Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Chemical and Biological Defense Program											Date: March 2014	
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	268.360	426.299	345.883	-	345.883	334.784	319.186	342.238	242.801	Continuing	Continuing
CA5: *CONTAMINATION AVOIDANCE (EMD)*	-	21.825	32.766	50.582	-	50.582	76.595	64.248	61.660	18.598	Continuing	Continuing
CM5: *HOMELAND DEFENSE (EMD)*	-	5.193	14.533	16.508	-	16.508	8.910	8.365	15.484	9.344	Continuing	Continuing
CO5: *COLLECTIVE PROTECTION (EMD)*	-	10.487	13.300	4.670	-	4.670	-	-	-	-	-	28.457
DE5: *DECONTAMINATION SYSTEMS (EMD)*	-	7.407	2.412	11.146	-	11.146	16.296	19.151	19.559	7.655	Continuing	Continuing
IP5: *INDIVIDUAL PROTECTION (EMD)*	-	23.952	26.296	15.435	-	15.435	16.832	9.411	8.522	10.053	Continuing	Continuing
IS5: *INFORMATION SYSTEMS (EMD)*	-	1.869	9.267	10.340	-	10.340	9.208	16.302	17.508	20.646	Continuing	Continuing
MB5: *MEDICAL BIOLOGICAL DEFENSE (EMD)*	-	173.505	246.436	169.497	-	169.497	138.224	154.851	179.989	168.644	Continuing	Continuing
MC5: *MEDICAL CHEMICAL DEFENSE (EMD)*	-	17.396	55.087	58.529	-	58.529	65.966	40.880	33.205	1.550	Continuing	Continuing
TE5: *TEST & EVALUATION (EMD)*	-	6.726	26.202	9.176	-	9.176	2.753	5.978	6.311	6.311	Continuing	Continuing

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

A. Mission Description and Budget Item Justification

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Chemical and Biological Defense Program	Date: March 2014
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*

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

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

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

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Chemical and Biological Defense Program					Date: March 2014
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 5: *System Development & Demonstration (SDD)*			**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*		
B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	311.071	451.306	408.758	-	408.758
Current President's Budget	268.360	426.299	345.883	-	345.883
Total Adjustments	-42.711	-25.007	-62.875	-	-62.875
• Congressional General Reductions	-0.410	-0.007			
• Congressional Directed Reductions	-32.457	-25.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-5.769	-			
• SBIR/STTR Transfer	-4.075	-			
• Other Adjustments	-	-	-62.875	-	-62.875

Change Summary Explanation

Funding: FY13: Reductions of $32.5M delayed medical, individual protection, detection, and toxin analysis efforts.

FY14: Reductions of $25.0M delay planned efforts and schedules for the Joint Biological Tactical Detection System (JBTDS), Common Analytical Laboratory System (CALS), therapeutics for Hemorrhagic Fever Virus (HFV), and the Botulinum Vaccine.

FY15: Reductions of $15.5M delay initiation of Stryker NBCRV biological recapitalization with the Joint Biological Tactical Detection System (JBTDS). Additional changes include an adjustment to the request for planned sustainment costs in FY15 for the MCM ADM, which will be funded from Government MCM programs using this facility.

Schedule: N/A

Technical: N/A

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program											Date: March 2014	
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*				Project (Number/Name) CA5 / *CONTAMINATION AVOIDANCE (EMD)*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
CA5: *CONTAMINATION AVOIDANCE (EMD)*	-	21.825	32.766	50.582	-	50.582	76.595	64.248	61.660	18.598	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

A. Mission Description and Budget Item Justification

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

Efforts included in this project are: (1) Chemical, Biological, Radiological, and Nuclear Dismounted Reconnaissance Systems (CBRN DRS); (2) Joint Biological Point Detection System (JBPDS); (3) Joint Biological Tactical Detection System (JBTDS); (4) Non-Traditional Agent (NTA) Defense Support; (5) Non-Traditional Agent (NTA) Detection Support; and (6) Next Generation Chemical Detector (NGCD).

The CBRN Dismounted Reconnaissance Systems (CBRN DRS) consists of portable, commercial and government off-the-shelf equipment which provides personnel protection from current and emerging CBRN hazards through detection, identification, sample collection, decontamination, marking, and hazard reporting for CBRN threats. The system supports Dismounted Reconnaissance, Surveillance, and CBRN Site Assessment missions which enable more detailed and near real-time CBRN information flow for the Warfighter. The program will address emerging CBRN threat requirements in order to provide an enhanced capability for the future.

The Joint Biological Point Detection System (JBPDS) is a fully automated system that detects, warns, and provides presumptive identification and samples for follow-on confirmatory analysis. It is an ACAT II program in Full Rate Production (FRP). The Army platforms include the JBPDS on the Biological Integrated Detection System (BIDS) and the Stryker Nuclear Biological Chemical Reconnaissance Vehicle (NBCRV). The Navy installs the JBPDS on several classes of ships such as Cruisers and Amphibious Transports. Engineering Changes to refresh the technology of the JBPDS consists of two separate efforts (one funded by procurement and one RDT&E funded) that, when combined, will reduce lifecycle costs and address obsolescence concerns. The existing computer hardware and operating system in the JBPDS will not meet Information Assurance standards due to obsolescence. Under the existing production contract, an engineering effort is underway to address the computer and operating system obsolescence concerns. The element being developed under RDT&E funding is a new detector technology that will significantly reduce false positives resulting in improved reliability, reduced consumable use, and reduction in operational and sustainment costs.

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

a theater-wide seamless array capable of biological detection, identification and warning. Units equipped with JBTDS will conduct biological surveillance missions to detect BWA aerosol clouds, collect a sample, and identify the agent to support time sensitive force protection decisions. JBTDS will leverage potential common identification technology solutions to additional programs and will address modernization of NBCRV and other platforms.

The Non-Traditional Agent (NTA) Defense program supports the on-going chemical and biological (CB) defense efforts as acquisition programs address emerging threat requirements across the full spectrum of conflict. Dedicated initiatives and projects will transition information, technologies, and capability into acquisition strategies that account for the breadth and depth of emerging threats which span the full range of military missions. By leveraging previous work done on NTAs (NTA DETECT) within the DoD, interagency cooperation, and international partnerships, the NTA Defense program will provide essential enablers such as threat understanding; operational impacts of performance trades; and comprehensive, integrated, and layered defense concepts against current CB threats. The program will develop a balanced portfolio which will target capabilities to reduce risk from technology gaps inherent from emerging threats. Additional efforts in conducting systems engineering analysis will occur in order to identify and consolidate capability knowledge gaps and prioritize required investments.

The Non-Traditional Agent (NTA) Detect project will identify, evaluate and continue to transition advanced detection and identification system(s) through follow-on technology insertion efforts which enhance the Domestic Response Capability (DRC), Advanced Threat (AT) Box, CBRN DRS (Dismounted Reconnaissance Sets, Kits, and Outfits), and Next Generation Chemical Detector programs. These efforts will ensure that specialized units will maintain situational awareness and have the ability to respond to emerging and escalating threats. The systems provide a mid-term capability to detect emerging threat materials and afford the Warfighter the ability to support domestic response and force protection missions. These systems will leverage common core technologies to detect and identify threats that can be exploited for lab deployable, fixed site and handheld applications.

The Next Generation Chemical Detector (NGCD) is several detection system variants for multi phase of matter sampling, location of liquid solids on surfaces, and vapor and aerosol monitoring. NGCD will detect and identify non-traditional agents, chemical warfare agents (CWAs), toxic industrial chemicals (TICs) in the air and on surfaces. The NGCD will provide improved CWA/TIC selectivity and sensitivity on multiple platforms as well as multiple environments. This sensor will improve detection, consequence management and reconnaissance, and weapons of mass destruction (WMD) interdiction capabilities. The scope of the project includes detection of agent a few feet away from the detector as well as the sampling point of the detector.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: 1) CBRN DRS - Dismounted Reconnaissance Sets, Kits, and Outfits (DR SKO)	3.487	0.720	-
FY 2013 Accomplishments: Completed documentation, systems engineering, and design to support MS C LRIP. Continued IPT support.			
FY 2014 Plans: Complete documentation, systems engineering, and design to support FRP. Continue IPT support.			
Title: 2) CBRN DRS - DR SKO	5.556	0.950	-
FY 2013 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Initiated and completed Multi-Service Operational Test and Evaluation (MOT&E). Initiated Failure Mode, Effects, and Criticality Analysis (FMECA). ***FY 2014 Plans:*** Complete verification and assessment of Failure, Mode, Effects, and Criticality Analysis (FMECA).			
Title: 3) CBRN DRS - DR SKO ***FY 2013 Accomplishments:*** Completed technical manual (TM) development. Continued logistics products development. ***FY 2014 Plans:*** Complete TM verification and logistics products development.	3.450	0.330	-
Title: 4) CBRN DRS - DR SKO ***FY 2013 Accomplishments:*** Completed retrofit of System Development and Demonstration (SDD) systems.	1.975	-	-
Title: 5) JBPDS ***FY 2013 Accomplishments:*** Completed strategic and tactical planning, government system engineering, program/financial management, costing, contracting, scheduling, and technical support.	0.296	-	-
Title: 6) JBPDS ***FY 2013 Accomplishments:*** Completed development of a new detector for the JBPDS program.	2.630	-	-
Title: 7) JBTDS ***FY 2014 Plans:*** Initiate evaluation of potential technology solutions for inclusion in JBTDS solution set, and initiate live agent risk reduction measures.	-	5.084	-
Title: 8) JBTDS ***FY 2014 Plans:*** Initiate development of a tactical identifier in collaboration with efforts in Next Generation Diagnostic System (NGDS) and Common Analytical Laboratory System (CALS). ***FY 2015 Plans:***	-	5.185	2.089

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Continue development of a tactical identifier in collaboration with NGDS and CALS.			
Title: 9) JBTDS ***FY 2014 Plans:*** Provide government strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, and technical support. ***FY 2015 Plans:*** Continue to provide government strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, and technical support.	-	7.243	8.386
Title: 10) JBTDS ***FY 2014 Plans:*** Initiate Service representation (i.e. integrated product teams (IPT) and working groups). ***FY 2015 Plans:*** Continue Service representation (i.e. integrated product teams (IPT) and working groups).	-	2.657	2.200
Title: 11) JBTDS ***FY 2014 Plans:*** Initiate development of unique test fixtures and adapters required to use the specific JBTDS system under test into the test chamber. ***FY 2015 Plans:*** Complete development of unique test fixtures and adapters required to use the specific JBTDS system under test into the test chamber.	-	0.645	1.000
Title: 12) JBTDS ***FY 2015 Plans:*** Initiate developmental testing to include live agent, environmental and military standard testing.	-	-	5.050
Title: 13) JBTDS ***FY 2015 Plans:*** Initiate and complete user operational assessment of Engineering Manufacturing Development (EMD) systems.	-	-	2.150
Title: 14) JBTDS ***FY 2015 Plans:***	-	-	7.800

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Initiate the development effort for NBCRV platform design and integration.			
Title: 15) JBTDS ***FY 2015 Plans:*** Initiate and complete the verification and validation of military utility model.	-	-	1.200
Title: 16) JBTDS ***FY 2015 Plans:*** Initiate the Engineering Manufacturing Development (EMD) Contract (including 36 test articles at approximately $70,000 each).	-	-	7.614
Title: 17) Next Generation Chemical Detector (NGCD) ***FY 2015 Plans:*** Purchase 50 prototypes at $24,000 each.	-	-	1.200
Title: 18) Next Generation Chemical Detector (NGCD) ***FY 2015 Plans:*** Prepare and initiate Production Qualification Test (PQT).	-	-	2.203
Title: 19) Next Generation Chemical Detector (NGCD) ***FY 2015 Plans:*** Continue Government Program Management.	-	-	0.509
Title: 20) NTA Defense - Threat Understanding/Military Utility and Supportability ***FY 2014 Plans:*** Initiate analysis of threat understanding and combat developer provided operational analysis to ascertain technology and training gaps in multiple missions. Leverage previous work done under NTA Detect to fully challenge outputs of threat and operational phenomenology. Centralize the analysis outputs and extend threat phenomenology methodology to all commodities. ***FY 2015 Plans:*** Expand analysis of threat understanding to further emerging classes and provide information to combat developers to ascertain technology and training gaps in multiple missions. Leverage previous work to fully challenge outputs of threat and operational phenomenology. Centralize the analysis outputs and extend threat phenomenology methodology to expanded threat space.	-	1.840	1.787
Title: 21) NTA Defense - Systems Engineering ***FY 2014 Plans:***	-	1.440	1.398

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Initiate detection focused systems engineering modeling tools and update to reflect and account for protection, medical, and decontamination. Begin to refine model in preparation for verification. Integrate the threat understanding to ensure task oriented operationally relevant system performance is understood early in requirements development process. ***FY 2015 Plans:*** Verify and validate model for use in identifying system performance trade space prior to technology evaluation, system design or final requirements definition.			
Title: 22) NTA Defense - Test and Evaluation ***FY 2014 Plans:*** Initiate emerging threat test bed and methodologies to evaluate component technologies (detectors, decontaminants, individual protection ensembles, etc.) for the enterprise to inform technology development strategies and support competitive prototypes and technology insertions in acquisition programs across the evolving emerging threat space. ***FY 2015 Plans:*** Utilize emerging threat test bed facilities and methodologies to evaluate component technologies (detectors, decontaminants, individual protection ensembles, etc.) for the enterprise to inform technology development strategies and support competitive prototypes and technology insertions in acquisition programs against all emerging threats. Support assessments of fielded capabilities against new threats and assist risk assessments.	-	0.992	0.965
Title: 23) NTA Defense - Technology Assessments ***FY 2014 Plans:*** Initiate synchronization of acquisition strategies across the CBDP, Interagency, and International Community for all NTA initiatives. Conduct assessments and coordinate science and technology transition through Enterprise Wide IPT for whole of government. ***FY 2015 Plans:*** Update synchronized acquisition strategies across the CBDP, Interagency, and International Community for all NTA initiatives. Utilize assessments to generate targeted technology transition through Enterprise Wide IPT for whole of government.	-	4.140	4.021
Title: 24) NTA Defense - NTA Library ***FY 2014 Plans:*** Develop and update the NTA Library to provide a database for NTA knowledge. ***FY 2015 Plans:*** Expand capabilities of the NTA Library to accommodate emerging information and upgrade for use by whole of government.	-	1.040	1.010
Title: 25) NTA Detect - COTS/GOTS Mission Analysis	1.817	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: Purchased 3 prototype Gas Chromatograph Mass Spectrometer (GCMS) systems at $150,000 each. Continued gap analyses to identify future needs to adequately test technology solutions. Continued refinement and update of source books for additional classes of emerging threats. Additional gap analysis, source book development, and testing of COTS/GOTS transitions to the NTA Defense funding line in FY14.			
Title: 26) NTA Detect - DESI Mass Spectrometer (MS) ***FY 2013 Accomplishments:*** Completed engineering and testing to support improved system health monitoring, sampling techniques, reliability and detection algorithm of the DESI-MS. Integrated and tested improved sampling techniques. Transition in FY14 to the NTA Defense program.	0.722	-	-
Title: 27) NTA Detect - Systems Engineering ***FY 2013 Accomplishments:*** Refined systems engineering methodology and incorporated into a model to verify detection technology investment strategies for SSA and CM missions, continued to update database sourcebooks and continued understanding of emerging threat impacts on current systems and missions in addition to consideration for future system designs. ***FY 2014 Plans:*** Complete systems engineering methodology. Complete database sourcebooks.	1.892	0.500	-
Accomplishments/Planned Programs Subtotals	21.825	32.766	50.582

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• CA4: *CONTAMINATION AVOIDANCE (ACD&P)*	5.713	24.853	40.088	-	40.088	34.229	29.355	-	-	-	134.238
• JC0100: *JOINT BIO POINT DETECTION SYSTEM (JBPDS)*	29.934	52.732	-	-	-	-	-	-	-	-	82.666
• JF0100: *JOINT CHEMICAL AGENT DETECTOR (JCAD)*	16.212	47.598	33.685	-	33.685	7.834	7.547	-	-	-	112.876
• JF0104: *NEXT GEN CHEMICAL DETECTOR (NGCD)*	-	-	-	-	-	3.000	3.000	4.356	17.208	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program			Date: March 2014
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• JN0900: *NON TRADITIONAL AGENT DETECTION (NTAD)*	4.770	8.000	-	-	-	-	-	-	-	-	12.770
• MC0100: *JOINT NBC RECONNAISSANCE SYSTEM (JNBCRS)*	83.215	-	3.600	-	3.600	3.600	3.600	3.600	-	-	97.615
• MC0101: *CBRN DISMOUNTED RECONNAISSANCE SYSTEMS (CBRN DRS)*	15.080	34.998	113.333	-	113.333	97.399	98.453	95.333	144.289	Continuing	Continuing
• MX0001: *JOINT BIO TACTICAL DETECTION SYSTEM (JBTDS)*	-	-	-	-	-	-	7.530	65.385	69.379	Continuing	Continuing

Remarks

D. Acquisition Strategy

CBRN DISMOUNTED RECONNAISSANCE SYSTEMS

The Chemical Biological Radiological Nuclear Dismounted Reconnaissance Systems (CBRN DRS) program uses a government-off-the-shelf (GOTS)/commercial-off-the-shelf (COTS) non-developmental item (NDI) single step to full capability acquisition approach. This strategy employs an NDI acquisition concept to establish a simplified management framework to translate mission needs and emerging technology capabilities into a stable, affordable, and well-managed acquisition program.

JOINT BIO POINT DETECTION SYSTEM (JBPDS)

The technology update for the detector focuses on the Rapid Agent Aerosol Detector (RAAD); being developed by MIT-LL with producibility and logistics support from Kansas City Plant (KCP). This technology update will be used to support the Joint US Forces Korea Portal and Integrated Threat Reduction (JUPITR) advanced technology demonstration (ATD).

JOINT BIO TACTICAL DETECTION SYSTEM (JBTDS)

The JBTDS is being developed using an evolutionary acquisition strategy. JBTDS will maximize the use of commercial off-the-shelf (COTS) and Government off-the-shelf (GOTS) technology. The awards for the Technology Development (TD) phase utilized a best value approach via the competitive CBRNE mission support contract to three contractor teams. Full and open competition will be utilized for the EMD contract with options for Low Rate Initial Production and Full Rate Production. Coordination with other programs (Common Analytical Laboratory System and Next Generation Diagnostic System) is occurring to share information and leverage potential common identification technology solutions to the three programs.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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NEXT GENERATION CHEMICAL DETECTOR (NGCD)

The NGCD analysis of alternatives will be used to generate performance specifications that will support contracting for competitive prototype development. The request for proposal was released July 2013. The goal for the initial stage of development will be to award multiple contracts for each variant of the NGCD. Full and open competition will be used to award one contract per variant at Milestone B. Mature technology will be accelerated as appropriate.

NON TRADITIONAL AGENT DEFENSE (NTA DEFENSE)

The Non-Traditional Agent Defense technology assessments, performance tradeoff analysis, and mission decomposition will provide acquisition information, technology, and evaluation testbeds to afford acquisition programs the ability to, more rapidly with less risk, develop capabilities for the Warfighter. The ability to attain situational awareness and respond to any unknown and emerging threat hazard will be attained through these incremental transitions to acquisition programs. By leveraging previous work done on NTAs within the DoD, the interagency, and internationally, the NTA Defense will provide essential enablers of a comprehensive, integrated, and layered defense against current CB threats and develop a balanced portfolio targeted at capabilities that preclude technological surprise from emerging threats.

NON TRADITIONAL AGENT DETECTION (NTA DETECT)

The Non-Traditional Agent (NTA) Detection technology assessments, performance tradeoff analyses, and mission decomposition transitioned a detection capability through incremental acquisition that afforded the Warfighter ability to attain situational awareness and respond to unknown and emerging hazards. COTS/GOTS assessments were used in order to lower program risks, reduce costs, and ensure a higher confidence in selected technologies. The project will address next priority mission areas and threats underneath the NTA Defense profile.

E. Performance Metrics

N/A

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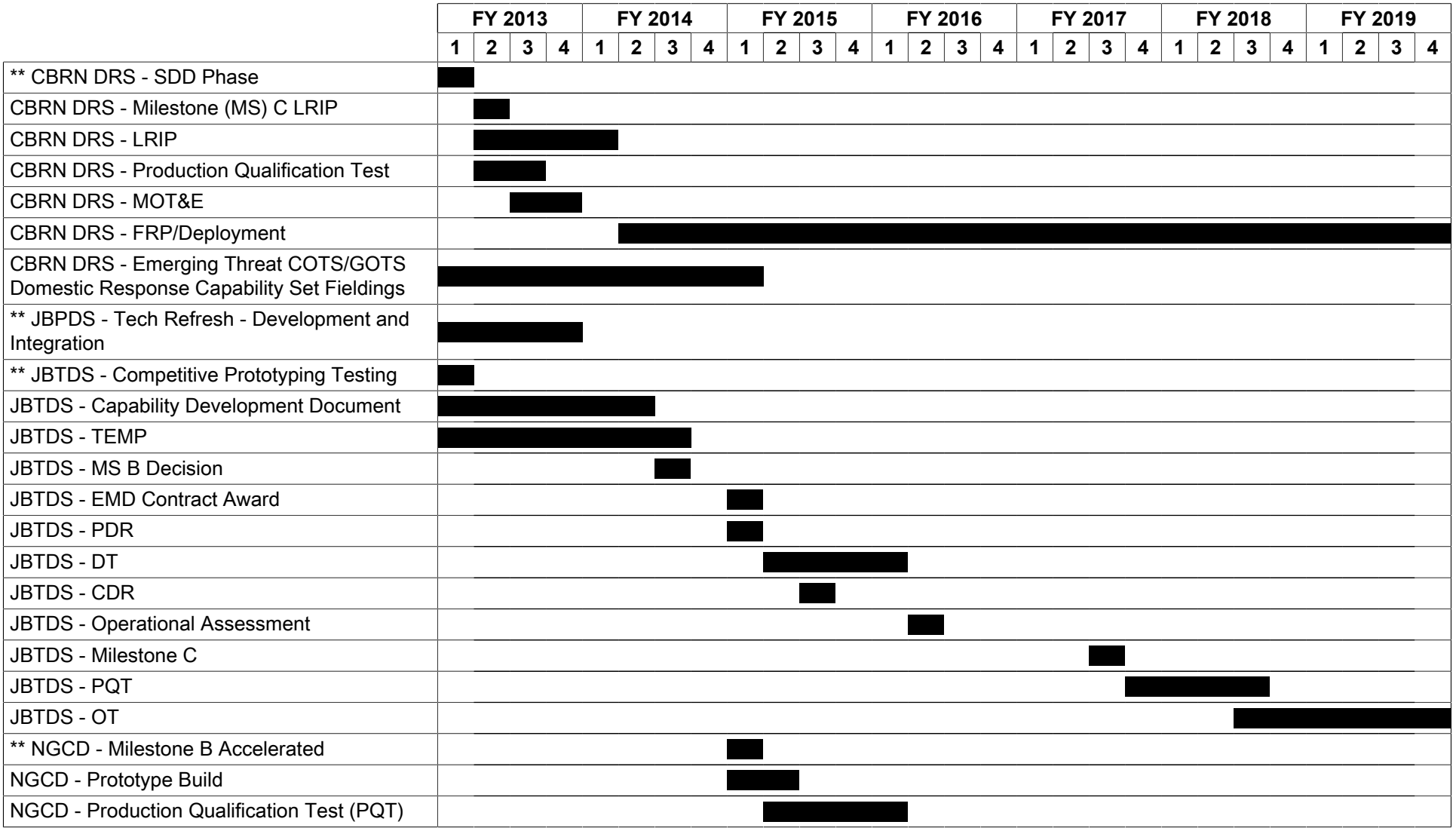

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** CA5 / *CONTAMINATION AVOIDANCE (EMD)*

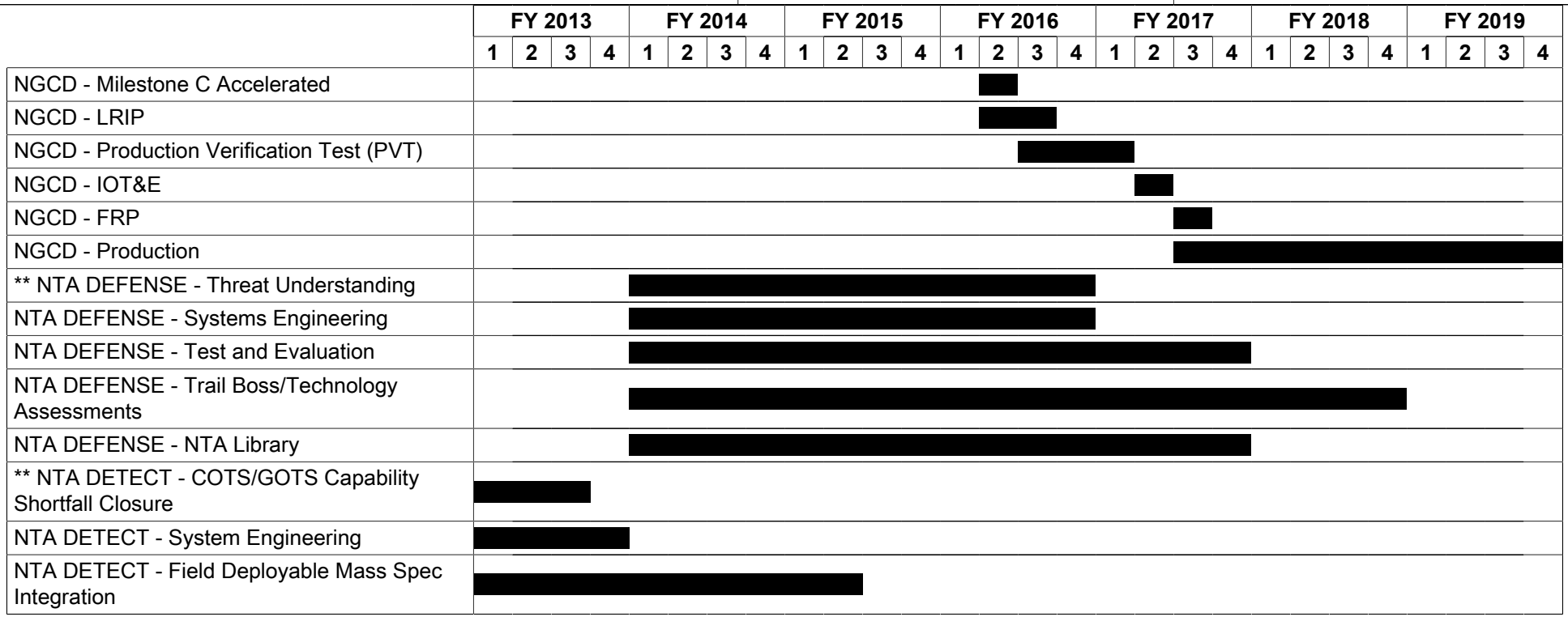

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** CA5 / *CONTAMINATION AVOIDANCE (EMD)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** CBRN DRS - SDD Phase	1	2013	1	2013
CBRN DRS - Milestone (MS) C LRIP	2	2013	2	2013
CBRN DRS - LRIP	2	2013	1	2014
CBRN DRS - Production Qualification Test	2	2013	3	2013
CBRN DRS - MOT&E	3	2013	4	2013
CBRN DRS - FRP/Deployment	2	2014	4	2019
CBRN DRS - Emerging Threat COTS/GOTS Domestic Response Capability Set Fieldings	1	2013	1	2015
** JBPDS - Tech Refresh - Development and Integration	1	2013	4	2013
** JBTDS - Competitive Prototyping Testing	1	2013	1	2013
JBTDS - Capability Development Document	1	2013	2	2014
JBTDS - TEMP	1	2013	3	2014
JBTDS - MS B Decision	3	2014	3	2014
JBTDS - EMD Contract Award	1	2015	1	2015
JBTDS - PDR	1	2015	1	2015
JBTDS - DT	2	2015	1	2016
JBTDS - CDR	3	2015	3	2015
JBTDS - Operational Assessment	2	2016	2	2016
JBTDS - Milestone C	3	2017	3	2017
JBTDS - PQT	4	2017	3	2018
JBTDS - OT	3	2018	4	2019
** NGCD - Milestone B Accelerated	1	2015	1	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
NGCD - Prototype Build	1	2015	2	2015
NGCD - Production Qualification Test (PQT)	2	2015	1	2016
NGCD - Milestone C Accelerated	2	2016	2	2016
NGCD - LRIP	2	2016	3	2016
NGCD - Production Verification Test (PVT)	3	2016	1	2017
NGCD - IOT&E	2	2017	2	2017
NGCD - FRP	3	2017	3	2017
NGCD - Production	3	2017	4	2019
** NTA DEFENSE - Threat Understanding	1	2014	4	2016
NTA DEFENSE - Systems Engineering	1	2014	4	2016
NTA DEFENSE - Test and Evaluation	1	2014	4	2017
NTA DEFENSE - Trail Boss/Technology Assessments	1	2014	4	2018
NTA DEFENSE - NTA Library	1	2014	4	2017
** NTA DETECT - COTS/GOTS Capability Shortfall Closure	1	2013	3	2013
NTA DETECT - System Engineering	1	2013	4	2013
NTA DETECT - Field Deployable Mass Spec Integration	1	2013	2	2015

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program			Date: March 2014
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COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
CM5: *HOMELAND DEFENSE (EMD)*	-	5.193	14.533	16.508	-	16.508	8.910	8.365	15.484	9.344	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

A. Mission Description and Budget Item Justification

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

Included in this project are the following developmental efforts:

The Common Analytical Laboratory System capability (CALS) will be modular, scalable and adaptable to a variety of concept of operations (CONOPS) and environmental conditions. Currently, fielded systems have been designed independently by various agencies with the intent of meeting a specific units requirements. As a result, multiple mobile lab configurations exist with differing sustainment tails and lacking in commonality. The 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) and Biological Warfare Agents (BWAs). Users of the system will include the National Guard Bureau Civil Support Teams, the Army 20th Support Command, the Army Medical Laboratory, the Air Force, and the Navy.

The Special Purpose Units Chemical Biological Equipment program provides for the acquisition and ongoing assessment of Chemical, Biological, Radiological and Nuclear (CBRN) detection, protection and decontamination equipment for these units.

The Weapons of Mass Destruction Civil Support Team Program supports the ongoing assessment and acquisition of COTS and GOTS hand held analytical detection, protection, decontamination and sampling equipment for survey in order to expand/enhance the operational capabilities of the (57) WMD CST Teams. This includes modernization of detection capabilities inside the Analytical Laboratory System to maintain system viability until the CALS is fielded.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: 1) CALS - System Engineering and Program Management	-	3.960	3.970
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Continue System and Program Management Support to provide management and engineering support, System Integration Laboratory efforts in preparation of Critical Design Review, manufacture of prototypes, and testing. ***FY 2015 Plans:*** Continue System and Program Management Support to provide management and engineering support, System Integration Laboratory efforts in preparation of Critical Design Review, manufacture of prototypes, and testing.			
Title: 2) CALS - Engineering and Planning and Design ***FY 2015 Plans:*** Prepare design package to include Quality Assurance plans for system level development and conduct logistics analysis.	-	-	0.540
Title: 3) CALS - System Integration Laboratory ***FY 2014 Plans:*** Continue to mitigate program risk through the use of a system integration laboratory tool set designed to facilitate system and subsystem level integration. ***FY 2015 Plans:*** Continue to mitigate program risk through the use of a system integration laboratory tool set designed to facilitate system and subsystem level integration.	-	0.375	0.200
Title: 4) CALS - Subsystem (Module) Prototype Manufacturing ***FY 2014 Plans:*** Initiate manufacturing of subsystem module prototypes. ***FY 2015 Plans:*** Complete manufacturing of subsystem module prototypes.	-	0.966	0.361
Title: 5) CALS - Subsystem Module Test and Evaluation ***FY 2014 Plans:*** Conduct subsystem module level testing. ***FY 2015 Plans:*** Conduct Development Test and Operational Test of subsystem modules.	-	2.179	4.935
Title: 6) CALS - System Level Prototype Variants ***FY 2014 Plans:***	-	4.568	6.502

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Initiate the module buildout for Prototypes to be utilized during Engineering and Manufacturing Development. Conduct Developmental Test and Operational Test (DT/OT). ***FY 2015 Plans:*** Purchase System Level variant prototypes ensuring integration and connectivity between modules as a general system layout. Purchase parts materials, fabrication, processing, subassembly, final assembly, reworking modification, and installation of parts and equipment, power plants, electronic equipment, and other items (including government-Furnished equipment [GFE]), and the proving of such equipment and instruments for the specified system prototype (Module).			
Title: 7) SPU CBE ***FY 2014 Plans:*** Provided CBRN Counter-Terrorism Commercial Off-The-Shelf (COTS) product/technology integration in support of the Special Operations (SOF) Community.	-	2.485	-
Title: 8) WMD CST - System Engineering and Program Management ***FY 2013 Accomplishments:*** Continued to provide for system engineering, technical control, and business management support of the next generation biological detection system.	1.466	-	-
Title: 9) WMD CST - Development Engineering ***FY 2013 Accomplishments:*** Completed development of method protocols for sampling with the next generation biological detection system for integration into the Analytical Laboratory System.	1.124	-	-
Title: 10) WMD CST - Component Test and Evaluation (ALS) ***FY 2013 Accomplishments:*** Continued Component Test and evaluation as a part of the modernization strategy for CBRN COTS technologies.	1.265	-	-
Title: 11) WMD CST - Component Integration and Test (ALS) ***FY 2013 Accomplishments:*** Completed integration of component detection system into the Analytical Laboratory System and validated connectivity of the component as a part of the general system.	1.338	-	-
Accomplishments/Planned Programs Subtotals	5.193	14.533	16.508

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** CM5 / *HOMELAND DEFENSE (EMD)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• JS0004: *WMD - CIVIL SUPPORT TEAMS (WMD CST)*	23.474	13.314	12.740	-	12.740	5.069	-	-	-	-	54.597
• JS0005: *COMMON ANALYTICAL LABORATORY SYSTEM (CALS)*	-	-	-	-	-	16.245	26.629	17.524	61.664	Continuing	Continuing

Remarks

D. Acquisition Strategy

COMMON ANALYTICAL LABORATORY SYSTEM (CALS)

The Common Analytical Laboratory System (CALS) will follow an incremental approach leveraging COTS/ GOTS solutions designed to address known joint force capability requirements for Chemical, Biological, Radiological and Nuclear (CBRN) field confirmatory and theatre validation analysis which includes Toxic Industrial Chemicals (TICs), Toxic Industrial Materials (TIMs), Chemical Warfare Agents (CWAs), Biological Warfare Agents (BWAs). CALS will address situational awareness by utilizing efforts underway to the extent possible. CALS will accommodate these component requirements within a modular and scalable concept framework.

SPU CB EQUIPMENT (SPUCBE)

Address legacy requirements gaps/deficiencies for SPU-CBE's where they exist through the streamlined acquisition of COTS/government-off-the-shelf (GOTS) capability upgrades that incorporate proven advancements in technology to satisfy mission performance standards.

WMD - CIVIL SUPPORT TEAMS (WMD CST)

The Weapons of Mass Destruction Civil Support Team Program (WMD-CST) is a COTS based program that supports the ongoing system engineering assessment, validation, and modernization of both CBRN COTS and GOTS analytical detection, protection, decontamination and sampling capabilities fielded to the (57) WMD CST Teams in order to optimize/enhance their operational capabilities.

E. Performance Metrics

N/A

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** CM5 / *HOMELAND DEFENSE (EMD)*

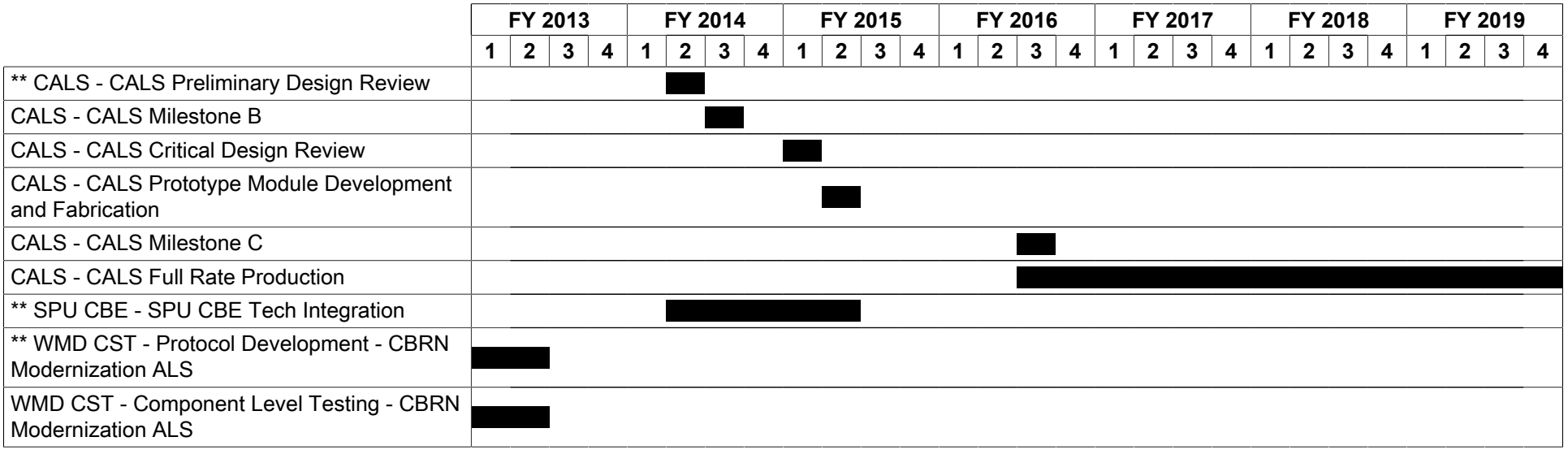

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** CM5 / *HOMELAND DEFENSE (EMD)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** CALS - CALS Preliminary Design Review	2	2014	2	2014
CALS - CALS Milestone B	3	2014	3	2014
CALS - CALS Critical Design Review	1	2015	1	2015
CALS - CALS Prototype Module Development and Fabrication	2	2015	2	2015
CALS - CALS Milestone C	3	2016	3	2016
CALS - CALS Full Rate Production	3	2016	4	2019
** SPU CBE - SPU CBE Tech Integration	2	2014	2	2015
** WMD CST - Protocol Development - CBRN Modernization ALS	1	2013	2	2013
WMD CST - Component Level Testing - CBRN Modernization ALS	1	2013	2	2013

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program			Date: March 2014
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	Project (Number/Name) CO5 / *COLLECTIVE PROTECTION (EMD)*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
CO5: *COLLECTIVE PROTECTION (EMD)*	-	10.487	13.300	4.670	-	4.670	-	-	-	-	-	28.457
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

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.

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

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: 1) JECP - System Development and Demonstration (SDD) Contract	1.853	-	-
FY 2013 Accomplishments: Continued development of logistic products for the JECP FoS. Supported a successful Milestone C decision review. Used the Failure, Analysis, and Corrective Action System process and Configuration Control Board to begin development of design changes for the FoS to address any failures from DT or observations from the OA. Supported the System Verification Review and Functional Configuration Audit.			
Title: 2) JECP - Low Rate Initial Production (LRIP) Contract	3.058	3.730	0.600
FY 2013 Accomplishments: Developed prototypes and tested design changes to ensure resolution of failures from DT or observations from the OA. Began the manufacture of Low Rate Initial Production (LRIP) systems for Government operational test and manufacturing readiness evaluation. LRIP consists of 6 tent kits at approximately $69,000 each, 6 improved structure kits at approximately $64,000 each,			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** CO5 / *COLLECTIVE PROTECTION (EMD)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
6 stand alone larges (SAL) at approximately $185,000 each, 8 single person airlocks at approximately $34,000 each, and 9 multi-person airlocks at approximately $65,000 each. Estimated total FY13 cost of LRIP systems is $2,765,000. ***FY 2014 Plans:*** Continue manufacture of additional LRIP systems, 3 tent kits at approximately $69,000 each, 2 improved structure kits at approximately $64,000 each, 3 SALs at approximately $185,000 each, 4 single person airlocks at approximately $34,000 each, and 3 multi-person airlocks at approximately $65,000 each. Estimated total FY14 cost of LRIP systems is $1,221,000 million. Continue refinement of logistic products for the Family of Systems. Conduct Technical Manual Validation for the Family of Systems. Provide support to Government led production verification test and multi-service operational test and evaluation. ***FY 2015 Plans:*** Provide support to Government led production verification test and multi-service operational test and evaluation. Finalize logistics products in preparation for Full Rate Production/Material Release decision. Participate in a Logistics Demonstration. Support Technical Manual Verification, Provisioning Conference and Final JILA. Finalize Level III drawing package. Support Physical Configuration Audit and FRP Manufacturing Readiness Assessment.			
Title: 3) JECP - Government System Level Developmental Testing ***FY 2013 Accomplishments:*** Conducted testing on Environmental Control Units used by the services to evaluate capabilities to support collective protection. ***FY 2014 Plans:*** Conduct prototype/regression testing on any design changes resulting from failures during DT or observations from the OA. Begin Government system level DT on LRIP systems including CP verification, entry/exit, post-field CP verification and a RAM event. ***FY 2015 Plans:*** Conduct a combined DT/OT field challenge event on LRIP systems. Complete Government system level DT on LRIP systems.	0.110	3.188	0.547
Title: 4) JECP - Multi-Service Operational Test & Evaluation ***FY 2014 Plans:*** Begin detailed planning for MOT&E of Low Rate Initial Production units. ***FY 2015 Plans:*** Conduct MOT&E I combined DT/OT event on LRIP systems.	-	0.337	0.500
Title: 5) JECP - Systems Engineering Oversight ***FY 2014 Plans:***	-	0.753	0.296

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Focus on conduct of production verification testing and detailed planning for MOT&E. Begin preparation for full rate production decision (FRP). ***FY 2015 Plans:*** Focus on supporting MOT&E and continue preparation for FRP decision.			
Title: 6) JECP - Systems Engineering IPT ***FY 2013 Accomplishments:*** Updated the requirements traceability matrix (RTM) to reflect requirements that have been verified. Conducted a System Verification Review and Functional Configuration Audit. Established the LRIP product baseline. Chaired the Configuration Control Board as change approval authority. ***FY 2014 Plans:*** Provide engineering support for Government led DT. Conduct review of the technical data package with emphasis on the drawing package. Update and maintain the RTM to track when requirements have been verified as test results become available. Chair the Configuration Control Board maintaining configuration control of the LRIP product baseline. ***FY 2015 Plans:*** Conduct the Physical Configuration Audit and FRP Manufacturing Readiness Assessment. Provide engineering support to DT, MOT&E and the logistics demonstration. Transition contractor developed drawings to the Government for maintenance in the product development management system.	1.183	0.867	0.402
Title: 7) JECP - Test and Evaluation IPT ***FY 2013 Accomplishments:*** Participated in Government lead system level DT and operational assessment. Conducted test failure scoring conferences as necessary. Authenticated all data collected during DT. Performed analysis to support test report generation and determination of requirements compliance. Conducted accreditation of the System Performance Model that will be used to supplement test data. ***FY 2014 Plans:*** Complete detailed planning of DT for LRIP systems. Begin Government led system level DT using LRIP systems and participate in MOT&E. Conduct test failure scoring conferences and Data Authentication Group meetings as necessary. ***FY 2015 Plans:*** Provide T&E support to the Log Demo. Complete system level DT on LRIP systems. Conduct test failure scoring conferences and Data Authentication Group meetings as necessary. Perform analysis to support test report generation and determination of requirements compliance.	1.743	0.511	0.525
Title: 8) JECP - Integrated Logistics Support IPT	0.629	0.905	0.761

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: Reported the results of the business case analysis and surge requirements analysis at MS C. Reviewed updated Technical Manuals and Training material. Participated in Configuration Control Board as necessary. Provided information to support the joint integrated logistics assessment (JILA). ***FY 2014 Plans:*** Validate Technical Manuals. ***FY 2015 Plans:*** Conduct a logistics demonstration on the FoS using Warfighters from the services. Conduct a Provisioning Conference and Technical Manual Verification. Provide information to support the final JILA.			
Title: 9) JECP - Program Management ***FY 2013 Accomplishments:*** Provided strategic planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support. ***FY 2014 Plans:*** Provide strategic planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support. ***FY 2015 Plans:*** Provide strategic planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support.	1.911	3.009	1.039
Accomplishments/Planned Programs Subtotals	10.487	13.300	4.670

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• JP1111: *JOINT EXPEDITIONARY COLLECTIVE PROTECTION (JECP)*	-	4.055	10.160	-	10.160	13.388	16.381	14.037	26.020	Continuing	Continuing

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** CO5 / *COLLECTIVE PROTECTION (EMD)*

D. Acquisition Strategy

JOINT EXPEDITIONARY COLLECTIVE PROTECTION (JECP)

Strategy based on evolutionary development, based on a family of systems approach. After MS B, awarded competitive cost plus incentive fee contract to Science Applications International Corporation (now Leidos) in 2008 to build prototypes subjected to robust engineering developmental testing and Operational Assessment during the System Development and Demonstration (SDD) phase. After MS C, awarded a Firm Fixed Price (FFP) option to Leidos in September 2013 for Low Rate Initial Production (LRIP) systems to support formal Developmental Testing (DT) and Multi-Service Operational Test & Evaluation (MOT&E). In addition, a Fixed Price Incentive Successive Target (FPIS) option will be awarded to Leidos in 2QFY14 to perform non-recurring engineering (NRE) and logistic product development associated with the LRIP system configurations. Following a successful Full Rate Production (FRP) decision, award a FFP option with five one-year ordering periods. Full and open competition will be used with an updated SPS to award follow-on production contracts.

E. Performance Metrics

N/A

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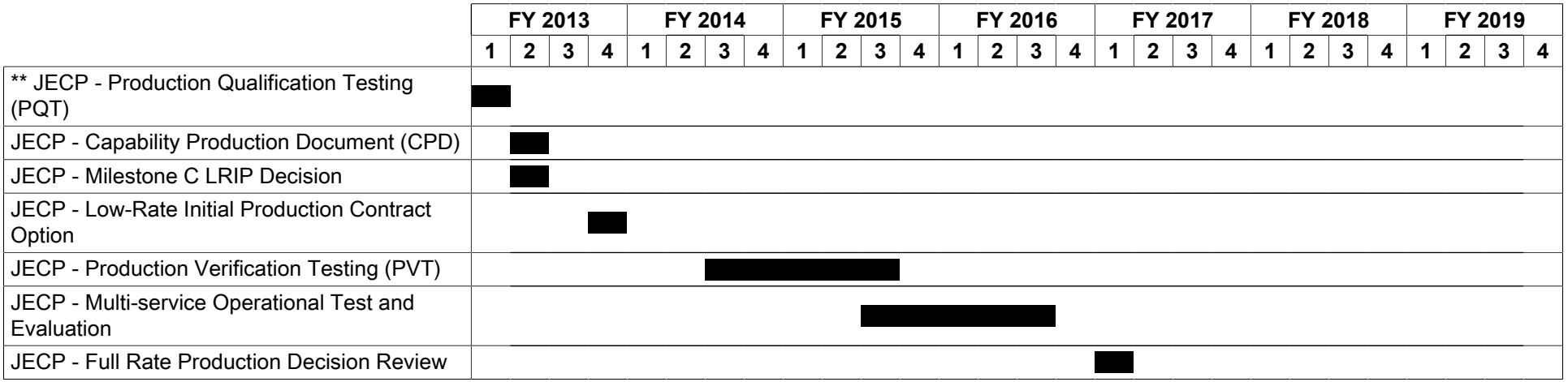

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** CO5 / *COLLECTIVE PROTECTION (EMD)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** JECP - Production Qualification Testing (PQT)	1	2013	1	2013
JECP - Capability Production Document (CPD)	2	2013	2	2013
JECP - Milestone C LRIP Decision	2	2013	2	2013
JECP - Low-Rate Initial Production Contract Option	4	2013	4	2013
JECP - Production Verification Testing (PVT)	3	2014	3	2015
JECP - Multi-service Operational Test and Evaluation	3	2015	3	2016
JECP - Full Rate Production Decision Review	1	2017	1	2017

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program											Date: March 2014	
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*				Project (Number/Name) DE5 / *DECONTAMINATION SYSTEMS (EMD)*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
DE5: *DECONTAMINATION SYSTEMS (EMD)*	-	7.407	2.412	11.146	-	11.146	16.296	19.151	19.559	7.655	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

A. Mission Description and Budget Item Justification

This project provides System Development and Demonstration (SDD) for: (1) the Contaminated Human Remains Pouch (CHRP); (2) the Decontamination Family of Systems (DFoS); (3) Contamination Indicator Decontamination Assurance System (CIDAS); (4) General Purpose Decontaminant (GPD); (5) Joint Service Equipment Wipe (JSEW); and (6) Major Defense Acquisition Program (MDAP).

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

The Decontamination Family of Systems (DFoS) program facilitates the rapid transition of mature Science and Technology (S&T) research developments to existing Decontamination or Contamination Mitigation ICD Programs of Record and guides S&T community efforts toward meeting the needs of the Warfighter. DFoS will develop a Family of Systems (FoS), to include equipment, to improve decontamination processes, and decontaminant solutions to meet the capability gaps for decontaminating Non-Traditional Agents (NTA) and chemical and biological (CB) warfare agents from personnel, equipment, vehicle interiors/exteriors, terrain, and fixed facilities.

CIDAS will provide a contamination indicator/decontamination assurance technology; it will consist of an indicator and an applicator, for which there will be three configurations. The indicator will be sprayed on tactical vehicles, shipboard surfaces, crew-served and individual weapons in hostile and non-hostile environments that may have been exposed to traditional and non-traditional chemical contamination. CIDAS is a new capability for the Joint Forces that will reduce logistics burden of decontamination by indicating presence and location of traditional (Nerve and Blister) and non-traditional chemical agents on militarily relevant surfaces pre- and post-decontamination.

GPD is a liquid decontaminant that will provide thorough decontamination capabilities for tactical vehicles, shipboard surfaces, crew-served weapons, and individual/ personal weapons in hostile and non-hostile environments that have been exposed to traditional and non-traditional CB contamination.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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JSEW is a decontamination wipe that will provide immediate/operational decontamination capabilities for sensitive and non-sensitive equipment in hostile and non-hostile environments that have been exposed to chemical agents/contamination and shall decontaminate Nerve and Blister agents from a starting liquid challenge of 10 g/m2 to less than or equal to 1g/m2 and non-traditional agents from a starting challenge of 5 g/m2 to less than or equal to 1g/m2. In addition, the JSEW is intended to be a replacement for the Individual Equipment Decontamination Kit (M295).

The Major Defense Acquisition Program (MDAP) Trail Boss provides a single access point to the full spectrum of CBRN expertise and support weapon system programs integration of CBRN Survivability into Department of Defense (DOD) programs designated as CBRN Mission Critical and those requiring CBRN capabilities. MDAP projects across the FYDP promote consistency of CBRN defense capabilities and systems' architectures across Services.

The F-35 Joint Strike Fighter (JSF) Decontamination System MDAP project will develop an integrated decontamination containment system and decontaminant delivery system to support the JSF Live Fire Test and Evaluation (LFT&E) to satisfy specific F-35 decontamination requirements through aircraft-unique interfaces and demonstrate the aircraft's ability to meet CB decontamination and survivability requirements.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: 1) CHRP ***FY 2013 Accomplishments:*** Initiated engineering, testing, and logistics planning and documentation to support CHRP test and evaluation to include liquid and vapor live agent swatch, system permeation, durability, material compatibility, environmental effects, and Operational Testing (OT). ***FY 2014 Plans:*** Initiate and complete Developmental and Operational testing and reporting to support Capabilities Production Document (CPD). Finalize documentation and complete final technical reviews to support a Milestone C (MS C) Full Rate Production (FRP) decision.	1.149	1.412	-
Title: 2) CHRP ***FY 2013 Accomplishments:*** Designed and developed two prototype CHRP systems at Government activities. Awarded purchase orders to procure 70 CHRP prototypes (35 at $500 each and 35 at $2,000 each) for Developmental Testing (DT) and Multi-Service Operational Test and Evaluation (MOT&E).	0.161	-	-
Title: 3) DFoS - JSF Decon ***FY 2013 Accomplishments:*** Performed development, integration and technical support for the Joint Strike Fighter (JSF) Decontamination System Sub-assemblies to support the system functionality demonstration and provided MDAP Core personnel support.	6.097	-	-
Title: 4) DFoS CIDAS	-	-	2.272

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
FY 2015 Plans: Build large scale applicators for Developmental Testing (DT). Initiate DT to include indication level, decontaminant compatibility, detector compatibility, reliability, and natural environments testing. Conduct Preliminary and Critical Design Reviews.			
Title: 5) DFoS CIDAS ***FY 2015 Plans:*** Award EMD contract to purchase 50 CIDAS test assets (25 small scale at $1,000 each; 25 mid scale at $10,000 each; 250 gallons of indicator at $236 per gallon) for DT, engineering support for detailed designs and engineering changes, readiness assessments, technical reviews, training, test support, and development of integrated product support deliverables.	-	-	0.853
Title: 6) DFoS GPD ***FY 2015 Plans:*** Conduct and complete the final phase of Developmental Testing (DT), to include the Technology Readiness Assessment (TRA), Manufacturing Readiness Assessment (MRA), Joint Integrated Logistics Assessment (JILA), System Verification Review (SVR), Production Readiness Review (PRR), and Logistics Demonstration; initiate Multi-Service Operational Test and Evaluation (MOT&E) and complete Operational Assessment (OA).	-	-	3.851
Title: 7) DFoS GPD ***FY 2015 Plans:*** Award base contract to purchase 10,000 gallons of GPD test assets (at $30 per gallon) and data item deliverables for Multi-Service Operational Test and Evaluation (MOT&E).	-	-	0.500
Title: 8) DFoS JSEW ***FY 2014 Plans:*** Continue Developmental Testing (DT), to include Packaging, real-time shelf-life, efficacy on complex surfaces and Chemical, Biological, Radiological Contamination Survivability (CBRCS), and conduct Technical Reviews and Technology Readiness Assessment (TRA). ***FY 2015 Plans:*** Complete DT; conduct and complete Joint Integrated Logistics Assessment (JILA), System Verification Review (SVR), Production Readiness Review (PRR); and initiate Multi-Service Operational Test and Evaluation (MOT&E).	-	1.000	1.768
Title: 9) DFoS JSEW ***FY 2015 Plans:***	-	-	0.200

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Award contract option to purchase 960 JSEW test assets (at $17 each) and data item deliverables for Multi-Service Operational Test and Evaluation (MOT&E), First Article Test (FAT), and Logistics Demonstration.			
Title: 10) MDAP - JSF DECON	-	-	1.702
FY 2015 Plans: Conduct Joint Strike Fighter (JSF) Decontamination System Integration Demonstration and System modification and refurbishment in support of JSF Program Office Live Fire Test and Evaluation (LFT&E).			
Accomplishments/Planned Programs Subtotals	7.407	2.412	11.146

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• JD0050: *DECONTAMINATION FAMILY OF SYSTEMS (DFoS)*	-	-	3.450	-	3.450	9.754	13.937	16.726	18.006	Continuing	Continuing
• JD0063: *CONTAMINATED HUMAN REMAINS POUCH (CHRP)*	-	-	2.865	-	2.865	1.542	-	-	-	-	4.407

Remarks

D. Acquisition Strategy

CONTAMINATED HUMAN REMAINS POUCH (CHRP)

The CHRP Government design and manufacture acquisition strategy will leverage current Mortuary Affairs (MA) equipment, such as the Human Remains Pouch (HRP), to identify metrics and performance specifications necessary for the handling of non-contaminated human remains, and expand the performance to fill the identified capability gap for safe handling of contaminated human remains (CHR). CHRP will develop two Government designed systems to meet performance specifications and provide a fielded capability for safe intra-theater handling and transport of CHR. At MS C, an effective and suitable system will be chosen for entry into the Production and Deployment Phase from two candidate systems based on testing results and a cost-benefit analysis. Manufacturing and production will occur at Government facilities. Follow-on phases of CHRP development may include efforts to incorporate the CHRP into a system designed to provide a transport capability to return CHR to Continental United States (CONUS).

The Government design strategy will emphasize meeting Key Performance Parameters (KPPs) using design attributes not offered by the commercial sector and materials with existing test data to provide Services two options at different cost and performance points. The CHRP will use EMD Phase testing to determine the capability of Government design candidates to meet the requirements outlined in the MA ICD and CHRP CDD, and the. At MS C, an effective and suitable system will

be chosen for entry into the Production and Deployment Phase from two candidate systems based on testing results and a cost-benefit analysis with input from the user community.

DECONTAMINATION FAMILY OF SYSTEMS (DFoS)

The DFoS is utilizing an incremental acquisition strategy to transition various developmental technology efforts (Commercial-Off-The-Shelf (COTS), and DoD technology efforts) to meet high priority Warfighter capability gaps. DFoS will support Major Defense Acquisition Programs (MDAPs) and Programs of Record by guiding S&T efforts and transitioning mature technologies to meet program requirements.

DFoS CONTAMINATION INDICATOR DECONTAMINATION ASSURANCE SYSTEM (DFoS CIDAS)

The CIDAS program will follow an evolutionary acquisition strategy in consonance with the Joint Requirements Office (JRO)/User developed capability documents. Following MS A, collaborated with JSTO/DTRA efforts, including the Hazard Mitigation, Materiel and Equipment Restoration (HaMMER) Advanced Technology Development Operational Demonstration and Extended User Evaluations, and conducted technology demonstrations on candidate indicator and applicator technologies to mitigate risk and identify affordable mature technologies that meet requirements. Determined need for and initiated Government designed large scale applicator to meet specific User requirements. Following MS B, use full and open competition to award a performance based contract with options for LRIP and FRP for indicator and small and mid scale applicator systems. Integrate and test contractor and Government designs in DT and operational testing.

DFoS GENERAL PURPOSE DECONTAMINANT (DFoS GPD)

The GPD program employed a Competitive Prototyping (CP) effort to facilitate the evaluation of COTs technologies. Seven contracts were awarded for competing vendors to provide prototype GPDs in support of CP I. A down select occurred based on technical performance and cost and four contracts were awarded to vendors in support of CP II. As the GPD program enters the next acquisition phase, the program will continue following an evolutionary acquisition strategy; employing a verification/validation effort to facilitate the identification and evaluation of mature technologies that can meet the GPD Capabilities Development Document (CPD) requirements satisfying Chemical, Biological, Radiological and Nuclear (CBRN) user needs.

DFoS JOINT SENSITIVE EQUIPMENT WIPE (DFoS JSEW)

JSEW program employed competitive prototyping to facilitate the evaluation of Commercial Off The Shelf (COTS) Technologies during the Technology Development Phase. Candidates were evaluated from competing vendor prototypes to determine optimal JSEW systems. Four contracts were awarded to vendors in support of Competitive Prototyping Phase (CP) II. As the JSEW enters the next acquisition phase, the program will continue following an evolutionary acquisition strategy; employing a verification/validation effort to facilitate the identification and evaluation of mature technologies that can meet the JSEW Capabilities Development Document (CPD) requirements. Follow-on increments of JSEW may include biological agent capability and use on skin.

MAJOR DEFENSE ACQUISITION PROGRAM (MDAP)

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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The JSF Decontamination System effort will utilize sole source contracting to leverage and integrate commercially available technologies to provide a decontamination delivery system for the Joint Strike Fighter program office in support of the JSF Live Fire Test and Evaluation (LFT&E).

E. Performance Metrics

N/A

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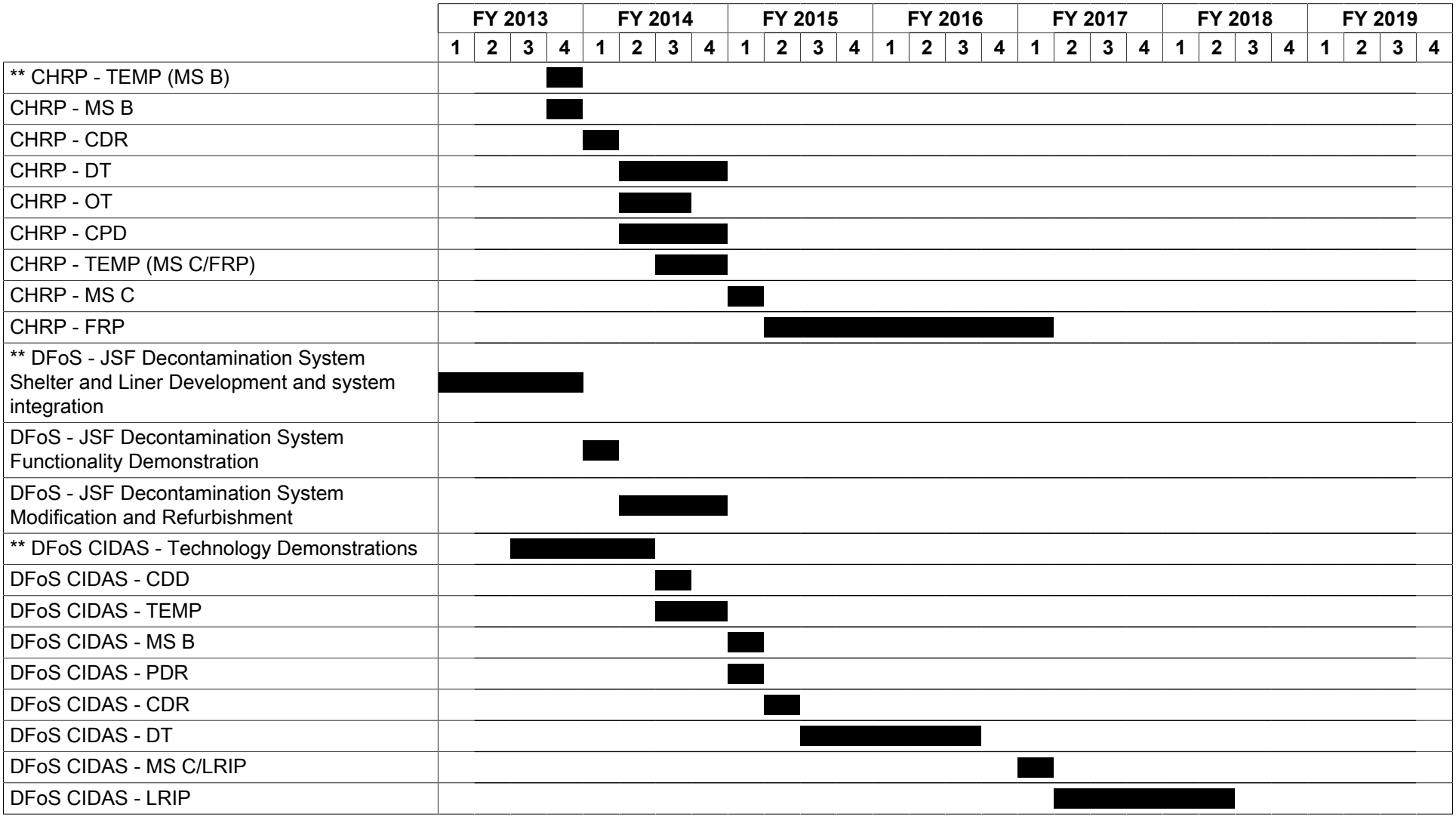

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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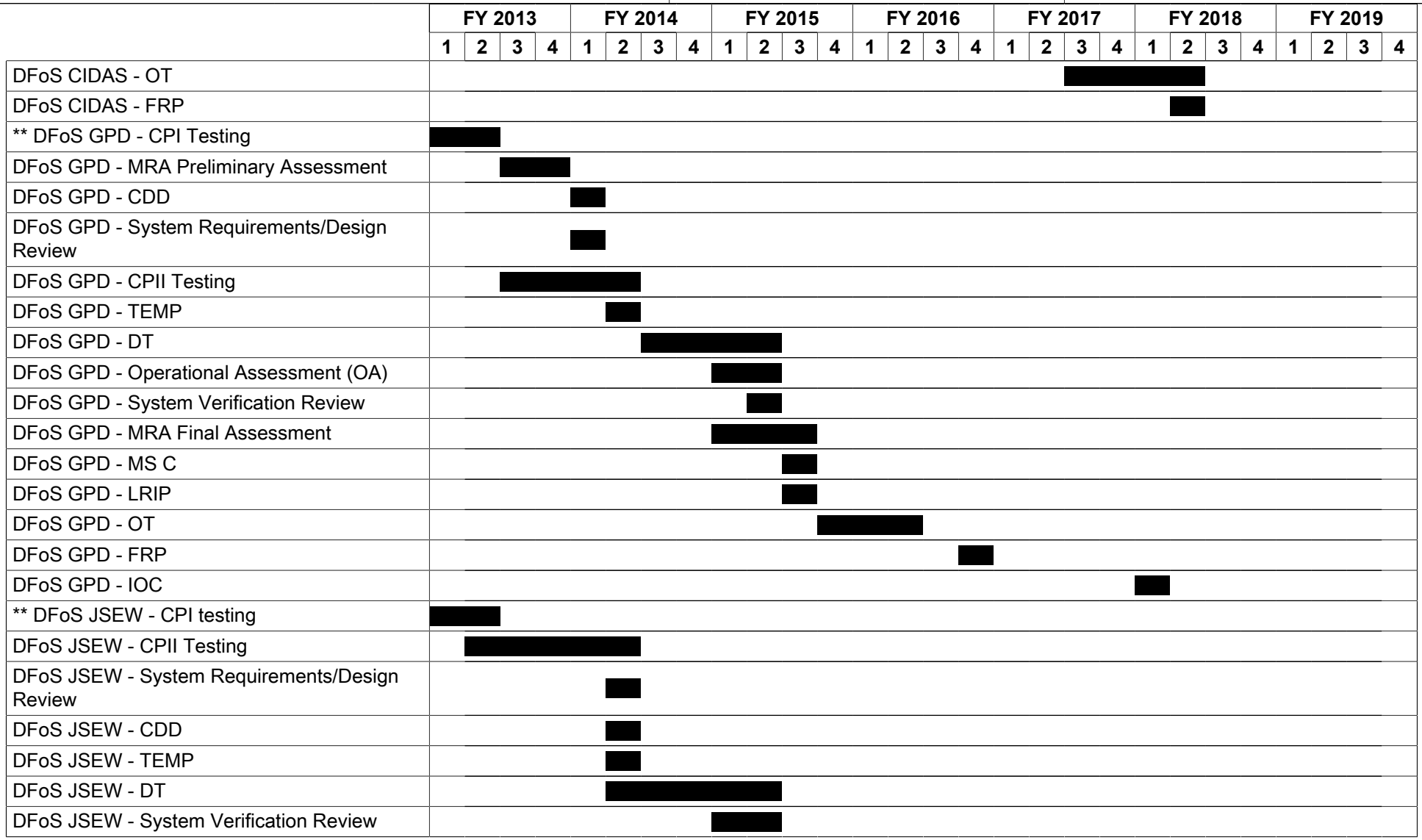

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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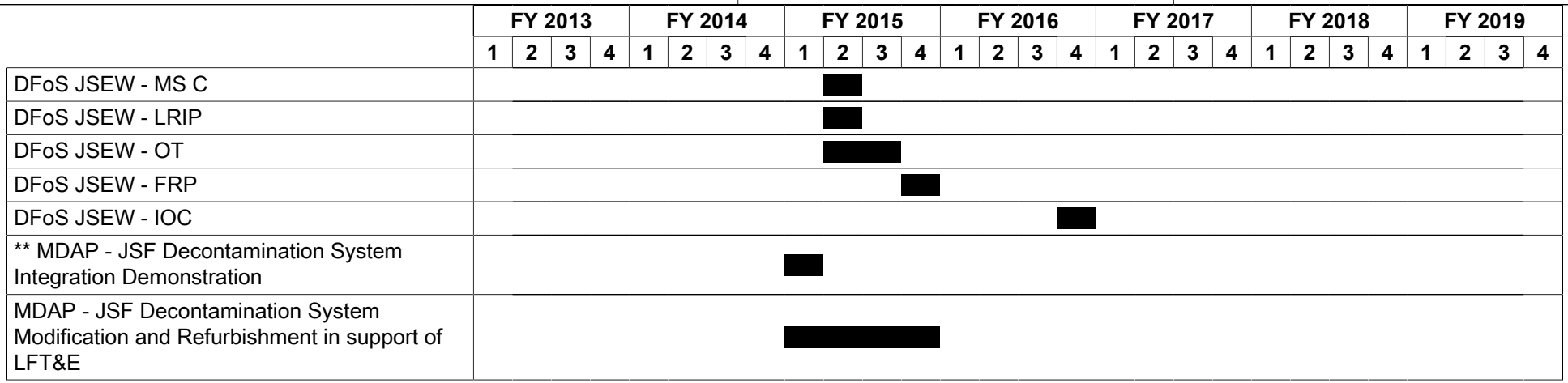

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** CHRP - TEMP (MS B)	4	2013	4	2013
CHRP - MS B	4	2013	4	2013
CHRP - CDR	1	2014	1	2014
CHRP - DT	2	2014	4	2014
CHRP - OT	2	2014	3	2014
CHRP - CPD	2	2014	4	2014
CHRP - TEMP (MS C/FRP)	3	2014	4	2014
CHRP - MS C	1	2015	1	2015
CHRP - FRP	2	2015	1	2017
** DFoS - JSF Decontamination System Shelter and Liner Development and system integration	1	2013	4	2013
DFoS - JSF Decontamination System Functionality Demonstration	1	2014	1	2014
DFoS - JSF Decontamination System Modification and Refurbishment	2	2014	4	2014
** DFoS CIDAS - Technology Demonstrations	3	2013	2	2014
DFoS CIDAS - CDD	3	2014	3	2014
DFoS CIDAS - TEMP	3	2014	4	2014
DFoS CIDAS - MS B	1	2015	1	2015
DFoS CIDAS - PDR	1	2015	1	2015
DFoS CIDAS - CDR	2	2015	2	2015
DFoS CIDAS - DT	3	2015	3	2016
DFoS CIDAS - MS C/LRIP	1	2017	1	2017
DFoS CIDAS - LRIP	2	2017	2	2018

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
DFoS CIDAS - OT	3	2017	2	2018
DFoS CIDAS - FRP	2	2018	2	2018
** DFoS GPD - CPI Testing	1	2013	2	2013
DFoS GPD - MRA Preliminary Assessment	3	2013	4	2013
DFoS GPD - CDD	1	2014	1	2014
DFoS GPD - System Requirements/Design Review	1	2014	1	2014
DFoS GPD - CPII Testing	3	2013	2	2014
DFoS GPD - TEMP	2	2014	2	2014
DFoS GPD - DT	3	2014	2	2015
DFoS GPD - Operational Assessment (OA)	1	2015	2	2015
DFoS GPD - System Verification Review	2	2015	2	2015
DFoS GPD - MRA Final Assessment	1	2015	3	2015
DFoS GPD - MS C	3	2015	3	2015
DFoS GPD - LRIP	3	2015	3	2015
DFoS GPD - OT	4	2015	2	2016
DFoS GPD - FRP	4	2016	4	2016
DFoS GPD - IOC	1	2018	1	2018
** DFoS JSEW - CPI testing	1	2013	2	2013
DFoS JSEW - CPII Testing	2	2013	2	2014
DFoS JSEW - System Requirements/Design Review	2	2014	2	2014
DFoS JSEW - CDD	2	2014	2	2014
DFoS JSEW - TEMP	2	2014	2	2014
DFoS JSEW - DT	2	2014	2	2015
DFoS JSEW - System Verification Review	1	2015	2	2015
DFoS JSEW - MS C	2	2015	2	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
DFoS JSEW - LRIP	2	2015	2	2015
DFoS JSEW - OT	2	2015	3	2015
DFoS JSEW - FRP	4	2015	4	2015
DFoS JSEW - IOC	4	2016	4	2016
** MDAP - JSF Decontamination System Integration Demonstration	1	2015	1	2015
MDAP - JSF Decontamination System Modification and Refurbishment in support of LFT&E	1	2015	4	2015

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program											Date: March 2014	
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*				Project (Number/Name) IP5 / *INDIVIDUAL PROTECTION (EMD)*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
IP5: *INDIVIDUAL PROTECTION (EMD)*	-	23.952	26.296	15.435	-	15.435	16.832	9.411	8.522	10.053	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

A. Mission Description and Budget Item Justification

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

Included in this program are:

(1) The Joint Service Aircrew Mask (JSAM) for Tactical (TA), Strategic (SA), and Rotary Wing (RW) aircraft are Acquisition Category (ACAT) III programs, incrementally developed with multiple variants for respiratory protection. The JSAM will be a lightweight chemical and biological (CB) protective mask that will be worn as CB protection for most Army, Air Force, Navy and Marine fixed wing (FW) and RW aircrew members. All JSAM variants will be compatible with most below-the-neck (BTN) CB protection ensembles and existing aircrew life support equipment (ALSE). They will include a protective hood assembly, CB filter, blower assembly, and an intercom for ground communication. They will also provide flame and thermal protection, demist/emergency demist, and anti-drowning features. The goal of the JSAM programs is to develop, manufacture, field, and sustain an aircrew respirator systems that, in conjunction with BTN clothing ensembles, will provide the capability for all aircrew to fly throughout their full operating envelope in an actual or perceived CB warfare environment.
The JSAM TA and SA respirators are being developed for use in the majority of Department of Defense (DoD) FW aircraft except for the F-35 Joint Strike Fighter (JSF). The JSAM TA will provide CB and anti-G protection up to nine times the vertical force (Gz), for aircrew in high-performance aircraft. The JSAM SA will be used in aircrew positions that do not require anti-G protection and provide CB protection for positions that only need pressure breathing for altitude.
The JSAM-JSF is a CB respirator being specifically designed to support the F-35. It is designed to ensure that system integration and qualification of CB protection and survivability requirements are achieved as derived from the JSF operational requirements document. Prior to FY15, this project was funded under the JSAM funding line. When integrated with aircraft and pilot mounted equipment, the JSAM-JSF will provide combined CB, hypoxia and anti-G protection to all F-35 users, including the United States Air Force (USAF), Navy (USN), Marine Corps (USMC), and International Partners.

The JSAM MPU-5 RW mask is being developed for use by pilots and aircrew in the majority of DoD RW aircraft in the United States Army (USA) except AH-64 users, USAF, USN, USMC, and United States Coast Guard (USCG). The JSAM RW will integrate with most BTN CB ensembles, normal aircrew flight equipment, and rotary wing flight helmets. The system contains a removable face plate, allowing the user to fly "face free" in MOPP 2.5 when the threat level dictates, thereby reducing physiological burden and improving field of view. If threat level warrants, the user can install their face plate into an already donned hood and enter MOPP 4 without removing their flight helmet.

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(2) The Joint Service General Purpose Mask (JSGPM) Advanced Respiratory Protection Initiative (ARPI) project funds the advanced component development and prototypes of an improved filtration and protection capability against highest priority Toxic Industrial Chemical (TIC) threats, addressing a current and significant capability gap to the operating force. The effort is supported by the Capabilities Production Document for the JSGPM, which outlines the need for a robust TIC/Toxic Industrial Material (TIM) protection capability. It is expected that new capabilities demonstrated through the activities in this project will be leveraged and integrated into future increments of UIPE.

(3) The Uniform Integrated Protection Ensemble (UIPE). The objective of UIPE is to fully integrate chemical, biological, radiological, nuclear (CBRN) and toxic industrial material (TIM) protection into an ensemble, identical in fit and form to the combat uniform (including mask-helmet integration and protective boots and gloves), thus negating the need for separate protective ensemble components. This integrated protection approach will result in increased Warfighter operational performance in a CBRN environment. The UIPE program will develop, integrate, test, procure and field incremental capability solutions that are modular in function and offer improvements in form and fit over current systems; the program will explore trade-space in areas such as protection level, heat stress, durability, antimicrobial properties, flame resistance, launderability, self-detoxification, and protection time in order to provide capabilities that afford maximum utility to the Warfighter. Where appropriate modeling and simulation tools will be used to lower UIPE program risks, reduce costs, and ensure a high confidence in selected technologies. UIPE Increment 1 is aimed specifically at providing enhanced individual protection capabilities to the Warfighter through reduction of physiological and psychological effects associated with CBRN protective garment thermal burden, weight, and bulk. UIPE Increment 1 achieved MS C approval in June 2013 and is now in the Production and Deployment (P&D) phase. The first increment of UIPE will provide CB protective equipment with improved operational capability to the U.S. Special Operations Command.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: 1) JSAM FW - MBU-25 ***FY 2013 Accomplishments:*** Completed Critical Design Review (CDR), Business Case Analysis, and re-baselining IPR leading to the delivery order expiration for the MBU-25, leading to the termination of JSAM FW.	1.217	-	-
Title: 2) JSAM TA - A/P22P-14(A) ***FY 2013 Accomplishments:*** Decision made to pursue the engineering change proposal to the A/P22P-14(A) for U.S. Navy (USN) and U.S. Air Force (USAF) Tactical Aircraft (TA). Purchased initial test assets and testing equipment in support of the A/P22P-14(A) Engineering Change Proposal (ECP) to support access pass-through activities, oxygen crossover solution, and torso-mounted pockets integration. Initiated developmental testing (DT) by conducting altitude, centrifuge, and decompression testing. ***FY 2014 Plans:***	2.609	5.727	4.979

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Purchase 162 A/P22P-14(A) test assets at $13,000.00 each, conduct CDR, developmental and flame resistance testing, and begin Safe-to-Fly Certification activities for the F-22. Conduct performance envelope characterization, component level design review, and manufacturing readiness assessment (MRA). ***FY 2015 Plans:*** Purchase an additional 150 A/P22P-14(A) test assets at $13,000.00 each and begin operational testing (OT).			
Title: 3) JSAM SA - MM53 ***FY 2013 Accomplishments:*** Decision made to pursue the engineering change proposal to modify the M53 ground mask for use in majority of DoD Strategic Aircraft (SA) not requiring anti-G protection. Awarded the prime contract to fund the RDT&E effort until Milestone C. Purchased 70 M53 test assets at $1,720.06 each to initiate early Developmental Testing (DT). In order to reduce cost and schedule, certain MM53 requirements were verified early using M53 masks, during DT. Conducted protection factor tests to characterize the MM53 mask's performance when wearing various aircrew helmets. ***FY 2014 Plans:*** Draft, staff, and obtain approval for the Test and Evaluation Master Plan (TEMP) and conduct a design review to close-out the preliminary design phase. Initiate prototype tooling and build Design Verification Testing (DVT) assets. Continue early DT using the M53 to verify a limited set of MM53 requirements and initiate DVT. Conduct a study using current Service aircrew to determine comfort levels while wearing the MM53 mask with several aircrew helmets. Initiate the Joint Integrated Logistics Assessment (JILA) process and attain final approval of the JSAM FW for Strategic Aircraft Capabilities Development Document (CDD). Purchase 85 test assets at a unit cost of $1,900.00 each. ***FY 2015 Plans:*** Complete DVT. Continue early DT using the M53 mask and initiate DT using the MM53 mask. Conduct the Critical Design Review (CDR) and Manufacturing Assessment (MRA), and complete the final design phase and Production Readiness Review (PRR). Initiate production tooling and build 265 assets (200 for DT and 65 for other users) at a unit cost of $1,900.00 each. Complete draft Technical Manual.	4.536	10.527	5.690
Title: 4) JSAM-JSF ***FY 2013 Accomplishments:*** Continued DVT, MRA, and CDR preparation. Conducted program management, respirator system live agent challenge test (SMARTMAN), Fit and Accommodation of neckwear protection (Neckdam), Environmental, Carbon Tube, and other various test activities. ***FY 2014 Plans:***	4.276	2.000	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** IP5 / *INDIVIDUAL PROTECTION (EMD)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Conduct a CDR and CDR assessment, test readiness review (TRR), Joint Integrated Logistics Assessment (JILA), initiate DT and conduct a Logistics Demonstration.			
Title: 5) JSAM JSF ***FY 2015 Plans:*** Complete Developmental Testing (DT) and conduct System Verification and Production Readiness reviews leading to a Low Rate Initial Production (LRIP) Decision. Provide product development support to the Joint Strike Fighter (JSF) program office in support of the Chemical and Biological Live Fire Test and Evaluation (LFT&E).	-	-	1.763
Title: 6) JSAM RW ***FY 2013 Accomplishments:*** Conducted airworthiness testing on AH/MH-6M, MH-60M and MH-47G aircraft. Developed, prepared and coordinated test plans. Conducted developmental testing in chemical agent, SMARTMAN, simulant, and under environmental exposure. Prepared program documentation and managed program schedule around requirements and fiscal constraints. ***FY 2014 Plans:*** Continue airworthiness testing on OH-58D, LUH-72A, HH-60M, UH-60L, and CH-47F. Complete developmental testing on specific helmet sighting systems in USN/USMC and assessment of integration capabilities with Optimized Top Owl aircraft. Prepare documentation for LRIP contract award. Initiate Physical Configuration Audit of system technical data. ***FY 2015 Plans:*** Conduct and complete Multi Service Operational Test and Evaluation. Complete Airworthiness testing and obtain airworthiness releases. Conduct all technical reviews in advance of Full Rate Production decision. Prepare all documentation in support of full and open production contract award.	6.914	6.037	2.000
Title: 7) JSGPM ***FY 2013 Accomplishments:*** JSGPM (ARPI) - Began the SDD phase of ZZ-AT media (zirconium hydroxide) based filter transitioning from Tech Base that is applicable to replace or improve fielded protection. Prepared for SDD contract. ***FY 2014 Plans:*** JSGPM (M61 Filters) - Award task on M61 Filter contract for delivery of 700 pairs of filters with more robust TIC/CWA protection. Filters will be $100 per pair for a total cost of $70,000. ***FY 2015 Plans:***	1.571	2.005	1.003

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** IP5 / *INDIVIDUAL PROTECTION (EMD)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
JSGPM - Continue refinement of technical data and manufacturing process controls for the Tech 1 material (CoZZAT).			
Title: 8) UIPE	2.829	-	-
FY 2013 Accomplishments: UIPE Incr 1 - Conducted Production Readiness Review (PRR), System Verification Review (SVR), Manufacturing Readiness Assessment (MRA) and Technology Readiness Assessment (TRA). Completed Logistics Demonstration. Performed Physical Configuration Audit (PCA). Prepared for, and conducted MS C Low Rate Initial Production (LRIP) decision. Exercised LRIP contract option(s). Conducted Operational Test Readiness Review (OTRR) and First Article Test (FAT). Initiated and completed Operational Test and Evaluation (OT&E). Prepared for Full Rate Production (FRP) decision.			
Accomplishments/Planned Programs Subtotals	23.952	26.296	15.435

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• JI0002: *JS AIRCREW MASK (JSAM)*	5.742	10.552	11.526	-	11.526	31.500	54.050	68.924	38.343	Continuing	Continuing
• MA0401: *CBRN UNIFORM INTEGRATED PROTECTION ENSEMBLE (UIPE)*	10.376	13.772	6.948	-	6.948	11.101	11.101	11.101	11.000	Continuing	Continuing

Remarks

D. Acquisition Strategy

JS AIRCREW MASK FIXED WING (JSAM FW)

The overall JSAM acquisition approach is phased due to the complexity of interfacing with almost 200 aircraft types and models with different mission sets, Aviation Life Support Equipment (ALSE), cockpit layouts, priorities, etc. JSAM will pursue two materiel solutions for fixed wing aircraft; the JSAM Tactical (TA) and JSAM Strategic (SA) programs. JSAM TA and SA must be compatible with current CB ensembles and provide flame protection and will replace all existing Pressure Breathing for Gravity (PBG) and non-PBG CB aircrew respirators. Both solutions are being pursued via Engineering Change Proposal (ECP) and integration efforts applied to already fielded items. The JSAM TA (A/P22P-14A) utilizes a phased acquisition strategy to provide aircrew of all Services with individual head-eye-respiratory protection against Chemical-Biological (CB) warfare agents. The JSAM TA effort will test the Pressure Breathing for Gravity (PBG) Mask to aircraft platforms. The ECP will be accomplished through leveraging a Sole Source (SS)/Firm Fixed Price (FFP) contract and fielded via Competitive/FFP contract. The JSAM SA (Modified M53 (MM53)) effort will test and field a mask for aircrew positions not requiring PBG capabilities. This contract was awarded via sole source to Avon Protection Systems, Cadillac, Michigan to modify and field a commercially available mask (M53).

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** IP5 / *INDIVIDUAL PROTECTION (EMD)*

JS AIRCREW MASK JOINT STRIKE FIGHTER (JSAM JSF)

JSAM-JSF is specifically designed for the F-35 (Joint Strike Fighter) to be incorporated within the JSF platform and fielded to US Services and international partners. JSAM-JSF is being developed concurrently with other JSF equipment including life support and pilot flight equipment. JSAM-JSF initially leveraged a JSAM-FW design and shared the same base contract with a Cost Plus Incentive Fee delivery order.

JS AIRCREW MASK ROTARY WING (JSAM RW)

JSAM RW is being developed under a competitive Cost Plus Fixed Fee contract, which is also used by JSAM Apache and Apache Block III. A sole source J&A will be utilized to award LRIP to Avox Systems, with a small quantity FRP option, thereby verification of Technical Data prior to delivery to the Government. Ultimately, a competitive solicitation will be made for Full Rate Production under Firm Fixed Price terms.

JS GENERAL PURPOSE MASK (JSGPM)

The JSGPM ARPI effort is using the M61 filter contracts awarded to 3M and Avon to develop improved filters for the JSGPM. There is a continual technology refreshment CLIN that allows for filter development tasks to be awarded under this contract. The tasks can be competed between the two awardees.

CBRN UNIFORM INTEGRATED PROTECTION ENSEMBLE (UIPE)

The UIPE Increment 2 will enhance fielded and emerging individual protective equipment as part of a Family of Systems that enables the Warfighter to operate in a contaminated Chemical and Biological (CB) environment with no or minimal degradation in performance. UIPE is supported by an approved Initial Capabilities Document (ICD). UIPE increment 2 will build on and enhance capabilities attained in Increment 1. In addition, Increment 2 will seek to address the broader scope of ICD requirements to include the capability to protect warfighters from operationally relevant traditional, non-traditional, and advanced CBRN/TIM threats likely to be encountered during joint force operations. UIPE Increment 2 acquisition strategy will be defined to address material requirements identified in CDD utilizing both COTS and Government-owned design to attain increased capabilities.

E. Performance Metrics

N/A

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** IP5 / *INDIVIDUAL PROTECTION (EMD)*

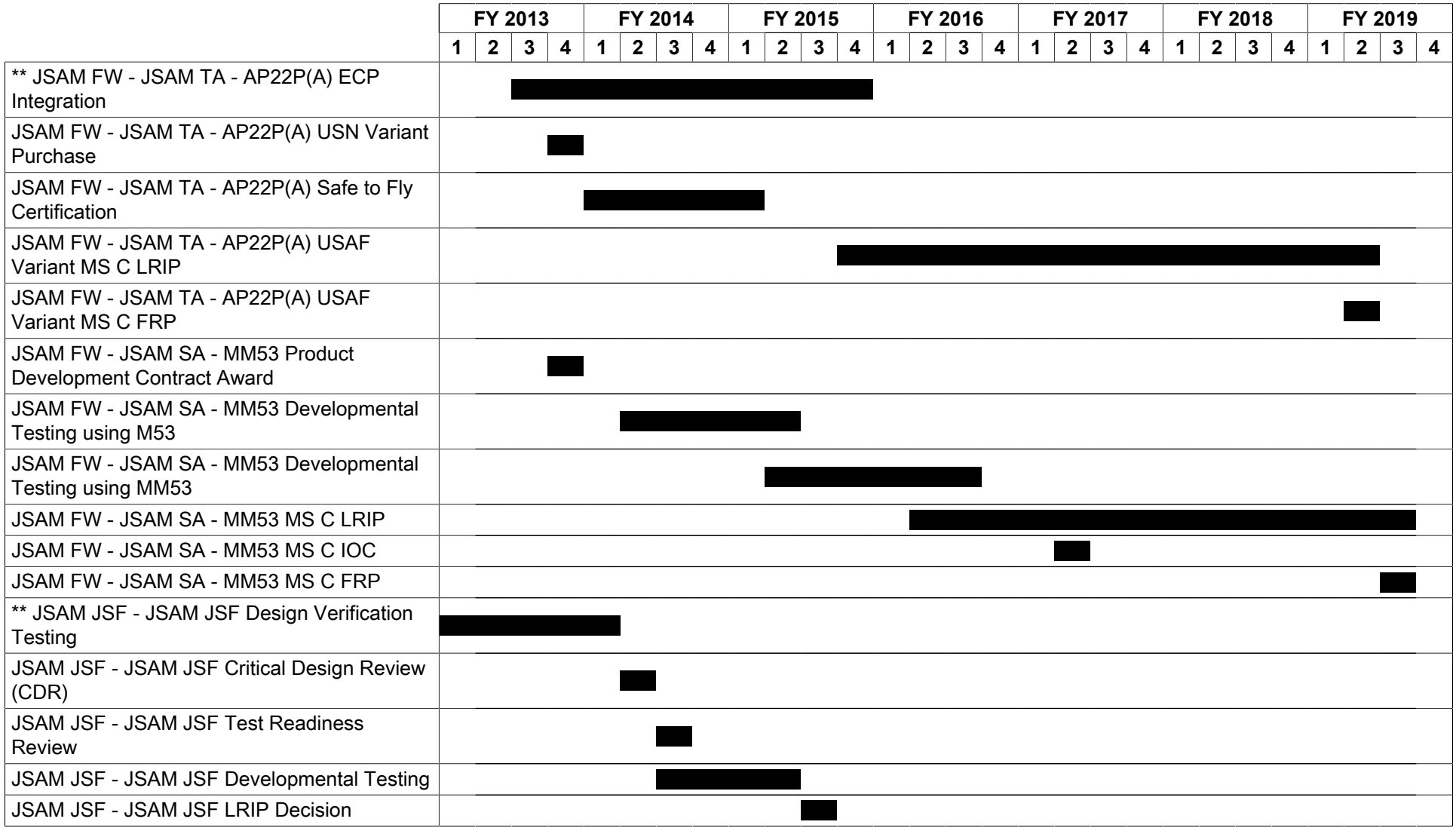

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** IP5 / *INDIVIDUAL PROTECTION (EMD)*

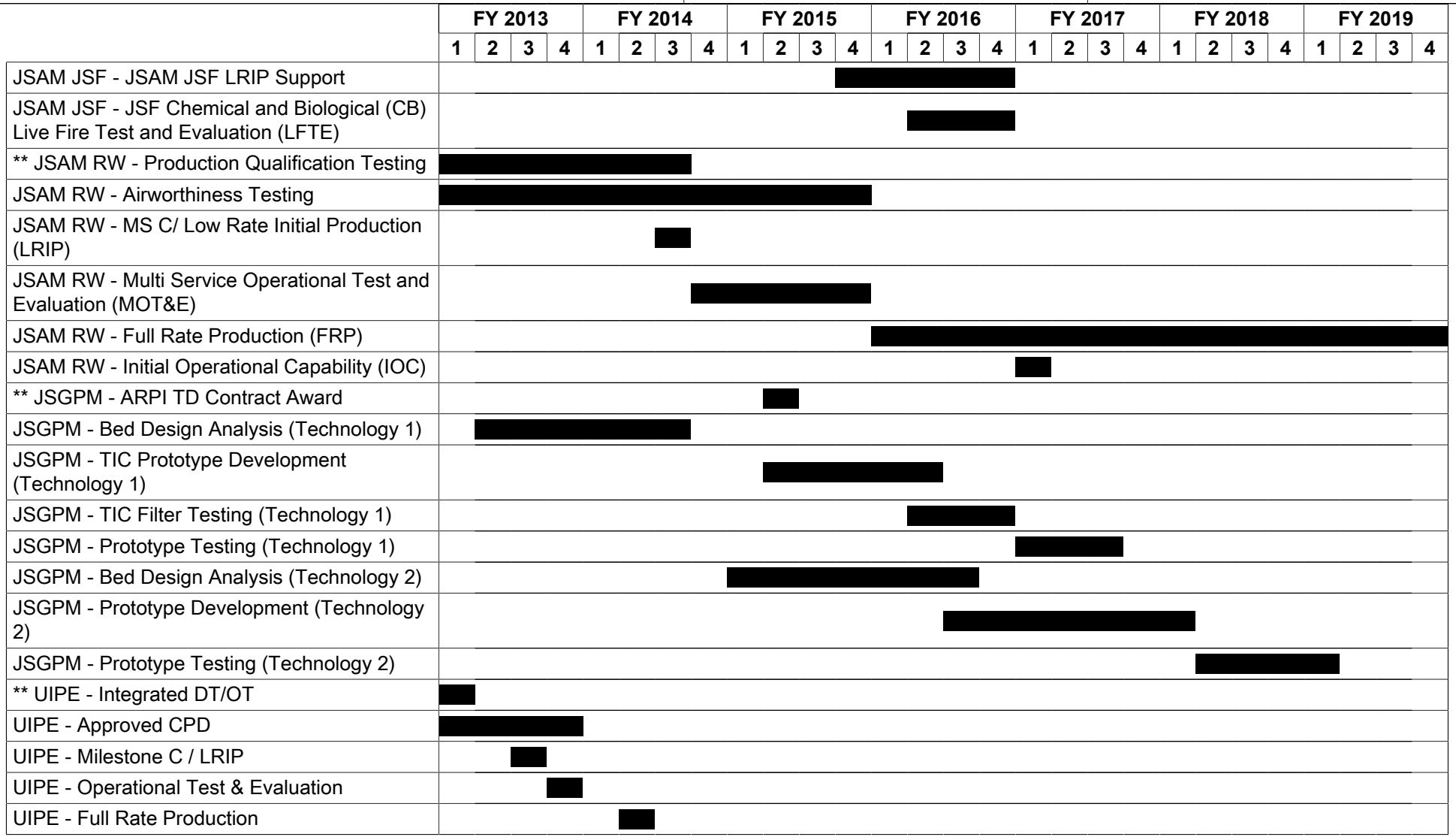

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** IP5 / *INDIVIDUAL PROTECTION (EMD)*

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
UIPE - SOCOM IOC												■																

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** IP5 / *INDIVIDUAL PROTECTION (EMD)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** JSAM FW - JSAM TA - AP22P(A) ECP Integration	3	2013	4	2015
JSAM FW - JSAM TA - AP22P(A) USN Variant Purchase	4	2013	4	2013
JSAM FW - JSAM TA - AP22P(A) Safe to Fly Certification	1	2014	1	2015
JSAM FW - JSAM TA - AP22P(A) USAF Variant MS C LRIP	4	2015	2	2019
JSAM FW - JSAM TA - AP22P(A) USAF Variant MS C FRP	2	2019	2	2019
JSAM FW - JSAM SA - MM53 Product Development Contract Award	4	2013	4	2013
JSAM FW - JSAM SA - MM53 Developmental Testing using M53	2	2014	2	2015
JSAM FW - JSAM SA - MM53 Developmental Testing using MM53	2	2015	3	2016
JSAM FW - JSAM SA - MM53 MS C LRIP	2	2016	3	2019
JSAM FW - JSAM SA - MM53 MS C IOC	2	2017	2	2017
JSAM FW - JSAM SA - MM53 MS C FRP	3	2019	3	2019
** JSAM JSF - JSAM JSF Design Verification Testing	1	2013	1	2014
JSAM JSF - JSAM JSF Critical Design Review (CDR)	2	2014	2	2014
JSAM JSF - JSAM JSF Test Readiness Review	3	2014	3	2014
JSAM JSF - JSAM JSF Developmental Testing	3	2014	2	2015
JSAM JSF - JSAM JSF LRIP Decision	3	2015	3	2015
JSAM JSF - JSAM JSF LRIP Support	4	2015	4	2016
JSAM JSF - JSF Chemical and Biological (CB) Live Fire Test and Evaluation (LFTE)	2	2016	4	2016
** JSAM RW - Production Qualification Testing	1	2013	3	2014
JSAM RW - Airworthiness Testing	1	2013	4	2015
JSAM RW - MS C/ Low Rate Initial Production (LRIP)	3	2014	3	2014
JSAM RW - Multi Service Operational Test and Evaluation (MOT&E)	4	2014	4	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** IP5 / *INDIVIDUAL PROTECTION (EMD)*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
JSAM RW - Full Rate Production (FRP)	1	2016	4	2019
JSAM RW - Initial Operational Capability (IOC)	1	2017	1	2017
** JSGPM - ARPI TD Contract Award	2	2015	2	2015
JSGPM - Bed Design Analysis (Technology 1)	2	2013	3	2014
JSGPM - TIC Prototype Development (Technology 1)	2	2015	2	2016
JSGPM - TIC Filter Testing (Technology 1)	2	2016	4	2016
JSGPM - Prototype Testing (Technology 1)	1	2017	3	2017
JSGPM - Bed Design Analysis (Technology 2)	1	2015	3	2016
JSGPM - Prototype Development (Technology 2)	3	2016	1	2018
JSGPM - Prototype Testing (Technology 2)	2	2018	1	2019
** UIPE - Integrated DT/OT	1	2013	1	2013
UIPE - Approved CPD	1	2013	4	2013
UIPE - Milestone C / LRIP	3	2013	3	2013
UIPE - Operational Test & Evaluation	4	2013	4	2013
UIPE - Full Rate Production	2	2014	2	2014
UIPE - SOCOM IOC	4	2015	4	2015

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program											Date: March 2014	
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*				Project (Number/Name) IS5 / *INFORMATION SYSTEMS (EMD)*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
IS5: *INFORMATION SYSTEMS (EMD)*	-	1.869	9.267	10.340	-	10.340	9.208	16.302	17.508	20.646	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

A. Mission Description and Budget Item Justification

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

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

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

JEM Increment 2, using IT Box Acquisition Strategy, adds capability to JEM Increment 1 including modeling of missile intercepts and improved modeling of hazard events in urban and littoral terrain. It also includes improved architecture called Common CBRN Modeling Interface (CCMI). Together, CCMI and IT Box enable more rapid and less costly integration of Science and Technology updates, aligning with the S&T provider to provide the most current capability to the warfighter. Battlespace commanders and first responders must have a CBRN hazard prediction capability in order to make decisions that will minimize risks of CBRN contamination and enable them to continue mission operations. JEM operates in an integrated fashion with operational and tactical Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) systems, and in a standalone mode. JEM interfaces and communicates with the other programs such as JWARN, weather systems, intelligence systems, and various databases.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** IS5 / *INFORMATION SYSTEMS (EMD)*

JWARN Increment 2 will provide an expansion of sensors that will connect to JWARN, increased automation of message handling, improved false alarm filtering, integration of route-planning calculator, and interoperability with additional Command and Control (C2), medical information and evolving Bio-Surveillance systems. JWARN will be located in Command and Control Centers at the appropriate level and will be employed by CBRN defense specialists and other designated personnel to improve the efficiency of limited CBRN personnel assets. This employment will transfer data automatically from existing sensors and to and from the future sensors to provide commanders with the capability to support operational decision making in a CBRN environment. JWARN will integrate existing sensors into a sensor network or host C2 system, but does not provide the sensors that will be employed in the operating environment. JWARN will transition from a Command and Control (C2) platform specific implementation to a Web-based Service Oriented Architecture (SOA) meeting the DoD's evolution to a more comprehensive Common Operating Environment (COE) and will operate as a standalone capability. Activities include: logistical elements, support equipment, manuals and training required to operate and support the system.

The Software Support Activity (SSA) is a Chem-Bio Defense user developmental support and service organization to facilitate net-centric interoperability of systems in acquisition for the Warfighter. The SSA provides the CBRN Warfighter with Joint Service solutions for Integrated Architectures, Data Management/Modeling, Information Assurance (IA), Interoperability Certifications, Verification, Validation and Accreditation (VV&A) to support interoperable and integrated net-centric, service-oriented solutions for CBRN systems. The SSA emphasizes development of reference implementations to guide Government and industry system and software developers to ensure that their products meet common interoperability standards. The latest technologies/products include the definition of a Common CBRN Sensor Integration Standard (CCSI) and the CBRN Data Model. These technologies and direct enablers for the development of CBRN integrated sensor networks and the dissemination of CBRN information across all users. The SSA directly supports Chemical and Biological Defense Program (CBDP) initiatives by providing common service oriented architectures and frameworks for the collection and dissemination of Bio-Surveillance and other critical CBRN information.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: 1) JEM Increment 2 Developmental Test and Evaluation	-	0.547	1.305
FY 2014 Plans: Perform Government assessment of competitive prototypes to assist in contracting technical assessment and down select decision. Perform Government Development Test of JEM Increment 2 capabilities to support Operational Test and Milestone C (MS C) decision.			
FY 2015 Plans: Continue Government evaluation of the software deliveries to complete Multiservice Operational Test and Evaluation (MOT&E) which will allow for Initial Operational Capability of JEM Increment 2 to be deployed to the services.			
Title: 2) JEM Increment 2 Program Development	-	6.012	3.801
FY 2014 Plans: Award competitive prototyping down-select option and develop JEM Increment 2 software baseline.			
FY 2015 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Continue JEM Increment 2 software development and perform integration into Command and Control (C2) systems.			
Title: 3) JEM Increment 2 Program Management ***FY 2014 Plans:*** Perform program/financial management, costing, contracting, scheduling and acquisition oversight support for JEM Increment 2. Initiate development of Requirements Definition Package (RDP) and Build Decisions (BD) for JEM Increment 2. ***FY 2015 Plans:*** Continue to perform program/financial management, costing, contracting, scheduling and acquisition oversight support for JEM Increment 2. Continue development and execution of Build Decisions (BD) for JEM Increment 2 while working within the Agile development process, to include performing a Joint Integrated Logistics Assessment (JILA) and Logistics' Demonstration (LOG DEMO) in order to deploy JEM Increment 2 to the services.	-	0.721	1.642
Title: 4) JEM Increment 2 Operational Test and Evaluation ***FY 2015 Plans:*** Complete Multiservice Operational Test and Evaluation (MOT&E) which will allow for Initial Operational Capability (IOC) of JEM Increment 2 to be deployed to the services.	-	-	1.050
Title: 5) JWARN IT BOX Program Management Support ***FY 2015 Plans:*** Perform program/financial management, costing, contracting, scheduling and acquisition oversight support for JWARN within IT BOX construct and Agile Software development processes.	-	-	0.574
Title: 6) SSA Policies, Standards and Guidelines ***FY 2013 Accomplishments:*** Conducted acquisition documentation for CBRN IT systems based on changes in policy, procedures, and guidelines. Continued surveillance of Federal Information Security Management Act (FISMA) and DoD Acquisition policies necessary to maintain certification on deployed service platforms. Provided Modeling and Simulation (M&S) strategic and accreditation support. ***FY 2014 Plans:*** Update acquisition documentation for CBRN IT systems based on changes in policy, procedures, and guidelines. Continue surveillance of Federal Information Security Management Act (FISMA) and DoD Acquisition policies necessary to maintain certification on deployed service platforms. Provide M&S strategic and accreditation support. ***FY 2015 Plans:***	0.198	0.208	0.203

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Continue updates to acquisition documentation for CBRN IT systems based on changes in policy, procedures, and guidelines. Perform surveillance of Federal Information Security Management Act (FISMA) and DoD Acquisition policies necessary to maintain certification on deployed service platforms. Provide M&S strategic and accreditation support.			
Title: 7) SSA Integrated Architecture ***FY 2013 Accomplishments:*** Conducted required modifications to the Integrated Architecture on host platforms and documented the infrastructure and technical standards. Conducted Net-Centric Assessments for programs. Reviewed and updated the Common CBRN Interface standards on operational systems, including a Common CBRN Sensor Interface (CCSI). ***FY 2014 Plans:*** Continue required modifications to the Integrated Architecture on host platforms and document the infrastructure and technical standards. Conduct Net-Centric Assessments for programs. Review and update the Common CBRN Interface standards on operational systems, including a CCSI. ***FY 2015 Plans:*** Perform required modifications to the Integrated Architecture on host platforms and document the infrastructure and technical standards. Conduct Net-Centric Assessments for programs. Review and update the Common CBRN Interface standards on operational systems, including a CCSI.	0.239	0.251	0.266
Title: 8) SSA Enterprise Support and Services ***FY 2013 Accomplishments:*** Supported processes and services for Architectures, Data, Information Assurance, Modeling and Simulation, Science and Technology, and Standards and Policy. ***FY 2014 Plans:*** Support processes and services for Architectures, Data, Information Assurance, Modeling and Simulation, Science and Technology, and Standards and Policy. Modify support processes and services necessary to maintain relevancy in accordance with DoD standards, policies, and guidelines. ***FY 2015 Plans:*** Continue to support processes and services for Architectures, Data, Information Assurance, Modeling and Simulation, Science and Technology, and Standards and Policy. Modify support processes and services necessary to maintain relevancy in accordance with DoD standards, policies, and guidelines.	0.156	0.163	0.147
Title: 9) SSA Chemical, Biological, Radiological, Nuclear (CBRN) Data Model ***FY 2013 Accomplishments:***	0.154	0.183	0.167

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Refined CBRN Data Model to maintain relevancy for Community of Interest. ***FY 2014 Plans:*** Develop CBRN data model and define the structure and content of information exchange (XML schemas) that support interoperability between CBD programs. ***FY 2015 Plans:*** Continue to develop and update CBRN data model and define the structure and content of information exchange "Extensible Markup Language"(XML) schemas that support interoperability between CBD programs.			
Title: 10) SSA Information Assurance ***FY 2013 Accomplishments:*** Maintained situational awareness and initiated actions to improve or restore IA posture to keep systems certified in accordance with DoD standards for information system programs. ***FY 2014 Plans:*** Employ Information Systems Security Engineering efforts to develop or modify the IA component of a system architecture to ensure it is in compliance with the IA component of the Global Information Grid architecture, and makes maximum use of enterprise IA capabilities and services. ***FY 2015 Plans:*** Continue to employ Information Systems Security Engineering efforts to develop or modify the IA component of a system architecture to ensure it is in compliance with the IA component of the Global Information Grid architecture, and makes maximum use of enterprise IA capabilities and services.	0.445	0.471	0.477
Title: 11) SSA Policy and Standards Repository ***FY 2013 Accomplishments:*** Maintained the repository for applicable policies, standards, and guidelines. ***FY 2014 Plans:*** Provide standards, formats, templates, training, and best practices to support practical compliance with laws, regulations, and policy for acquisition, certification, and sustainment of net-centric, interoperable, and spectrum dependent systems and devices. ***FY 2015 Plans:***	0.349	0.366	0.357

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Continue to provide standards, formats, templates, training, and best practices to support practical compliance with laws, regulations, and policy for acquisition, certification, and sustainment of net-centric, interoperable, and spectrum dependent systems and devices.			
Title: 12) SSA Technology Transition Support ***FY 2013 Accomplishments:*** Provided Technology Transition support services (common components and services) for CBD programs. ***FY 2014 Plans:*** Provide Technology Transition support services (common components and services) for CBD programs. ***FY 2015 Plans:*** Perform Technology Transition support services (common components and services) for CBD programs.	0.328	0.345	0.351
Accomplishments/Planned Programs Subtotals	1.869	9.267	10.340

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• IS7: *INFORMATION SYSTEMS (OP SYS DEV)*	9.590	6.518	4.091	-	4.091	7.835	11.995	13.034	11.019	Continuing	Continuing
• G47101: *JOINT WARNING & REPORTING NETWORK (JWARN)*	2.646	1.112	0.766	-	0.766	-	4.589	1.522	0.533	Continuing	Continuing
• JC0208: *JOINT EFFECTS MODEL (JEM)*	-	-	1.141	-	1.141	3.316	5.069	3.086	3.031	Continuing	Continuing
• JS5230: *SOFTWARE SUPPORT ACTIVITY (SSA)*	-	0.100	-	-	-	0.100	0.100	0.100	0.100	Continuing	Continuing

Remarks

D. Acquisition Strategy

JOINT EFFECTS MODEL (JEM)

JEM Increment 2 acquisition will utilize the JROC's "IT Box" construct for software development. The intent is to provide the next generation of capability with current and future technologies, as stated in the IS ICD, in less time and away from an incremental delivery approach. This effort is being acquired through a Request for Proposal (RFP) to Industry under full and open competition. The program plans to award multiple development contracts in a competitive prototyping phase prior to downselecting a single JEM developer and integrator.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** IS5 / *INFORMATION SYSTEMS (EMD)*

JOINT WARNING & REPORTING NETWORK (JWARN)

JWARN Increment 2 acquisition will utilize the JROC's "IT Box" construct for software requirements management and development. The intent is to provide the next generation of capability with current and future technologies, as stated in the IS ICD, in less time and away from an incremental delivery approach. This effort is being executed under a Cost-Plus-Award Term Incentive structure to gain maximum benefit to the Government in maintaining the fielded baseline and future software capability development and was awarded under a full and open competition Request for Proposal (RFP). The JWARN Program will procure a Sensor Connectivity Capability (SCC) (hardware materiel solution) in order to facilitate the transfer of CBRN sensor information from legacy CBRN sensors to DoD networks. This solution will be external to the CBRN Sensors and Service-identified network transmission device(s).

SOFTWARE SUPPORT ACTIVITY (SSA)

The SSA provides enterprise-wide services and coordination across all CBDP programs that contain data or software, or are capable of linking to the Global Information Grid (GIG). The SSA facilitates interoperability, integration, and supportability of existing and developing IT and National Security Systems (NSS). Phase 1a identifies CBDP programs that deal with data or software, and have an IT component. This will be followed by coordination to facilitate the concepts of interoperability, integration and supportability of enterprise-wide services. Next follows work with user communities to develop and demonstrate enterprise-wide common architectures, products and services. (BA5 - System Development and Demonstration). Phase 2 will support the application of the enterprise-wide architectures, products and services into the programs, with verification of compliance with the defined products and services. (BA7 - Operational Systems Development).

E. Performance Metrics

N/A

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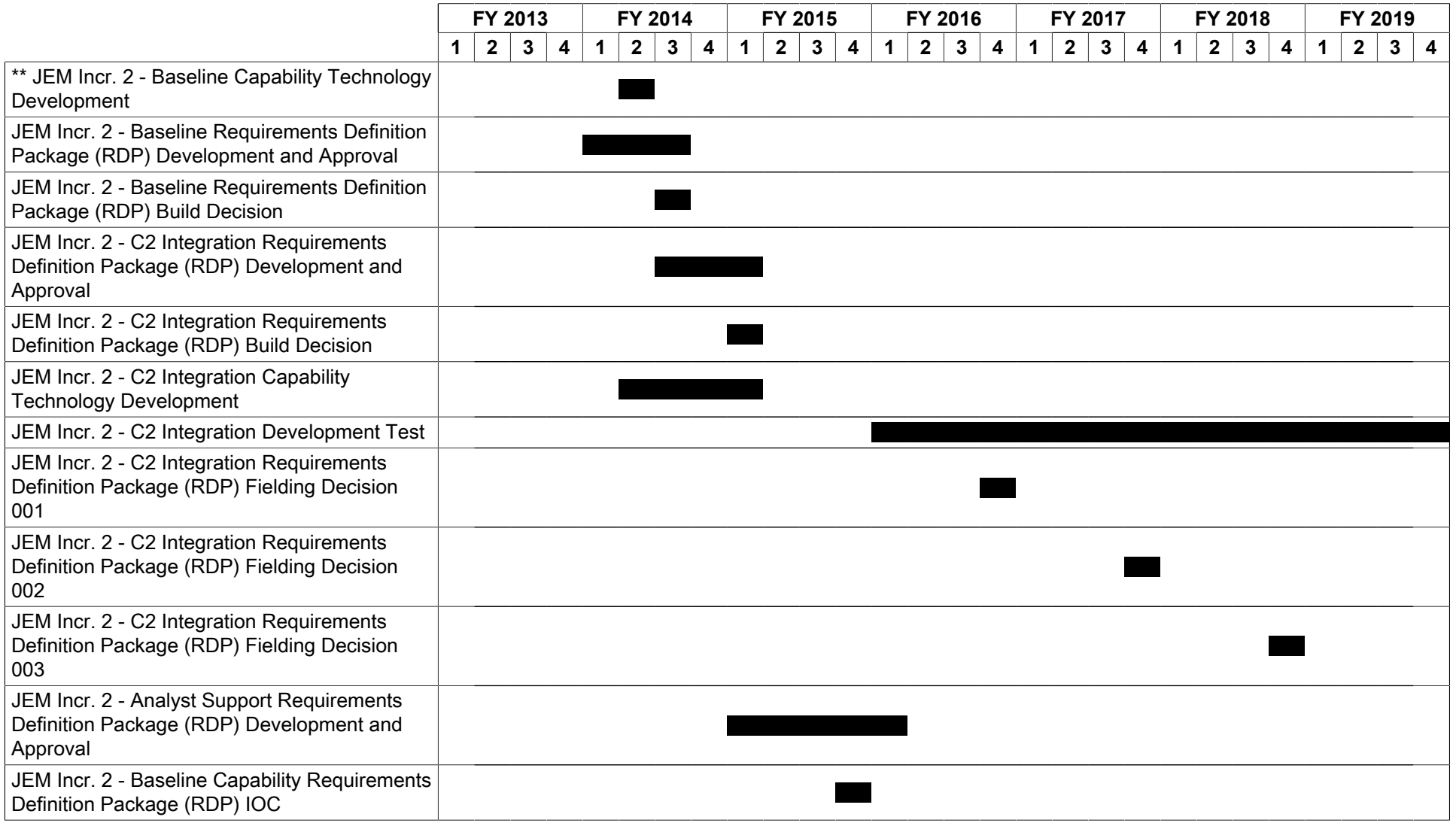

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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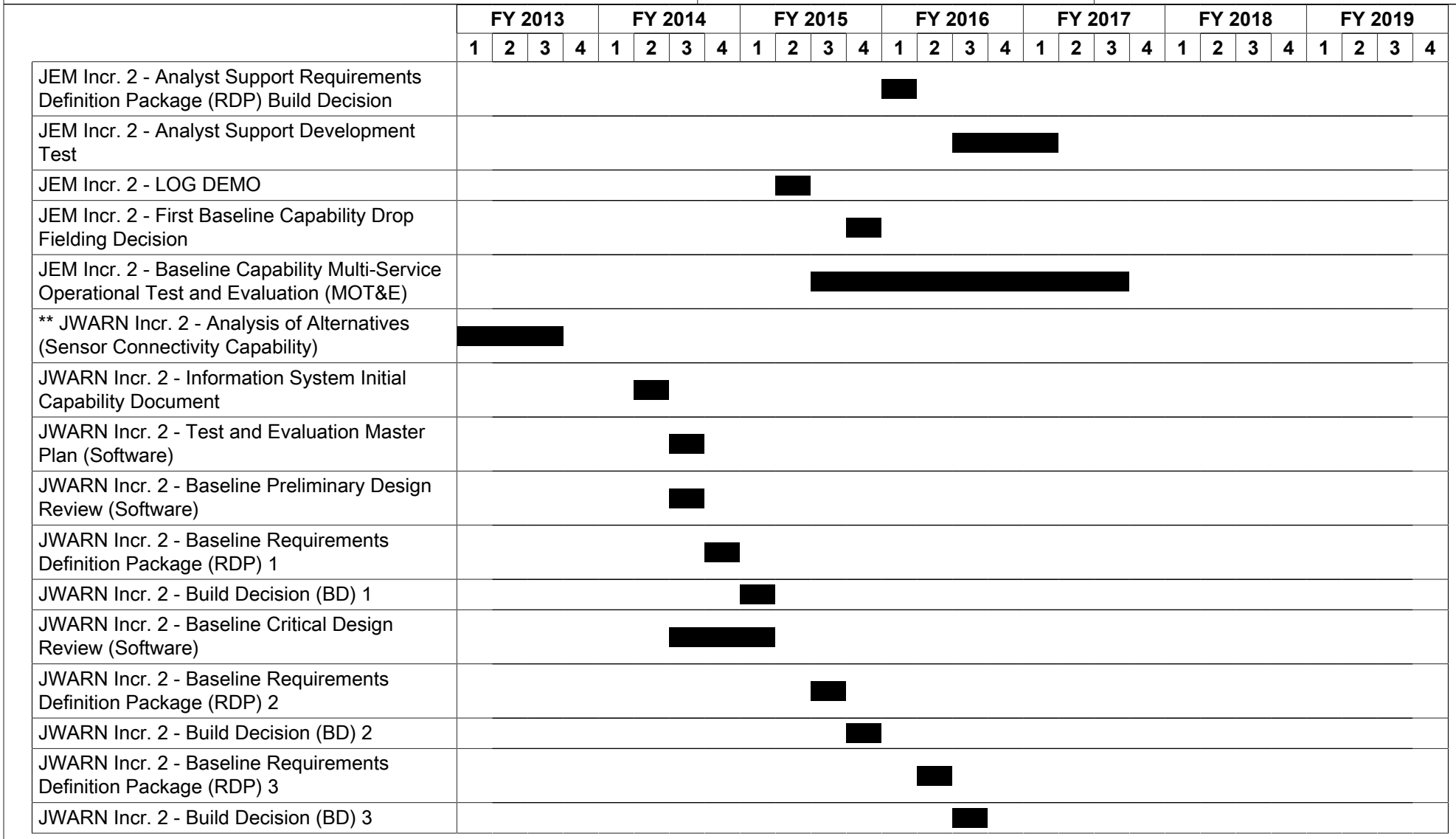

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** IS5 / *INFORMATION SYSTEMS (EMD)*

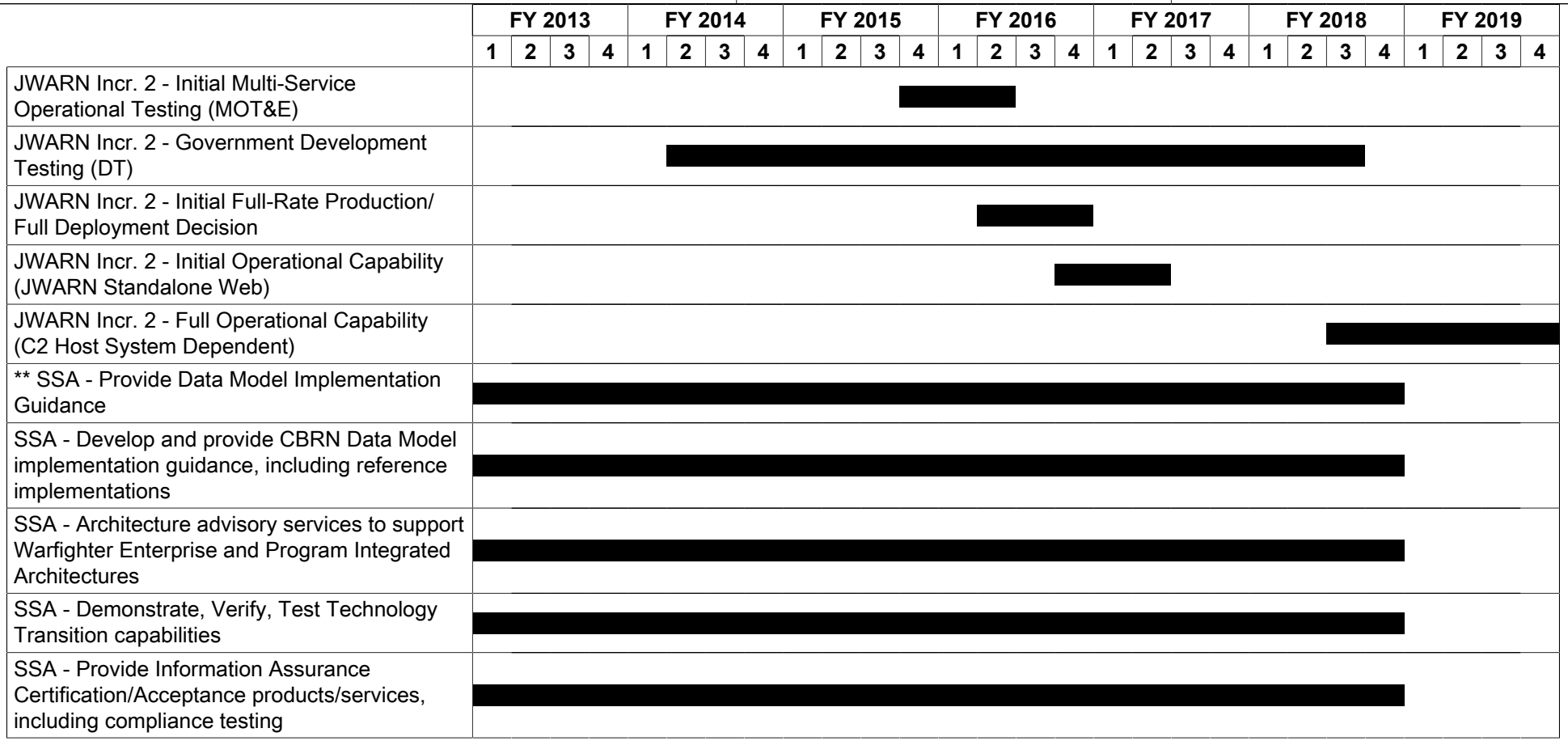

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** JEM Incr. 2 - Baseline Capability Technology Development	2	2014	2	2014
JEM Incr. 2 - Baseline Requirements Definition Package (RDP) Development and Approval	1	2014	3	2014
JEM Incr. 2 - Baseline Requirements Definition Package (RDP) Build Decision	3	2014	3	2014
JEM Incr. 2 - C2 Integration Requirements Definition Package (RDP) Development and Approval	3	2014	1	2015
JEM Incr. 2 - C2 Integration Requirements Definition Package (RDP) Build Decision	1	2015	1	2015
JEM Incr. 2 - C2 Integration Capability Technology Development	2	2014	1	2015
JEM Incr. 2 - C2 Integration Development Test	1	2016	4	2019
JEM Incr. 2 - C2 Integration Requirements Definition Package (RDP) Fielding Decision 001	4	2016	4	2016
JEM Incr. 2 - C2 Integration Requirements Definition Package (RDP) Fielding Decision 002	4	2017	4	2017
JEM Incr. 2 - C2 Integration Requirements Definition Package (RDP) Fielding Decision 003	4	2018	4	2018
JEM Incr. 2 - Analyst Support Requirements Definition Package (RDP) Development and Approval	1	2015	1	2016
JEM Incr. 2 - Baseline Capability Requirements Definition Package (RDP) IOC	4	2015	4	2015
JEM Incr. 2 - Analyst Support Requirements Definition Package (RDP) Build Decision	1	2016	1	2016
JEM Incr. 2 - Analyst Support Development Test	3	2016	1	2017
JEM Incr. 2 - LOG DEMO	2	2015	2	2015
JEM Incr. 2 - First Baseline Capability Drop Fielding Decision	4	2015	4	2015
JEM Incr. 2 - Baseline Capability Multi-Service Operational Test and Evaluation (MOT&E)	3	2015	3	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** JWARN Incr. 2 - Analysis of Alternatives (Sensor Connectivity Capability)	1	2013	3	2013
JWARN Incr. 2 - Information System Initial Capability Document	2	2014	2	2014
JWARN Incr. 2 - Test and Evaluation Master Plan (Software)	3	2014	3	2014
JWARN Incr. 2 - Baseline Preliminary Design Review (Software)	3	2014	3	2014
JWARN Incr. 2 - Baseline Requirements Definition Package (RDP) 1	4	2014	4	2014
JWARN Incr. 2 - Build Decision (BD) 1	1	2015	1	2015
JWARN Incr. 2 - Baseline Critical Design Review (Software)	3	2014	1	2015
JWARN Incr. 2 - Baseline Requirements Definition Package (RDP) 2	3	2015	3	2015
JWARN Incr. 2 - Build Decision (BD) 2	4	2015	4	2015
JWARN Incr. 2 - Baseline Requirements Definition Package (RDP) 3	2	2016	2	2016
JWARN Incr. 2 - Build Decision (BD) 3	3	2016	3	2016
JWARN Incr. 2 - Initial Multi-Service Operational Testing (MOT&E)	4	2015	2	2016
JWARN Incr. 2 - Government Development Testing (DT)	2	2014	3	2018
JWARN Incr. 2 - Initial Full-Rate Production/Full Deployment Decision	2	2016	4	2016
JWARN Incr. 2 - Initial Operational Capability (JWARN Standalone Web)	4	2016	2	2017
JWARN Incr. 2 - Full Operational Capability (C2 Host System Dependent)	3	2018	4	2019
** SSA - Provide Data Model Implementation Guidance	1	2013	4	2018
SSA - Develop and provide CBRN Data Model implementation guidance, including reference implementations	1	2013	4	2018
SSA - Architecture advisory services to support Warfighter Enterprise and Program Integrated Architectures	1	2013	4	2018
SSA - Demonstrate, Verify, Test Technology Transition capabilities	1	2013	4	2018
SSA - Provide Information Assurance Certification/Acceptance products/services, including compliance testing	1	2013	4	2018

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program											Date: March 2014	
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COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
MB5: *MEDICAL BIOLOGICAL DEFENSE (EMD)*	-	173.505	246.436	169.497	-	169.497	138.224	154.851	179.989	168.644	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

A. Mission Description and Budget Item Justification

This project funds medical countermeasures, development of reagents, assays, diagnostic equipment, biosurveillance and supporting efforts.

The Advanced Development and Manufacturing (ADM) capability (formerly the Medical Countermeasures Advanced Development and Manufacturing (MCMI) program) provides core and drug development services to include the establishment, commissioning, validation, and attainment of Current Good Manufacturing Practice (cGMP)/ Current Good Laboratory Practice (cGLP) for a MCM ADM capability for the Department of Defense (DoD).

The ADM effort is being executed in two phases. Phase 1 is for the establishment, commissioning, and validation of the ADM capability. This project funds the establishment of a capability to be located in Alachua, Florida. Two ADM cGMP suites, capable of operating at Bio Surety Level (BSL) 3 will be established during the base contract period. There are contract options to incrementally increase capacity. Upon attainment of cGMP capability Phase 2 begins. During Phase 2, the contractor team will support and maintain the capability in a state of readiness to support MCM development (to include cGMP manufacturing) and assist in training personnel in its use. The second phase includes transition and integration of new technologies to support MCM FDA required development activities. Phase 1 and 2 contract was awarded in March 2013 to Nanotherapeutics, Inc., Alachua, FL. The ADM capability sustainment costs during Phase 2 will originate from Government MCM programs using this capability.

The Critical Reagents Program's (CRP) strategy establishes a core research and development capability by developing biological threat agent reference materials (strains, antigens, antibodies and nucleic acids) and detection/diagnostic assays for biothreat agent detection. These reagents/assays are leveraged across multiple programs to meet the requirements of the Warfighter and Joint biological defense systems and support the biological defense community. Through the Targeted Acquisition of Reference Materials Augmenting Capabilities (TARMAC) initiative, the CRP will use a systematic approach to the introduction of materials and information into MCM development.

BSV programs align the Biosurveillance efforts across the DoD and national strategies. The BSV program will scope and influence BSV capabilities as products to meet Warfighter requirements through innovative management of key BSV initiative. BSV will also support the Joint US Forces Korea (USFK) Portal and Integrated Threat Recognition (JUPITR) ATD which will find, demonstrate, transition, and transfer the best operational concepts and technology solutions in support of a holistic approach to countering biological threats from laboratory to operational use. Depending on the maturity, outputs will focus on providing component, CONOPS, and subsystem transition into programs of record (PORs) and/or integration into existing PORs. Technologies identified from the JUPITR ATD will be fielded in FY16 to Pacific Command (PACOM). Future ATD developments will continue to bridge communication gaps between US Forces across other Combatant Command (COCOMs).

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The Emerging Infectious Diseases Therapeutics (EID Tx, formerly called EID FLU) Acquisition Program is developing and will deliver a FDA-approved, broad-spectrum medical countermeasure to the Warfighter for protection against naturally occurring or biologically engineered viruses. EID Tx is pursuing influenza indication, EID-Flu MCM, as the first step in the development of a broad spectrum antiviral drug due to a clear and established FDA regulatory approval pathway. The drug in development is highly efficacious against multiple influenza viruses, including the 2009 H1N1 pandemic virus, H5N1 avian influenza virus, the most recently identified H7N9 influenza virus from the outbreak in China, and drug resistant strains of influenza viruses. This drug has also demonstrated efficacy against other viruses of concern to the DoD's biodefense program. Ongoing EID Tx drug development will be leveraged to demonstrate additional broad-spectrum MCM's against naturally occurring and/or engineered biowarfare threats. Initial testing to support FY15 down-select for follow-on label extension programs has begun. FDA approval for an influenza treatment is anticipated in FY16 following completion of the SDD phase.

The Hemorrhagic Fever Virus (HFV) Medical Countermeasure Acquisition Program develops medical countermeasures (MCMs), using high threat, extremely lethal Biological Warfare Agents (BWAs) of the Filoviridae family agents (Ebola and Marburg) as model systems. Medical countermeasures will be advanced through the Food and Drug Administration (FDA) licensure/approval via the FDA 'Animal Rule', which allows for the demonstration of efficacy in relevant animal model(s) when human testing is not ethically feasible. HFV will also conduct animal model development and refinement as needed to support the pivotal animal efficacy testing required under the FDA 'Animal Rule'. Completion of Phase I trials, animal model development, and manufacturing scale up are the focus of the ACD&P phase. FDA approval for Filovirus therapeutics are expected in FY18 following completion of the SDD phase.

The DoD funds the development 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. Products under development in this budget item include Recombinant Botulinum A/B and Plague vaccines. Efforts to be conducted during the Engineering Manufacturing Development (EMD) Phase include the development of large scale manufacturing process and validation of that process, nonclinical studies, demonstration of manufacturing consistency, 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". The DoD anticipates that the FDA will approve these products using the Animal Rule, which allows for the demonstration of efficacy in relevant animal model(s). Upon FDA licensure, the product will transition to full-scale licensed production.

The DoD also has the mission to maintain Investigational New Drug (IND) vaccines in Good Manufacturing Practice (GMP) storage and to conduct the periodic potency and sterility testing of these materials to support submissions to the FDA. These IND vaccines will be used to provide additional levels of protection to laboratory workers in the Special Immunizations Program (SIP) conducting research on these diseases.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: 1) ADM - Establish Manufacturing Suites & Capability	15.075	13.990	-
FY 2013 Accomplishments:			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Continued the establishment of two modular manufacturing suites to biosurety level three (3) standards. Started verification and validation planning for the manufacturing suites to include process equipment. Continued ADM capability staffing with Contractor personnel. ***FY 2014 Plans:*** Finalize the establishment of two modular manufacturing suites to biosurety level three (3) standards. Conduct verification and validation of the manufacturing suites to include process equipment. Continue ADM capability staffing with Contractor personnel. Contractor personnel will have core competencies to manage the ADM capability in a state of readiness. Finalize the procurement, installation and testing of equipment.			
Title: 2) ADM - Equipment Procurement and Installation. ***FY 2013 Accomplishments:*** Continued the procurement, installation and testing of equipment. ***FY 2014 Plans:*** Finalize the procurement, installation and testing of equipment.	3.702	6.000	-
Title: 3) ADM - Commissioning and Validation ***FY 2013 Accomplishments:*** Prepared for testing and commissioning. Prepared for independent validation and attainment of Food and Drug Administration (FDA) Current Good Manufacturing Practice (cGMP) and Current Good Laboratory Practice (cGLP) certification. Validated processes to include Design Qualification, Installation Qualification, Operational Qualification, Performance Qualification.	10.210	-	-
Title: 4) ADM - Program Management ***FY 2013 Accomplishments:*** Maintained strategic planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support. ***FY 2014 Plans:*** Provide strategic planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight and technical support.	2.357	6.618	-
Title: 5) BSV ***FY 2014 Plans:***	-	6.700	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Initiate and complete purchase of Commercial Off the Shelf Detectors for the Assessment of Environmental Detectors (AED) Leg of the JUPITR ATD.			
Title: 6) BSV ***FY 2014 Plans:*** Initiate management and Logistic Support to AED leg of JUPITR ATD.	-	2.300	-
Title: 7) CRP ***FY 2013 Accomplishments:*** Continued development/expansion of biological select agents reference materials to known and emerging threats. ***FY 2014 Plans:*** Continue development/expansion/scale-up of biological select agents reference materials to known and emerging threats. ***FY 2015 Plans:*** Continue development/expansion of biological select agents reference materials to known and emerging threats.	2.470	2.960	2.859
Title: 8) CRP ***FY 2013 Accomplishments:*** Continued development of immunoassays and nucleic acid based genomic assays to support fielded and developmental systems. ***FY 2014 Plans:*** Continue development of immunoassays and nucleic acid based genomic assays to support fielded and developmental systems. ***FY 2015 Plans:*** Continue development of immunoassays and nucleic acid based genomic assays to support fielded and developmental systems.	1.200	2.170	1.590
Title: 9) CRP ***FY 2013 Accomplishments:*** Continued QA/QC testing to encompass the transition and fielding of biological detection assays. ***FY 2014 Plans:*** Continue Quality Assurance/Quality Control testing to encompass the transition and fielding of biological detection assays. ***FY 2015 Plans:*** Continue QA/QC testing to encompass the transition and fielding of biological detection assays.	0.680	1.111	1.070
Title: 10) CRP	0.900	0.870	1.290

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: Continued to maintain ISO 9001; 17025 and Guide 34 certifications. ***FY 2014 Plans:*** Continue to maintain ISO 9001; 17025 and Guide 34 certifications. ***FY 2015 Plans:*** Continue to maintain ISO 9001; 17025 and Guide 34 certifications.			
Title: 11) CRP ***FY 2013 Accomplishments:*** Developed strain dossier and comprehensive microbial resource application for strains contained in Unified Culture Collection. ***FY 2014 Plans:*** Continue development of prototypes/information for strains contained in Unified Culture Collection. ***FY 2015 Plans:*** Continue development of prototypes/information for strains contained in Unified Culture Collection.	2.000	1.525	2.384
Title: 12) EID-Tx ***FY 2013 Accomplishments:*** Initiated preparations for FDA required Phase 3 clinical trials that began in Dec 2013. Successful Phase 3 clinical trials preparations require the enrollment of at least 1500 patients and are conducted globally at over 400 clinical trial sites to capture both Northern and Southern Hemisphere flu seasons. ***FY 2014 Plans:*** Initiate two global Phase 3 clinical trials required by the FDA for approval against influenza. Conduct any additional safety clinical trials required by the FDA. Conduct studies to identify and prioritize MCM development against DOD priority viral agents. Target agent selection will be completed for further development under the FY15 EID Label Extension (LE) effort. ***FY 2015 Plans:*** Complete two global Phase 3 clinical trials as required by the FDA for approval against influenza. Conduct any additional safety clinical trials required by the FDA. Conduct studies to identify and prioritize MCM development against DOD priority viral agents. Down-select and initiate the first FY15 EID Label Extension (LE) effort.	67.396	69.847	28.894
Title: 13) HFV ***FY 2014 Plans:***	-	28.478	39.640

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Initiate activities to scale up manufacturing of the HFV MCMs to meet commercial scale. Initiate pivotal animal efficacy studies via the aerosol and parenteral routes of challenge under Good Laboratory Practices (GLP) conditions in a Bio Safety Level (BSL) 4. Initiate preparatory activities to support pilot aerosol efficacy studies in a BSL 4, under GLP conditions. Complete development of the non-human primate models for filovirus required to support the pivotal animal efficacy studies. ***FY 2015 Plans:*** Continue activities to scale up manufacturing of the HFV MCMs to meet commercial scale. Continue pivotal animal efficacy studies via the aerosol and parenteral routes of challenge under Good Laboratory Practices (GLP) conditions in a Bio Safety Level (BSL) 4. Initiate pilot aerosol efficacy studies in a BSL 4, under GLP conditions. Initiate preparatory activities to support pilot aerosol efficacy studies for the MCM against the Ebola Zaire Virus.			
Title: 14) VAC BOT - Recombinant Botulinum Vaccine ***FY 2013 Accomplishments:*** Prepared for and initiated the technology transfer of the manufacturing process for serotypes A & B. ***FY 2014 Plans:*** Continue technology transfer of the manufacturing process and initiate the production of consistency lots for serotypes A & B. ***FY 2015 Plans:*** Complete technology transfer of the manufacturing process and continue the production of consistency lots for serotypes A & B.	13.267	32.098	36.447
Title: 15) VAC BOT - Recombinant Botulinum Vaccine ***FY 2013 Accomplishments:*** Initiated pivotal non human primate efficacy study. Continued requirements for safeguarding biological select agents and toxins. Conducted initiation efforts for the Phase 3 clinical trial. These efforts included submission of protocol to FDA, identification of clinical sites, development of clinical database, and labeling and shipping of clinical material. ***FY 2014 Plans:*** Continue pivotal non human primate efficacy study. Execute technology transfer to a new vaccine manufacturer. Continued requirements for safeguarding biological select agents and toxins. ***FY 2015 Plans:*** Initiate non-clinical reproductive toxicity testing. Continue requirements for safeguarding biological select agents and toxins. Initiate non-clinical comparability studies to bridge newly manufactured drug substance that was made at the previous Contractor Manufacturing Organization (CMO) prior to technology transfer.	22.463	15.812	16.915
Title: 16) VAC PLG	9.196	10.125	11.200

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: Continued non clinical studies to include additional FDA required passive transfer studies. Continued requirement for safeguarding biological select agents and toxins. ***FY 2014 Plans:*** Complete non-clinical, FDA-required passive transfer studies. Initiate animal efficacy studies to demonstrate vaccine effectiveness according to the Capability Development Document (CDD) requirement levels. Continue requirement for safeguarding select agents and toxins. ***FY 2015 Plans:*** Continue Animal efficacy studies. Initiate pivotal animal efficacy and duration studies. Initiate reproductive toxicity testing. Continue requirements for safeguarding biological select agents and toxins.			
Title: 17) VAC PLG ***FY 2013 Accomplishments:*** Completed Phase 2b clinical trial. ***FY 2014 Plans:*** Initiate preparation for Phase 3 clinical trial to evaluate expanded safety and efficacy in thousands of volunteers. Conduct Milestone C/LRIP. ***FY 2015 Plans:*** Initiate in-life portion of Phase 3 clinical trial to evaluate expanded safety and efficacy. Initiate Protective Capacity Assay using pooled human sera from Phase 3 clinical trial.	13.418	35.901	17.461
Title: 18) VAC PLG ***FY 2013 Accomplishments:*** Initiated consistency lot production and testing. ***FY 2014 Plans:*** Complete consistency lot production and testing. ***FY 2015 Plans:*** Prepare and submit IND for consistency lot production and testing and Protective Capacity Assay (PCA) results to the FDA for approval or guidance.	1.362	1.450	2.000
Title: 19) VAC PLG	5.449	6.012	6.150

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: Continued to provide strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight, and technical support. ***FY 2014 Plans:*** Continue to provide strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight, and technical support. ***FY 2015 Plans:*** Continue to provide strategic/tactical planning, government systems engineering, program/financial management, costing, technology assessment, contracting, scheduling, acquisition oversight, and technical support.			
Title: 20) VAC SIP ***FY 2013 Accomplishments:*** Continued storage, distribution, potency testing, and biosurety compliance activities in support of the Special Immunization Program. ***FY 2014 Plans:*** Continue storage, distribution, potency testing, and biosurety compliance activities in support of the Special Immunization Program. ***FY 2015 Plans:*** Continue storage, distribution, potency testing, and biosurety compliance activities in support of the Special Immunization Program.	2.360	2.469	1.597
Accomplishments/Planned Programs Subtotals	173.505	246.436	169.497

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• MB7: *MEDICAL BIOLOGICAL DEFENSE (OP SYS DEV)*	0.490	0.499	13.414	-	13.414	14.551	9.816	7.277	16.496	Continuing	Continuing
• JM8788: *NEXT GENERATION DIAGNOSTICS SYSTEM (NGDS)*	14.999	-	3.861	-	3.861	4.632	8.593	8.495	13.900	Continuing	Continuing
• JX0005: *DOD BIOLOGICAL VACCINE PROCUREMENT*	0.185	0.185	6.412	-	6.412	6.606	12.108	3.406	6.801	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program			Date: March 2014
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• JX0210: *CRITICAL REAGENTS PROGRAM (CRP)*	1.012	1.011	1.011	-	1.011	-	-	-	-	-	3.034

Remarks

D. Acquisition Strategy

ADVANCED DEVELOPMENT & MANUFACTURING (ADM)

The ADM capability awarded a competitive ten (10) year [two base years with four 2 year options] Cost Plus Fixed fee (CPFF) contract to Nanotherapeutics, Inc., Alachua, FL.

BIOSURVEILLANCE (BSV)

BSV is the delivery of a set of capabilities to acquire, integrate, and analyze medical, environmental, and incident management data using existing and next generation systems, medical and non-medical sample collection tools and identifiers/diagnostics; and transition hardware/software tools and devices as residuals from the Biosurveillance Joint USFK Portal and Integrated Threat Recognition (JUPITR) Advanced Technology Demonstration (ATD). Lessons learned from the ATD will be transitioned to the programs of record associated with the CBDP. The acquisition strategy will address the materiel solutions identified out of the multiple Biosurveillance (BSV) related Analysis of Alternatives (AoA's).

CRITICAL REAGENTS PROGRAM (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.

EMERGING INFECTIOUS DISEASES - THERAPUTIC (EID TX)

The goal of the EID Tx program is to develop a safe and effective MCM against biothreats of interest to the DoD. The first step of the acquisition strategy is to develop an MCM for influenza due to a clear and established FDA regulatory approval pathway. The Phase 2 clinical trial is complete, demonstrating both safety and efficacy in humans. Program was authorized by FDA to move forward at End of Phase 2 meeting on 3 SEP 13. Phase 3 clinical trials for EID Tx against influenza began during 1QFY14. Following successful FDA approval of the drug against influenza, EID Tx will utilize an incremental approach to label extensions of this broad spectrum therapeutic. The development strategy for additional label extensions of the antiviral drug consists of detailed characterization of antiviral activities of the broad-spectrum

compound against multiple virus families using cell-based and animal model systems. Using the results of the cell-based assays efficacy assessment of the drug against high-priority viruses of biodefense concern will be performed using small animal studies. The results of the small animal testing will determine the best candidate to move forward for the Label Extension starting in FY15.

HEMORRHAGIC FEVER VIRUS (HFV)

The acquisition strategy uses a parallel evaluation of drug candidates against the lethal Ebola Zaire and Marburg viruses. Following a successful Milestone B and entry into SDD phase, the program will conduct expanded human clinical safety studies, definitive animal efficacy, and toxicology studies, required for FDA approval. The performer(s) will submit a New Drug Application(s) for the Ebola Zaire and Marburg therapeutics during the SDD Phase. During the Production and Deployment phase, full rate manufacturing and stockpile production will be pursued. If the FDA mandates post-marketing surveillance studies, they will be conducted during Production and Deployment.

BOTULINUM VACCINE (VAC BOT)

The Prime System Contractor (Dynport Vaccine Company/DVC LLC, Frederick MD) will function as the FDA regulatory sponsor 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 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 clinical trial (Phase 1). During the Engineering Manufacturing Development (EMD) Phase, the prime contractor stabilized the vaccine formulation, validated the manufacturing process and testing protocols, optimized the delivery systems and manufactured consistency lots. Phase 2 clinical trials were performed and provided additional safety data. The remaining efforts to be conducted during the SDD phase include the Phase 3 clinical trial to demonstrate safety in an expanded volunteer population and evaluation of efficacy in pivotal animal studies to satisfy FDA requirements for the Animal Rule . The Low rate Initial Production (LRIP) decision will be conducted after the manufacturing process has been validated and consistency lots have been produced. A Biologics License Application is submitted to the FDA will all clinical, nonclinical, and manufacturing data. The FDA grants licensure to products that are determined to be safe and efficacious.

PLAGUE VACCINE (VAC PLG)

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 clinical trial (Phase 1). In order to reduce technical program risk in the Plague vaccine program, the program office conducted competitive prototyping between 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 a Prime System Contract. The Prime System Contractor (Dynport Vaccine Company/DVC LLC, Frederick MD) currently functions as the FDA regulatory sponsor and performs all ancillary, regulatory, quality assurance, and data management as required by the FDA. A Project Arrangement is in place with the United Kingdom and Canada. During the Engineering Manufacturing Development (EMD) Phase, the prime contractor stabilized the vaccine formulation, validated the manufacturing

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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process and testing protocols, optimized the delivery systems and manufactured consistency lots. Phase 2 clinical trials were performed and provided additional safety data. The remaining efforts to be conducted during the EMD phase include the Phase 3 clinical trial to demonstrate safety in an expanded volunteer population and evaluation of efficacy and duration of protection in pivotal animal studies to satisfy FDA requirements for the Animal Rule . The Low Rate Initial Production (LRIP) decision will be conducted after the manufacturing process has been validated and consistency lots have been produced. A Biologics License Application will be 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.

SPECIAL IMMUNIZATION PROGRAM (VAC SIP)

The SIP effort is to store IND vaccines used to potentially provide additional protection to laboratory workers performing research on the infectious agents for Tularemia, Eastern Equine Encephalitis (EEE), Western Equine Encephalitis (WEE), Venezuelan Equine Encephalitis (VEE), and Q-Fever. Efforts include Good Manufacturing Practices (GMP) storage and periodic potency testing to support the FDA regulated Investigational New Drug (IND) reporting requirements. This Department of Defense program supports the Federal interagency with this effort, as well as academic and industry partners.

E. Performance Metrics

N/A

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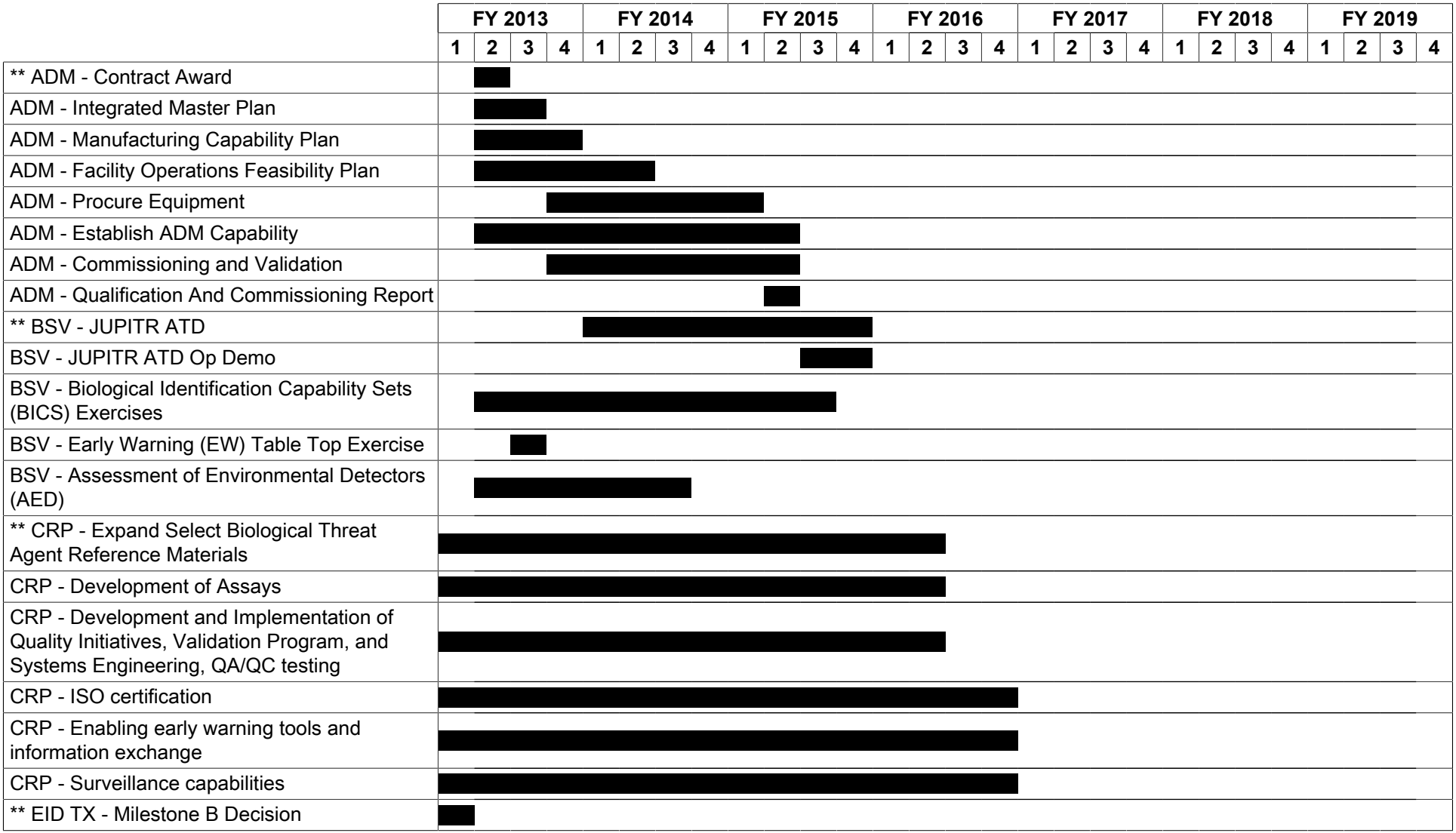

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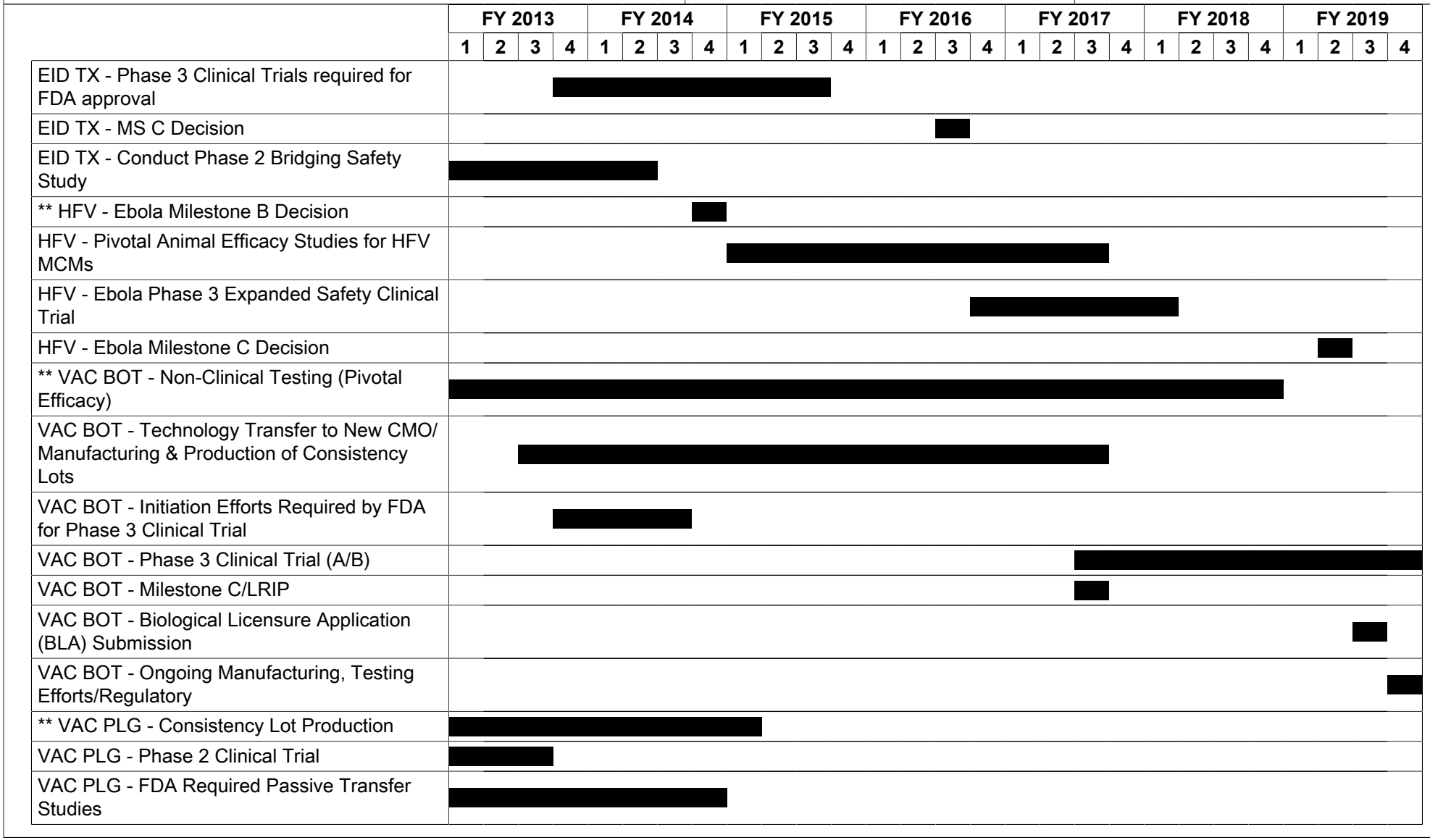

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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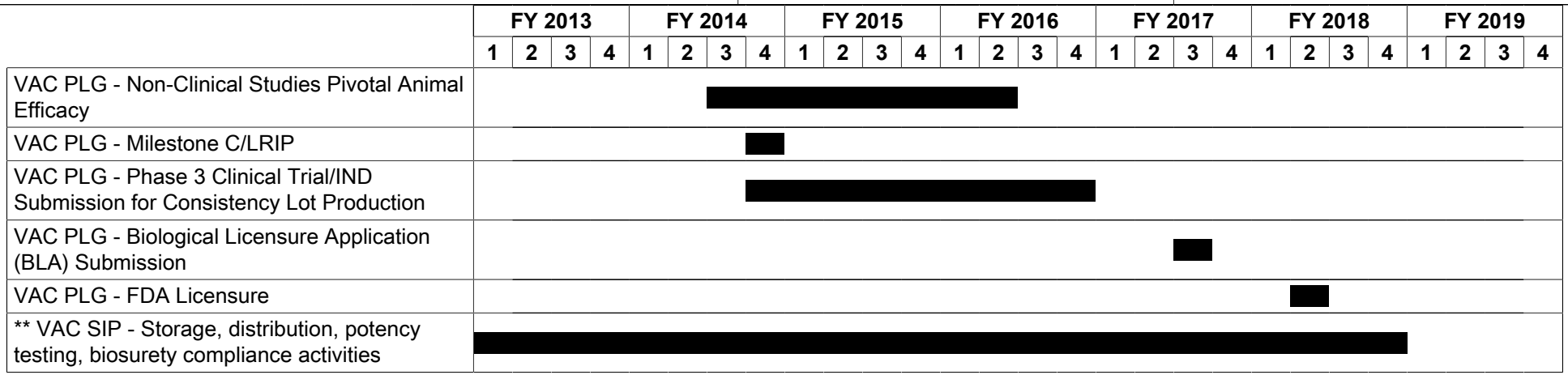

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** ADM - Contract Award	2	2013	2	2013
ADM - Integrated Master Plan	2	2013	3	2013
ADM - Manufacturing Capability Plan	2	2013	4	2013
ADM - Facility Operations Feasibility Plan	2	2013	2	2014
ADM - Procure Equipment	4	2013	1	2015
ADM - Establish ADM Capability	2	2013	2	2015
ADM - Commissioning and Validation	4	2013	2	2015
ADM - Qualification And Commissioning Report	2	2015	2	2015
** BSV - JUPITR ATD	1	2014	4	2015
BSV - JUPITR ATD Op Demo	3	2015	4	2015
BSV - Biological Identification Capability Sets (BICS) Exercises	2	2013	3	2015
BSV - Early Warning (EW) Table Top Exercise	3	2013	3	2013
BSV - Assessment of Environmental Detectors (AED)	2	2013	3	2014
** CRP - Expand Select Biological Threat Agent Reference Materials	1	2013	2	2016
CRP - Development of Assays	1	2013	2	2016
CRP - Development and Implementation of Quality Initiatives, Validation Program, and Systems Engineering, QA/QC testing	1	2013	2	2016
CRP - ISO certification	1	2013	4	2016
CRP - Enabling early warning tools and information exchange	1	2013	4	2016
CRP - Surveillance capabilities	1	2013	4	2016
** EID TX - Milestone B Decision	1	2013	1	2013
EID TX - Phase 3 Clinical Trials required for FDA approval	4	2013	3	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
EID TX - MS C Decision	3	2016	3	2016
EID TX - Conduct Phase 2 Bridging Safety Study	1	2013	2	2014
** HFV - Ebola Milestone B Decision	4	2014	4	2014
HFV - Pivotal Animal Efficacy Studies for HFV MCMs	1	2015	3	2017
HFV - Ebola Phase 3 Expanded Safety Clinical Trial	4	2016	1	2018
HFV - Ebola Milestone C Decision	2	2019	2	2019
** VAC BOT - Non-Clinical Testing (Pivotal Efficacy)	1	2013	4	2018
VAC BOT - Technology Transfer to New CMO/Manufacturing & Production of Consistency Lots	3	2013	3	2017
VAC BOT - Initiation Efforts Required by FDA for Phase 3 Clinical Trial	4	2013	3	2014
VAC BOT - Phase 3 Clinical Trial (A/B)	3	2017	4	2019
VAC BOT - Milestone C/LRIP	3	2017	3	2017
VAC BOT - Biological Licensure Application (BLA) Submission	3	2019	3	2019
VAC BOT - Ongoing Manufacturing, Testing Efforts/Regulatory	4	2019	4	2019
** VAC PLG - Consistency Lot Production	1	2013	1	2015
VAC PLG - Phase 2 Clinical Trial	1	2013	3	2013
VAC PLG - FDA Required Passive Transfer Studies	1	2013	4	2014
VAC PLG - Non-Clinical Studies Pivotal Animal Efficacy	3	2014	2	2016
VAC PLG - Milestone C/LRIP	4	2014	4	2014
VAC PLG - Phase 3 Clinical Trial/IND Submission for Consistency Lot Production	4	2014	4	2016
VAC PLG - Biological Licensure Application (BLA) Submission	3	2017	3	2017
VAC PLG - FDA Licensure	2	2018	2	2018
** VAC SIP - Storage, distribution, potency testing, biosurety compliance activities	1	2013	4	2018

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program			Date: March 2014
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COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
MC5: *MEDICAL CHEMICAL DEFENSE (EMD)*	-	17.396	55.087	58.529	-	58.529	65.966	40.880	33.205	1.550	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

A. Mission Description and Budget Item Justification

This project provides for the development of medical materiel and other medical equipment items necessary to provide an effective capability for medical defense against chemical warfare agent threats facing U.S. forces in the field. This project supports efforts in the System Development and Demonstration (SDD) phase of the acquisition strategy for prophylactic, pre-treatment, and therapeutic drugs and diagnostic medical devices for the protection, treatment, detection, and medical management of chemical warfare agent exposures. Project funds research and development of safety studies, manufacturing scale-up, process validation, drug interaction, performance test, and submission of the Food and Drug Administration (FDA) drug licensure application(s). This program currently funds: (1) Bioscavenger (BSCAV), a new capability, to be used as a prophylaxis against nerve agents; and (2) Improved Nerve Agent Treatment System (INATS) an enhanced nerve agent treatment regimen consisting of an improved oxime to replace the current fielded oxime 2-pralidoxime chloride (2-PAM), product formulation enhancements to increase survival, and expanded pretreatment indications for the use of pyridostigmine bromide (PB), the active component of Soman Nerve Agent Pretreatment Pyridostigmine (SNAPP).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: 1) BSCAV ***FY 2013 Accomplishments:*** Completed source selection activities, awarded the EMD contract, and initiated the re-establishment of a manufacturing line. ***FY 2014 Plans:*** Continue and complete re-establishment of a manufacturing line and initiate small scale process qualification.	15.646	11.972	-
Title: 2) BSCAV ***FY 2013 Accomplishments:*** Initiated storage and stability testing of purified product. ***FY 2014 Plans:*** Continue storage and stability testing of purified product. ***FY 2015 Plans:*** Continue storage and stability testing of purified product.	1.750	1.980	6.191
Title: 3) BSCAV	-	11.018	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
FY 2014 Plans: Initiate and complete nonclinical toxicity and efficacy studies (NTA).			
Title: 4) BSCAV ***FY 2014 Plans:*** Initiate Current Good Manufacturing Practice (cGMP) manufacturing for clinical and nonclinical studies. ***FY 2015 Plans:*** Continue cGMP manufacturing for clinical and nonclinical studies.	-	22.368	12.739
Title: 5) BSCAV ***FY 2015 Plans:*** Initiate pilot pharmacokinetic (PK) dosing, onset, duration, and clinical studies.	-	-	11.529
Title: 6) BSCAV ***FY 2014 Plans:*** Initiate engineering and scale-up manufacturing runs. ***FY 2015 Plans:*** Complete engineering and scale-up manufacturing runs.	-	4.000	12.855
Title: 7) INATS ***FY 2014 Plans:*** Initiate nonclinical studies to expand indications for the currently fielded pyridostigmine bromide (PB) component of the INATS system of systems. ***FY 2015 Plans:*** Continue nonclinical studies to expand indications for pyridostigmine bromide (PB).	-	3.749	3.870
Title: 8) INATS ***FY 2015 Plans:*** Initiate and complete pilot scale development of bulk drug substance (BDS) and final drug product (FDP).	-	-	4.861
Title: 9) INATS ***FY 2015 Plans:***	-	-	3.769

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Initiate current Good Manufacturing Practice (cGMP) efforts and manufacture of clinical trial material.			
Title: 10) INATS	-	-	2.715
FY 2015 Plans: Initiate nonclinical studies to test product formulation enhancements.			
Accomplishments/Planned Programs Subtotals	17.396	55.087	58.529

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• JM6677: *ADVANCED ANTICONVULSANT SYSTEM (AAS)*	1.566	-	2.500	-	2.500	-	-	-	-	-	4.066

Remarks

D. Acquisition Strategy

BIOSCAVENGER (BSCAV)

Used a serial evaluation of candidates to achieve competitive prototyping in the Technology Development Phase which culminated in a down-select decision. The Bioscavenger program issued a Request For Proposal (RFP) to select the best value for the government for a prophylaxis to support an initial limited user group. During the System Development and Demonstration (SDD) phase the program will continue to exercise management oversight with system integration support of a commercial partner to ensure that manufacturing of the product is in accordance with Food and Drug Administration (FDA) regulations and guidelines. The RFP for product manufacturing includes options for transition to the Medical Countermeasures Initiative (MCMI) Advanced Development and Manufacturing (ADM) capability. Prior to FDA licensure, a commercial partner will perform a Phase 2 human clinical safety study, definitive animal efficacy studies, and toxicology studies. The system integrator will also develop and manufacture a product formulation and delivery system and will submit a New Drug Application and seek FDA approval. The SDD phase will culminate in FDA licensure of the Bioscavenger. During the Production and Deployment phase, the Bioscavenger program, in conjunction with a commercial partner, will pursue full rate production and conduct any FDA-mandated post-marketing surveillance studies. Concurrently the Bioscavenger program will conduct an analysis of alternative manufacturing technologies, investigate additional product indications, and pursue an expanded force prophylaxis once alternate technologies have matured.

IMPROVED NERVE AGENT TREATMENT SYSTEM (INATS)

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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Improved Nerve Agent Treatment Systems (INATS) is an enhanced nerve agent treatment regimen designed to replace and provide improved product performance over the Antidote Treatment Nerve Agent Auto-injector (ATNAA). The components of the INATS program include: 1) development of a broad spectrum oxime that is effective against emerging threats to replace the fielded currently fielded oxime 2-pralidoxime chloride (2-PAM); 2) product formulation enhancements to increase survival; and 3) expanded pretreatment indications for pyridostigmine bromide (PB). During the Technology Development Phase, the system integrator will oversee conduct of formulation development efforts, nonclinical toxicology and efficacy studies, Phase 1 human clinical safety studies as well as nonclinical studies to obtain FDA approval for expanding the indications for PB. Following a successful Milestone B and entry in to the Engineering and Manufacturing (EMD) Phase, the system integrator will continue to exercise management oversight with system integration support from a commercial partner or partners to ensure that the development and manufacture of the INATS is in accordance with Food and Drug Administration (FDA) regulations and guidelines. Prior to FDA licensure, the commercial partner(s) will perform a Phase 2 human clinical safety study, nonclinical toxicology studies and definitive animal efficacy studies. The system integrator will also manufacture an improved oxime formulation and autoinjector delivery system that is stable under operationally relevant temperatures. The system integrator will submit a New Drug Application and seek FDA approval for the INATS product. During the Production and Deployment Phase, the system integrator, in conjunction with a commercial partner, will pursue full rate and stockpile production and will conduct any FDA mandated post-marketing surveillance studies. The system integrator will transfer contracting and logistical responsibilities to the Defense Logistics Agency during the Operations and Support Phase however, as the total life-cycle manager the system integrator will monitor program performance through disposal.

E. Performance Metrics

N/A

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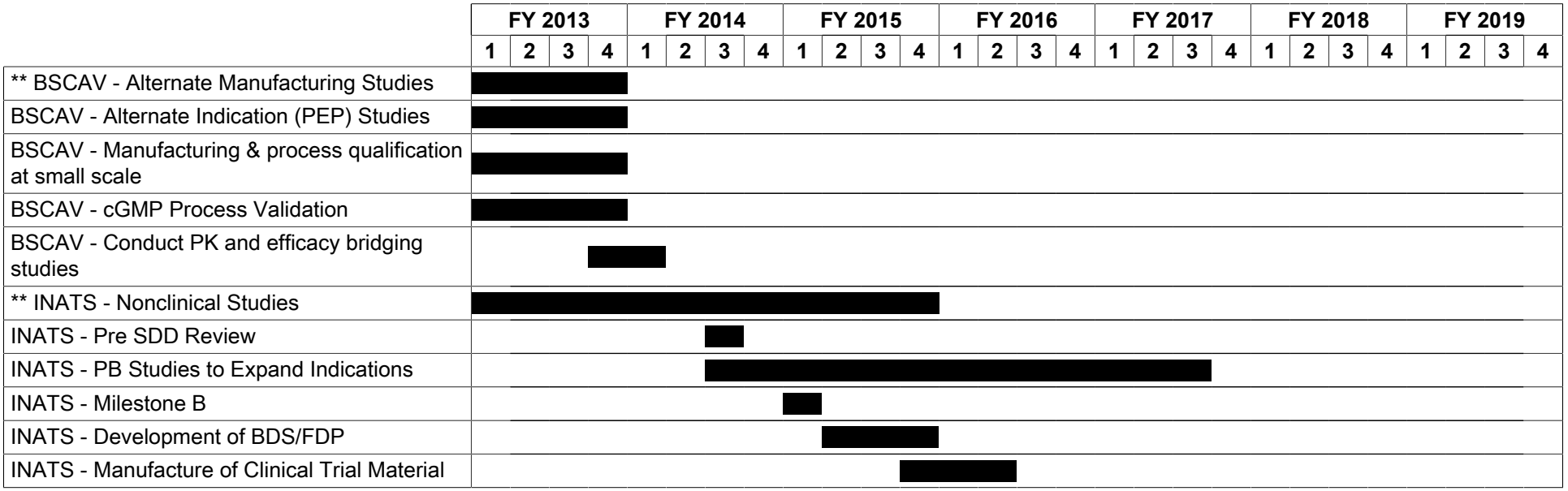

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** MC5 / *MEDICAL CHEMICAL DEFENSE (EMD)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** BSCAV - Alternate Manufacturing Studies	1	2013	4	2013
BSCAV - Alternate Indication (PEP) Studies	1	2013	4	2013
BSCAV - Manufacturing & process qualification at small scale	1	2013	4	2013
BSCAV - cGMP Process Validation	1	2013	4	2013
BSCAV - Conduct PK and efficacy bridging studies	4	2013	1	2014
** INATS - Nonclinical Studies	1	2013	4	2015
INATS - Pre SDD Review	3	2014	3	2014
INATS - PB Studies to Expand Indications	3	2014	3	2017
INATS - Milestone B	1	2015	1	2015
INATS - Development of BDS/FDP	2	2015	4	2015
INATS - Manufacture of Clinical Trial Material	4	2015	2	2016

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program											Date: March 2014	
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*				Project (Number/Name) TE5 / *TEST & EVALUATION (EMD)*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
TE5: *TEST & EVALUATION (EMD)*	-	6.726	26.202	9.176	-	9.176	2.753	5.978	6.311	6.311	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

A. Mission Description and Budget Item Justification

This funding supports the Chemical Biological Defense Portfolio (CBDP) Test Equipment, Strategy, and Support (TESS) efforts. TESS provides test infrastructure products for testing and evaluating chemical and biological defense systems throughout the life cycle acquisition process. TESS test infrastructure products are aligned in four groups to include: (1) Chemical Laboratory (Sense); (2) Biological Laboratory (Sense); (3) Field Simulant Test (Sense); and (4) Individual Protection, Collective Protection and Decontamination (Shield and Sustain).

(1) Chemical Laboratory (Sense): The product for this area is the Dynamic Test Chamber (DTC) for chemical point sensors, and Non-Traditional Agent Defense Test System (NTADTS). The Dynamic Test Chamber provides a new capability for testing chemical point detection systems against chemical warfare agents in various environmental conditions. The NTADTS provides a new capability at Edgewood Chemical Biological Center to conduct chemical defense testing using new emerging threats. The NTADTS supports testing of Decontamination, Collective Protection, Individual Protection, and Contamination Avoidance products. The CBD acquisition programs supported are Dismounted Reconnaissance Sets Kits and Outfits (DR SKO), Next Generation Chemical Detector (NGCD), Decon Family of Systems (DFoS), and Common Analytical Laboratory System (CALS).

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

(3) Field Simulant (Sense): The product for this area is a fully instrumented simulant Test Grid. The Test Grid capability demonstrates test methodologies for chem and bio aerosols and advanced technologies. The Test Grid effort provides a fully instrumented 20 km by 40 km field chemical and biological simulant test capability that integrates cloud tracking equipment; meteorological equipment; and test data network. The CBD acquisition programs supported are the Joint Expeditionary Collective Protection (JECP), Next Generation Chemical Detector (NGCD), Joint Biological Point Detection System (JBPDS) and the Joint Biological Tactical Detection System (JBTDS).

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

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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Uniform Integrated Protection Ensemble Increment 1 (UIPE 1), UIPE Increment 2, Joint Service Aircrew Mask Fixed Wing (JSAM FW) and Rotary Wing (JSAM RW), and the Joint Service General Purpose Mask (JSGPM).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: 1) PD TESS - Dynamic Test Chamber (DTC) ***FY 2014 Plans:*** Support validation activities.	-	1.465	-
Title: 2) PD TESS - Non-Traditional Agent Defense Test System (NTADTS) ***FY 2013 Accomplishments:*** Continued fabrication and installation. ***FY 2014 Plans:*** Complete verification, and test system commissioning. Initiate validation ***FY 2015 Plans:*** Complete test system validation. Transition test system to test and evaluation community.	3.779	11.088	4.801
Title: 3) PD TESS - WSLAT ***FY 2013 Accomplishments:*** Completed verification and validation. Transitioned to test and evaluation community.	0.552	-	-
Title: 4) PD TESS - Test Grid ***FY 2013 Accomplishments:*** Initiated pre-verification activities. ***FY 2014 Plans:*** Conduct verification. Initiate and conduct validation. ***FY 2015 Plans:*** Complete validation and transition initial capability.	1.262	13.649	4.375
Title: 5) PD TESS - Individual Protection Ensemble Mannequin System (IPEMS) ***FY 2013 Accomplishments:*** Completed mannequin installation and transitioned support.	0.393	-	-
Title: 6) PD TESS - Joint Biological Tactical Defense System Test Infrastructure ***FY 2013 Accomplishments:***	0.740	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Chemical and Biological Defense Program		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Initiated test infrastructure activities. Conducted background and interferent aerosol development characterization and verification.			
Accomplishments/Planned Programs Subtotals	6.726	26.202	9.176

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• TE7: *TEST & EVALUATION (OP SYS DEV)*	3.730	3.690	5.984	-	5.984	4.881	5.118	5.174	5.381	Continuing	Continuing

Remarks

D. Acquisition Strategy

TEST EQUIPMENT, STRATEGY & SUPPORT (PD TESS)

TESS 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-4, RDT&E Schedule Profile: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** TE5 / *TEST & EVALUATION (EMD)*

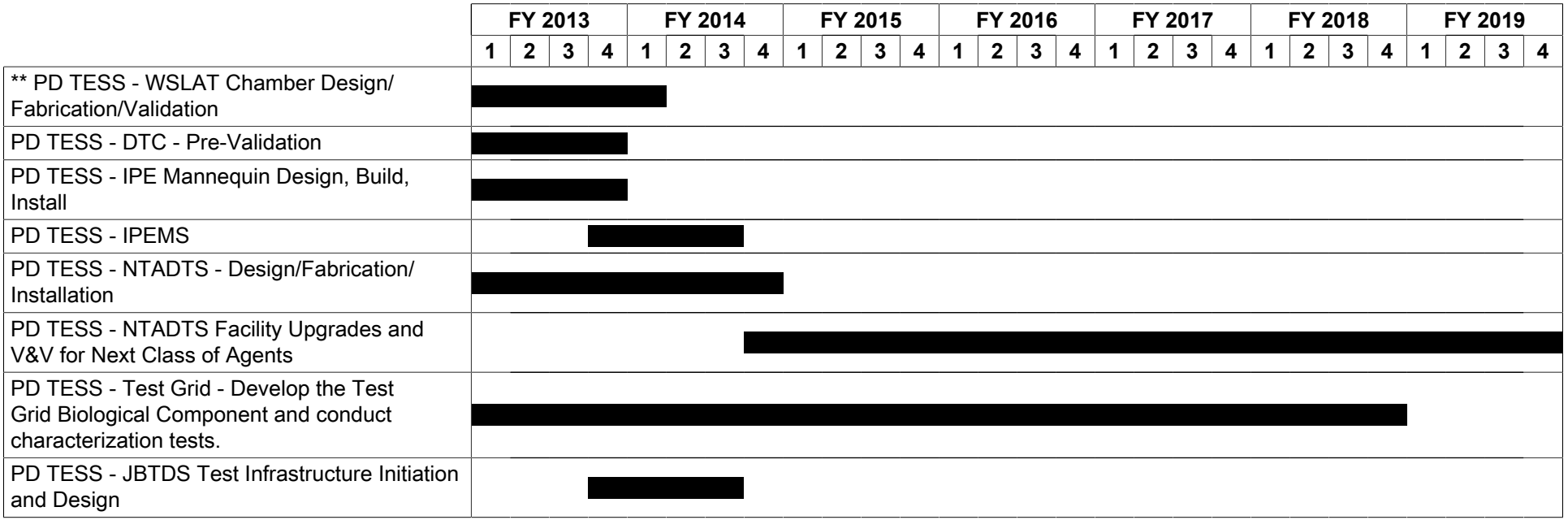

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Chemical and Biological Defense Program		Date: March 2014
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *CHEMICAL/BIOLOGICAL DEFENSE (EMD)*	**Project (Number/Name)** TE5 / *TEST & EVALUATION (EMD)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
** PD TESS - WSLAT Chamber Design/Fabrication/Validation	1	2013	1	2014
PD TESS - DTC - Pre-Validation	1	2013	4	2013
PD TESS - IPE Mannequin Design, Build, Install	1	2013	4	2013
PD TESS - IPEMS	4	2013	3	2014
PD TESS - NTADTS - Design/Fabrication/Installation	1	2013	4	2014
PD TESS - NTADTS Facility Upgrades and V&V for Next Class of Agents	4	2014	4	2019
PD TESS - Test Grid - Develop the Test Grid Biological Component and conduct characterization tests.	1	2013	4	2018
PD TESS - JBTDS Test Infrastructure Initiation and Design	4	2013	3	2014