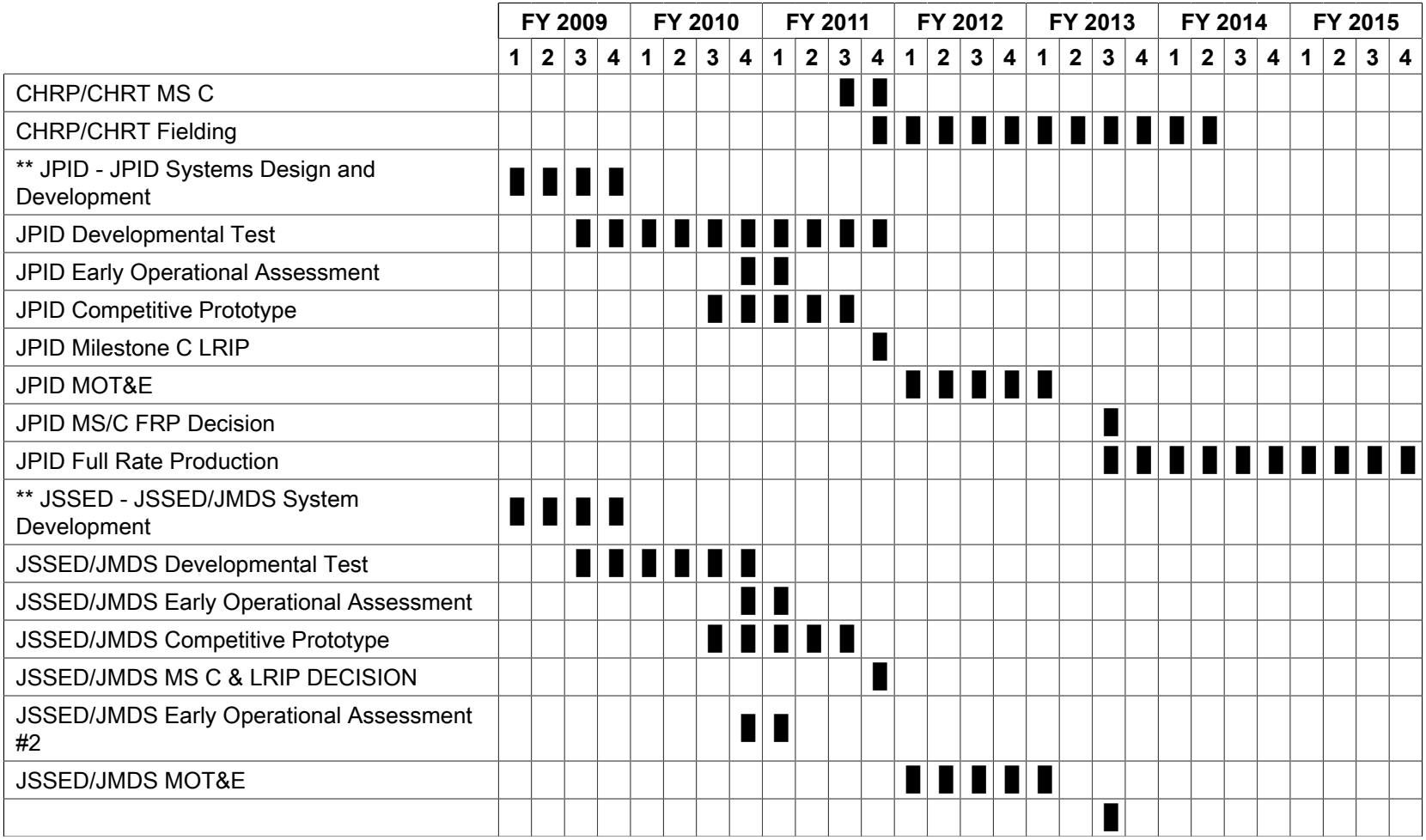

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT DE5: *DECONTAMINATION SYSTEMS (SDD)*	

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
JSSED/JMDS Full Rate Production (FRP) DECISION																												
JSSED/JMDS FRP																			▮	▮	▮	▮	▮	▮	▮	▮	▮	▮

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** DE5: *DECONTAMINATION SYSTEMS (SDD)*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
** CONG - Self contained automated vehicle washing systems with microwave decontamination	3	2010	4	2011
Protective Self-Decontaminating Surfaces - CHRPS	3	2010	4	2011
** DC PROTO - Market Survey/Industry Day/Sources Sought	1	2010	2	2010
Competitive Prototype Test	3	2010	4	2011
** DFS - Commercial Decontaminant	1	2009	3	2009
NTA Decon Assessment Capability	4	2009	4	2009
Decon Wipes	2	2010	4	2014
Electro-chemically Generated Chlorine Dioxide (eCl02)	2	2010	4	2014
Surfactant System	2	2010	2	2013
Contaminant Indicator/Decon Assurance Spray	2	2010	1	2014
Aircraft Decon	3	2010	2	2013
** HRDS - CHRT Market Survey	1	2009	1	2009
HRDS MDD	4	2009	4	2009
HRDS Document Preparation, technical support, and test planning	2	2010	2	2011
CHRP/CHRT Development Testing	1	2011	2	2011
CHRP/CHRT MS C	3	2011	4	2011
CHRP/CHRT Fielding	4	2011	2	2014
** JPID - JPID Systems Design and Development	1	2008	4	2009

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
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	Start		End	
Event	Quarter	Year	Quarter	Year
JPID Developmental Test	3	2009	4	2011
JPID Early Operational Assessment	4	2010	1	2011
JPID Competitive Prototype	3	2010	3	2011
JPID Milestone C LRIP	4	2011	4	2011
JPID MOT&E	1	2012	1	2013
JPID MS/C FRP Decision	3	2013	3	2013
JPID Full Rate Production	3	2013	4	2015
** JSSED - JSSED/JMDS System Development	1	2008	4	2009
JSSED/JMDS Developmental Test	3	2009	4	2010
JSSED/JMDS Early Operational Assessment	4	2010	1	2011
JSSED/JMDS Competitive Prototype	3	2010	3	2011
JSSED/JMDS MS C & LRIP DECISION	4	2011	4	2011
JSSED/JMDS Early Operational Assessment #2	4	2010	1	2011
JSSED/JMDS MOT&E	1	2012	1	2013
JSSED/JMDS Full Rate Production (FRP) DECISION	3	2013	3	2013
JSSED/JMDS FRP	3	2013	4	2015

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT IP5: *INDIVIDUAL PROTECTION (SDD)*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
IP5: *INDIVIDUAL PROTECTION (SDD)*	18.363	21.094	9.678	0.000	9.678	4.833	3.044	0.756	0.563	Continuing	Continuing
Quantity of RDT&E Articles	0	544	0		0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project funds System Development and Demonstration (SDD) of individual protection equipment, the goal is to provide equipment that allows the individual soldier, sailor, airman, or marine to operate in a contaminated Nuclear, Biological and Chemical (NBC) environment with little or no degradation of his/her performance.

The three efforts listed below are funded in this program:

(1) The Joint Service Aircrew Mask (JSAM) is an Acquisition Category (ACAT) III Family of Systems (FoS) respiration system being incrementally developed. JSAM MPU-6 Apache is for use with the Integrated Helmet And Display Sighting System, JSAM Fixed Wing (FW) MBU-25/26 respirator and JSAM MPU-5 Rotor Wing (RW) are being developed for use in the majority of the Department of Defense's (DoD's) Fixed and Rotary Wing aircraft. The F-35 JSAM MBU-26 is being developed with the FW JSAM MBU-25 to meet the needs of the Major Defense Acquisition Program, the Joint Strike Fighter (JSF). The goal of the overall JSAM project is to develop, manufacture, field and sustain an aircrew respirator system that, in conjunction with a below-the-neck (BTN) clothing ensemble, will provide the capability for all aircrew to fly throughout their full operating envelope in an actual or perceived Chemical and Biological (CB) warfare environment. JSAM will be a lightweight CB protective mask that will be worn as CB protection for most Army, Air Force, Navy and Marine rotary and fixed-wing aircrew members. The FW JSAM will be the first and only CB protective mask in the DoD inventory that can provide anti-G protection, up to 9 times the vertical force (Gz), for aircrew in high performance aircraft. All JSAM Increments will be compatible with most below-the-neck CB ensembles and existing aircrew life support equipment. They will include a protective hood assembly, CB filter, blower assembly, and an intercom for ground communication. They will provide flame and thermal protection, provide hypoxia protection to 60,000 feet, demist/ emergency demist and anti-drown features. The MPU-5 and MPU-6 variants are being designed to be capable of being donned/doffed in flight.

(2) The Joint Service General Purpose Mask (JSGPM) funds SDD of respiratory and ocular protection technologies aimed at providing incremental upgrades for the JSGPM. Additionally, this project funds the Technology Development (TD) phase of the Advanced Respiratory Protection Initiative (ARPI) program for developing revolutionary materials, design and concepts that may be transitioned into future Chem/Bio ensemble (Joint Chemical Ensemble). Performance enhancements for all respiratory and ocular protection programs will be focused on increasing the protection levels of the systems from Chemical Warfare Agents (CWAs) and Toxic Industrial Chemicals (TICs) while reducing the physiological and logistical burdens.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT IP5: *INDIVIDUAL PROTECTION (SDD)*

(3) The Lightweight Chemical Biological Ensemble (LCBE), aims to provide CBRN individual protection for the Warfighter while reducing physiological and logistical burdens.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
1) JSAM	16.781	14.714	7.269	0.000	7.269
FY 2009 Accomplishments: JSAM MPU-6 (Apache) - Completed Operational Testing (OT). Prepared documentation for Milestone (MS) C Full Rate Production (FRP). JSAM MPU-5 (RW) - Continued Developmental Testing (DT). JSAM FW - Initiated flight testing, Chem/Bio, environmental and continued integration testing for joint service aircraft platform. *FY 2010 Plans:* JSAM MPU-5 (RW) - Prepare specific mask tooling for prototypes. Complete DT. Produce MPU-5 prototypes (256 units at a cost of $4,400 ea) for OT. Start OT. JSAM FW - Continue and complete DT flight testing. Start OT. Produce prototypes (288 prototype at a unit cost of $4,130 ea) for OT. Start OT. *FY 2011 Base Plans:* JSAM MPU-5 (RW) - Complete OT. Prepare documentation for MS C FRP. JSAM FW - Complete OT. Prepare documentation for MS C FRP.					
2) JSGPM	0.000	1.444	2.409	0.000	2.409
FY 2010 Plans: JSGPM (ARPI) - Conduct government testing screening. Initiate filter qualification testing on potential End of Service Life Indicator (ESLI) candidates.					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** IP5: *INDIVIDUAL PROTECTION (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: JSGPM (ARPI) - Conduct government testing to ensure carbons transitioned to JSGPM filters to improve TIC protection meeting the user requirements. Conduct government testing on novel filtration candidates considered for Joint Chemical Ensemble (JCE). JSGPM - Complete testing of ESLI.					
3) LCBE *FY 2010 Plans:* Prepare MS A documentation for LCBE Increment 1. Technology demonstration of lightweight garment technologies and designs. Continue thermal burden reduction/heat stress assessment.	0.000	2.305	0.000	0.000	0.000
4) SBIR *FY 2010 Plans:* Small Business Innovative Research.	0.000	0.241	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	16.781	18.704	9.678	0.000	9.678

	FY 2009	FY 2010
Congressional Add: 1) JSAM *FY 2009 Accomplishments:* Congressional Interest Item - JSAM Donn\Doff. Developed Donn\Doff capability for MPU-5 and MPU-6 requirement.	1.582	2.390

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT IP5: *INDIVIDUAL PROTECTION (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010
FY 2010 Plans: Congressional Interest Item - JSAM Donn\Doff. Continue development of Donn\Doff capability for MPU-5 and MPU-6 requirement.		
Congressional Adds Subtotals	1.582	2.390

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• IP7: *INDIVIDUAL PROTECTION OPERATIONAL SYS DEV*	4.560	0.000	0.000		0.000	2.869	4.371	7.548	4.681	Continuing	Continuing
• JI0002: *JS AIRCREW MASK (JSAM)*	0.000	23.045	6.964		6.964	12.919	12.112	14.084	9.017	Continuing	Continuing
• JI0003: *JOINT SERVICE GENERAL PURPOSE MASK (JSGPM/JSCESM)*	42.391	48.282	49.835		49.835	51.508	56.463	56.334	60.975	Continuing	Continuing
• JI0300: *JOINT CHEMICAL ENSEMBLE (JCE)*	0.000	0.000	0.000		0.000	0.000	7.446	9.918	6.936	Continuing	Continuing
• MA0400: *PROTECTIVE CLOTHING (JSLIST)*	37.484	20.393	17.887		17.887	18.208	9.429	6.943	6.944	Continuing	Continuing

D. Acquisition Strategy

JSAM

The JSAM Acquisition Program Baseline Agreement (APBA) identifies JSAM Type IA Apache (MPU-6) as the Rotary Wing (RW) Integrated Helmet and Display Sighting System (IHADSS) variant. The JSAM Type I RW (MPU-5) that is being developed for the majority of RW aircrew. JSAM Type IA Apache (MPU-6) will be fielded first. Appropriate production options will be exercised.

The JSAM Type II Fixed Wing (FW) variant will meet the needs of the FW aircrew, and majority of the requirements for the JSF JSAM.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** IP5: *INDIVIDUAL PROTECTION (SDD)*

JSGPM

JSGPM: All possible candidates will be identified through the Request For Information (RFI). The candidates will be screened against CWAs and TICs at the sorbent level. Candidates that show an indication that it may provide a performance enhancement may be transitioned into filter qualification testing. The qualification of a new filtration media for JSGPM will be based on the current JSGPM filter specification.

JSGPM (ARPI): The Advanced Respiratory Protection Initiative (ARPI) program will be based on full and open competition. A Request For Information was released in July 2008 to evaluate what novel concepts, materials and designs that could be pursued for the next generation system. An analysis of the results of the market survey will be conducted and potential candidates will be pursued for further evaluation.

LCBE

The Lightweight Chemical Biological Ensemble (LCBE) program will pursue an evolutionary incremental approach to provide capability to the Warfighter. Each increment of LCBE will provide technologies with military utility that are modular in function, and offer improvement in form and fit over current systems. The LCBE program will develop, integrate, test, procure and field systems that increase Warfighter operational performance in a CBRN environment via the use of emerging technologies and by leveraging tradespace in areas such as protection level, heat stress, durability, antimicrobial properties, launderability, self-detoxification, protection time, etc. Where appropriate, modeling and simulation tools will be used to lower LCBE program risks, reduce costs and ensure a high confidence in selected technologies.

LCBE INCREMENT 1
The LCBE will use an evolutionary acquisition strategy with phased development. The first LCBE increment will provide an operationally useful and supportable capability in as short a time as possible. Accordingly, Increment 1 of LCBE will incorporate an accelerated development cycle leveraging existing COTS technologies that will, at a minimum, provide a lightweight CB protective garment capability. Gate testing and down-selection of prototypes will comprise the initial phases of the Government's testing program. A competitively awarded contract is planned for DT and Operational Assessment (OA) will occur prior to MS C. Appropriate system requirements reviews, test readiness reviews, producibility reviews and audits will be scheduled as required prior to each milestone.

Future increments of LCBE shall be defined via separate Capability Development Document (CDDs)/Capability Production Document (CPDs) and will follow a similar path/process from MS A or MS B through MS C/FRP and will leverage preceding efforts to the greatest extent possible, maintaining commonality and synergy across all increments.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** IP5: *INDIVIDUAL PROTECTION (SDD)*

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT IP5: *INDIVIDUAL PROTECTION (SDD)*

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** JSAM - HW S - Contractor Development Types I/IA	C/CPAF	AVOX Lancaster, NY	36.353	0.795	Oct 2009	0.000		0.000		0.000	0.000	37.148	7.209
SW SB - Contractor Development Type II	C/FPI	Gentex Rancho Cucamonga, CA	12.658	4.626	Oct 2009	0.425	Jan 2011	0.000		0.425	0.000	17.709	0.000
HW S - Donn/Doff development	C/FFP	Gentex Rancho Cucamonga, CA	1.582	1.625	Apr 2010	0.000		0.000		0.000	0.000	3.207	0.000
		Subtotal	50.593	7.046		0.425		0.000		0.425	0.000	58.064	7.209

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
** JSGPM - ES C - JSGPM Filter	MIPR	ECBC APG, MD	0.000	0.118	Oct 2009	0.215	Oct 2010	0.000		0.215	0.000	0.333	0.000
ES C - JSGPM Filter	MIPR	NRL Washington, DC	0.000	0.100	Oct 2009	0.150	Oct 2010	0.000		0.150	0.000	0.250	0.000
** LCBE - ES S - Engineering IPT	MIPR	Various	0.000	0.400	Apr 2010	0.000		0.000		0.000	0.000	0.400	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT IP5: *INDIVIDUAL PROTECTION (SDD)*

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
ES SB - Tech Demos	MIPR	Various	0.000	1.360	Oct 2009	0.000		0.000		0.000	0.000	1.360	0.000
		Subtotal	0.000	1.978		0.365		0.000		0.365	0.000	2.343	0.000

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** JSAM - OTHT SB - Govt Dev Test	MIPR	Various	24.347	2.294	Oct 2009	0.000		0.000		0.000	7.174	33.815	0.092
OTE S - Govt Operational Test Type II	MIPR	Various	9.706	5.064	Oct 2009	4.049	Jan 2011	0.000		4.049	4.046	22.865	0.404
OTHT SB - Govt Operational Test Type I	C/FFP	AVOX Lancaster, NY	3.074	0.000		1.980	Oct 2010	0.000		1.980	0.000	5.054	0.185
** JSGPM - DTE SB - JSGPM Filter Testing	MIPR	Various	0.000	0.776	Oct 2009	1.594	Oct 2010	0.000		1.594	0.000	2.370	0.000
DTE SB - JSGPM Filter Testing	MIPR	NRL Washington, DC	0.000	0.250	Oct 2009	0.250	Oct 2010	0.000		0.250	0.000	0.500	0.000
		Subtotal	37.127	8.384		7.873		0.000		7.873	11.220	64.604	0.681

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT IP5: *INDIVIDUAL PROTECTION (SDD)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010 Cost	FY 2010 Award Date	FY 2011 Base Cost	FY 2011 Base Award Date	FY 2011 OCO Cost	FY 2011 OCO Award Date	FY 2011 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** JSAM - PM/MS C - Program Management/ Management Support	MIPR	Various	17.525	2.700	Oct 2009	0.815	Oct 2010	0.000		0.815	0.000	21.040	5.421
** JSGPM - PM/MS C - Conduct Market Survey Analysis	MIPR	JPMO IP Stafford, VA	0.000	0.200	Oct 2009	0.200	Oct 2010	0.000		0.200	0.000	0.400	0.000
** LCBE - PM/MS S - JPM Support	MIPR	Various	0.000	0.545	Apr 2010	0.000		0.000		0.000	0.000	0.545	0.000
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/STTR	MIPR	HQ AMC, Alexandria	0.000	0.241		0.000		0.000		0.000	0.000	0.241	0.000
		Subtotal	17.525	3.686		1.015		0.000		1.015	0.000	22.226	5.421

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	105.245	21.094		9.678		0.000		9.678	11.220	147.237	13.311

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*		PROJECT IP5: *INDIVIDUAL PROTECTION (SDD)*

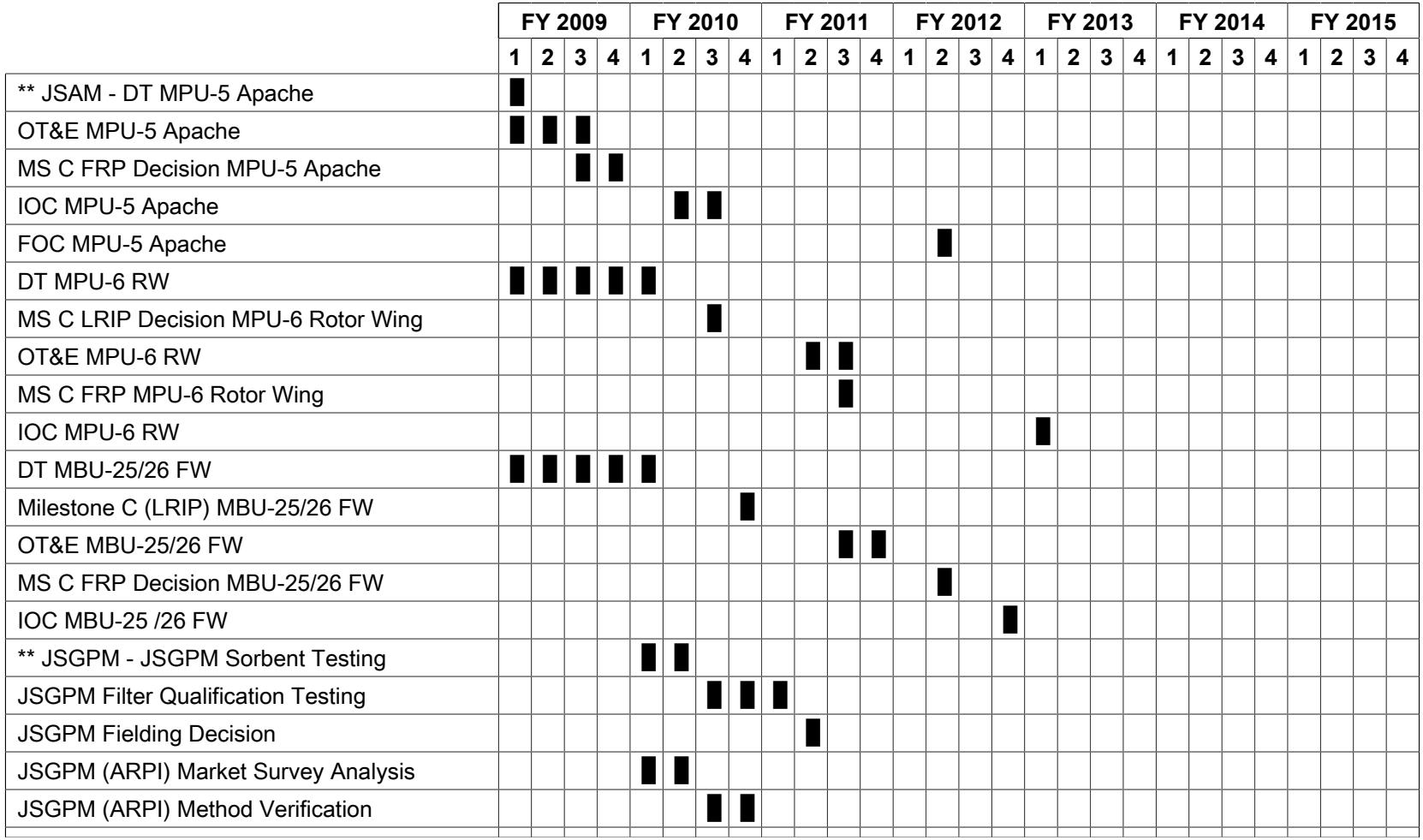

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT IP5: *INDIVIDUAL PROTECTION (SDD)*	

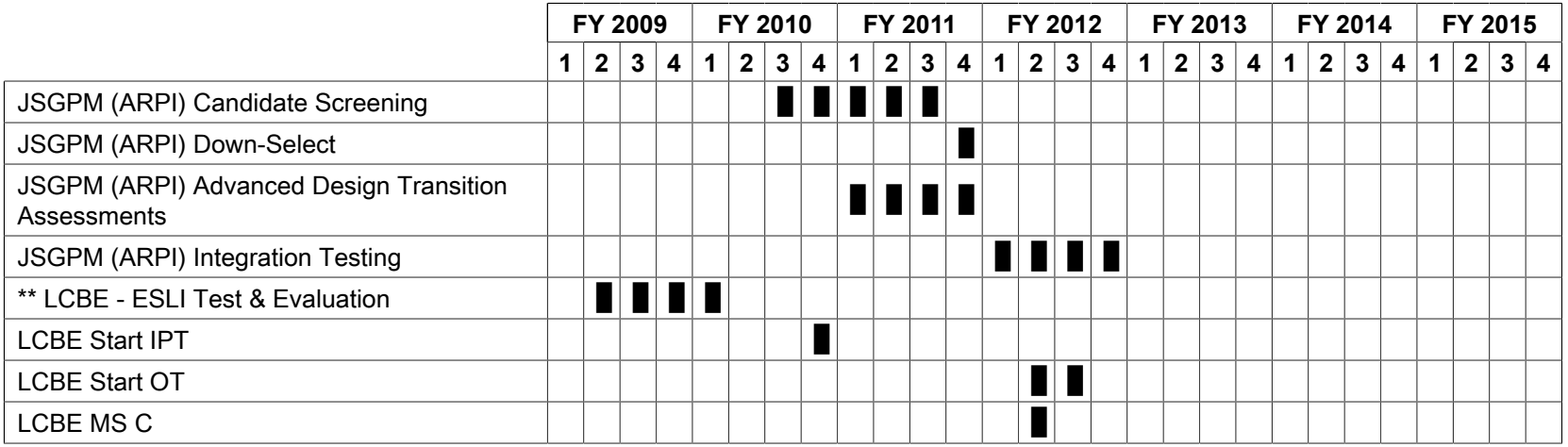

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** IP5: *INDIVIDUAL PROTECTION (SDD)*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
** JSAM - DT MPU-5 Apache	4	2007	1	2009
OT&E MPU-5 Apache	2	2008	3	2009
MS C FRP Decision MPU-5 Apache	3	2009	4	2009
IOC MPU-5 Apache	2	2010	3	2010
FOC MPU-5 Apache	2	2012	2	2012
DT MPU-6 RW	4	2007	1	2010
MS C LRIP Decision MPU-6 Rotor Wing	3	2010	3	2010
OT&E MPU-6 RW	2	2011	3	2011
MS C FRP MPU-6 Rotor Wing	3	2011	3	2011
IOC MPU-6 RW	1	2013	1	2013
DT MBU-25/26 FW	1	2008	1	2010
Milestone C (LRIP) MBU-25/26 FW	4	2010	4	2010
OT&E MBU-25/26 FW	3	2011	4	2011
MS C FRP Decision MBU-25/26 FW	2	2012	2	2012
IOC MBU-25 /26 FW	4	2012	4	2012
** JSGPM - JSGPM Sorbent Testing	1	2010	2	2010
JSGPM Filter Qualification Testing	3	2010	1	2011
JSGPM Fielding Decision	2	2011	2	2011

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** IP5: *INDIVIDUAL PROTECTION (SDD)*

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
JSGPM (ARPI) Market Survey Analysis	1	2010	2	2010
JSGPM (ARPI) Method Verification	3	2010	4	2010
JSGPM (ARPI) Candidate Screening	3	2010	3	2011
JSGPM (ARPI) Down-Select	4	2011	4	2011
JSGPM (ARPI) Advanced Design Transition Assessments	1	2011	4	2011
JSGPM (ARPI) Integration Testing	1	2012	4	2012
** LCBE - ESLI Test & Evaluation	2	2009	1	2010
LCBE Start IPT	4	2010	4	2010
LCBE Start OT	2	2012	3	2012
LCBE MS C	2	2012	2	2012

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT IS5: *INFORMATION SYSTEMS (SDD)*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
IS5: *INFORMATION SYSTEMS (SDD)*	45.694	27.301	13.844	0.000	13.844	24.984	24.872	25.345	25.775	Continuing	Continuing
Quantity of RDT&E Articles	80	0	0		0	0	0	0	0		

A. Mission Description and Budget Item Justification

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

Efforts funded in this project are: (1) Joint Effects Model (JEM); (2) Joint Operational Effects Federation (JOEF); (3) the Joint Warning and Reporting Network (JWARN); and (4) 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 (Increment 1); high altitude releases, urban NBC environments (Increment 2); building interiors, and human performance degradation (Increment 3). 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 will interface and communicate with the other programs such as JWARN, JOEF, weather systems, intelligence systems, and various databases.

JOEF will be a near real-time course of action analysis tool developed in three increments using a detailed NBC hazard prediction model. Each increment supports Aerial Ports of Debarkation (APODs), Sea Ports of Debarkation (SPODs), mobile forces, medical and automated Tactics, Techniques and Procedures (TTPs) in various levels of fidelity. Increment 1 will support deliberate planning for operational and strategic users in a C4ISR common operating environment (COE); Command and Control Personal Computers (C2PC); and crisis planning for the operational users in a COE.

The Joint Warning and Reporting Network (JWARN) will provide, in the first of two increments, joint forces with a comprehensive 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 NBC warning technology which will collect, analyze, identify, locate, report, and disseminate NBC warnings. JWARN will be compatible and integrated with Joint Services C4ISR Systems. JWARN is transition from COE standards to Service Oriented Architecture (SOA). 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 C2 systems.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** IS5: *INFORMATION SYSTEMS (SDD)*

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 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 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 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 Warfighter's ability to communicate his CBRN solutions and interoperate with other Service operational systems. It also supports a longer term ability to interoperate with related agencies and to reduce the Warfighter's CBRN footprint as technologies improve.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
1) JEM Operational Demonstrations and Exercises	0.381	0.698	0.000	0.000	0.000
FY 2009 Accomplishments: Supported operational demonstrations and exercises.					
FY 2010 Plans: Continue to support operational demonstrations and exercises.					
2) JEM Independent Verification, Validation, and Accreditation	1.079	1.616	0.278	0.000	0.278
FY 2009 Accomplishments: Conducted independent verification, validation, and accreditation of JEM software and models.					
FY 2010 Plans: Conduct independent verification, validation, and accreditation of JEM software and models.					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT IS5: *INFORMATION SYSTEMS (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Conduct independent verification, validation, and accreditation of JEM software and models.					
3) JEM Systems Engineering *FY 2009 Accomplishments:* Continued JEM Increment 1 Systems Engineering Tasks to include software updates, configuration management, human-system integration, security analysis and DoD architecture artifact development. Updated requirements and architecture analysis for supporting Science and Technology capabilities in preparation for JEM Increment 1. *FY 2010 Plans:* Continue to sustain JEM Increment 1 Systems Engineering Tasks to include software updates, configuration management, human-system integration, security analysis and DoD architecture artifact development.	1.121	0.794	0.000	0.000	0.000
4) JEM Program Management *FY 2009 Accomplishments:* Continued JEM program financial management, scheduling, planning and reporting. *FY 2010 Plans:* Continue JEM program financial management, scheduling, planning and reporting. *FY 2011 Base Plans:* Continue JEM program financial management, scheduling, planning and reporting.	1.913	1.947	0.233	0.000	0.233
5) JEM Program Development	2.309	2.229	0.478	0.000	0.478

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Performed software upgrades on fielded JEM baseline. Provided JEM updates in parallel with evolving C4I host system upgrades. Continued development of additional capabilities and upgrades to models within JEM. Supported requests for special configurations of JEM to include; NORAD, NORTHCOM, STRATCOM, USFK, USAFE, US National Guard CST, etc. and maintained interoperability with GCCS and J/A/AF/M MCS. *FY 2010 Plans:* Perform software upgrades on fielded JEM baseline. Provide JEM updates in parallel with evolving C4I host system upgrades. Continued development of additional capabilities and upgrades to models within JEM. Supported requests for special configurations of JEM to include; NORAD, NORTHCOM, STRATCOM, USFK, USAFE, US National Guard CST, etc. and maintained interoperability with GCCS and J/A/AF/M MCS. *FY 2011 Base Plans:* Perform software upgrades on fielded JEM baseline. Provide JEM updates in parallel with evolving C4I host system upgrades. Continue development of additional capabilities and upgrades to models within JEM. Support requests for special configurations of JEM (North American Aerospace Defense Command (NORAD), US Northern Command (NORTHCOM), US Strategic Command (STRATCOM), US Forces Korea (USFK) US Air Force Europe (USAFE), US National Guard Civil Support Teams (CST), (etc). Global Command and Control System (GCCS) - Joint/Army/Air Force/Maritime (J/A/AF/M), Maneuver Control System (MCS). Conduct full system integration, ensure operational supportability; reduce logistics footprint; implement human systems integration; ensure affordability; protect critical program information; and demonstrate system integration, interoperability, safety, and utility.					
6) JEM Operational Test and Evaluation/Follow-On Test and Evaluation	1.480	1.491	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT IS5: *INFORMATION SYSTEMS (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Continued to conduct Multi-Service Operational Test and Evaluation (MOT&E) and Follow-on Test and Evaluation (FOT&E). *FY 2010 Plans:* Continue to conduct MOT&E and FOT&E.					
7) JEM Models Continuing Development *FY 2009 Accomplishments:* Provided Scientific Subject Matter Expertise (SME) and support to JEM Model IPT. Conducted revalidation of Increment 1 technology analysis from FY04 analysis and support model validation, verification and accreditation activities. *FY 2010 Plans:* Continue to provide Scientific SME and support to JEM Model IPT. Continue to revalidate Increment 1 technology analysis from FY04 analysis and support model validation, verification and accreditation activities.	0.505	0.504	0.000	0.000	0.000
8) JEM Accession of Technology Improvements *FY 2009 Accomplishments:* Continued Science and Technology transition and development of JEM Increment 1 software. Reviewed and evaluated internal JEM architecture for improved performance and potential operational cost savings. Provided upgrades to JEM Increment 1 to synchronize with Service C2 systems. Migrated JEM Increment 1 software to evolving host platforms. Analyzed existing and future software architectures. Migrated Urban Dispersion Modeling into JEM Increment 1 baseline and included STRATCOM support.	5.174	7.142	0.567	0.000	0.567

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT IS5: *INFORMATION SYSTEMS (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Analyze existing and future software architectures. Continue migrating JEM software to evolving host platforms (Service C2 systems). Incorporate Urban Dispersion Modeling enhancements, Missile Intercept, Backtracking to Source, enhanced STRATCOM Support, and Human Effects. Continue to review and evaluate existing JEM internal architecture for improved performance and potential operational cost savings. *FY 2011 Base Plans:* Continue Science and Technology transition and improvement of JEM Increment 1 software. Analyze existing and future software architectures. Continue migrating JEM software to evolving host platforms (Service C2 systems). Incorporate Urban Dispersion Modeling enhancements, Missile Intercept, Backtracking to Source, enhanced STRATCOM Support, and Human Effects. Continue to review and evaluate existing JEM internal architecture for improved performance and potential operational cost savings.					
9) JEM Developmental Test and Evaluation *FY 2009 Accomplishments:* Continued to perform Governmental DT on JEM Increment 1 software. Verified that the JEM transitioned S&T code and model correctly and conducted test in support of follow-on accreditation and operational test. Completed interoperability, network and system security certifications of multiple service C4I/host systems and three computer operating systems (Windows XP, Vista and UNIX). *FY 2010 Plans:* Continue to perform Governmental DT on JEM Increment 1 updates. Verify that the JEM transitioned S&T code and model correctly and conduct tests in support of follow-on accreditation and operational tests. Conduct interoperability, network and system security certifications of multiple service C4I/host systems and three computer operating systems (Windows XP, Vista and UNIX). Conduct verification and validation to ensure updates to evolving baseline don't affect JEM accreditation.	1.091	2.073	0.439	0.000	0.439

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Continue to perform Governmental DT on JEM Increment 1 updates and evolving baselines in support of future User and Operational Assessments in preparation for milestone events. Verify that the JEM transitioned S&T code and model correctly and conduct test in support of follow-on accreditation and operational test. Conduct interoperability, network and system security certifications of multiple service C4I/host systems and three computer operating systems (Windows XP, Vista and UNIX). Conduct verification and validation to ensure updates to evolving baseline don't affect JEM accreditation.					
10) JOEF JOEF Program Management *FY 2009 Accomplishments:* Provided Program Management Support, including Systems Engineering, Warfighter, Test and Evaluation, and Integrated Logistics Support Integrated Project Teams (Increment 1).	2.690	0.000	0.000	0.000	0.000
11) JOEF JOEF Software Development *FY 2009 Accomplishments:* Developed software for deliberate and crisis planning for Seaports of Debarkation (SPOD), Aerial Ports of Debarkation (APOD) and automated Tactics, Techniques and Procedures (TTP), including Common Operating Environment (COE), Command and Control Personal Computer (C2PC) interfaces and MCS/GCCS-J (Increment 1). Developed mobile force capability to meet Service requirements (Increment 1).	3.700	0.000	0.000	0.000	0.000
12) JOEF	0.570	0.000	0.000	0.000	0.000

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
JOEF Test and Evaluation *FY 2009 Accomplishments:* Developed and tested interoperability of JOEF software with required systems (Increment 1). Planned and conducted Developmental and Operational Testing (DT/OT).					
13) JOEF JOEF Integrated Logistics Support *FY 2009 Accomplishments:* Planned and provided Integrated Logistics Support, including training, to the JOEF system (Increment 1).	0.320	0.000	0.000	0.000	0.000
14) JOEF JOEF Validation and verification (Increment 1) *FY 2009 Accomplishments:* Planned and conducted software validation and verification (Increment 1).	0.300	0.000	0.000	0.000	0.000
15) JOEF JOEF Integration with JEM and JWARN *FY 2009 Accomplishments:* Continued the integration with JEM, JWARN and database management systems (Increment 1).	0.300	0.000	0.000	0.000	0.000
16) JWARN Increment 1 JWARN Program Development	5.660	2.249	7.261	0.000	7.261

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Performed software upgrades on JWARN baseline. Provided JWARN updates in parallel with evolving C4I host system upgrades. Continued development of additional capabilities and upgrades within JWARN. Supported requests for special configurations and training of JWARN prototype for US Forces Korea (USFK). Maintained interoperability with Global Command and Control System (GCCS) Joint/Army/Air Force/Maritime (J/A/AF/M) and Maneuver Control System (MCS). *FY 2010 Plans:* Perform software upgrades on JWARN baseline. Provide JWARN updates in parallel with evolving C4I host system upgrades. Continue development of additional capabilities and upgrades within JWARN. Support requests for special configurations and training of JWARN prototype for USFK. Maintain interoperability with GCCS J/A/AF/M and MCS. Complete Increment 1 development and initiate Increment 2 planning and development in preparation for Milestone "B" decision through the MDD process as delineated in DOD 5000.02. *FY 2011 Base Plans:* Perform software upgrades on JWARN baseline. Provide JWARN updates in parallel with evolving C4I host system upgrades. Continue development of additional capabilities and upgrades within JWARN. Support requests for special configurations and training of JWARN prototype for USFK. Maintain interoperability with GCCS J/A/AF/M and MCS. Initiate JWARN Increment 2 Technology Development Baseline and initiate Engineering and Manufacturing Development activities. Conduct full system integration, ensure operational supportability; reduce logistics footprint; implement human systems integration; ensure affordability; protect critical program information; and demonstrate system integration, interoperability, safety, and utility.					
17) JWARN Increment 1 JWARN Program Management	2.073	1.900	2.494	0.000	2.494

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Continued JWARN program financial management, scheduling, planning and reporting. *FY 2010 Plans:* Continue JWARN program financial management, scheduling, planning and reporting. *FY 2011 Base Plans:* Continue JWARN program financial management, scheduling, planning and reporting.					
18) JWARN Increment 1 JWARN Operational demonstrations and tests. *FY 2009 Accomplishments:* Conducted operational demonstrations and tests in support of Milestone "C" decision. Generated Multi-Service Operational Test and Evaluation (MOT&E) test results and reports. *FY 2010 Plans:* Plan for, conduct and support operational demonstrations and tests in support of Follow-on Test and Evaluation (FOT&E). Generate test results and reports. *FY 2011 Base Plans:* Prepare for and conduct operational demonstrations and tests.	1.634	0.050	0.050	0.000	0.050
19) JWARN Functional Qualification Tests (FQT)	4.405	0.413	0.000	0.000	0.000

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Conducted Increment 1 FQT to include a High Altitude Electro-Magnetic Pulse (HAEMP), MILSTD 810F environmental, and decontamination testing. Generated FQT results and reports. *FY 2010 Plans:* Prepare for Increment 2 FQT.					
20) JWARN Increment 1 JWARN Total Package Fielding *FY 2009 Accomplishments:* Developed and tested software to support JWARN Total Package Fielding. *FY 2010 Plans:* Continue development and test of software to support JWARN Total Package Fielding. *FY 2011 Base Plans:* Continue development and test of software to support JWARN Total Package Fielding.	0.853	0.550	0.700	0.000	0.700
21) JWARN Increment 1 JWARN Hardware Development *FY 2009 Accomplishments:* Developed the wireless JWARN Component Interface Device (JCID) as required by the Services' Urgent Needs Statement (UNS). Produced 70 Engineering Development Models of the JCID.	2.553	0.000	0.000	0.000	0.000
22) SSA Policies, Standards and Guidelines	0.422	0.233	0.094	0.000	0.094

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Provided Policies, Standards & Guidelines for IT Systems Development (FISMA compliance and J6 Interoperability Certification). *FY 2010 Plans:* Continue to provide Policies, Standards & Guidelines for IT Systems Development (FISMA compliance and J6 Interoperability Certification). *FY 2011 Base Plans:* Continue to provide Policies, Standards & Guidelines for IT Systems Development (FISMA compliance and J6 Interoperability Certification).					
23) SSA Integrated Architecture *FY 2009 Accomplishments:* Continued to maintain a program Integrated Architecture for JPEO-CBD (Warfighter Enterprise Architecture). *FY 2010 Plans:* Continue to maintain a program Integrated Architecture for JPEO-CBD (Warfighter Enterprise Architecture). *FY 2011 Base Plans:* Continue to maintain a program Integrated Architecture for JPEO-CBD (Warfighter Enterprise Architecture).	0.695	0.422	0.170	0.000	0.170
24) SSA Enterprise Support and Services	0.480	0.307	0.134	0.000	0.134

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Provided support processes and services for Architectures, Data, Information Assurance, Help Desk, Modeling and Simulation, Science and Technology, and Standards and Policy. *FY 2010 Plans:* Continue to provide support processes and services for Architectures, Data, Information Assurance, Help Desk, Modeling and Simulation, Science and Technology, and Standards and Policy. *FY 2011 Base Plans:* Continue to provide support processes and services for Architectures, Data, Information Assurance, Help Desk, Modeling and Simulation, Science and Technology, and Standards and Policy.					
25) SSA Chemical, Biological, Radiological, Nuclear (CBRN) Data Model *FY 2009 Accomplishments:* Provided CBRN Data Model development for CBRN Community of Interest. *FY 2010 Plans:* Continue to provide CBRN Data Model development for CBRN Community of Interest. *FY 2011 Base Plans:* Continue to provide CBRN Data Model development for CBRN Community of Interest.	0.493	0.307	0.134	0.000	0.134
26) SSA Enterprise Information Technology Support Plan *FY 2009 Accomplishments:* Maintained Enterprise IT Support Plan.	0.364	0.000	0.000	0.000	0.000
27) SSA Information Assurance	0.592	0.408	0.157	0.000	0.157

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Provided Information Assurance certification and acceptance services for developing JPEO-CBD programs. *FY 2010 Plans:* Continue to provide Information Assurance certification and acceptance services for developing JPEO-CBD programs. *FY 2011 Base Plans:* Continue to provide Information Assurance certification and acceptance services for developing JPEO-CBD programs.					
28) SSA Policy and Standards Repository *FY 2009 Accomplishments:* Continued to maintain a repository for applicable Enterprise policies, standards, and guidelines. *FY 2010 Plans:* Continue to maintain a repository for applicable Enterprise policies, standards, and guidelines. *FY 2011 Base Plans:* Continue to maintain a repository for applicable Enterprise policies, standards, and guidelines.	0.532	0.340	0.140	0.000	0.140
29) SSA Technology Transition Support *FY 2009 Accomplishments:* Provided Technology Transition support services (common components and services). *FY 2010 Plans:* Continue to provide Technology Transition support services (common components and services).	0.301	0.172	0.070	0.000	0.070

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Continue to provide Technology Transition support services (common components and services).					
30) SSA *FY 2009 Accomplishments:* Established and maintained Enterprise VV&A guidelines and processes, including M&S strategic support and accreditation support. *FY 2010 Plans:* Continue maintenance of Enterprise VV&A guidelines and processes, including M&S strategic support and accreditation support. *FY 2011 Base Plans:* Continue maintenance of Enterprise VV&A guidelines and processes, including M&S strategic support and accreditation support.	0.457	0.303	0.122	0.000	0.122
31) SSA Net-Centric Assessment Provided Net-Centric Assessment for programs. *FY 2009 Accomplishments:* Provided Net-Centric Assessment for programs. *FY 2010 Plans:* Continue to provide Net-Centric Assessment for programs. *FY 2011 Base Plans:* Continue to provide Net-Centric Assessment for programs.	0.623	0.399	0.161	0.000	0.161

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
32) SSA CBRN Interface Standards *FY 2009 Accomplishments:* Developed and maintained Common CBRN Interface standards, including a Common CBRN Sensor Interface (CCSI). *FY 2010 Plans:* Continue to maintain Common CBRN Interface standards, including a CCSI. *FY 2011 Base Plans:* Continue to maintain Common CBRN Interface standards, including a CCSI. Develop new interfaces as required.	0.624	0.402	0.162	0.000	0.162
33) SBIR *FY 2010 Plans:* Small Business Innovative Research.	0.000	0.352	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	45.694	27.301	13.844	0.000	13.844

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• G47101: *JOINT WARNING & REPORTING NETWORK (JWARN)*	4.375	6.551	6.903		6.903	8.078	5.590	8.183	8.423	Continuing	Continuing
• JC0208: *JOINT EFFECTS MODEL (JEM)*	5.546	3.482	3.482		3.482	0.000	0.000	3.369	3.568	Continuing	Continuing
	0.000	0.000	0.000		0.000	0.000	2.482	2.480	3.716	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT IS5: *INFORMATION SYSTEMS (SDD)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• JC0209: *JOINT OPERATIONAL EFFECTS FEDERATION (JOEF)*											

D. Acquisition Strategy

JEM

The Joint Effects Model (JEM) is following an evolutionary acquisition approach that will allow rapid fielding of existing technologies while further research and development (R&D) continues in order to mature the technologies required for subsequent versions of JEM. It 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 JPEO-CBD architectures and technologies, as well as with Service C2 systems. JEM is expected to develop three distinct increments of software. JEM will define and publish its web-services interface; the JEM interface will be the same on all systems, utilizing data definitions from the approved CBRN data model as appropriate. A cost plus award fee contract was awarded for the follow-on JEM contract for integration and development.

JOEF

Joint Operational Effects Federation (JOEF) is a planning tool to support deliberate and crisis planning. JOEF will be a near real-time course of action analysis tool developed in three increments. It will use a detailed CBRN hazard prediction model. Each block supports Aerial Ports of Debarkation (APODs), Sea Ports of Debarkation (SPODs), mobile forces, medical and automated Tactics, Techniques and Procedures (TTPs) in various levels of fidelity. Increment 1 will support deliberate planning for operational and strategic users in a Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) common operating environment (COE)/Networked environment, Command and Control Personal Computers (C2PC), and crisis planning for the operational users in a COE/Networked environment. Increment 2 will support deliberate and crisis planning for the tactical users in COE/Networked, and Non-Networked environments; deliberate planning for operational and strategic users in a Non-Networked environment; and crisis planning for the operational users in a COE Networked and Non-Networked environments. Increment 2 also supports planning for consequence management and development of consequence management for military capabilities. Increment 3 will extend consequence management capabilities to include hot/allied nation military operations and civilian facilities.

JWARN

JWARN is being developed in two increments. JWARN Increment 1, will integrate JWARN capabilities into specified (Common Operating Environment (COE)-based) operational-level Service Command and Control (C2) systems at the Global Command and Control System (GCCS) stakeholder level, extend the integration effort

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT IS5: *INFORMATION SYSTEMS (SDD)*

into the Service tactical (non COE-based) C2 systems, provide connectivity to legacy and newly developed sensors, and complete the development of JWARN in accordance with the threshold requirements contained in the Joint Requirements Oversight Council (JROC) approved Joint Operational Requirement Document (JORD) approved 5 July 2005, by JROC Memorandum 144-5 as refined by the JWARN Increment 1 Capabilities Production Document (CPD) approved 13 December 2007 by JROM 829-07. JWARN Increment 2 will extend these baseline capabilities to other C2 systems and new sensors as they are fielded; and further, will ensure CBRN warning and reporting capabilities remain synchronized with the changing demands of the Warfighter while keeping pace with evolving C2 systems.

SSA

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

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

Phase 1b established management and control measures for tracking and reporting progress of the various elements described in Phases 1 and 2. This includes establishing, tracking, and performing configuration management of inventories and databases of IT systems and their states of interoperability and information assurance compliance. [BA6 - RDT&E Management Support].

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT IS5: *INFORMATION SYSTEMS (SDD)*	

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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 Hazard Prediction Model Development and Integration	C/CPAF	Northrop Grumman San Diego, CA	26.438	8.643	Jan 2010	0.000		0.000		0.000	0.000	35.081	0.000
** JWARN - SW S - JWARN System Development and Demonstration	C/CPAF	Northrop Grumman Winterpark, FL	12.238	2.000	Jan 2010	4.871	Jan 2011	0.000		4.871	0.000	19.109	0.000
** SSA - Product Development	MIPR	SPAWAR Systems Center San Diego, CA	4.641	1.020	Oct 2009	0.468	Oct 2010	0.000		0.468	0.000	6.129	0.000
		Subtotal	43.317	11.663		5.339		0.000		5.339	0.000	60.319	0.000

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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 S - IPT - System Engineering, Logistics and Program Support	MIPR	Various	15.203	1.998	Jan 2010	0.432	Jan 2011	0.000		0.432	0.000	17.633	0.000
** SSA - Support Costs	MIPR		4.821	1.444	Oct 2009	0.682	Oct 2010	0.000		0.682	0.000	6.947	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT IS5: *INFORMATION SYSTEMS (SDD)*	

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
		SPAWAR Systems Center San Diego, CA											
		Subtotal	20.024	3.442		1.114		0.000		1.114	0.000	24.580	0.000

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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 - DTE SB - Hazard Prediction Model Development Test	MIPR	Various	6.035	2.073	Jan 2010	0.346	Jan 2011	0.000		0.346	0.000	8.454	0.000
OTE S - Hazard Prediction Model Developmental Test	MIPR	Various	5.555	2.219	Jan 2010	0.984	Jan 2011	0.000		0.984	0.000	8.758	0.000
OTHT SB - Hazard Prediction Model - IV&V	MIPR	Various	3.282	1.616	Jan 2010	0.000		0.000		0.000	0.000	4.898	0.000
** JWARN - OTHT SB - JWARN	MIPR	Various	31.247	0.161	Jan 2010	0.306	Jan 2011	0.000		0.306	0.000	31.714	0.000
** SSA - Test and Evaluation	MIPR	SPAWAR Systems Center	3.460	0.485	Oct 2009	0.148	Oct 2010	0.000		0.148	0.000	4.093	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT IS5: *INFORMATION SYSTEMS (SDD)*

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
		San Diego, CA											
		Subtotal	49.579	6.554		1.784		0.000		1.784	0.000	57.917	0.000

Remarks

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** JEM - PM/MS S - Program Office - Planning and Programming	MIPR	SPAWAR Systems Command San Diego, CA	6.613	1.945	Oct 2009	0.233	Oct 2010	0.000		0.233	0.000	8.791	0.000
** JWARN - PM/MS S - JWARN Management Support	MIPR	Various	21.666	3.001	Jan 2010	5.328	Jan 2011	0.000		5.328	0.000	29.995	0.000
** SSA - Management Services	MIPR	SPAWAR Systems Center San Diego, CA	3.018	0.344	Oct 2009	0.046	Oct 2010	0.000		0.046	0.000	3.408	0.000
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/STTR	MIPR	HQ AMC, Alexandria	0.000	0.352		0.000		0.000		0.000	0.000	0.352	0.000
		Subtotal	31.297	5.642		5.607		0.000		5.607	0.000	42.546	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT IS5: *INFORMATION SYSTEMS (SDD)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010 Cost	FY 2010 Award Date	FY 2011 Base Cost	FY 2011 Base Award Date	FY 2011 OCO Cost	FY 2011 OCO Award Date	FY 2011 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Remarks													

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	144.217	27.301		13.844		0.000		13.844	0.000	185.362	0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*		PROJECT IS5: *INFORMATION SYSTEMS (SDD)*

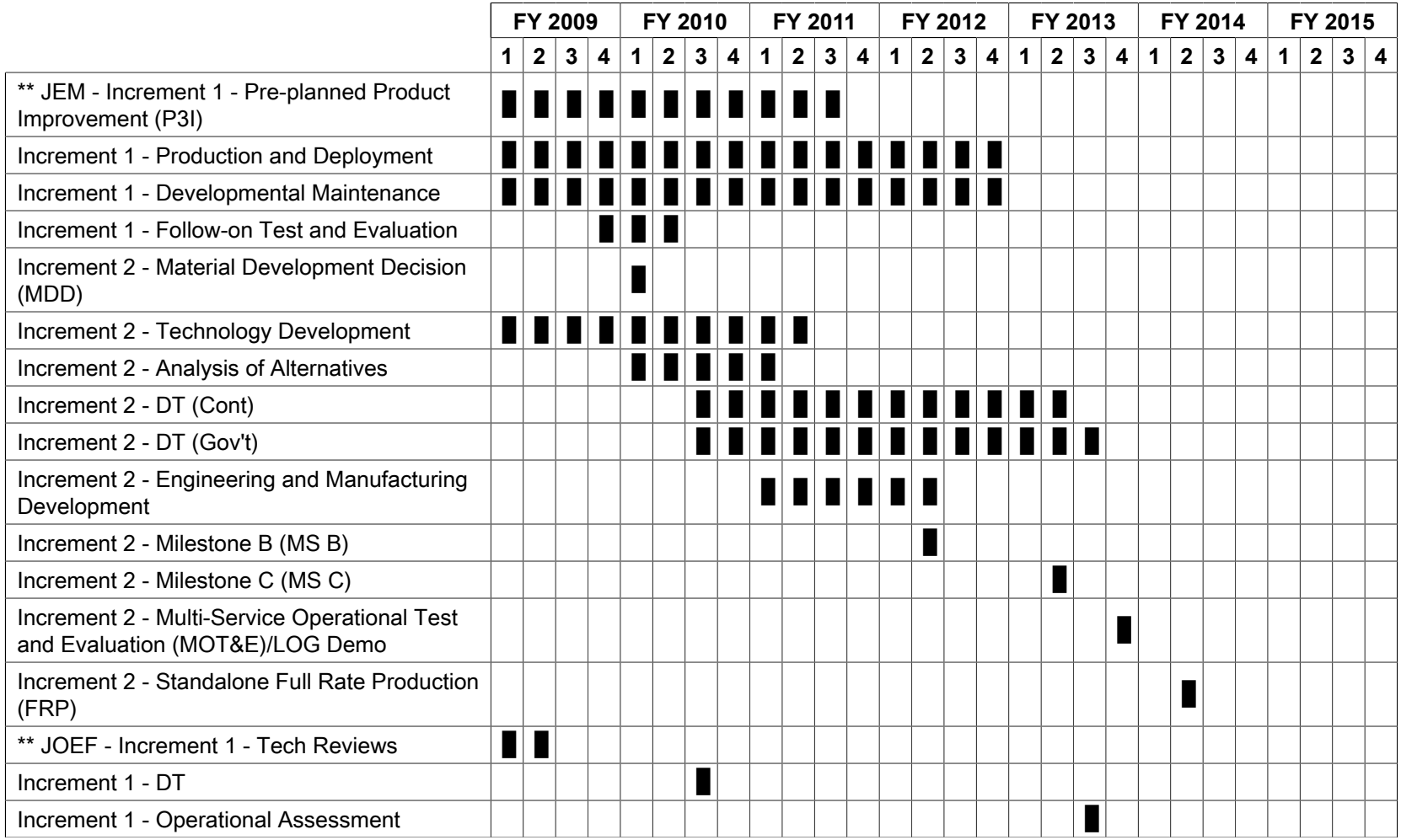

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT IS5: *INFORMATION SYSTEMS (SDD)*	

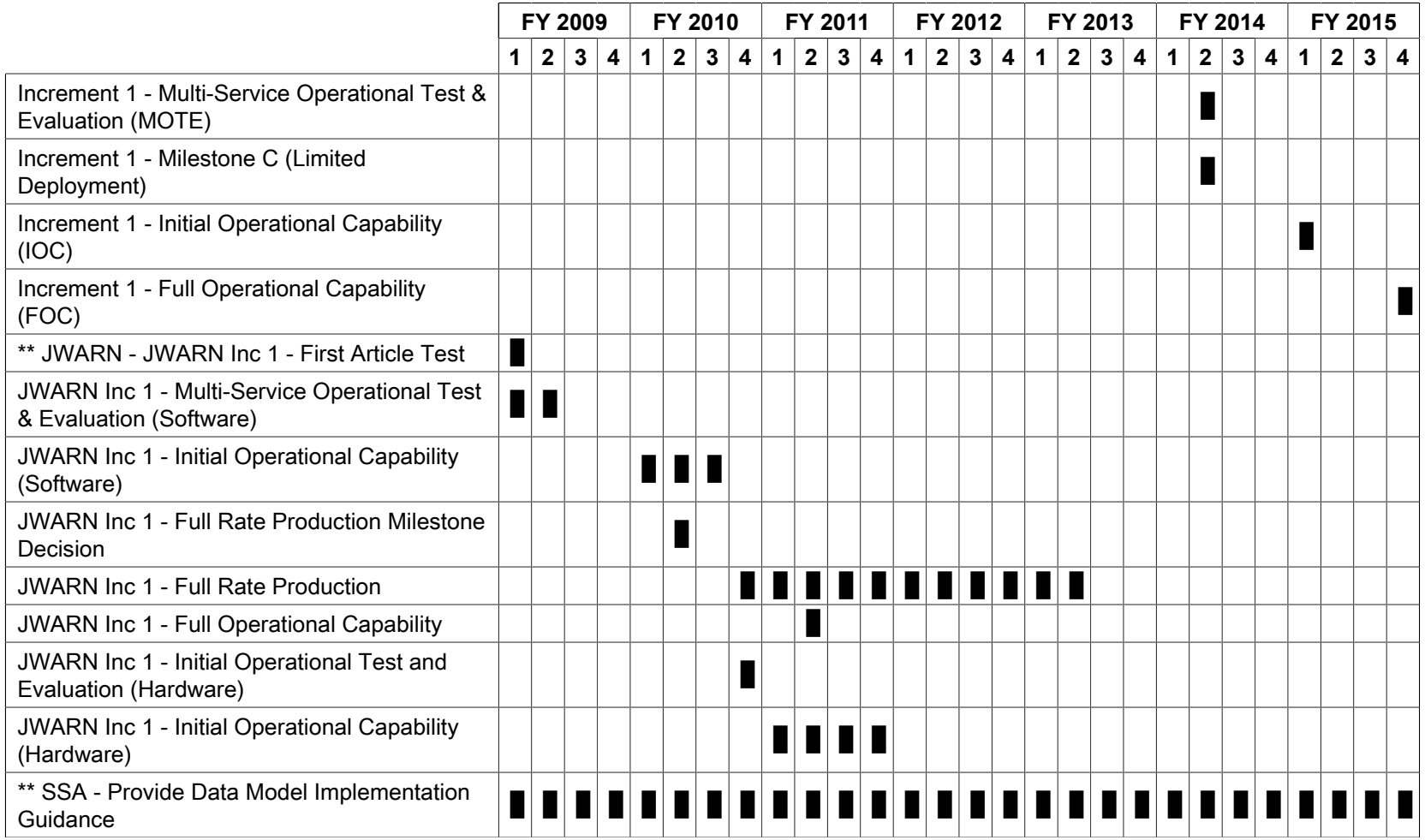

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT IS5: *INFORMATION SYSTEMS (SDD)*	

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Provide Enterprise Architecture Products and Services	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Provide Information Assurance Site Compliance Testing	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Provide Integration and Test, M&S, VV&A Certification and Accreditation	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Demonstrate Technology Transition Capabilities	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Provide CM Services for Common User Products and Services	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Provide Net-Centric Assessment and assist programs with implementation of policy	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Develop and provide CBRN Data Model implementation guidance, including reference implementations	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Architecture advisory services to support Warfighter Enterprise and Program Integrated Architectures	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Demonstrate, Verify, Test Technology Transition capabilities especially for Common Components and Services	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Provide Information Assurance Certification/ Acceptance products/services, including compliance testing	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT IS5: *INFORMATION SYSTEMS (SDD)*	

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Provide Modeling, Simulation, VV&A, Integration/Test support and interoperability demonstrations.	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮
Provide FISMA and J6 Interoperability certification support	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮
Provide CBRN Interface Standards, including reference implementations, e.g. Common CBRN Sensor Interface	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮
Sustain CBRN Data Model	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮
Sustain CCSI, including investigation, as an industry standard	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** IS5: *INFORMATION SYSTEMS (SDD)*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
** JEM - Increment 1 - Pre-planned Product Improvement (P3I)	3	2008	3	2011
Increment 1 - Production and Deployment	4	2007	4	2012
Increment 1 - Developmental Maintenance	3	2008	4	2012
Increment 1 - Follow-on Test and Evaluation	4	2009	2	2010
Increment 2 - Material Development Decision (MDD)	1	2010	1	2010
Increment 2 - Technology Development	3	2008	2	2011
Increment 2 - Analysis of Alternatives	1	2010	1	2011
Increment 2 - DT (Cont)	3	2010	2	2013
Increment 2 - DT (Gov't)	3	2010	3	2013
Increment 2 - Engineering and Manufacturing Development	1	2011	2	2012
Increment 2 - Milestone B (MS B)	2	2012	2	2012
Increment 2 - Milestone C (MS C)	2	2013	2	2013
Increment 2 - Multi-Service Operational Test and Evaluation (MOT&E)/LOG Demo	4	2013	4	2013
Increment 2 - Standalone Full Rate Production (FRP)	2	2014	2	2014
** JOEF - Increment 1 - Tech Reviews	2	2006	2	2009
Increment 1 - DT	3	2010	3	2010
Increment 1 - Operational Assessment	3	2013	3	2013
Increment 1 - Multi-Service Operational Test & Evaluation (MOTE)	2	2014	2	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT IS5: *INFORMATION SYSTEMS (SDD)*

	Start		End	
Event	Quarter	Year	Quarter	Year
Increment 1 - Milestone C (Limited Deployment)	2	2014	2	2014
Increment 1 - Initial Operational Capability (IOC)	1	2015	1	2015
Increment 1 - Full Operational Capability (FOC)	4	2015	4	2015
** JWARN - JWARN Inc 1 - First Article Test	4	2008	1	2009
JWARN Inc 1 - Multi-Service Operational Test & Evaluation (Software)	4	2008	2	2009
JWARN Inc 1 - Initial Operational Capability (Software)	1	2010	3	2010
JWARN Inc 1 - Full Rate Production Milestone Decision	2	2010	2	2010
JWARN Inc 1 - Full Rate Production	4	2010	2	2013
JWARN Inc 1 - Full Operational Capability	2	2011	2	2011
JWARN Inc 1 - Initial Operational Test and Evaluation (Hardware)	4	2010	4	2010
JWARN Inc 1 - Initial Operational Capability (Hardware)	1	2011	4	2011
** SSA - Provide Data Model Implementation Guidance	1	2008	4	2015
Provide Enterprise Architecture Products and Services	3	2007	4	2015
Provide Information Assurance Site Compliance Testing	3	2006	4	2015
Provide Integration and Test, M&S, VV&A Certification and Accreditation	2	2007	4	2015
Demonstrate Technology Transition Capabilities	1	2008	4	2015
Provide CM Services for Common User Products and Services	1	2008	4	2015
Provide Net-Centric Assessment and assist programs with implementation of policy	4	2007	4	2015
Develop and provide CBRN Data Model implementation guidance, including reference implementations	1	2008	4	2015
	1	2008	4	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
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	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
Architecture advisory services to support Warfighter Enterprise and Program Integrated Architectures				
Demonstrate, Verify, Test Technology Transition capabilities especially for Common Components and Services	1	2008	4	2015
Provide Information Assurance Certification/Acceptance products/services, including compliance testing	1	2008	4	2015
Provide Modeling, Simulation, VV&A, Integration/Test support and interoperability demonstrations.	1	2008	4	2015
Provide FISMA and J6 Interoperability certification support	1	2008	4	2015
Provide CBRN Interface Standards, including reference implementations, e.g. Common CBRN Sensor Interface	1	2008	4	2015
Sustain CBRN Data Model	1	2008	4	2015
Sustain CCSI, including investigation, as an industry standard	1	2008	4	2015

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*	87.676	57.558	141.680	0.000	141.680	161.732	159.144	141.481	111.671	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This project (MB5) contains Engineering and Manufacturing Development (EMD) on efforts (post Milestone B), which provide a rapid response capability from identification of pathogens to the delivery of medical countermeasures. Specifically, this project includes: the Critical Reagents Program (CRP), the Joint Vaccine Acquisition Program (JVAP) which includes vaccines for Recombinant Botulinum A/B and Plague, and The Transformational Medical Technology Initiative (TMTI) program.

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

The Transformational Medical Technologies Initiative (TMTI) was launched to respond to the threat of emerging or intentionally bioengineered biological threats. TMTI's mission is to protect the Warfighter from genetically engineered biological threats by providing a rapid response capability from identification of pathogens to the delivery of medical countermeasures. This mission is accomplished by developing broad spectrum (multi-agent) therapeutics against biological warfare (BW) agents (e.g, one drug that treats multiple agents). The development of broad spectrum therapeutics involves developing a capability to treat exposure to hemorrhagic fever viruses (HFVs) (e.g. Ebola virus) and intracellular bacterial pathogens (ICBs) (e.g. Tularemia). Efforts are further classified as host-directed therapeutics (e.g, drugs that target common pathways within a human to prevent or treat a variety of diseases) or pathogen-directed therapeutics (e.g., drugs that attack a common pathway found in multiple threat agents). Attrition is high throughout the drug development process. Less than 10% of all preclinical compounds become a licensed drug. Causes for attrition include scientific failures, Food and Drug Administration (FDA) rejection at major milestone reviews, and loss through down-selection at DoD Milestone Decision points. The development of medical countermeasures is an arduous process that requires extensive interaction with the FDA, from pre-clinical research to safety tests in human subjects (Phase I clinical studies), efficacy tests in humans/animals (Phase II clinical studies or pivotal animal efficacy studies), and expanded safety or efficacy studies (Phase III clinical studies), which culminate with a request to the FDA to license, market, and produce a drug. This interaction between the Department of Defense (DoD) and the FDA results in a coordinated, unified, and safe effort.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*

The Joint Vaccine Acquisition Program (JVAP) under Chemical Biological Medical Systems (CBMS) funds the EMD phase of vaccines that are directed against validated biological warfare (BW) weapons to include bacteria, viruses, and toxins of biological origin. Effective medical countermeasures to negate the threat of these BW agents are urgently needed. Vaccines have been identified as the most efficient countermeasure against the validated threat of BW weapons. Efforts for medical biological defense product development involve production scale-up studies and validation, non-clinical studies, consistency manufacturing, and expanded clinical human safety studies. The results of these efforts, and those conducted during the EMD phase, will be used to submit a Biologic License Application (BLA) to the Food and Drug Administration (FDA) for product licensure. To evaluate vaccine effectiveness, pivotal animal studies will be conducted concurrently with the Phase 3 clinical trial to satisfy the requirements of the FDA's "Animal Rule". Upon FDA licensure, the product will transition to full-scale licensed production. Products under development in this budget item include Recombinant Botulinum A/B and Plague vaccines.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
1) CRP	2.217	1.158	1.278	0.000	1.278
FY 2009 Accomplishments: Developed biological threat agent reference materials (new strains of Yersinia and Burkholderia). *FY 2010 Plans:* Continue development/expansion of biological select agents reference materials to known and emerging threats. *FY 2011 Base Plans:* Continue development/expansion of biological select agents reference materials to known and emerging threats.					
2) CRP	1.127	0.679	0.733	0.000	0.733
FY 2009 Accomplishments: Integrated new assays into CRP Catalog (PCR FastBlock assays, Positive Plasmid Controls and ECL System Reagents).					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Continue development of immunoassays and nucleic acid based genomic assays to support fielded and developmental systems. *FY 2011 Base Plans:* Continue development of immunoassays and nucleic acid based genomic assays to support fielded and developmental systems.					
3) CRP *FY 2009 Accomplishments:* Completed implementation of formal Quality Assurance/Quality Control(QA/QC) program to encompass systems engineering, validation, Development Testing (DT), and Operational Testing (OT) for the transition of fielding of biological detection assays. *FY 2010 Plans:* Continue QA/QC testing to encompass the transition and fielding of biological detection assays. *FY 2011 Base Plans:* Continue QA/QC testing to encompass the transition and fielding of biological detection assays.	3.568	2.206	2.358	0.000	2.358
4) CRP *FY 2009 Accomplishments:* Continued development of guidelines to achieve International Organization for Standardization (ISO) for select biological threat agent reference materials. *FY 2010 Plans:* Finalize implementation plan to achieve ISO certification.	0.523	0.312	0.337	0.000	0.337

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Achieve and maintain ISO certification.					
5) TMTI Broad Spectrum Medical Countermeasures: Activities during this phase will include Phase 2 clinical trials, which will test the efficacy of therapeutics. Because the therapeutics sought are for biological warfare (BW) indications, efficacy testing on humans cannot be performed and will be tested in animals only. Because of the lack of human efficacy data, trials in animals are considered to be "Pivotal Animal Efficacy Studies" and are most commonly performed on at least two species of animals, to include non-human primates. Activities will also include expanded human and animal safety and/or animal efficacy studies as directed by the Food and Drug Administration (FDA) to support a New Drug Application (NDA) submission. *FY 2011 Base Plans:* Initiate pivotal animal efficacy studies and any expanded safety or efficacy studies as directed by the FDA for up to three candidate drugs following review and approval of new drug candidates at Milestone B. Critical activities will include dose/schedule and administration, assay validation, and efficacy studies in animals to demonstrate a favorable impact on clinical endpoints. Final formulation and dose will be determined by these studies. Pending discussions with the FDA, additional data may be required beyond that collected in initial Phase I clinical studies and pivotal animal efficacy studies to satisfy safety and/or efficacy requirements for NDA submission and licensure.	0.000	0.000	48.419	0.000	48.419
6) TMTI Platform Technologies: Exercises will commence on the platform technologies as an integrated system, and the bioinformatics system, developed with Science and Technology (S&T) funding, to evaluate and determine their capacity to support TMTI's capability goals. Platform technologies will continue to be integrated. Platforms will be exercised and evaluated as a system.	0.000	0.000	17.229	0.000	17.229

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Plan and execute up to two exercises and evaluations. Data will be collected into lessons learned and analyzed with the goal of improving the integration of the platforms. Analysis will be performed to develop a timeline for the response capability. Continue to evaluate the bioinformatics system for overall architecture, connectivity, processing capability, and user friendliness. Analyze lessons learned from each exercise and incorporate them into future exercises in order to improve countermeasure efficacy and shorten the time required to produce an approved countermeasure for an unknown or genetically modified pathogen.					
7) JVAP - Recombinant Botulinum Vaccine *FY 2009 Accomplishments:* Completed execution of Phase 1b clinical trial.	0.874	0.000	0.000	0.000	0.000
8) JVAP - Recombinant Botulinum Vaccine *FY 2009 Accomplishments:* Continued manufacturing process validation and validation of formulation, filled and finished process for serotypes A and B. *FY 2010 Plans:* Continue manufacturing process validation and validation of formulation, fill and finish process for serotypes A and B. *FY 2011 Base Plans:* Continue manufacturing process validation and validation of formulation, fill and finish process for serotypes A and B.	18.059	22.874	28.668	0.000	28.668
9) JVAP - Recombinant Botulinum Vaccine	1.053	2.788	5.323	0.000	5.323

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Continued non-clinical testing. Continued requirement for safeguarding biological select agents and toxins mandated by DoD Directive 5210.88. *FY 2010 Plans:* Continue non-clinical testing. Continue requirement for safeguarding biological select agents and toxins mandated by DoD Directive 5210.88. *FY 2011 Base Plans:* Continue non-clinical testing. Continue requirement for safeguarding biological select agents and toxins mandated by DoD Directive 5210.88.					
10) JVAP - Recombinant Botulinum Vaccine *FY 2009 Accomplishments:* Continued Phase 2 clinical trial. *FY 2010 Plans:* Continue Phase 2 clinical trial. *FY 2011 Base Plans:* Continue Phase 2 clinical trial.	9.378	4.979	2.139	0.000	2.139
11) JVAP - Plague Vaccine *FY 2009 Accomplishments:* Continued large scale manufacturing process development. *FY 2010 Plans:* Continue and complete large scale manufacturing process development.	12.956	1.453	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
12) JVAP - Plague Vaccine	11.492	9.948	9.913	0.000	9.913
FY 2009 Accomplishments: Continued non-clinical studies, to include additional FDA required passive transfer studies. Continued requirement for safeguarding biological select agents and toxins mandated by DoD Directive 5210.88. *FY 2010 Plans:* Continue non-clinical studies, to include additional FDA required passive transfer studies. Continue requirement for safeguarding biological select agents and toxins mandated by DoD Directive 5210.88. *FY 2011 Base Plans:* Continue non-clinical studies, to include additional FDA required passive transfer studies. Continue requirement for safeguarding biological select agents and toxins mandated by DoD Directive 5210.88.					
13) JVAP - Plague Vaccine	5.783	4.056	5.725	0.000	5.725
FY 2009 Accomplishments: Continued Phase 2 clinical trial. *FY 2010 Plans:* Continue Phase 2 clinical trial. *FY 2011 Base Plans:* Continue Phase 2 clinical trial.					
14) JVAP - Plague Vaccine	16.162	3.471	15.260	0.000	15.260
FY 2009 Accomplishments: Continued large scale manufacturing process validation.					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Continue large scale manufacturing process validation. *FY 2011 Base Plans:* Continue large scale manufacturing process validation.					
15) JVAP - Plague Vaccine *FY 2009 Accomplishments:* Provided strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contacting, scheduling, acquisition oversight and technical support. *FY 2010 Plans:* Provide strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contacting, scheduling, acquisition oversight and technical support. *FY 2011 Base Plans:* Provide strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contacting, scheduling, acquisition oversight and technical support.	4.484	2.888	4.298	0.000	4.298
16) SBIR *FY 2010 Plans:* Small Business Innovative Research.	0.000	0.746	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	87.676	57.558	141.680	0.000	141.680

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• JM0001: *JOINT BIO AGENT IDENT AND DIAG SYSTEM (JBAIDS)*	0.479	0.000	5.571		5.571	0.000	0.000	0.000	0.000	Continuing	Continuing
• JX0005: *DOD BIOLOGICAL VACCINE PROCUREMENT*	38.109	12.701	12.824		12.824	3.385	3.466	56.416	98.759	Continuing	Continuing
• JX0210: *CRITICAL REAGENTS PROGRAM (CRP)*	0.000	0.000	0.994		0.994	0.993	0.993	0.992	0.000	Continuing	Continuing
• MB4: *MEDICAL BIOLOGICAL DEFENSE (ACD&P)*	7.910	102.437	136.975		136.975	130.718	131.347	115.985	113.566	Continuing	Continuing

D. Acquisition Strategy

CRP

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

TMTI

Transformational Medical Technology Initiative's (TMTI) ultimate goal is the delivery of FDA-licensed, therapeutics to the Warfighter. This goal can be reached through any one of the following three acquisition approaches: 1) through the discovery of new drugs; 2) through application of new drug indications (i.e., through a commercial off-the-shelf (COTS) approach); or, 3) through the re-engineering of previously developed drugs (i.e., through a Modified COTS approach). This may involve FDA-approved drugs or previously developed drug compounds that do not have an FDA license. Each of these approaches will require different entry points into both the drug development process and the defense acquisition management timeline. Moreover, each of these approaches will likely experience a different set of FDA regulatory requirements. In order to execute the overall acquisition strategy, TMTI has partnered with other elements within the DoD Chemical and Biological Defense Program, DoD agencies, private industry, and other DoD laboratories for the development of TMTI products. The contract types used to execute the program will depend on the circumstances, including maturity of the science, the legalities surrounding Intellectual Property (IP) and patent rights, and even the

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

size of the performer. Cost Plus Fixed Fee and Cost Plus Incentive Fee contracts will be used with traditional or nontraditional defense contractors for most advanced development contracts. Finally, developing platform technologies, such as modeling and simulation to predict drug-to-drug interaction effects prior to actual clinical trials, and the use of genetic sequencing and a bioinformatics backbone, are examples of how TMTI managers intend to augment private industry best practices to streamline the program management, test and evaluation, and overall TMTI product development.

VAC BOT

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

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

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

VAC PLG

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

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*

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

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

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*	

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
** CRP - CRP - Scale-up of Select Biological Threat Agent Reference Materials	MIPR	USAMRIID Fort Detrick, MD & Dugway Proving Ground	8.101	0.511	Jan 2010	0.607	Jan 2011	0.000		0.607	0.000	9.219	0.000
CRP - Development of Select Biological Threat Agent Reference Materials and Assays	MIPR	RDECOM Edgewood, MD	1.538	0.151	Jan 2010	0.159	Jan 2011	0.000		0.159	0.000	1.848	0.000
** TMTI - HW C - Therapeutic development	C/CPIF	TBD Contract #1	0.000	0.000		8.493	Apr 2011	0.000		8.493	0.000	8.493	0.000
HW C - Therapeutic development	C/CPIF	TBD Contract #2	0.000	0.000		8.493	Apr 2011	0.000		8.493	0.000	8.493	0.000
SW S - Technologies	C/CPIF	TBD Technologies	0.000	0.000		6.044	Apr 2011	0.000		6.044	0.000	6.044	0.000
** VAC BOT - Manufacturing, Validation and Consistency Lot Production	C/CPAF	DynPort Vaccine Company Frederick, MD	16.175	12.470	Jan 2010	14.554	Jan 2011	0.000		14.554	0.000	43.199	0.000
** VAC PLG - Manufacturing, Validation, and Consistency Lot Production	C/CPAF	DynPort Vaccine Company Frederick, MD	66.552	5.261	Jan 2010	13.743	Jan 2011	0.000		13.743	0.000	85.556	0.000
		Subtotal	92.366	18.393		52.093		0.000		52.093	0.000	162.852	0.000

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

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010 Cost	FY 2010 Award Date	FY 2011 Base Cost	FY 2011 Base Award Date	FY 2011 OCO Cost	FY 2011 OCO Award Date	FY 2011 Total Cost	Cost To Complete	Total Cost	Target Value of Contract

Remarks

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

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010 Cost	FY 2010 Award Date	FY 2011 Base Cost	FY 2011 Base Award Date	FY 2011 OCO Cost	FY 2011 OCO Award Date	FY 2011 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** CRP - CRP - Select Biological Threat Agent Reference Material Regulatory /Quality Assurance (QA) Support	MIPR	DTIC Edgewood, MD	0.556	0.090	Jan 2010	0.095	Jan 2011	0.000		0.095	0.000	0.741	0.000
CRP - Select Biological Threat Agent Reference Material Support	MIPR	USAMRIID Fort Detrick, MD; RDECOM	2.290	0.294	Jan 2010	0.309	Jan 2011	0.000		0.309	0.000	2.893	0.000
CRP - Select Biological Threat Agent Reference Material Regulatory/ Quality Assurance (QA) Support	MIPR	Dugway Proving Ground Dugway, UT	1.171	0.131	Jan 2010	0.138	Jan 2011	0.000		0.138	0.000	1.440	0.000
	C/CPIF	TBD Contract #1	0.000	0.000		6.066	Apr 2011	0.000		6.066	0.000	6.066	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
** TMTI - ES C - Regulatory Integration (Environmental and FDA Documentation) and Delivery System													
ES C - Regulatory Integration (Environmental and FDA Documentation) and Delivery System	C/CPIF	TBD Contract #2	0.000	0.000		6.071	Apr 2011	0.000		6.071	0.000	6.071	0.000
TD/D C - Technologies	C/CPIF	TBD Technologies	0.000	0.000		4.317	Apr 2011	0.000		4.317	0.000	4.317	0.000
** VAC BOT - Regulatory Integration (Environmental and FDA Documentation) and Delivery System	C/CPAF	DynPort Vaccine Company Frederick, MD	2.909	1.559	Jan 2010	1.819	Jan 2011	0.000		1.819	0.000	6.287	0.000
** VAC PLG - Regulatory Integration (Environmental and FDA Documentation) and Delivery System	C/CPAF	DynPort Vaccine Company Frederick, MD	11.631	1.155	Jan 2010	1.418	Jan 2011	0.000		1.418	0.000	14.204	0.000
		Subtotal	18.557	3.229		20.233		0.000		20.233	0.000	42.019	0.000

Remarks

DTIC - Defense Technical Information Center
NMRC - Naval Medical Research Center
RDECOM - Research, Development & Engineering Command

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010 Cost	FY 2010 Award Date	FY 2011 Base Cost	FY 2011 Base Award Date	FY 2011 OCO Cost	FY 2011 OCO Award Date	FY 2011 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
USAMRIID - US Army Medical Research Institute of Infectious Diseases DPG - Dugway Proving Ground													

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010 Cost	FY 2010 Award Date	FY 2011 Base Cost	FY 2011 Base Award Date	FY 2011 OCO Cost	FY 2011 OCO Award Date	FY 2011 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
** CRP - CRP - Conformance Testing of Select Biological Threat Agent Reference Materials and Assays	MIPR	Naval Medical Research Center Silver Spring, MD	2.333	0.162	Jan 2010	0.206	Jan 2011	0.000		0.206	0.000	2.701	0.000
CRP - Test & Evaluation of Select Biological Threat Agent Reference Materials and Assays	MIPR	USAMRIID Frederick, MD	3.143	0.222	Jan 2010	0.282	Jan 2011	0.000		0.282	0.000	3.647	0.000
CRP - Validation Program	C/CPFF	TBD	5.431	0.597	Apr 2010	0.740	Apr 2011	0.000		0.740	0.000	6.768	0.000
** TMTI - DTE C - Phase II and III Testing	C/CPIF	TBD Contract #1	0.000	0.000		9.706	Apr 2011	0.000		9.706	0.000	9.706	0.000
DTE C - Phase II and III Testing	C/CPIF	TBD Contract #2	0.000	0.000		9.706	Apr 2011	0.000		9.706	0.000	9.706	0.000
Technologies	C/CPIF	TBD Technologies	0.000	0.000		6.752	Apr 2011	0.000		6.752	0.000	6.752	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*	

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
** VAC BOT - Testing, Evaluation, and Clinical Trials	C/CPAF	DynPort Vaccine Company Frederick, MD	14.883	10.378	Jan 2010	12.479	Jan 2011	0.000		12.479	0.000	37.740	0.000
** VAC PLG - Testing, Evaluation, and Clinical Trials	C/CPAF	DynPort Vaccine Company Frederick, MD	55.678	8.181	Jan 2010	11.174	Jan 2011	0.000		11.174	0.000	75.033	0.000
		Subtotal	81.468	19.540		51.045		0.000		51.045	0.000	152.053	0.000

Remarks

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

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
** CRP - Product Management Support	Allot	CBMS Frederick, MD	0.924	0.365	Oct 2009	0.541	Oct 2010	0.000		0.541	0.000	1.830	0.000
Product Management Support	SS/FFP	Goldbelt Raven LLC, Frederick	3.079	1.493	Jan 2010	1.444	Jan 2011	0.000		1.444	0.000	6.016	0.000
Chem Bio Medical Systems Office	Allot	CBMS Frederick, MD	2.285	0.249	Jul 2010	0.180	Jul 2011	0.000		0.180	0.000	2.714	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*	

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
IT, Facility and Security Support	MIPR	RDECOM Edgewood, MD	0.194	0.090	Jan 2010	0.005	Jan 2011	0.000		0.005	0.000	0.289	0.000
** VAC BOT - PM/ MS S - Joint Vaccine Acquisition Program Management	Allot	CBMS Frederick, MD	0.349	1.543	Jul 2010	2.738	Jul 2011	0.000		2.738	0.000	4.630	0.000
PM/MS S - Contractor Systems Engineering/ Program Management Support	SS/FFP	Goldbelt Raven LLC, Frederick	2.983	1.805	Apr 2010	1.163	Apr 2011	0.000		1.163	0.000	5.951	0.000
PM/MS S - Award Fee (Maximum 10.5%)	C/CPAF	DynPort Vaccine Company Frederick, MD	3.691	2.886	Jan 2010	3.377	Jan 2011	0.000		3.377	0.000	9.954	0.000
** VAC PLG - PM/MS S - Joint Vaccine Acquisition Program Management Office	Allot	CBMS Frederick, MD	4.977	0.960	Jan 2010	1.577	Jan 2011	0.000		1.577	0.000	7.514	0.000
PM/MS S - Program Management Support	Allot	JPEO Falls Church, VA	6.225	2.888	Jul 2010	3.534	Jul 2011	0.000		3.534	0.000	12.647	0.000
PM/MS S - Contractor Systems Engineering/ Program Management Support #2	SS/FFP	Goldbelt Raven LLC, Frederick	7.870	0.851	Apr 2010	1.576	Apr 2011	0.000		1.576	0.000	10.297	0.000
PM/MS S - Award Fee (Maximum 10.5%) #2	C/CPAF	DynPort Vaccine Company Frederick, MD	10.860	2.520	Jan 2010	2.174	Jan 2011	0.000		2.174	0.000	15.554	0.000
	MIPR	HQ	0.000	0.746		0.000		0.000		0.000	0.000	0.746	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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		AMC, Alexandria											
		Subtotal	43.437	16.396		18.309		0.000		18.309	0.000	78.142	0.000

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	235.828	57.558		141.680		0.000		141.680	0.000	435.066	0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*

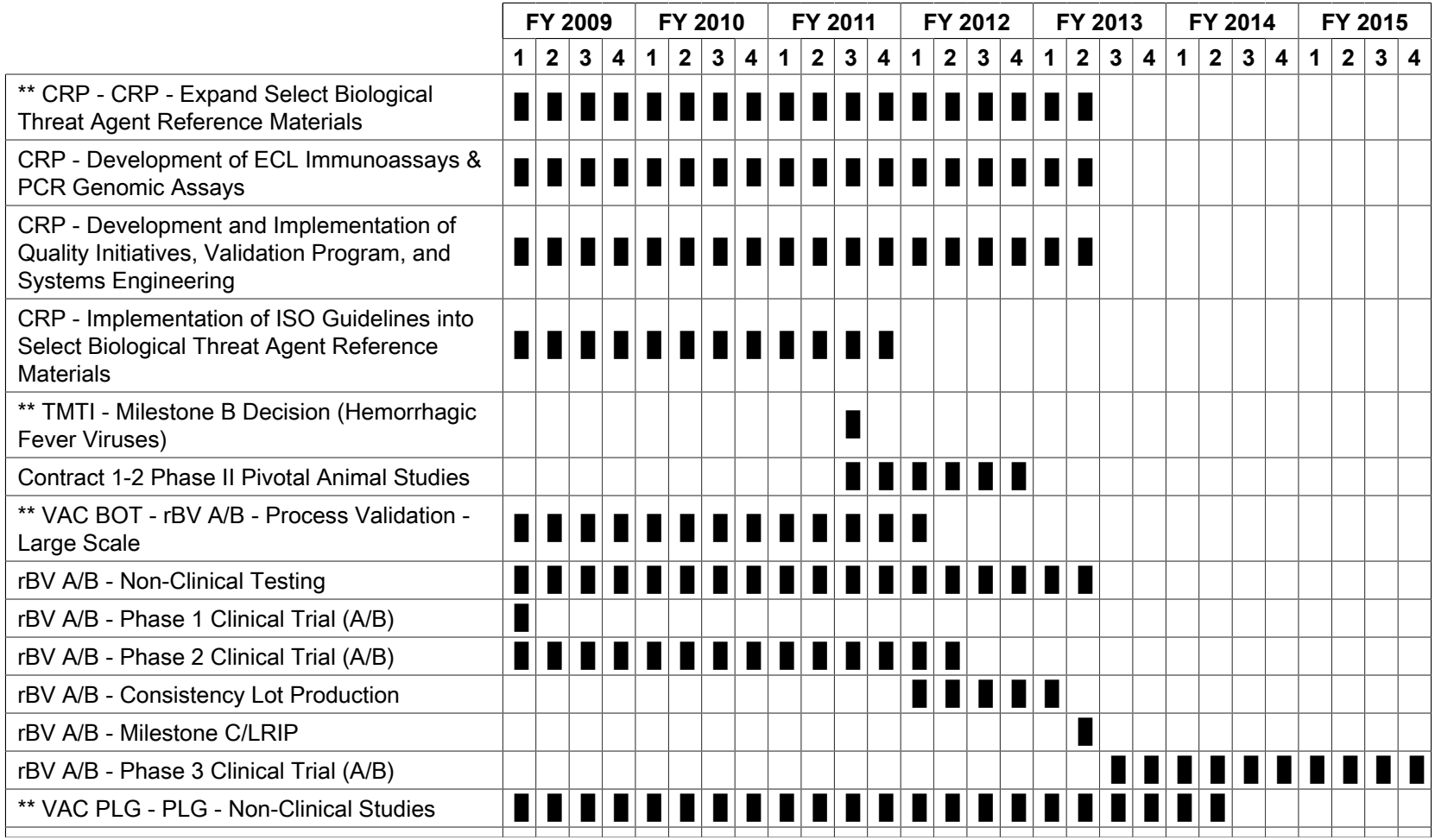

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*	

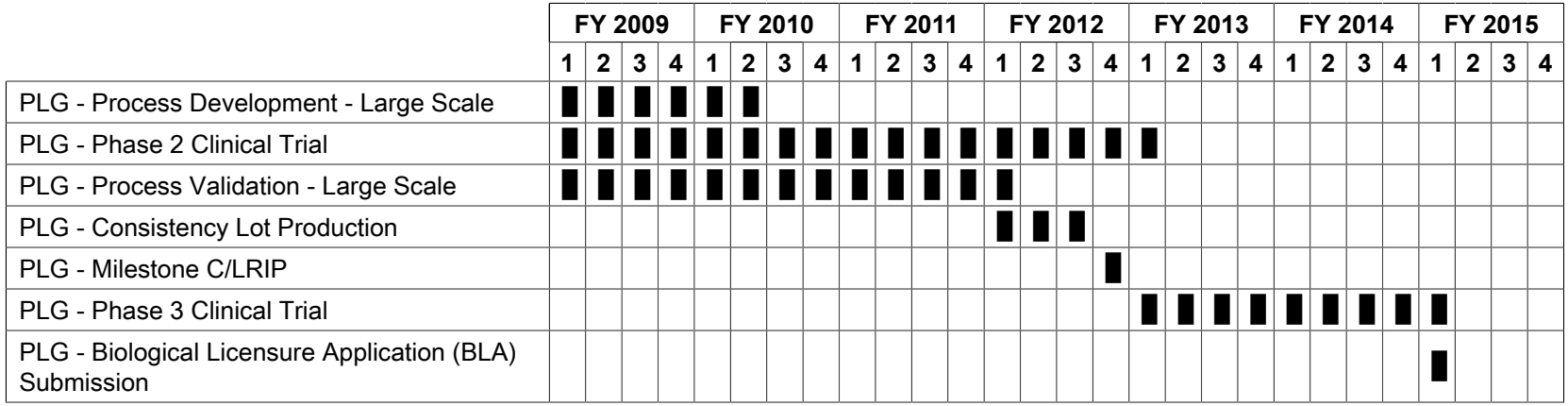

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
** CRP - CRP - Expand Select Biological Threat Agent Reference Materials	4	2003	2	2013
CRP - Development of ECL Immunoassays & PCR Genomic Assays	1	2003	2	2013
CRP - Development and Implementation of Quality Initiatives, Validation Program, and Systems Engineering	4	2006	2	2013
CRP - Implementation of ISO Guidelines into Select Biological Threat Agent Reference Materials	3	2007	4	2011
** TMTI - Milestone B Decision (Hemorrhagic Fever Viruses)	3	2011	3	2011
Contract 1-2 Phase II Pivotal Animal Studies	3	2011	4	2012
** VAC BOT - rBV A/B - Process Validation - Large Scale	1	2002	1	2012
rBV A/B - Non-Clinical Testing	2	2003	2	2013
rBV A/B - Phase 1 Clinical Trial (A/B)	3	2004	1	2009
rBV A/B - Phase 2 Clinical Trial (A/B)	4	2008	2	2012
rBV A/B - Consistency Lot Production	1	2012	1	2013
rBV A/B - Milestone C/LRIP	2	2013	2	2013
rBV A/B - Phase 3 Clinical Trial (A/B)	3	2013	1	2016
** VAC PLG - PLG - Non-Clinical Studies	2	2003	2	2014
PLG - Process Development - Large Scale	4	2004	2	2010
PLG - Phase 2 Clinical Trial	3	2006	1	2013
PLG - Process Validation - Large Scale	4	2007	1	2012

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** MB5: *MEDICAL BIOLOGICAL DEFENSE (SDD)*

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
PLG - Consistency Lot Production	1	2012	3	2012
PLG - Milestone C/LRIP	4	2012	4	2012
PLG - Phase 3 Clinical Trial	1	2013	1	2015
PLG - Biological Licensure Application (BLA) Submission	1	2015	1	2015

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MC5: *MEDICAL CHEMICAL DEFENSE (SDD)*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
MC5: *MEDICAL CHEMICAL DEFENSE (SDD)*	14.203	14.027	51.856	0.000	51.856	47.835	28.771	12.122	8.171	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This project funds the development of medical materiel and other medical equipment items necessary to provide an effective capability for medical defense against chemical agent threats facing U.S. forces in the field. This project supports efforts in the Engineering and Manufacturing Development (EMD) phase of the acquisition strategy for prophylactic and therapeutic drugs, diagnostic equipment, and other life support equipment for protection against and management of chemical warfare agents. Project funds research and development of safety studies, manufacturing scale-up, process validation, drug interaction, performance test, and submission of the Food and Drug Administration (FDA) drug licensure application(s). This program currently funds: (1) Advanced Anticonvulsant System (AAS), which will be used as a treatment for seizures from exposure to nerve agents; (2) Bioscavenger Increment 2 (BSCAV Increment 2), which will be used as a prophylaxis against nerve agents; (3) Inhalational Atropine (IA), which will be used to treat continuing nerve agent-induced effects after the patient has been evacuated to a medical treatment facility; (4) Improved Nerve Agent Treatment System (INATS), which will be used as a treatment for nerve agent intoxication to include new indications for Pyridostigmine Bromide (PB) that will be integrated with current therapeutic regimens; and (5) Pharmaceutical Post Approval and Development Support (PPADS) - Soman Nerve Agent Pyriodstigmine Pretreatment (SNAPP) used as a pretreatment against nerve agent poisoning. Time Temperature Indicators (TTI), Item Unique Identification (IUID), and Radio-Frequency Identification (RFID) will be part of the development effort for incorporation on all medical countermeasures being developed by CBMS-MITS. A TTI is a human readable tab that will provide the Warfighter immediate knowledge if the product is still useable or not. IUID and RFID labels placed on the product will improve inventory management and strategic purchasing, and enable reliable visibility, and capability-based operational readiness.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
1) AAS	3.491	0.176	0.000	0.000	0.000
FY 2009 Accomplishments: Continued Phase 2 clinical safety studies.					

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Complete Phase 2 clinical safety studies.					
2) AAS *FY 2009 Accomplishments:* Continued process development and current Good Manufacturing Practices (cGMP) requirements. *FY 2010 Plans:* Continue process development and current Good Manufacturing Practices (cGMP) requirements. *FY 2011 Base Plans:* Continue process development and current Good Manufacturing Practices (cGMP) requirements.	3.118	0.675	1.881	0.000	1.881
3) AAS *FY 2009 Accomplishments:* Continued Good Laboratory Practices (GLP) animal efficacy studies. *FY 2010 Plans:* Complete Good Laboratory Practices (GLP) animal efficacy studies.	3.865	0.293	0.000	0.000	0.000
4) AAS *FY 2009 Accomplishments:* Completed formulation and toxicology studies.	0.946	0.000	0.000	0.000	0.000
5) AAS *FY 2009 Accomplishments:* Continued Developmental Testing/Operational Testing (DT/OT) of packaging.	0.334	0.281	0.000	0.000	0.000

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Complete Developmental Testing/Operational Testing (DT/OT) of packaging.					
6) AAS *FY 2009 Accomplishments:* Initiated New Drug Application (NDA). *FY 2010 Plans:* Continue New Drug Application (NDA). *FY 2011 Base Plans:* Complete New Drug Application (NDA).	1.093	1.963	0.628	0.000	0.628
7) BSCAV *FY 2010 Plans:* Continue large scale manufacturing, process qualification, and validation. *FY 2011 Base Plans:* Continue large scale manufacturing, process qualification, and validation.	0.000	5.061	7.487	0.000	7.487
8) BSCAV *FY 2010 Plans:* Initiate Good Laboratory Practices (GLP) animal efficacy studies. *FY 2011 Base Plans:* Continue Good Laboratory Practices (GLP) animal efficacy studies.	0.000	1.037	6.398	0.000	6.398
9) BSCAV	0.000	0.000	0.515	0.000	0.515

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Initiate Phase 2 clinical safety studies.					
10) BSCAV *FY 2011 Base Plans:* Initiate BLA preparation and submission to Food and Drug Administration (FDA).	0.000	0.000	1.050	0.000	1.050
11) BSCAV NTA *FY 2011 Base Plans:* Initiate GLP animal studies to demonstrate efficacy against a broad spectrum of nerve agents including non-traditional agents.	0.000	0.000	8.878	0.000	8.878
12) BSCAV BSCAV *FY 2010 Plans:* Initiate proof of concept studies for alternative manufacturing technology. *FY 2011 Base Plans:* Continue proof of concept studies for alternative manufacturing technology.	0.000	0.800	1.005	0.000	1.005
13) IA *FY 2011 Base Plans:* Continue process development and current Good Manufacturing Practices (cGMP) requirements.	0.000	0.000	1.605	0.000	1.605
14) Inhalational Atropine (IA)	0.000	0.000	0.900	0.000	0.900

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MC5: *MEDICAL CHEMICAL DEFENSE (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Continue formulation, analytical methods, and device development.					
15) INATS *FY 2010 Plans:* Initiate Phase 1 clinical trial. *FY 2011 Base Plans:* Complete Phase 1 clinical trial.	0.000	2.823	0.680	0.000	0.680
16) INATS *FY 2011 Base Plans:* Initiate oxime candidate Current Good Manufacturing Practice (cGMP) manufacturing and large scale process validation and qualification requirements and stability in autoinjector.	0.000	0.000	4.863	0.000	4.863
17) INATS *FY 2011 Base Plans:* Initiate Good Laboratory Practices (GLP) definitive animal efficacy studies.	0.000	0.000	2.645	0.000	2.645
18) INATS *FY 2011 Base Plans:* Initiate and continue Phase 2 clinical safety studies.	0.000	0.000	2.225	0.000	2.225
19) INATS	1.016	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MC5: *MEDICAL CHEMICAL DEFENSE (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Provided strategic/tactical planning, government systems engineering, program/financial management, costing, technology, assessment, contracting, scheduling, acquisition oversight and technology support.					
20) INATS *FY 2011 Base Plans:* Initiate New Drug Application (NDA) preparation.	0.000	0.000	0.600	0.000	0.600
21) INATS INATS - Test candidate oxime against non-traditional agents. *FY 2011 Base Plans:* INATS - Test candidate oxime against non-traditional agents.	0.000	0.000	10.496	0.000	10.496
22) PPADS *FY 2010 Plans:* Develop a Time Temperature Indicator (TTI) capability for Soman Nerve Agent Pre-Treatment Pyridostigmine to provide visual indicator of product reliability.	0.000	0.738	0.000	0.000	0.000
23) PPADS *FY 2009 Accomplishments:* Initiated development of a cGMP process for the production of Sodium Thiosulfate and Sodium Nitrite as part of the cyanide antidote kit.	0.340	0.000	0.000	0.000	0.000
24) SBIR	0.000	0.180	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MC5: *MEDICAL CHEMICAL DEFENSE (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Small Business Innovative Research.					
Accomplishments/Planned Programs Subtotals	14.203	14.027	51.856	0.000	51.856

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• JM6500: *INHALATIONAL ATROPINE (IA)*	0.000	0.000	0.000		0.000	0.000	0.000	0.496	0.991	Continuing	Continuing
• JM6555: *IMPROVED NERVE AGENT TREATMENT SYSTEM (INATS)*	0.000	0.000	0.000		0.000	0.000	0.000	3.966	4.954	Continuing	Continuing
• JM6677: *ADVANCED ANTICONVULSANT SYSTEM (AAS)*	0.000	0.000	0.000		0.000	0.000	4.466	9.126	5.187	Continuing	Continuing

D. Acquisition Strategy

AAS

The Advanced Anticonvulsant System (AAS) will consist of the drug midazolam in an autoinjector. Midazolam, injected intramuscularly, will treat against seizures and prevent subsequent neurological damage caused by exposure to nerve agents. Midazolam is more water-soluble than diazepam (the currently fielded medication to control nerve agent-induced seizures) and terminates nerve agent-induced seizures more quickly than diazepam. AAS will not eliminate the need for other protective and therapeutic systems. AAS will be a replacement for the currently-fielded Convulsant Antidote, Nerve Agent (CANA) autoinjector, which uses diazepam.

BSCAV

The Bioscavenger acquisition strategy consists of a developmental program with three distinct increments.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** MC5: *MEDICAL CHEMICAL DEFENSE (SDD)*

Increment 1 is butyrylcholinesterase purified from human plasma (i.e., plasma-derived Bioscavenger or pBioscavenger). The Medical Identification and Treatment Systems (MITS) Joint Product Management Office exercises management oversight, and a commercial partner serves as the system integrator during the Technology Development Phase, which includes small scale manufacturing, pre-clinical animal studies, Investigational New Drug (IND) application, and Phase 1 human clinical safety studies.

The Bioscavenger Increment 2 strategy includes a proof-of-concept study followed by an initial down-selection between two different technologies: Recombinant human butyrylcholinesterase (rHuBChE) and small synthetic molecule, awarded to two different contractors. The chosen technology, rHuBChE, will continue to a formal down-selection with the plasma-derived Bioscavenger at Milestone B prior to transition to the Engineering and Manufacturing Development (EMD) phase. Following Milestone B into EMD, MITS will continue to exercise management oversight with system integration support of a commercial partner to ensure manufacturing of the product is in accordance with Food and Drug Administration (FDA) regulations and guidelines. Prior to FDA licensure, the commercial partner will perform a Phase 2 human clinical safety study, definitive animal efficacy studies, and toxicology studies. The SDD phase will culminate in obtaining FDA licensure of the Bioscavenger. During the Production and Deployment phase, the MITS JPMO, in conjunction with a commercial partner, will pursue full rate and stockpile production and conduct any FDA-mandated post-marketing surveillance.

Unlike Bioscavenger Increment 1 and 2 technology, where the Bioscavenger becomes ineffective after binding with nerve agents, Increment 3 will include products that continuously degrade nerve agents while retaining their effectiveness (catalytic Bioscavenger). Because the technology for Increment 3 is immature, a candidate product will not be ready for transition to advanced development until late in the next decade. Therefore, CBMS MITS is exploring alternative technologies to reduce the costs of producing Bioscavenger Increment 2.

IA

Medical Identification and Treatment Systems (MITS) Joint Product Management Office (JPMO) will manage the development of Inhalational Atropine (IA) for the DoD. For this Advanced Development effort, the competitively selected contractor will serve as the systems integrator throughout development and shall be responsible for conducting the activities associated with drug development in a manner consistent with eventual approval by the Food and Drug Administration (FDA), including: human clinical safety studies; pharmacokinetic studies; and validated manufacturing. The contractor shall sponsor the drug product to the FDA and hold all approvals and/or licenses.

INATS

Medical Identification and Treatment Systems (MITS) Joint Product Management Office will serve as the system integrator during the Technology Development Phase that includes pre-clinical animal studies and Phase 1 human clinical safety studies. After Milestone B, during the System Development and Demonstration Phase,

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MC5: *MEDICAL CHEMICAL DEFENSE (SDD)*

MITS and/or a commercial partner (product dependent) will serve as the system integrator to ensure that products are manufactured in accordance with Food and Drug Administration (FDA) regulations and guidelines, appropriate Phase 2 human clinical safety and definitive animal efficacy studies are conducted, and required toxicology studies are performed. During the Production and Deployment Phase, FDA approval will be obtained and full rate and stockpile production will be pursued. Any FDA mandated post-marketing surveillance will be conducted.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MC5: *MEDICAL CHEMICAL DEFENSE (SDD)*

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** AAS - AAS - cGMP Manufacturing Requirements	C/CPIF	Meridian Medical Technologies Columbia, MD	11.018	1.409	Jan 2010	1.029	Jan 2011	0.000		1.029	0.000	13.456	0.000
** BSCAV - BSCAV Inc 2 - cGMP Manufacturing	C/CPIF	TBD	0.000	2.714	Apr 2010	6.010	Jan 2011	0.000		6.010	0.000	8.724	0.000
** IA - cGMP Manufacturing requirements	C/CPIF	TBD	0.000	0.000		0.945	Jan 2011	0.000		0.945	0.000	0.945	0.000
** INATS - INATS - cGMP Manufacturing	C/CPIF	TBD	0.000	1.597	Jan 2010	2.912	Jan 2011	0.000		2.912	0.000	4.509	0.000
INATS - NTA Study	C/CPIF	TBD	0.000	0.000		10.496	Jan 2011	0.000		10.496	0.000	10.496	0.000
		Subtotal	11.018	5.720		21.392		0.000		21.392	0.000	38.130	0.000

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** AAS - AAS - Regulatory Integration and NDA Support Efforts	C/CPIF	Meridian Medical Technologies Columbia, MD	4.018	0.529	Jan 2010	0.391	Jan 2011	0.000		0.391	0.000	4.938	0.000
	C/CPIF	TBD	0.000	1.075	Apr 2010	2.626	Jan 2011	0.000		2.626	0.000	3.701	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MC5: *MEDICAL CHEMICAL DEFENSE (SDD)*	

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** BSCAV - BSCAV Inc 2 - Regulatory Integration & Biologics License Application (BLA) Support Efforts													
** IA - Regulatory Integration and NDA support efforts	C/CPIF	TBD	0.000	0.000		0.390	Jan 2011	0.000		0.390	0.000	0.390	0.000
** INATS - INATS - Regulatory Integration and NDA Support Efforts	C/CPIF	TBD	0.000	0.543	Jan 2010	1.092	Jan 2011	0.000		1.092	0.000	1.635	0.000
		Subtotal	4.018	2.147		4.499		0.000		4.499	0.000	10.664	0.000

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** AAS - AAS - GLP Animal Efficacy Studies	C/CPFF	Battelle Memorial Institute Columbus, OH	2.949	0.921	Jan 2010	0.698	Jan 2011	0.000		0.698	0.000	4.568	0.000
** BSCAV - BSCAV Inc 2 - Phase 2 Clinical	C/CPIF	TBD	0.000	2.034	Apr 2010	6.193	Jan 2011	0.000		6.193	0.000	8.227	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MC5: *MEDICAL CHEMICAL DEFENSE (SDD)*

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
Safety and GLP Animal Efficacy Studies													
BSCAV Inc 2 - Animal Efficacy Studies	C/CPIF	TBD	0.000	0.000		8.878	Jan 2011	0.000		8.878	0.000	8.878	0.000
** IA - Formulation and device development studies	C/CPIF	TBD	0.000	0.000		0.780	Jan 2011	0.000		0.780	0.000	0.780	0.000
** INATS - INATS - GLP Animal Efficacy & Phase 2 Clinical Safety Studies	C/CPIF	TBD	0.000	0.410	Jul 2010	3.963	Apr 2011	0.000		3.963	0.000	4.373	0.000
INATS - Large Scale Manufacturing	C/CPIF	TBD	0.000	0.000		0.881	Apr 2011	0.000		0.881	0.000	0.881	0.000
** PPADS - PPADS - Time Temperature Indicator (TTI) Capability	C/CPIF	TBD	0.000	0.738	Jan 2010	0.000		0.000		0.000	0.000	0.738	0.000
		Subtotal	2.949	4.103		21.393		0.000		21.393	0.000	28.445	0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MC5: *MEDICAL CHEMICAL DEFENSE (SDD)*

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** AAS - AAS - Product Management Support	MIPR	USAMMDA Fort Detrick, MD	0.689	0.165	Jan 2010	0.170	Jan 2011	0.000		0.170	0.000	1.024	0.000
AAS - Chem Bio Medical Systems	Allot	CBMS Frederick, MD	1.127	0.364	Apr 2010	0.221	Jan 2011	0.000		0.221	0.000	1.712	0.000
** BSCAV - BSCAV Inc 2 - Product Management Support	SS/FFP	Goldbelt Raven LLC, Frederick	0.000	0.502	Apr 2010	0.825	Jan 2011	0.000		0.825	0.000	1.327	0.000
BSCAV Inc 2 - Chem Bio Medical Systems	Allot	CBMS Frederick, MD	0.000	0.054	Apr 2010	0.081	Apr 2011	0.000		0.081	0.000	0.135	0.000
BSCAV Inc 2 - Joint Program Executive Office	Allot	JPEO Falls Church, VA	0.000	0.358	Apr 2010	0.542	Jan 2011	0.000		0.542	0.000	0.900	0.000
USAMMDA, Fort Detrick, MD	Allot	Fort Detrick MD	0.000	0.161	Apr 2010	0.178	Apr 2011	0.000		0.178	0.000	0.339	0.000
** IA - IA - Management Support	Allot	CBMS Frederick, MD	0.000	0.000		0.260	Jan 2011	0.000		0.260	0.000	0.260	0.000
IA - Management Support	Allot	JPEO Falls Church, VA	0.000	0.000		0.130	Jan 2011	0.000		0.130	0.000	0.130	0.000
** INATS - INATS - Product Management Support	SS/FFP	Goldbelt Raven LLC, Frederick	0.000	0.000		0.705	Jan 2011	0.000		0.705	0.000	0.705	0.000
INATS - Product Management Support	MIPR	USAMMDA Fort Detrick, MD	0.000	0.000		0.160	Apr 2011	0.000		0.160	0.000	0.160	0.000
INATS - Chem Bio Medical Systems	Allot	CBMS Frederick, MD	0.000	0.273	Jan 2010	0.300	Jan 2011	0.000		0.300	0.000	0.573	0.000
	Allot	JPEO	1.016	0.000		1.000	Jan 2011	0.000		1.000	0.000	2.016	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MC5: *MEDICAL CHEMICAL DEFENSE (SDD)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010 Cost	FY 2010 Award Date	FY 2011 Base Cost	FY 2011 Base Award Date	FY 2011 OCO Cost	FY 2011 OCO Award Date	FY 2011 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
INATS - Joint Program Executive Office		Falls Church, VA											
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/STTR	MIPR	HQ AMC, Alexandria	0.000	0.180		0.000		0.000		0.000	0.000	0.180	0.000
		Subtotal	2.832	2.057		4.572		0.000		4.572	0.000	9.461	0.000

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	20.817	14.027		51.856		0.000		51.856	0.000	86.700	0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MC5: *MEDICAL CHEMICAL DEFENSE (SDD)*

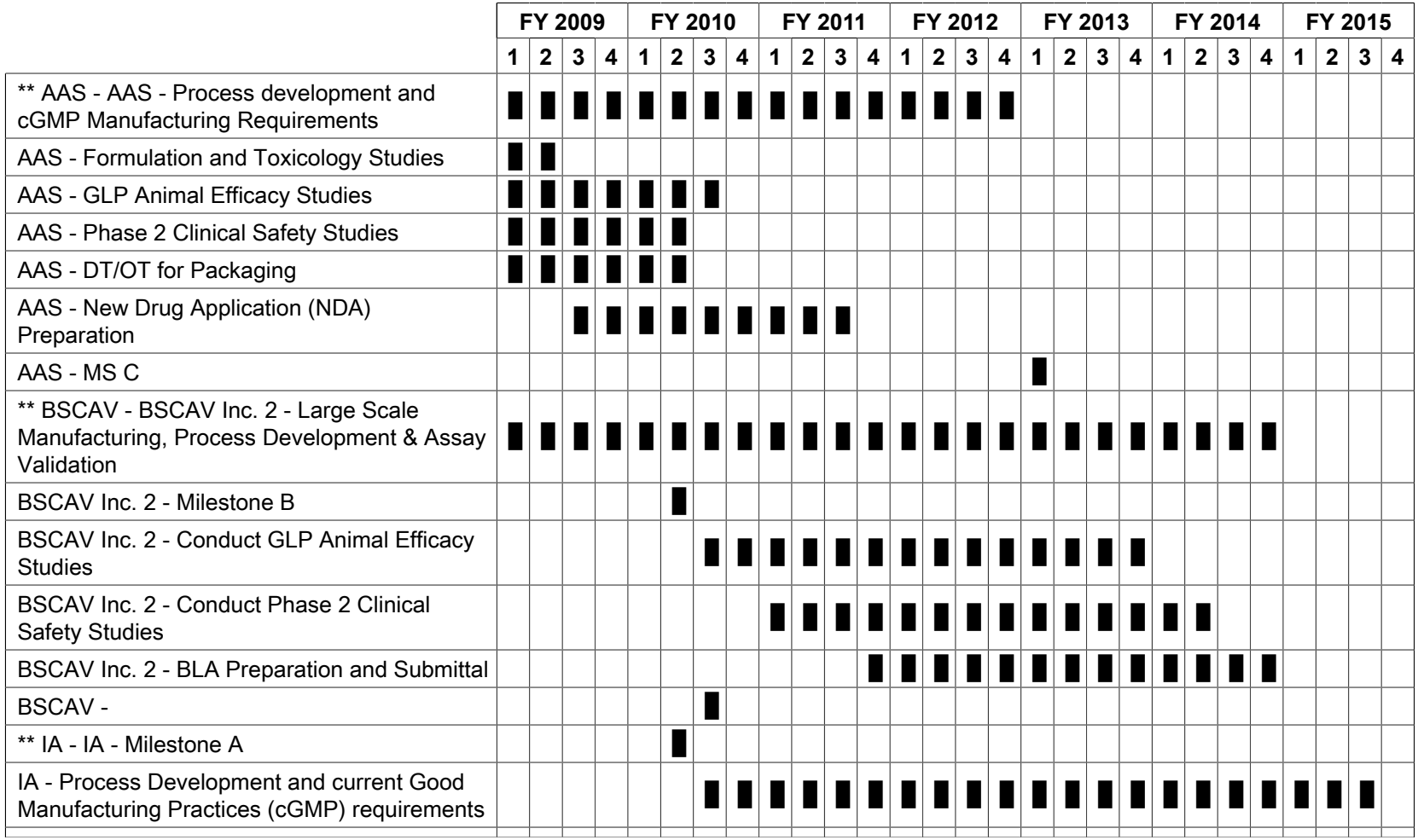

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*		PROJECT MC5: *MEDICAL CHEMICAL DEFENSE (SDD)*

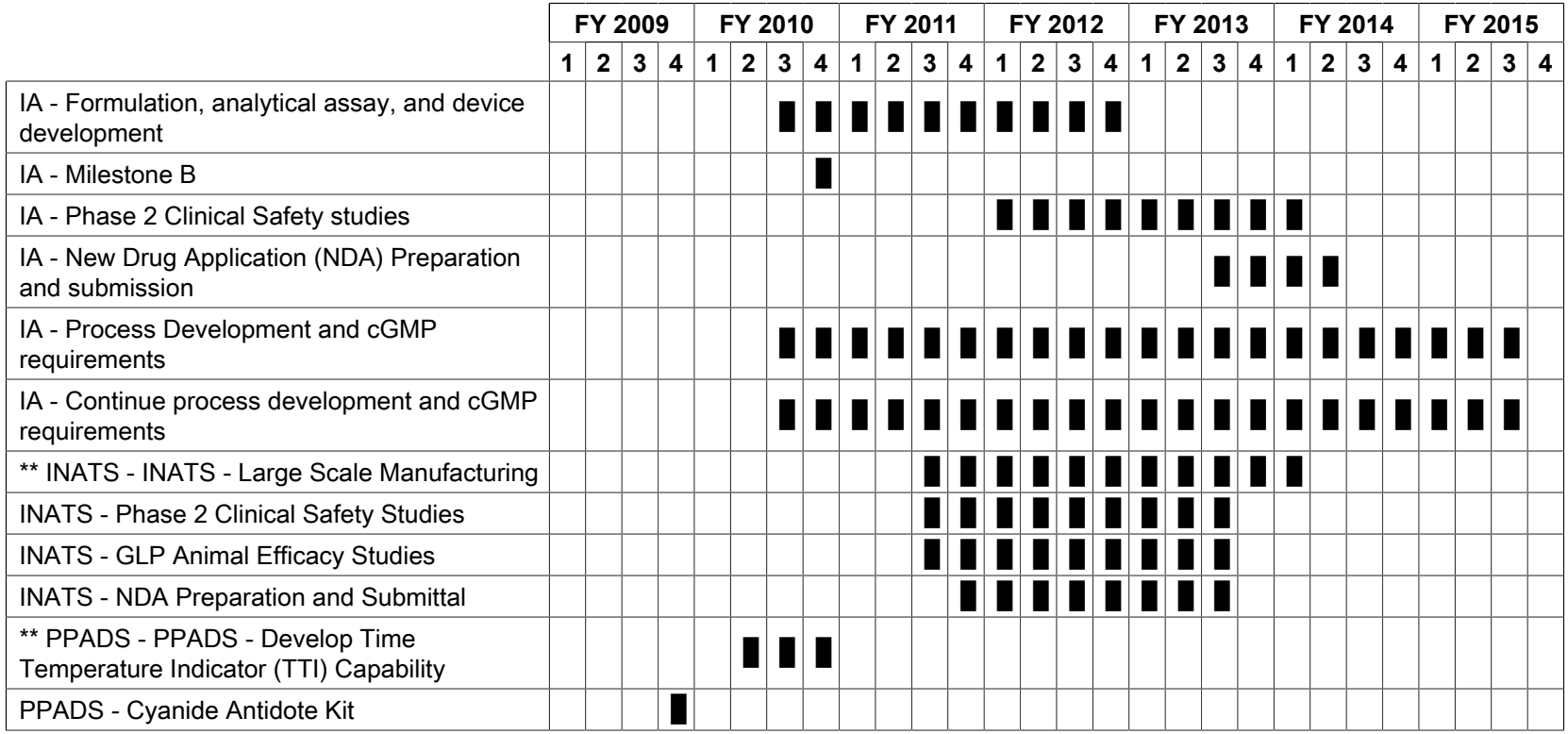

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** MC5: *MEDICAL CHEMICAL DEFENSE (SDD)*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
** AAS - AAS - Process development and cGMP Manufacturing Requirements	4	2005	4	2012
AAS - Formulation and Toxicology Studies	3	2007	2	2009
AAS - GLP Animal Efficacy Studies	4	2007	3	2010
AAS - Phase 2 Clinical Safety Studies	3	2007	2	2010
AAS - DT/OT for Packaging	4	2008	2	2010
AAS - New Drug Application (NDA) Preparation	3	2009	3	2011
AAS - MS C	1	2013	1	2013
** BSCAV - BSCAV Inc. 2 - Large Scale Manufacturing, Process Development & Assay Validation	1	2008	4	2014
BSCAV Inc. 2 - Milestone B	2	2010	2	2010
BSCAV Inc. 2 - Conduct GLP Animal Efficacy Studies	3	2010	4	2013
BSCAV Inc. 2 - Conduct Phase 2 Clinical Safety Studies	1	2011	2	2014
BSCAV Inc. 2 - BLA Preparation and Submittal	4	2011	4	2014
BSCAV -	3	2010	3	2010
** IA - IA - Milestone A	2	2010	2	2010
IA - Process Development and current Good Manufacturing Practices (cGMP) requirements	3	2010	3	2015
IA - Formulation, analytical assay, and device development	3	2010	4	2012
IA - Milestone B	4	2010	4	2010

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** MC5: *MEDICAL CHEMICAL DEFENSE (SDD)*

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
IA - Phase 2 Clinical Safety studies	1	2012	1	2014
IA - New Drug Application (NDA) Preparation and submission	3	2013	2	2014
IA - Process Development and cGMP requirements	3	2010	3	2015
IA - Continue process development and cGMP requirements	3	2010	3	2015
** INATS - INATS - Large Scale Manufacturing	3	2011	1	2014
INATS - Phase 2 Clinical Safety Studies	3	2011	3	2013
INATS - GLP Animal Efficacy Studies	3	2011	3	2013
INATS - NDA Preparation and Submittal	4	2011	3	2013
** PPADS - PPADS - Develop Time Temperature Indicator (TTI) Capability	2	2010	4	2010
PPADS - Cyanide Antidote Kit	4	2009	4	2009

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MR5: *MEDICAL RADIOLOGICAL DEFENSE (SDD)*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
MR5: *MEDICAL RADIOLOGICAL DEFENSE (SDD)*	3.002	8.276	1.143	0.000	1.143	4.817	2.265	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This project funds the advanced development of candidate therapeutic medical countermeasures to mitigate the consequences of exposure to ionizing radiation due to nuclear or radiological attacks. Exposure to ionizing radiation causes damage to blood-forming cells (hematopoietic system) and gastrointestinal system, leading to Acute Radiation Syndrome (ARS). Medical countermeasures must be approved by the Food and Drug Administration (FDA) for human use prior to fielding. Testing the efficacy of candidate drugs against normally lethal radiation exposure cannot be conducted in humans; therefore, surrogate animal models must be used to obtain FDA approval.

Medical Radiation Countermeasures (MRADC) efforts include multiple countermeasures required to restore casualties to pre-exposure health and to protect U.S. Forces against injury caused by exposure to radiation. MRADC shall reverse or limit radiation injury resulting in increase survival, decreased incapacity, and sustained operational effectiveness. In addition, MRADC shall be effective against a broad range of radiation sources and types, and shall be useable in the battle space, including evacuation.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
1) MRADC	0.000	2.080	0.368	0.000	0.368
MRADC *FY 2010 Plans:* Initiate non-clinical animal efficacy studies.					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Continue non-clinical animal efficacy studies.					
2) MRADC *FY 2009 Accomplishments:* Provided strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support.	3.002	0.000	0.000	0.000	0.000
3) MRADC *FY 2010 Plans:* Initiate process development and current Good Manufacturing Practices (cGMP) manufacturing requirements. *FY 2011 Base Plans:* Continue process development and current Good Manufacturing Practices (cGMP) manufacturing requirements.	0.000	3.583	0.395	0.000	0.395
4) MRADC *FY 2010 Plans:* Initiate product formulation, storage, and delivery system on 2 candidates. *FY 2011 Base Plans:* Continue product formulation, storage, and delivery system on 2 candidates.	0.000	2.505	0.380	0.000	0.380
5) SBIR *FY 2010 Plans:* Small Business Innovative Research.	0.000	0.108	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MR5: *MEDICAL RADIOLOGICAL DEFENSE (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Accomplishments/Planned Programs Subtotals	3.002	8.276	1.143	0.000	1.143

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

MRADC

Medical Identification and Treatment Systems (MITS) Joint Product Management Office will manage the development of Medical Radiation Countermeasures (MRADC) for the Department of Defense (DoD). A contractor will serve as the product integrator throughout development and shall be responsible for conducting activities associated with drug development in a manner consistent with eventual approval by the Food and Drug Administration (FDA). The contractor shall sponsor the drug to the FDA and hold all approvals and/or licenses. The Technology Development phase includes pre-clinical studies and Phase 1 human clinical safety studies. During the Engineering and Manufacturing Development (EMD) phase, large scale manufacturing, Phase 2 human clinical safety studies and definitive animal efficacy studies will be conducted. FDA approval of the countermeasure is an exit criterion for the EMD phase. During the Production and Deployment Phase, sufficient quantities of product to meet Initial Operational Capability and Full Operational Capability will be purchased. Subsequent purchases will be made by the Defense Logistics Agency. Any post-marketing surveillance requested by the FDA will be conducted.

MRADC will be developed using a system-of-systems approach to provide a full spectrum capability to protect against the radiation threat. Individual countermeasure solutions will be developed using a single step to a full capability (FDA approval) strategy. The DoD is working very closely with the Department of Health and Human Services (HHS), which also has a radiation countermeasure program. The establishment of an interagency working group provides oversight and guidance to both agency programs to ensure that their efforts are non-duplicative and are directed to meeting the requirement of both agencies.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MR5: *MEDICAL RADIOLOGICAL DEFENSE (SDD)*	

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** MRADC - MRADC - cGMP Manufacturing	C/CPIF	TBD	0.000	2.346	Jan 2010	0.377	Jan 2011	0.000		0.377	0.000	2.723	0.000
MRADC - Product Formulation, Storage and Delivery System	C/CPIF	TBD	0.000	2.219	Jan 2010	0.200	Jan 2011	0.000		0.200	0.000	2.419	0.000
		Subtotal	0.000	4.565		0.577		0.000		0.577	0.000	5.142	0.000

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** MRADC - MRADC - Regulatory Integration and NDA Support Efforts	C/CPIF	TBD	0.000	0.000		0.100	Jan 2011	0.000		0.100	0.000	0.100	0.000
		Subtotal	0.000	0.000		0.100		0.000		0.100	0.000	0.100	0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MR5: *MEDICAL RADIOLOGICAL DEFENSE (SDD)*

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** MRADC - MRADC - Definitive Animal Efficacy studies	C/CPIF	TBD	0.000	2.087	Jan 2010	0.200	Jan 2011	0.000		0.200	0.000	2.287	0.000
		Subtotal	0.000	2.087		0.200		0.000		0.200	0.000	2.287	0.000

Remarks

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** MRADC - MRADC - Product Management Support	SS/FFP	Goldbelt Raven LLC, Frederick	0.657	0.705	Jan 2010	0.000		0.000		0.000	0.000	1.362	0.000
MRADC - Chem Bio Medical Systems	Allot	CBMS Frederick, MD	0.000	0.659	Apr 2010	0.100	Apr 2011	0.000		0.100	0.000	0.759	0.000
MRADC - Product Management Services	MIPR	USAMMDA Ft Detrick, MD	0.145	0.152	Oct 2009	0.166	Oct 2010	0.000		0.166	0.000	0.463	0.000
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/STTR	MIPR	HQ AMC, Alexandria	0.000	0.108		0.000		0.000		0.000	0.000	0.108	0.000
		Subtotal	0.802	1.624		0.266		0.000		0.266	0.000	2.692	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
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Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
Remarks													

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.802	8.276		1.143		0.000		1.143	0.000	10.221	0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT MR5: *MEDICAL RADIOLOGICAL DEFENSE (SDD)*	

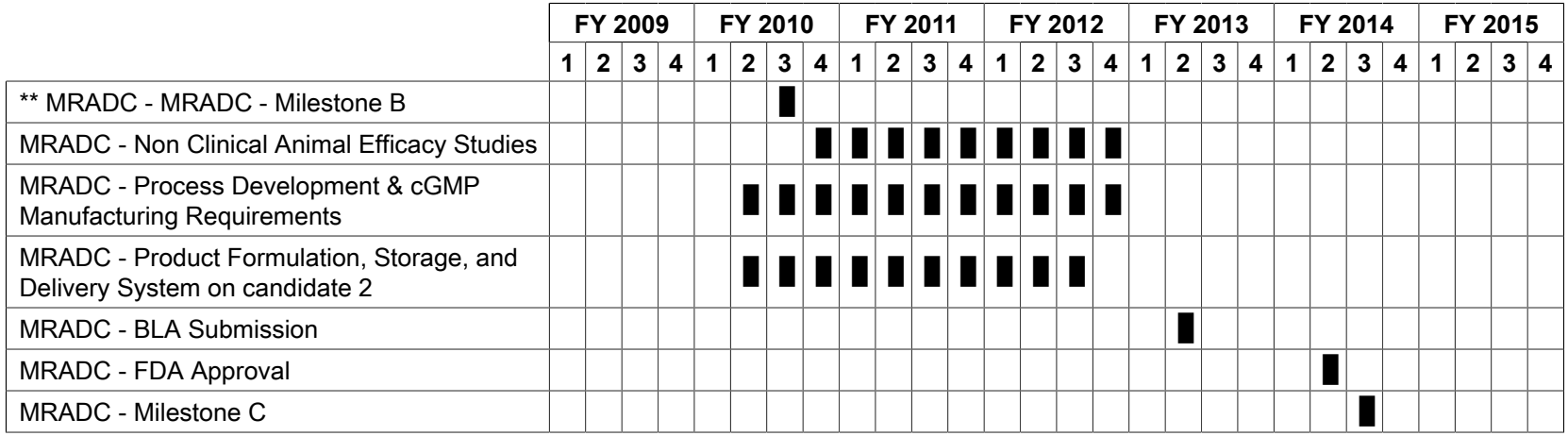

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** MR5: *MEDICAL RADIOLOGICAL DEFENSE (SDD)*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
** MRADC - MRADC - Milestone B	3	2010	3	2010
MRADC - Non Clinical Animal Efficacy Studies	4	2010	4	2012
MRADC - Process Development & cGMP Manufacturing Requirements	2	2010	4	2012
MRADC - Product Formulation, Storage, and Delivery System on candidate 2	2	2010	3	2012
MRADC - BLA Submission	2	2013	2	2013
MRADC - FDA Approval	2	2014	2	2014
MRADC - Milestone C	3	2014	3	2014

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*				PROJECT TE5: *TEST & EVALUATION (SDD)*			
COST ($ in Millions)	**FY 2009 Actual**	**FY 2010 Estimate**	**FY 2011 Base Estimate**	**FY 2011 OCO Estimate**	**FY 2011 Total Estimate**	**FY 2012 Estimate**	**FY 2013 Estimate**	**FY 2014 Estimate**	**FY 2015 Estimate**	**Cost To Complete**	**Total Cost**
TE5: *TEST & EVALUATION (SDD)*	37.444	36.593	15.901	0.000	15.901	12.243	4.238	14.614	15.300	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

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

(1) Chemical Laboratory (Sense): Products for this area include a Non-Traditional Agent (NTA) Test Facility and a Dynamic Test Chamber (DTC) for chemical point sensors. The Dynamic Test Chamber provides a new capability for testing chemical point detection systems against chemical warfare agents in various environmental conditions. Major CBDP acquisition programs supported are: the Joint Chemical Agent Detector (JCAD).

(2) Sense Laboratory (Biological): Products for this area include a Whole System Live Agent Test (WSLAT) "Strung Out" Chamber; WSLAT "Full System" Chamber; and upgrade of a bio-level 3 facility located at Dugway Proving Ground (DPG). The WSLAT "Strung Out" Chamber supports Joint Biological Point Detection component testing in biological live agent environments. The WSLAT "Full System" Chamber supports testing of all biological detection systems in production configuration in biological live agent environments. The Baker Laboratory Upgrade will provide a bio-level 3 fabricated infrastructure to host the WSLAT "Full System" Chamber. The upgrade will include bio-level 3 support laboratories and analytical instrumentation. Major CBDP acquisition programs supported are: the Joint Biological Point Detection System (JBPDS)/JBPDS Block II; the Joint Biological Tactical Detection System (JBTDS); and the Joint Biological Standoff Detection System (JBSDS) Block II.

(3) Field Simulant (Sense): Products for this area include a fully instrumented Simulant Test Grid and characterization of the Active Standoff Chamber (ASC) facilities. The Test Grid effort provides a fully instrumented 20 km by 40 km field simulant test capability that integrates cloud tracking equipment, meteorological equipment, test data network, C4ISR network, and operations center. The ASC effort provides a controlled simulant cloud characterization and facility. Major acquisition programs supported are: the Joint Chemical Agent Detector (JCAD); the Joint NBC Reconnaissance System (JNBCRS); the Joint Warning and Reporting Network (JWARN); the Joint Biological Standoff Detection System (JBSDS); the Joint Biological Point Detection System (JBPDS); the Joint Biological Tactical Detection System (JBTDS); the Joint Effects Model (JEM); the Joint Operational Effects Federation (JOEF); and the Joint Expeditionary Collective Protection (JECP) System.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** TE5: *TEST & EVALUATION (SDD)*

(4) Individual Protection, Collective Protection and Decontamination (Shield and Sustain): Products for this area include: a Small Item Decontamination Chamber; Individual Protection Ensemble (IPE) Mannequin; Man-in-Simulant Test (MIST) instrumentation; Individual Protection Equipment (IPE) Grid; Collective Protection (ColPro) instrumentation and facilities. The Small Item Decontamination Chamber provides an enhanced ability to conduct decontamination and residual agent off-gassing testing. The IPE Mannequin provides an articulated robotic mannequin that simulates Warfighters activities and includes under ensemble agent sensing capability for evaluating IPE against chemical warfare agents. The Man-in-Simulant Test instrumentation provides a near real time simulant sensor system to monitor penetration of simulant. The Individual Protection Equipment (IPE) Grid provides test procedures to establish commonality measurements for system level IPE performance tests. Chemical, Biological Agent Resistance Test (CBART) fixture provides a near real time testing capability under a range of environmental conditions for individual and collective protection materials. Collective Protection instrumentation and fixture upgrades provide improved test capabilities at Dugway Proving Ground, Dahlgren Naval Surface Warfare Center, and the Edgewood Chemical Biological Center for the evaluation of entire ColPro systems, subsystems and individual components. Acquisition Programs supported are: Joint Platform Interior Decontamination/Joint Material Decontamination System (JPID/JMDS); Joint Service Transportable Decontamination System (JSTDS); Joint Expeditionary Collective Protection (JECP); Joint Collective Protection Equipment (JCPE); Protective Clothing; Joint Protective Aircrew Ensemble (JPACE); Joint Service General Purpose Mask (JSGPM); Joint Service Aircrew Mask (JSAM); and the Joint Chemical Ensemble (JCE).

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
1) PD TESS - IPE Mannequin *FY 2010 Plans:* Initiate IPE Mannequin and Chamber system design, fabrication and installation. *FY 2011 Base Plans:* Complete installation and conduct verification and validation testing.	0.000	13.200	6.300	0.000	6.300
2) PD TESS - IPE Man-in-Simulant Test (MIST) Upgrade *FY 2010 Plans:* Procure, verify and validate real-time MIST sensors.	0.000	0.659	0.000	0.000	0.000
3) PD TESS - Dynamic Test Chamber	4.610	0.750	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT TE5: *TEST & EVALUATION (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Completed assembly and installation and conducted validation testing. *FY 2010 Plans:* Complete validation of the Dynamic Test Chamber.					
4) PD TESS - Test Grid Instrumentation Network & Design *FY 2009 Accomplishments:* Procured chemical dissemination and referee instrumentation, installed test data network, and initiated build of the operations center. *FY 2010 Plans:* Complete IOC for chemical simulant testing. Procure data network software build and operational demonstration. Procure operational demonstration hardware. *FY 2011 Base Plans:* Conduct characterization testing of Biological referee instrumentation.	23.175	14.441	4.530	0.000	4.530
5) PD TESS - Decon Facility Upgrade *FY 2009 Accomplishments:* Completed assembly and installation of small item decon chamber.	0.193	0.000	0.000	0.000	0.000
6) PD TESS - Whole System Live Agent Test (WSLAT) *FY 2009 Accomplishments:* Continued construction of Baker Laboratory and procured referee instrumentation. Awarded WSLAT design, fabrication, and build contract.	7.203	5.010	1.915	0.000	1.915

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT TE5: *TEST & EVALUATION (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Complete WSLAT design and initiate build. *FY 2011 Base Plans:* Complete WSLAT build and installation.					
7) PD TESS - ColPro Upgrades *FY 2009 Accomplishments:* Initiated biological and mechanical filtration for ColPro facilities.	0.528	0.000	0.000	0.000	0.000
8) PD TESS *FY 2009 Accomplishments:* Provided system engineering support for the design, build, integration and validation of test infrastructure products. *FY 2010 Plans:* Continue system engineering support for the design, build, integration and validation of test infrastructure products. *FY 2011 Base Plans:* Continue system engineering support for the design, build, integration and validation of test infrastructure products.	1.735	0.797	3.156	0.000	3.156
9) SBIR *FY 2010 Plans:* Small Business Innovative Research.	0.000	0.461	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	37.444	35.318	15.901	0.000	15.901

Exhibit R-2A, RDT&E Project Justification: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT TE5: *TEST & EVALUATION (SDD)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010
Congressional Add: 1) Real Time Monitoring of Chemical Agents *FY 2010 Plans:* Congressional Interest Item - Real Time Monitoring of Chemical Agents, Chemical Agent Stimulants and Toxic Industrial Chemicals.	0.000	1.275
Congressional Adds Subtotals	0.000	1.275

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• TE7: *TEST & EVALUATION (OP SYS DEV)*	7.037	4.870	4.813		4.813	4.779	4.750	5.660	5.615	Continuing	Continuing

D. Acquisition Strategy

PD TESS

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

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT TE5: *TEST & EVALUATION (SDD)*

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** PD TESS - HW S - IPE Mannequin System Fabricate/Install	C/FFP	Midwest Research Institute Kansas City, MO	0.000	13.200	Jan 2010	6.300		0.000		6.300	0.000	19.500	0.000
HW S - WSLAT Chamber Fabrication/ Installation	C/FFP	TBD	4.521	5.010		1.915	Jan 2011	0.000		1.915	0.000	11.446	0.000
HW S - Test Grid Referee Instrumentation, Data Network and C4ISR	C/FFP	Lockheed Martin Integrated Systems Wall, NJ	40.959	14.441	Jan 2010	4.530		0.000		4.530	0.000	59.930	0.000
HW S - Dynamic Test Chamber Fabrication/ Installation	Reqn	NAVSEA (JHU-APL) Washington, DC	7.490	0.750		0.000		0.000		0.000	0.000	8.240	0.000
Congressional Interest Item - Real Time Monitoring of Chemical Agents, Chemical Agent Stimulants and Toxic Industrial Chemicals.	C/CPFF	TBD	0.000	1.275	Apr 2010	0.000		0.000		0.000	0.000	1.275	0.000
		Subtotal	52.970	34.676		12.745		0.000		12.745	0.000	100.391	0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT TE5: *TEST & EVALUATION (SDD)*

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** PD TESS - OTHT S - IPE MIST Validation	MIPR	Various	0.000	0.659	Jul 2010	0.000		0.000		0.000	0.000	0.659	0.000
		Subtotal	0.000	0.659		0.000		0.000		0.000	0.000	0.659	0.000

Remarks

Test efforts are for the validation of capabilities.

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
** PD TESS - PM/MS S - Program Management/ Systems Engineering Support	MIPR	JPM NBCCA APG, MD	10.642	0.797	Oct 2009	3.156	Oct 2010	0.000		3.156	0.000	14.595	0.000
** ZSBIR - SBIR/STTR - Aggregated from ZSBIR-SBIR/STTR	MIPR	HQ AMC, Alexandria	0.000	0.461		0.000		0.000		0.000	0.000	0.461	0.000
		Subtotal	10.642	1.258		3.156		0.000		3.156	0.000	15.056	0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT TE5: *TEST & EVALUATION (SDD)*	

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	63.612	36.593		15.901		0.000		15.901	0.000	116.106	0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Chemical and Biological Defense Program			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	PROJECT TE5: *TEST & EVALUATION (SDD)*	

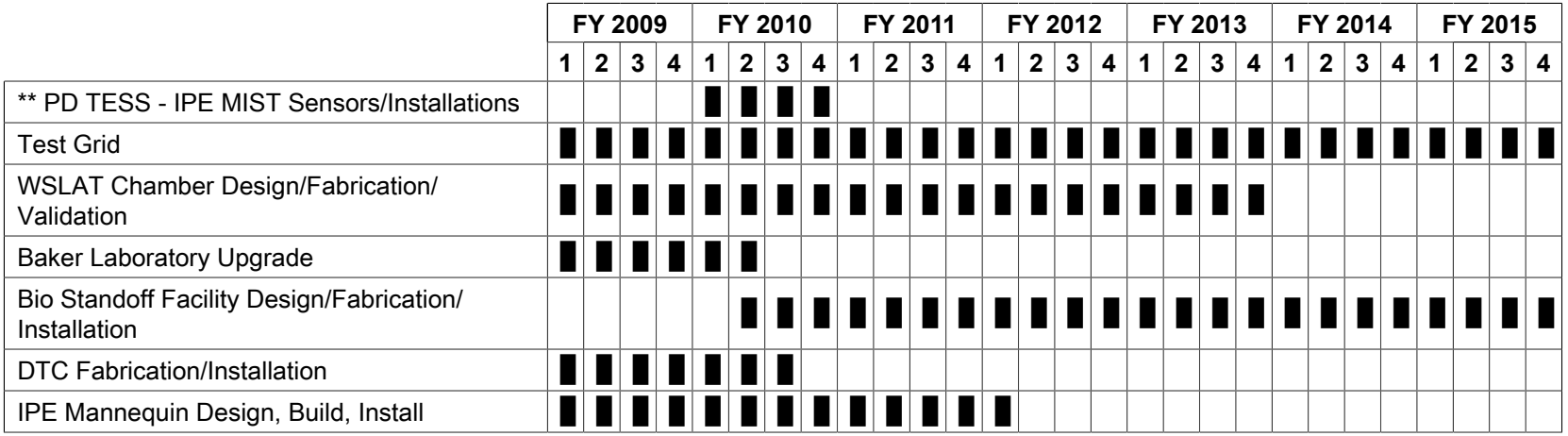

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Chemical and Biological Defense Program		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604384BP: *CHEMICAL/BIOLOGICAL DEFENSE (SDD)*	**PROJECT** TE5: *TEST & EVALUATION (SDD)*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
** PD TESS - IPE MIST Sensors/Installations	1	2010	4	2010
Test Grid	1	2009	4	2015
WSLAT Chamber Design/Fabrication/Validation	1	2006	4	2013
Baker Laboratory Upgrade	1	2008	2	2010
Bio Standoff Facility Design/Fabrication/Installation	2	2010	4	2015
DTC Fabrication/Installation	1	2008	3	2010
IPE Mannequin Design, Build, Install	1	2009	1	2012