Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Chemical and Biological Defense Program	Date: March 2024
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 and Biological Defense Program - EMD*

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	0.000	294.774	382.977	270.265	0.000	270.265	232.085	199.007	216.883	228.624	Continuing	Continuing
UN5: *Understand (SDD)*	-	128.837	182.726	154.658	0.000	154.658	124.463	90.423	63.185	55.658	Continuing	Continuing
PT5: *Protect (SDD)*	-	86.221	97.975	41.664	0.000	41.664	25.670	15.951	34.836	58.658	Continuing	Continuing
MT5: *Mitigate (SDD)*	-	66.596	88.441	65.958	0.000	65.958	68.516	80.822	100.320	97.781	Continuing	Continuing
EN5: *Enabling Investments (SDD)*	-	13.120	13.835	7.985	0.000	7.985	13.436	11.811	18.542	16.527	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element (PE) resources System Development & Demonstration across the Understand, Protect, Mitigate, and Enabling Investments portfolios. The Chemical Biological Defense Programs (CBDP) investments provide an integrated, layered capability to enable Countering Weapons of Mass Destruction (CWMD) missions ranging from combat operations to Department of Defense (DoD) support to domestic incident prevention and response. The projects in this PE support the development, build, and test of products to verify that all operational and derived requirements have been met and to support production or deployment decisions. The activities include mature system development, integration, and demonstration to support Milestone C decisions, and conducting operational tests and evaluation of production representative articles. FY25 funding accelerates characterization and situational awareness of emerging biothreats and accelerates delivery of improved protection from and mitigation of biothreats, including rapid repurposing of available therapeutics and development of new vaccines.

Individual Projects include:

- Understand (UN5): Provides the Joint Force the ability to detect and identify hazards from traditional and emerging chemical and biological threats to improve the timeliness and confidence of information for decision-makers. Supports freedom of maneuver and informs commanders' decisions by predicting, locating, identifying, analyzing, and warning of chemical and biological (CB) hazards.

- Protect (PT5): Provides the Joint Force the ability to prevent the effects of exposure to chemical and biological hazards. Protects personnel against chemical, biological, and radiological (CBR) liquid, vapor, and aerosol hazards through next-generation prototypes of masks, filters, and ensembles to reduce physiological, psychological, and logistical burdens to the warfighter. Medical countermeasure efforts conducted during this phase include the development of a large-scale manufacturing process and validation of that process, nonclinical studies, demonstration of manufacturing consistency, and expanded clinical human safety studies. Focuses on platform-based approaches to accelerate the development of prophylactic medical countermeasures that rapidly and durably protect against Biological Warfare Agents (BWAs), toxins, non-traditional and emerging chemical threats with minimal doses. The results of these efforts will be used to submit a Biologics License Application (BLA) to the U.S. Food & Drug Administration (FDA) for product licensure.

- Mitigate (MT5): Preserves combat power by mitigating exposure to CB hazards and restoring combat readiness of critical personnel and platforms. Enables Joint Force lethality by providing capabilities for Warfighters to rapidly respond to and mitigate the adverse effects of CB hazards. Fields mitigation capabilities against engineered biological agents, opioids and other Pharmaceutical-Based Agents, and Fourth Generation Agents (FGAs).

- Enabling Investments (EN5): Provides fundamental knowledge and technology demonstrations as key portfolio enablers integral to responding to emerging threats. Dedicated funding for this Project supports National and Departmental incident response and preparedness regarding CB threats.

Middle Tier Acquisition programs:

The total cost of the Uniform Integrated Protective Ensemble Family of Systems Gloves (UIPE FOS GLOVES) Middle Tier of Acquisition effort is $58.924 Million, including RDT&E (Project PT5) and procurement of prototype units (CBDP BLIN Protection & Hazard Mitigation). The UIPE FOS GLOVES is fully funded across the Future Years Defense Program.

The projects in this PE support the engineering and manufacturing development phase of the Department of Defense (DoD) acquisition system and are, therefore, correctly placed in Budget Activity 5.

B. Program Change Summary ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	301.611	382.977	314.012	-	314.012
Current President's Budget	294.774	382.977	270.265	-	270.265
Total Adjustments	-6.837	0.000	-43.747	-	-43.747
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-6.209	-			
• Other Adjustments	-0.628	-	-43.747	-	-43.747

Change Summary Explanation

Funding: FY 2023 (-$6.209 Million): Transfer of funding to support Small Business Innovative Research/Small Business Technology Transfer efforts.
FY 2023 (-$0.628 Million): CBDP funding transferred to Under Secretary of Defense (Acquisition & Sustainment) high priority efforts.

FY 2025 (-$43.747 Million) The overall decrease of (-$43.747 Million) primarily includes a decrease to the Antiviral Oral Therapeutic (AVO TX) program Budget Activity 5 (BA5) by transitioning funding to BA4 to support AVO TX FDA engagements needed for a successful Milestone B decision and transition of medical

countermeasure development activities to the Rapid Access to Products in Development (RAPID) program (-$25.825 Million), a System Development & Demonstration (SDD) adjustment to support DoD high priority efforts (-$18.696 Million), and a inflation rate adjustment increase (+$0.774 Million).

Schedule: N/A

Technical: N/A

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program			Date: March 2024
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604384BP / *Chemical and Biological Defense Program - EMD*	Project (Number/Name) UN5 / *Understand (SDD)*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
UN5: *Understand (SDD)*	-	128.837	182.726	154.658	0.000	154.658	124.463	90.423	63.185	55.658	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Understand System Development & Demonstration (SDD) Project provides the Joint Force the ability to continually receive information about the Chemical, Biological, Radiological and Nuclear (CBRN) situation at a desired time and place by detecting, identifying, and quantifying CBRN hazards in air, water, or on land, and on personnel, equipment or facilities. These efforts support the ability to conduct early warning (informing protective posture) and employment of rapid detection, identification, and analysis tools needed to address emerging biological threats. Efforts also keep the Joint Force ahead of emerging chemical threats with portable, reduced size, weight, and power, cost detectors to protect general and specialized forces and to enhance operations on the battlefield by providing early warning and field analytics. Medical diagnostic activities develop U.S. Food & Drug Administration (FDA) approved products for the warfighter at the point of care to inform far-forward medical and protection decisions.

Efforts included in this Project are:

(1) Advanced and Emerging Threat Defense (AET DEFENSE)
(2) Aerosol Vapor Chemical Agent Detector (AVCAD)
(3) Chemical and Biological Wearables - Enhanced Biological Defense (CB Wearables - ENBD)
(4) Chemical Biological Radiological Nuclear Sensor Integration on Robotics Platforms (CSIRP)
(5) Compact Vapor Chemical Agent Detector (CVCAD)
(6) Defense Biological Products Assurance Program (DBPAP)
(7) Defense Biological Products Assurance Program - Enhanced Biological Defense (DBPAP-ENBD)
(8) Far Forward Biological Sequencing (FFBS)
(9) Joint Biological Tactical Detection System (JBTDS)
(10) Mobile Field Kit (MFK)
(11) Nuclear Biological Chemical Reconnaissance Vehicle Sensor Suite Upgrade (NBCRV SSU)
(12) Next Generation Diagnostics 2 Chemical Diagnostics (NGDS 2 CHEMDX)
(13) Next Generation Diagnostics 2 Man Portable Diagnostic System (NGDS 2 MPDS)
(14) Proximate Chemical Agent Detector (PCAD)
(15) Physiological Monitoring Sensor Suite (PM2S)
(16) Special Purpose Unit Rapid Capability Development and Deployment (SPU RCDD)
(17) Wearable All Hazard Remote Monitoring Program (WARP)
(18) Multi-Phase Chemical Agent Detector (MPCAD)
(19) Surveillance and Pathogen Characterization - Enhanced Biological Defense (SPCHAR-ENBD)

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

The Advanced and Emerging Threat Defense (AET DEFENSE) program continues to address the highest priority CBRN gaps and supports the Chemical Biological Defense Program (CBDP) Strategic Line of Effort to meet current and emerging threats by anticipating CB hazards and identifying capabilities to counter emerging and future threats. The AET DEFENSE program collaborates with the Joint Services and interagency to align RDT&E resources to determine readiness against emerging threats as they are identified across the entire CBDP enterprise portfolio. In FY25 and beyond, AET DEFENSE continues to broaden the data set for emerging threats to better assess detection and decontamination capabilities.

Aerosol Vapor Chemical Agent Detector (AVCAD) is a Man-Portable system to detect aerosol and vapor chemical agents. AVCAD fills critical gaps in current Joint Force chemical sensor capabilities, in the areas of liquid, solid and dusty aerosol Chemical Warfare Agent detection, and detection of specific advanced threats/Non-Traditional Agents. The AVCAD will also detect low-level off-gassing, or residual vapors, to prevent/mitigate health effects associated with low concentration exposures, and perform remote alarm warning and reporting. AVCAD will support chemical and biological defense missions, including monitoring, collective protection, base defense, decontamination, unmasking, and reconnaissance. AVCAD will be integrated on the Nuclear Biological Chemical Reconnaissance Vehicle (NBCRV). AVCAD also has a fixed site variant that will be integrated onto ships. In FY25, funding is utilized to finalize MOT&E activities in support of the Full Rate Production (FRP) anticipated in March 2025.

CB WEARABLES-ENBD continues to develop interfaces needed to integrate wearable physiological monitoring capabilities directly into service-sponsored decision support and mission command systems. These capabilities detect and alert for CBRN anomalies that may indicate exposure to biological warfare agents (BWA) or other emerging threats across the force. This enables the services to conduct force-wide monitoring to detect the presence or initial onset of CBRN threats and human physiological stressors. Wearables provides commanders with the ability to understand, address, and provide solutions against emerging threats encountered under many operational scenarios, which could deter maneuver and ability to project force. CB Wearables-ENBD will continue to directly interface and integrate with existing joint force computing environments and directly supports the strategic goals of the CBDP's Enhanced Biodefense effort.

The Chemical Biological Radiological and Nuclear (CBRN) Sensor Integration on Robotics Platforms (CSIRP) is a prototyping and fielding effort that will focus on repackaging and integrating modular CBRN sensor solutions to enhance Unmanned Aircraft Systems (UAS) and Unmanned Ground Vehicles (UGV) Programs of Record (PORs). CSIRP will provide situational awareness across the echelons of command in order to enable freedom of maneuver and action on the battlefield. An integrated CSIRP capability will exploit advances in artificial intelligence, machine learning and autonomy, sensing and communication capabilities that enable timely and accurate detection, warning and reporting of CBRN hazards. CSIRP will reduce risk at tactical and operational echelons in mounted and dismounted configurations. CSIRP gives the Joint Force an opportunity to enhance capabilities and maintain operational advantage in a lethal and complex operating environment. In FY25, CSIRP will integrate standoff detection and provide upgrades to CBRN autonomy, mapping and obstacle avoidance for denied global positioning system (GPS) operations on UAS's.

Compact Vapor Chemical Agent Detector (CVCAD) is an unobtrusive, low-profile chemical detection capability that will continuously, and autonomously, monitor and alert general and specialized units to an unsafe environment without further burdening the warfighters payload or interfering with the primary mission. The CVCAD will warn CBRN and non-CBRN forces of Chemical Weapon Agent (CWA), Toxic Industrial Chemical (TIC), or confined space hazards to inform immediate force protection decisions. The small form factor (less than 2 pounds) is amenable to both man-worn and unmanned aerial or ground system operations to enable timely personnel

protective action and other force protection decisions. FY25 funding supports engineering and development tasks to include military standard environmental and false alarm testing, as well as conduct an operational assessment to measure system performance and assess risk to support Milestone C (MS C) Decision in 4QFY26.

The Defense Biological Product Assurance Program (DBPAP) serves as the principal resource of high quality, validated, and standardized biological detection assays and reagents that meet the requirements of the warfighter and Joint biological defense systems. The DBPAP pursues an array of analytical tools to verify assay performance and predict effective medical countermeasure solutions that are critical to preparedness. The DBPAP enables online ordering system for assays, reagents, and biological reference materials , where multiple government agencies and customers can place orders, track order status, and monitor ordering history. In FY25 DBPAP will continue to support optimization and expansion of biological threat agents reference materials and assays to known and emerging threats.

The Defense Biological Product Assurance Program - Enhanced Biodefense (DBPAP-ENBD) efforts increase the capabilities above DBPAP baseline levels specifically through enhancements to biological threat agent reference materials, analytical tools portfolios, increased sequencing capabilities, expanded analytical tool capabilities, increased repository of collected biothreat genomic information, and additional biorepository of targeted biothreats and toxins against emerging diseases and potential pandemics. In FY25 DBPAP-ENBD continues to support expanded enhancements to biological threat agent reference materials, and analytical tools portfolios, increased sequencing capabilities, expanding on analytical tools, additional repository of collected biothreat genomic information, and increased biorepository of targeted biothreats and toxins against emerging diseases and potential pandemics.

Far Forward Biological Sequencing (FFBS) system is a rapid handheld biological sequencing device that will provide far-forward Special Operations Forces (SOF) the detect-to-inform capability on or near the objective, with a reduction in Commanders' tactical decision timeline from weeks to hours, increasing tactical flexibility and fighting strength, and it will save lives. FY25 funds will focus on the completion of prototype testing and preparations to enter the Production & Deployment (P&D) phase.

The Joint Biological Tactical Detection System (JBTDS) is the first tactical lightweight, low-cost biological surveillance system to detect, collect, and identify Biological Warfare Agent (BWA) aerosols. JBTDS components are man-portable, battery operable and easy to employ by any military user. JBTDS provides notification of a hazard and enhances battle-space awareness to protect and preserve the forces and can archive a sample for follow up analysis. When networked, JBTDS augments existing biological detection systems providing a theater-wide array capable of biological detection, identification and warning to support time sensitive force protection decisions. The JBTDS provides surface sampling capability which interfaces with the JBTDS identifier to support sensitive site exploitation missions. In FY25, JBTDS will conduct testing on the full JBTDS system (Detector/Collector, Identifier, Base Station). The production lead time for Identifiers is much shorter than the Detector/ Collector/Base Station. The Program Manager is leveraging this as an opportunity to conduct testing on the Identifier in one of its intended use cases to identify biological material present in environmental surface samples. FY25 testing will involve the full system interrogating aerosol samples for the presence of biological agents of concern.

MFK effort is the modernization, development, and continuous engineering of Mobile Field Kit (MFK), which is the National Guard Bureau's (NGBs) interim CBRN Awareness & Understanding capability for the Homeland Defense Mission. MFK is a suite of software applications, platforms, and architecture residing on the National Guard CBRN Response Enterprise (CRE) Information Management System (NG-CIMS) operationally deployed in support of NGB missions. MFK provides the NGB real-time visualization and mapping of CBRN threats, personnel location and health, and other sensor data to support the Homeland mission. FY25 funds will begin the time-phased transition of specific capabilities from MFK to CSC2.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
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Nuclear Biological Chemical Reconnaissance Vehicle Sensor Suite Upgrade (NBCRV SSU) provides maneuver formations the ability to conduct mounted Chemical Biological Radiological and Nuclear (CBRN) reconnaissance and surveillance. The NBCRV SSU will answer the commander's priority intelligence requirements & facilitate proactive risk-based decisions, to ensure freedom of action and maintain maneuver momentum in Large Scale Combat Operations. NBCRV SSU is an Acquisition Category (ACAT) II modification work order (MWO) effort to modernize the current NBCRV Sensor Suite to increase maintainability, reliability, maneuverability of the force, and standoff distance from the threat, via enhanced CBRN standoff capabilities & integrating onto robotics for Human-Machine Integration (HMI). In FY25, plans include completing CBRN sensor integration for the next capability set (CS2.2) and begin test and evaluation activities.

The NGDS 2 ChemDx program will provide a rapid, hand-held, point-of-care device, for the quantitative detection of acetyl cholinesterase (AChE) levels in blood samples, an indicator of possible Nerve Agent exposure in individuals. NGDS 2 ChemDx will be employed by Services at multiple echelons of healthcare. NGDS 2 ChemDx test results are to be used to aid in the diagnosis and treatment of individuals suspected of having exposure to chemical nerve agents. In FY25, the NGDS 2 ChemDx program will finish clinical trials and submit application for FDA clearance, to complete EMD, achieve MS C and award a production contract.

The Next Generation Diagnostics System 2 - Man Portable Diagnostics System (NGDS 2 - MPDS) program will provide a simple-to-use, portable diagnostic device capability that can be used in austere battlefield environments to assist in the diagnosis of infectious diseases and biological warfare agents. The MPDS will enable earlier patient diagnosis improve decision support for treatment, evacuation, and command situational awareness, and mitigate the effects of exposure to unknown infectious disease and biological agents. In FY25, NGDS 2 MPDS will continue testing required for FDA clearance of two assays, initiate testing required for FDA clearance of a third assay, and conduct Developmental Testing.

The Proximate Chemical Agent Detector (PCAD) is developing a Non-Trace and Trace capabilities. Non-Trace will provide the services with a handheld point and interrogate device that identifies visible liquid and solid chemical threats on surfaces at standoff (non-contact) distances. The PCAD Trace will provide the services with a handheld device that will rapidly scan an area to locate, detect, and identify non-visible solid and liquid threats on surfaces at standoff (non-contact) distances. In FY25 Non-Trace capability transitions to BA5 and the PCAD program will be conducting Early Manufacturing Development (EMD) testing, operational testing, user events and acquisition documentation in support of a Milestone C (MS C) decision in FY26.

The Physiological Monitoring Sensor Suite (PM2S) is a new start program in FY24. It develops CBRN exposure software algorithms that analyze physiological data collected from wearable sensors. These algorithms provide commanders with actionable information to maximize warfighter readiness, performance, and enhance resiliency before, during, and after CBRN operations. BA5 efforts conduct software hardening, verification/validation, and integration on algorithms transitioned from DTRA JSTO and service wearables S&T partners. Capabilities developed will integrate with the hardware-focused Chemical and Biological Wearables - Enhanced Biodefense (CB WEARABLES-ENBD) solution set, which will provide an additional layer of sensing to rapidly detect CBRN threats across the joint forces, decrease risk to mission, and risk to force.

Special Purpose Unit Rapid Capability Development and Deployment (SPU RCDD) facilitates United States Special Operations Command (USSOCOM) rapid response requirements, through the classified special category (SPECAT) process, for near-term and emergent chemical-biological defensive capabilities. SPU RCDD mitigates risk across the Enterprise by creating a portfolio of operationally relevant CBRND capabilities that can be quickly transitioned in response to the articulated, developing

capability needs of the geographic combatant commanders. These objectives are met by the early transitioning of promising S&T; the focused conduct of combat evaluations and mission-oriented operational assessments to assess technological and mission suitability; and leveraging existing Commercial-Off-The-Shelf (COTS) and Government-Off-The-Shelf (GOTS) products along with novel redesign approaches to optimize existing solutions to new challenges supported by adaptive acquisition strategies.

Wearable All-hazard Remote-monitoring Project (WARP) is a family of wearable and attachable sensors to collect, transmit, and integrate information about the CBRND operational environment, disposition of warfighters, and key mission equipment status to optimize actions on the objective, provide real-time tactical data for decision makers, and facilitate unit readiness post mission. This network of sensors may be accessed by ground-force command for operational decisions for more timely and accurate situational awareness resulting in increased force protection. WARP has gone through the classified special category (SPECAT) requirements validation via United States Special Operations Command (USSOCOM) and Assistant Secretary of Defense for Nuclear, Chemical & Biological Defense Programs (ASD(NCB)).

Multi-Phase Chemical Agent Detector (MPCAD) is a two-person portable system that will conduct near real-time, near-laboratory grade analysis of solid, liquid, and vapor samples collected by the operator in a presumptively contaminated area. The MPCAD results will support the Commander's tactical and operational decisions regarding maneuver, protection, decontamination, and treatment measures. The Army will employ MPCAD in Dismounted Reconnaissance and Site Assessment missions to substantiate presumptive detector results. The Air Force will employ the MPCAD to support Post-Event Reconnaissance in support of Reconnaissance and Surveillance missions by monitoring the environment at airbases after a chemical release. The Air Force will continuously monitor contaminated areas for chronic health effects levels through analysis of samples from collectors deployed at the contamination site and brought back to the analyzer for identification and quantification. This information will support commander decisions to determine Mission Oriented Protective Posture (MOPP) levels and eventual termination of cordon restrictions.

SPCHAR-ENBD (contact tracing) integrates innovative and emerging contact tracing capabilities into the pre-symptomatic exposure wearable system outlined in CB Wearables-ENBD. This effort will leverage on-going COVID-19 investments in contact tracing stemming from the joint service response to Joint Emergent Operational Needs Statement (JEONS) JS-0003. It will include person-worn digital proximity tools for logging close contacts with the infected. SPCHAR-ENBD directly supports the strategic goals of the Chemical Biological Defense Program's (CBDP's) Enhanced Biodefense effort.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: 1) AET DEFENSE	1.223	2.692	1.842
Description: This effort will focus on expanding capabilities of data libraries and CBDP information systems and will focus on understanding advanced capability against emerging threats. This effort includes Program Management, Support, and Testing of technologies that have been demonstrated to be at Technology Readiness Level (TRL) 6 or higher in order to rapidly field solutions to combat emerging threats.			
FY 2024 Plans: Continue efforts to leverage expanded requirements to broaden data set for emerging biological threats and Pharmaceutical Based Agents (PBAs). Expand efforts to include data for defensive capabilities against three additional emerging threat materials. Produce additional data to better assess detection and defensive capabilities against new requirements and inform rapid fielding			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
decisions. Produce new data to understand decontamination capabilities against multiple emerging threat materials. Conduct exercises to support Joint Service and interagency tactics, techniques, and procedures (TTP) development and gap analysis for materiel solutions. Assess potential upgrades to systems in the Engineering and Manufacturing Development (EMD) phase of acquisitions to add emerging threat defensive capability prior to or shortly after fielding. ***FY 2025 Plans:*** Continue efforts to produce additional data to better assess detection and decontamination capabilities against toxins, bioregulators, and other advanced threats. Conduct protocol development to improve CBDP ability to respond to advanced threats. Conduct market surveys and assessments of technologies for rapid fielding by Chemical Biological Defense Program to mitigate emerging threat gaps as threats are identified. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Decrease due to the PBA testing reduction and prioritized testing for other advanced threats.			
Title: 2) AVCAD ***Description:*** Product Development, Testing, Support Cost, Program Management Support. ***FY 2024 Plans:*** Executing and completing product development and testing. Preparing for Full Rate Production (FRP) to include type classification / material release (TCMR). Continue Systems Engineering and other IPTs for product development and materiel release. Complete Multi-Service Operational Test and Evaluation (MOT&E) in support of a Full Rate Production decision. Continue Program management and administration processes to include but not limited to program oversight, resource justification, budgeting and programming, milestone and schedule tracking. Continue Other Government Agency (OGA) Support for logistics and test evaluation results in support of a Full Rate Production decision. ***FY 2025 Plans:*** Complete product development, Systems Engineering, and multi-service operation test and evaluation (MOT&E). Complete program management and administrative processes and Other Government Agency (OGA) support for logistics and test evaluation results in support of a Full Rate Production (FRP) decision. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Program/project transitioned to Production and Deployment Phase. Decrease in funding to close out necessary activities for MOT&E supporting the FRP decision in 2QFY25.	16.603	11.290	3.000
Title: 3) CB WEARABLES-ENBD ***Description:*** This effort will develop and field wearable sensor capabilities and architectures for use across the joint services.	37.922	39.201	27.299

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
FY 2024 Plans: Continues to develop, test, and evaluate a series of interfaces that connect a family of wearable devices to service-operated combat networks and architectures operating within all phases of multi-domain operations. Conducts advanced development on algorithmic tools used to monitor and predict joint warfighter exposure to emerging threats and CBRN hazards. Develops architectures and standards to support integrating existing Government and industry solutions into system level capabilities. ***FY 2025 Plans:*** Combines software algorithms developed under the Physiological Monitoring Sensor Suite (PM2S) program with additional tactical, readiness, and performance monitoring functions. Integrates these capabilities onto joint force data movement networks across multiple domains and echelons. Develops and integrates decision support tools to enable operational and medical commanders of all levels to monitor and predict warfighter readiness, performance, and health before, during, and after operations in CBRN environments. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Decrease due to integration of previously developed common hardware and software capabilities into other service network architectures.			
Title: 4) CSIRP ***Description:*** Product Development, Program Management, Test and Evaluation and Support. ***FY 2024 Plans:*** Completion of chemical sensor integration on an Unmanned Air Systems (UAS) to support the Nuclear Biological Chemical Reconnaissance Vehicle Sensor Suite Upgrade (NBCRV SSU) program and integration work on Unmanned Surface Vessels (USV). Initiate repacking and integration of standoff detection, cross platform teaming, and upgrades to autonomous CBRN mapping in denied GPS operations for UASs, as part of the Development Objective Strategy #2. Continue coordination of demonstrations and test events for additional service end users. Continue program office management and administration processes to include, but not limited to, program oversight, resource justification, budgeting and programming, milestone and schedule tracking. Continue evaluation of capability and development of Concept of Operations (CONOPS). ***FY 2025 Plans:*** Completion of repackaging and integration of Standoff detection, cross platform teaming and upgrades to autonomous CBRN mapping in denied GPS operations for UASs, at part of Capability Set 3.0. Initiate command and control integration, sensor integration for backpack portable UASs, and integration of preliminary biological identification on unmanned platforms at part of Capability Set 4.0. Continue coordination of demonstrations and test events for additional services and end users. Continue program office management and administration process to include, but not limited to, program oversight, resource justification,	12.474	18.505	19.468

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
budgeting and programming, milestone, and schedule tracking. Continue evaluation of capability and development of Concept of Operations (CONOPS). ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase due to expanded modernization and development efforts.			
Title: 5) CVCAD ***Description:*** Prototype Advanced Development, Testing & Program Management ***FY 2024 Plans:*** Conduct Engineering and Development tasks to include military standard environmental and false alarm testing, as well as conduct a soldier touch point to assess and measure system performance and assess risk. Continue Program management and administration processes to include but not limited to program oversight, resource justification, budgeting and programming, milestone and schedule tracking. ***FY 2025 Plans:*** Continue Engineering and Development tasks and procure test articles (~30) to support military standard, environmental and false alarm testing, as well as conduct an operational assessment to assess and measure system performance and assess risk. Initiate documentation and staffing to support Milestone C (MS C) Decision in 4QFY26. Continue Program management and administration processes to include but not limited to program oversight, resource justification, budgeting and programming, milestone and schedule tracking. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Decrease in FY25 BA5 due to decrease in performers and reduction in number of system required for engineering and manufacturing developmental testing.	0.597	16.834	8.376
Title: 6) DBPAP ***Description:*** Advanced Development ***FY 2024 Plans:*** Continue development/expansion of biological threat agents reference materials to known and emerging threats. Continue development of assays and nucleic acid based genomic assays to support fielded and developmental systems. Continue Quality Assurance/Quality Control (QA/QC) testing to encompass the transition and fielding of biological detection assays. Continue to maintain yearly accreditation audits such as ISO 9001, 17025, and Guide 34 certifications. Continue quality actions throughout to maintain the quality managed systems. Continue development of prototypes/information for strains contained in Unified Culture Collection. Supports establishment of a Common Reference Repository - a single source for well-characterized, traceable test	7.999	8.313	8.020

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Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
articles and vital information for biological defense, effective verification of proficiency testing, improved acquisition of emerging technologies, all at a decreased cost for the individual organizations. ***FY 2025 Plans:*** Continue development/expansion of biological threat agents reference materials to known and emerging threats. Continue development of assays and nucleic acid based genomic assays to support fielded and developmental systems. Continue Quality Assurance/Quality Control (QA/QC) testing to encompass the transition and fielding of biological detection assays. Continue to maintain yearly accreditation audits such as ISO 9001, 17025, and Guide 34 certifications. Continue quality actions throughout to maintain the quality managed systems. Continue development of prototypes/information for strains contained in the United States Army Medical Research Institute of Infectious Diseases (USAMRIID's) Biodefense Reference Material Repository (BRMR). Continue to support a biological reference repository - a single source for well-characterized, traceable test articles and vital information for biological defense, effective verification of proficiency testing, improved acquisition of emerging technologies, all at a decreased cost for the individual organizations. Continue sharing data and reference materials are with the U.S. Government community which benefit a variety of science and technology detection and medical countermeasure programs. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Decrease due to funding efficiencies gained in assay tool development.			
Title: 7) DBPAP-ENBD ***Description:*** Advanced Development ***FY 2024 Plans:*** Continue expansion of site locations for increased sequencing capabilities to monitor critical assay performance that detect biothreats, and exchange critical data (sequence information) collected at these sites. (One Site per Year through FY28). Continue expanding the repository of collected biothreat genomic information to a government access controlled, cloud-based information center to support analytics from the field. Maintain exchange of data by creating data compression/decompression capabilities prior to storage and retrieval on GARDIC. Continue expansion of biorepository of targeted biothreats and toxins strategically against emerging diseases and potential pandemics. Maintain information storage capabilities on DoD Accredited sites. ***FY 2025 Plans:*** Continue expansion of site locations for increased sequencing capabilities to monitor critical assay performance that detect biothreats, and exchange critical data (sequence information) collected at these sites. (One Site per Year through FY29). Continue expanding the repository of collected biothreat genomic information to a government access controlled, cloud-based information center to support analytics from the field. Continue expanding analytical tools and capabilities for evaluating assays and reagents.	2.548	1.900	2.050

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Continue expansion of biorepository of targeted biothreats and toxins strategically against emerging diseases and potential pandemics. Continue maintaining information storage capabilities on DoD Accredited sites. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase due to increased production of materials for expanding notes for targeted reference material acquisition.			
Title: 8) FFBS ***Description:*** Prototype Development ***FY 2024 Plans:*** Prototype development and testing effort will focus on the development of prototypes to ensure they are able to meet requirements of decreasing sample to answer time, increasing the ease of use for the preparation of samples, increasing bioinformatics data and software and database development. ***FY 2025 Plans:*** Complete EMD testing on prototypes and prepare for transition into the Production and Deployment phase. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Decrease due to transition into Critical Design Review and testing.	-	2.488	1.989
Title: 9) JBTDS ***Description:*** Program management, testing, contracting and logistics support. ***FY 2024 Plans:*** Complete Low Rate Initial Production T&E activities. ***FY 2025 Plans:*** Conduct Multi-Service Operational Test & Evaluation (MOT&E) and development test/operational test activities in preparation for Full Rate Production (FRP) decision. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** FY25 funds decrease in line with schedule requirements to support completion of T&E activities to support Full Rate Production (FRP) in FY26.	5.480	7.892	5.658
Title: 10) MFK ***Description:*** Modernization, Development and Continuous Engineering ***FY 2024 Plans:***	-	6.300	6.552

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Begin the modernization, development and continuous engineering of MFK, with a focus on hardening the application suite for cyber security. Effort also includes updates to the software based on user feedback in order to maintain operational relevancy. ***FY 2025 Plans:*** Continue engineering, development, and modernization of MFK in support of the time-phased transition of capabilities from MFK to CBRN Support to command and control. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase due to expanded modernization and development efforts.			
Title: 11) NBCRV SSU ***Description:*** Product Development, Program Management, Test and Evaluation and Support. ***FY 2024 Plans:*** Continue government strategic planning, systems engineering, logistics, training, test and evaluation, technical support, integration, and developmental testing. Complete Limited User Test for Capability Set 2.1 (CS2.1). Complete CBRN sensor and integrated sensor suite prototype development, and maturation of CS2.2, and initiate CS2.2 developmental testing. Continue program office management and administration processes to include but not limited to program oversight, resource justification, budgeting and programming, milestone and schedule tracking. Continue program office management and administration processes. ***FY 2025 Plans:*** Continue government strategic planning, systems engineering, logistics, training, technical support, integration, and test and evaluation. Complete Chemical Biological Radiological and Nuclear (CBRN) sensor and integrated sensor suite prototype development, and maturation of Capability Set 2.2 (CS2.2), and initiate CS2.2 developmental testing. Continue program office management and administration processes to include, but not limited to program oversight, resource justification, budgeting and programming, milestone and schedule tracking. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase due to expanding developmental test activities of CS2.2.	16.576	21.629	23.344
Title: 12) NGDS 2 CHEMDX ***Description:*** Engineering and Manufacturing Development ***FY 2024 Plans:***	6.682	7.808	2.129

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Continue Engineering Development, conduct Development Testing and Operational User Evaluations, begin clinical trials. ***FY 2025 Plans:*** Finish clinical trials and submit application for FDA clearance, to complete EMD, achieve MS C and award a production contract. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Program/project transitioned to Production and Deployment Phase.			
Title: 13) NGDS 2 MPDS ***Description:*** Engineering and Manufacturing Development. ***FY 2024 Plans:*** Continue hardware, software, assay development; instrument developmental testing, and analytical testing/ two clinical trials. ***FY 2025 Plans:*** Continue clinical trials needed for FDA clearance of first two assays, start clinical trials of third assay, and complete Developmental Testing (DT). ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Decrease is aligned to planned EMD activities scheduled in FY25.	10.575	19.359	14.637
Title: 14) PCAD ***Description:*** PCAD developmental testing, program management and contract support for Non-Trace. ***FY 2025 Plans:*** Conduct operational and developmental testing for Non-Trace effort, An operational field test event and prepare for program Milestone events and program management activities. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** PCAD Non-Trace enters EMD and will conduct MS B in FY25 and will enter into Low Rate Initial Production (LRIP) in FY26.	-	-	6.472
Title: 15) PM2S ***Description:*** Service Integration ***FY 2025 Plans:***	-	-	12.600

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Conduct software hardening, verification/validation, and integration on algorithms transitioned from DTRA JSTO and service wearables S&T partners. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase due to transition and hardening of multiple science and technology wearables products (PREP, PRESAGED, AGENT/ RAPIDS transitioned via TTA w/ DTRA JSTO; MASTR-E and tactical wearables via TTA w/ DEVCOM Soldier Center; Sigma+ via TTA w/ DARPA).			
Title: 16) SPU RCDD ***Description:*** Advanced Development: this line includes product development, test and evaluation, management services, and support to develop technology across multiple commodity areas. ***FY 2024 Plans:*** Continue developing, prototyping, and maturing CBRND technologies to rapidly equip users with capabilities in response to new and emerging threats and opportunities. Continue developing prototype systems across the CBDP commodity areas in order to close Joint Special Operations Command (JSOC) capability gaps. ***FY 2025 Plans:*** Continue developing, prototyping, and maturing CBRND technologies to rapidly equip users with capabilities in response to new and emerging threats and opportunities within Understand, Protect, Mitigate, and Enabling commodity areas. FY25 SPU RCDD funds will align with Understand and Protect. Continue developing Special Operations Forces (SOF)-peculiar CB solutions for USSOCOM. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase due to economic cost adjustments in Project Understand Budget Activity 5 (UN5).	6.725	7.050	7.122
Title: 17) WARP ***Description:*** Prototype Development: this effort will initiate, prototype, and mature WARP kits, maximizing the use of commercial off-the-shelf and Government off-the-shelf (COTS/GOTS) items. ***FY 2024 Plans:*** Execute integration of commercial off-the-shelf and Government off-the-shelf (COTS/GOTS) CBRN sensors into a visualization tool that is viewable on a customer-specific Team Awareness Kit (TAK) device. ***FY 2025 Plans:***	-	2.100	2.650

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Complete integration of the WARP Kit prototype. Finalize development of the hardened prototype. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase due to integration and finalizing prototype development.			
Title: 18) WARP ***Description:*** Test & Evaluation: this effort will test and evaluate via developmental and operational assessments the capability of the WARP kits. ***FY 2024 Plans:*** Execute test and evaluation on the software and communication protocol for the integrated CBRN sensors and the Team Awareness Kit (TAK) device(s). ***FY 2025 Plans:*** Complete physical (MIL-STD) and end-to-end (integration into USSOCOM equipment) test and evaluation activities. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase due to USSOCOM equipment integration and performing DT/OT testing activities.	-	1.100	1.450
Title: 19) MPCAD ***Description:*** Program Management, Testing, contracting and logistics support ***FY 2024 Plans:*** Complete Vapor Low Rate Initial Procurement (LRIP) product and development (P&D) testing. Complete program management efforts including Government system engineering, program/financial management, costing, personnel support and travel. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The FY24 to FY25 decrease aligns with termination expectations of the MPCAD from centralized acquisition program management and return to JSTO-CBD for further Science and Technology (S&T) development.	2.061	8.265	-
Title: 20) SPCHAR-ENBD ***Description:*** This effort will focus on Innovative Contact Tracing.	1.372	-	-
Accomplishments/Planned Programs Subtotals	128.837	182.726	154.658

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program			Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*	

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• UN4: *Understand (ACD&P)*	52.163	61.638	53.120	-	53.120	47.808	49.646	49.608	62.105	Continuing	Continuing
• UN7: *Understand (Op Sys Dev)*	39.602	50.603	59.296	-	59.296	71.995	70.339	64.131	59.948	Continuing	Continuing
• SA0015: *Aerosol Vapor Chemical Agent Detector (AVCAD)*	-	2.458	42.496	-	42.496	45.496	47.932	66.561	110.248	Continuing	Continuing
• SA0005: *Chemical Biological Radiological Nuclear Sensor Integration on Robotic Platforms (CSIRP)*	2.099	-	-	-	-	-	-	-	-	0.000	5.560
• SA0024: *Compact Vapor Chemical Agent Detector (CVCAD)*	-	-	-	-	-	8.200	13.687	22.144	22.144	Continuing	Continuing
• JX0210: *Defense Biological Products Assurance Program (DBPAP)*	2.736	2.736	2.736	-	2.736	2.736	2.736	2.736	2.736	Continuing	Continuing
• MX0001: *Joint Biological Tactical Detection System (JBTDS)*	-	7.025	9.872	-	9.872	33.556	78.102	78.405	79.031	Continuing	Continuing
• SA0056: *Nuclear Biological Chemical Reconnaissance Vehicle Sensor Suite Upgrade (NBCRV SSU)*	-	16.795	-	-	-	15.525	15.561	16.222	16.723	Continuing	Continuing
• SA0043: *Next Generation Diagnostics System 2 Chemical Diagnostics (NGDS 2 CHEM DX)*	-	1.881	4.891	-	4.891	7.722	7.212	7.014	0.672	Continuing	Continuing
• SA0044: *Next Generation Diagnostics System 2 Man Portable Diagnostic System (NGDS 2 MPDS)*	-	-	-	-	-	5.416	7.032	5.156	1.026	Continuing	Continuing
• PHM018: *Special Purpose Unit Rapid Capability Development and Demonstration (SPU RCDD)*	10.188	49.455	30.799	-	30.799	34.180	33.716	26.638	32.609	Continuing	Continuing
• SA0055: *Wearable All Hazard Remote Monitoring Program (WARP)*	-	-	17.500	-	17.500	7.000	7.000	7.000	-	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• SA0017: *Multiphase Chemical Agent Detector (MPCAD)*	4.014	13.561	-	-	-	-	-	-	-	0.000	17.575

Remarks

D. Acquisition Strategy

Advanced and Emerging Threat Defense (AET DEFENSE)

The AET DEFENSE program will use a variety of acquisition approaches to survey, assess, and rapidly field technologies to inform and fill advanced and emerging threat defensive capability gaps. The program will utilize existing Multiple Award Indefinite Delivery Indefinite Quantify Task Order Contracts to provide technical support to studies and assessments of performance against emerging threats. For Program of Record (PoR) systems currently in development that will be assessed for performance against emerging threats, those PoR's existing contracts will be modified to incorporate development engineering and test support for emerging threat capability. The AET DEFENSE program will utilize Other Transaction Authority (OTA) agreements for system development and prototyping activities and Government Agencies and Federally Funded Research and Development Centers to provide development, testing and technical support.

Aerosol Vapor Chemical Agent Detector (AVCAD)

The AVCAD program achieved Milestone C approval and awarded the low rate initial production (LRIP) as an existing option leveraging the current contract. Upon completion of Production & Deployment test activities, the full rate production options will be executed.

Chemical and Biological Wearables - Enhanced Biological Defense (CB WEARABLES-ENBD)

CB Wearables-ENBD will leverage a presumed hybrid acquisition strategy that will use the software acquisition pathway to integrate and field software algorithms developed under the Physiological Monitoring Sensor Suite (PM2S) program, as well as develop and integrate Government Off-The-Shelf (GOTS) hardware needed for deployment on service-sponsored networks and weapons platforms.

Chemical Biological Radiological Nuclear Sensor Integration on Robotic Platforms (CSIRP)

CSIRP is a streamlined and tailored acquisition effort to rapidly prototype and field CBRN payload capabilities for unmanned ground, air and/or surface platforms. CSIRP will provide and integrate unmanned CBRN payload prototypes in cyclic prototyping plans based on service requirements. The prototyping plans will use a streamlined acquisition process in order to keep pace with industry and the rapid advancement of technologies. The CSIRP strategy will use the rapid prototyping process enabled by the Other Transactional Agreements (OTA) contract vehicle to develop mature prototypes for transition to Programs of Record (POR) for procurement.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

Compact Vapor Chemical Agent Detector (CVCAD)

The CVCAD program will use the Combating Weapons of Mass Destruction Other Transaction Authority (CWMD OTA) contract vehicle to transition four technologies from Science & Technology (S&T) into the program of record. This streamlined acquisition approach is broken into four phases; Phase I S&T advanced development, Phase II technology transition maturation evaluation, Phase III competitive prototyping down select, Engineering decision, manufacturing and development. Phase IV will execute Production and Development for low rate initial production (LRIP) systems. CVCAD will procure Full Rate Production (FRP) items through a follow-on Federal Acquisition Regulation based contract.

Defense Biological Products Assurance Program (DBPAP)

DBPAP utilizes best buying principles and acquisition rigor for alignment to requirements to perform an “enabling” function for certain programs of record (e.g., Analytical Lab System (ALS), Common Analytical Lab System (CALS), Next Generation Diagnostic System (NGDS)) and other enterprise partners. The DBPAP uses better buying power to consolidate requirements for “commodity-like” biological detection products. Appropriated fixed program objective funds enable investment to build out high-quality, standardized biological products portfolio and expand offerings to customers. Advanced development and testing / evaluation of new products (Research, Development, Test and Evaluation - RDTE) based on customer demands, Conformance testing and Development of information products (e.g., databases, analytical tools). The DBPAP coordinates closely with the Joint, Science and Technology Office to enhance the DBPAP reference material holdings in the United States Army Medical Research Institute of Infectious Diseases (USAMRIID’s) Biodefense Reference Material Repository (BRMR); improve antibodies and expand the portfolio of DBPAP immunoassays and reagents; and develop new molecular assays. The DBPAP uses a mix of competitive commercial contracts and funding of government laboratories to produce high quality assays and reagents.

Defense Biological Products Assurance Program - Enhanced Biological Defense (DBPAP-ENBD)

The DBPAP-ENBD provides increased capabilities above baseline abilities in part through expanding capabilities of the Targeted Acquisition of Reference Materials Augmenting Capabilities (TARMAC) initiative. Additional data generated through the use of products and partnerships coordinated through TARMAC is collected and curated into a DOD accredited database, the Government Assay and Reagents for Defense Information Center (GARDIC). government. The DBPAP-ENBD coordinates with an increased number of international and interagency partners to set the conditions to sequence strains of interest that characterize the virus at fixed and far forward locations. The DBPAP-ENBD expands the use of internally developed as well as commercially acquired analytical tools to determine the efficacy of the government assays and supports development of appropriate countermeasures.
The focused expansion of efforts for the DBPAP-ENBD is:
1) Expansion of site locations for increased sequencing capabilities to monitor critical assay performance that detect biothreats and exchange critical data (sequence information) collected at these sites. (One Site Per Year).
2) Expanding the repository of collected biothreat genomic information to a government access controlled, cloud-based information center in order to support analytics from the field.
3) Expansion of biorepository of targeted biothreats and toxins strategically against emerging diseases and potential pandemics.
4) Maintain information storage capabilities on DoD Accredited sites.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

Far Forward Biological Sequencing (FFBS)

The FFBS program released a Request For Information (RFI) to industry in 4QFY23. Program plans to initiate into the Engineering and Manufacturing Development (EMD) phase during 2QFY24 and issue a request for proposals for the development and testing of prototypes. FFBS will complete operational test during 4QFY25 and issue a competitive production award in 1QFY26 to meet Initial Operational Capability (IOC) in 4QFY26 and Full Operational Capability (FOC) in 4QFY27.

Joint Biological Tactical Detection System (JBTDS)

The JBTDS program utilizes a streamlined acquisition strategy leveraging contracts with Chemring Sensors and Electronic Systems (CSES) and Biomeme. The contracts include options for Low Rate Initial Production (LRIP) and Full Rate Production (FRP). The JBTDS Milestone C LRIP was approved 03 AUG 23. The JBTDS program uses an agile acquisition strategy which leverages current technologies, recognizing up front the need for potential technology insertion to provide more cost effective capabilities.

Mobile Field Kit (MFK)

Mobile Field Kit (MFK) will transition from the Defense Threat Reduction Agency (DTRA) by coordinating a Technology Transition Agreement that addresses current technical and acquisition shortfalls and limitations. MFK will manage the continuous engineering, development, and modernization process in support of National Guard Bureau (NGB) operations by assuming control of the requirements generation process and incrementally modernizing the software architecture. Additional work includes software updates to ensure interoperability with the Joint architecture and assessing and engineering improvements for cyber security from a Joint perspective. MFK will inform the NGB/Homeland Defense configuration of CBRN Support to C2 (CSC2). The long-term (NTE 5 years) strategy is to transition MFK functions to the CSC2 program in a time-phased approach that aligns with CSC2 requirements, and cost/schedule/performance targets. This strategy will be executed without impacting the current operational relevancy of MFK.

Nuclear Biological Chemical Reconnaissance Vehicle Sensor Suite Upgrade (NBCRV SSU)

Nuclear Biological Chemical Reconnaissance Vehicle Sensor Suite Upgrade (NBCRV SSU) program is testing Capability Set 2.1 (CS2.1) to inform a CS2.1 Low Rate Initial Production (LRIP) Decision in FY24. CS2.1 will provide initial capability to the warfighter. The NBCRV SSU program will build CS2.2 systems in FY24-FY25, followed by testing in FY25-FY26 to inform the CS2.2 Full Rate Production (FRP) Decision in FY27. CS2.2 will meet all threshold requirements to provide full capability to the warfighter. As CS2.2 systems are fielded, the CS2.1 systems will be retrofitted to the CS2.2 configuration.

Next Generation Diagnostics 2 Chemical Diagnostics (NGDS 2 CHEMDX)

NGDS Increment 2 ChemDx is using an Other Transactions Authority (OTA) agreement to take advantage of non-traditional Defense contractor offerings. NGDS 2 ChemDx will use the agreement holder to conduct system development, pre-developmental testing (pre-DT) and clinical trials. ChemDx will use Department of Defense

(DoD) test agencies to conduct Development Testing and Operational User Evaluations. Clinical trials will inform approval of the ChemDx system by the U.S. Food and Drug Administration for "Prescription Home Use", which along with DoD testing will inform a Full Rate Production decision, leading to the award of a FAR-based production contract.

Next Generation Diagnostics 2 Man Portable Diagnostic System (NGDS 2 MPDS)

NGDS 2 MPDS is currently in engineering and manufacturing development (EMD). MPDS is using Other Transactions Authority (OTA) agreements to take advantage of nontraditional Defense contractor offerings. MPDS will use the agreement holder to develop the system and assays, conduct the clinical trials, and for pre-developmental testing (pre-DT) instrument testing. MPDS will be using DoD sites to support the agreement holder's clinical trials. Defense (DoD) agencies will conduct Developmental Testing (DT), operational assessment (OA), and Initial Operational Test & Evaluation (IOT&E). Following MS C, MPDS will initiate a Federal Acquisition Regulation (FAR) based production contract.

Proximate Chemical Agent Detector (PCAD)

Proximate Chemical Agent Detector (PCAD) Non-Trace effort will leverage the existing Science & Technology (S&T) Chemical Weapons Mass Destruction (CWMD) Other Transaction Authority (OTA) contract in FY24 to procure prototypes for Technology Maturation Risk Reduction (TMRR) phase. This streamlined approach will use one contracting mechanism to transition technology from S&T to acquisition and allow follow-on acquisitions up through Low Rate Initial Production (LRIP). PCAD Non-Trace will procure Full Rate Production (FRP) items through a follow-on Federal Acquisition Regulation based contract. PCAD Trace effort will leverage the existing S&T CWMD OTA's to evaluate and transition the technologies in accordance to the Technology Transition Agreement (TTA) with the Defense Threat Reduction Agency (DTRA) in FY27. PCAD Non-Trace intends to enter in at a Milestone B (MS B) 1QFY25 utilizing the existing Next Generation Chemical Detection (NGCD) Milestone A (MS A) Acquisition Decision Memorandum (ADM).

Physiological Monitoring Sensor Suite (PM2S)

PM2S will leverage a rapid acquisition strategy (such as the software acquisition pathway) to develop, integrate, and field software algorithms into hardware-focused decision support tools developed under the CB WEARABLES-ENBD program. These capabilities will help to address knowledge gaps identified under the OSD-sponsored wearables Pilot program related to integrated physiological threat-based decision support.

Special Purpose Unit Rapid Capability Development and Deployment (SPU RCDD)

The SPU RCDD overall acquisition strategy allows for rapid prototyping and testing of novel and modified COTS and or GOTS systems against mission critical capabilities to enhance mission success. SPU RCDD will use developmental testing and USSOCOM combat and functional evaluations to rapidly develop items that close SPECAT capability gaps. This will be accomplished through competitive contracting vehicles such as Multiple Award Indefinite Delivery Indefinite Quantify Task

Orders, the Countering Weapons of Mass Destruction Other Transaction Authority (CWMD OTA), and Commercial Solutions Opening (CSO). SPU RCDD will use Government Agencies for test and evaluation, and technical support.

Wearable All Hazard Remote Monitoring Program (WARP)

WARP will leverage the Wearables Pilot for market survey and high-Technology Readiness Level (TRL) products. Using those items, WARP will integrate Commercial-off-the shelf (COTS) and Government-off-the shelf (GOTS) CBRN sensors and COTS physiological monitoring devices into a common infrastructure for display on USSOCOM devices. This will be accomplished through Countering Weapons of Mass Destruction Other Transaction Authority (CWMD OTA) and Government Agencies for prototype development, test and evaluation, and technical support.

Multi-Phase Chemical Agent Detector (MPCAD)

The MPCAD used a streamlined acquisition strategy. The MPCAD contract(s) utilized the Countering Weapons of Mass Destruction (CWMD) Other Transaction Authority (OTA) for EMD and Production representative items. The program developed and validated the systems during EMD and LRIP with production representative items utilizing two contractors to increase competition and minimize production price. In FY24, the MPCAD program has been directed by the Milestone Decision Authority to transition efforts from centralized acquisition program management and return to DTRA JSTO for Science and Technology (S&T) development. The MPCAD will no longer procure production items.

Surveillance and Pathogen Characterization - Enhanced Biological Defense (SPCHAR-ENBD)

SPCHAR-ENBD (contact tracing) sunsets at the end of FY23 and will integrate all capabilities into the CB-Wearables ENBD.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program			Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AET DEFENSE - HW C - Protection Capability Prototyping	Various	Various : N/A	-	0.197	Feb 2023	0.280	Jan 2024	0.000		-		0.000	0.000	0.477	0.000
AET DEFENSE - HW S - System Prototyping and Modification	Various	Various : N/A	-	0.197	Feb 2023	0.000		0.000		-		0.000	0.000	0.197	0.000
AET DEFENSE - HW S - Emerging threat detection/ decontamination/protection capability engineering development	Various	Various : N/A	-	0.172	Jan 2023	0.000		0.000		-		0.000	0.000	0.172	0.000
AET DEFENSE - HW C - Emerging Threat Detection	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	0.000		0.964	Mar 2024	0.000		-		0.000	0.000	0.964	0.000
AVCAD - HW C - Government Product Development Team Labor	MIPR	Various : N/A	-	1.862	Nov 2022	1.850	Feb 2024	0.500	Nov 2024	-		0.500	Continuing	Continuing	0.000
AVCAD - HW S - P&D Contract	C/CPIF	Smiths Detection : Edgewood, MD	-	6.094	Jun 2023	0.000		1.200	Nov 2024	-		1.200	Continuing	Continuing	0.000
CB WEARABLES-ENBD - SW C - Common Wearable Device Interfacing	C/CPFF	Various : N/A	-	10.460	Jan 2023	13.430	Jan 2024	6.746	Dec 2024	-		6.746	Continuing	Continuing	0.000
CB WEARABLES-ENBD - HW C - Service-sponsored Decision Support System Integration	C/CPFF	Various : N/A	-	19.038	Jan 2023	14.410	Jan 2024	15.240	Dec 2024	-		15.240	Continuing	Continuing	0.000
CSIRP - HW C - Government Product Development Team Labor	MIPR	U.S. Army Combat Capabilities Development	-	1.478	Nov 2022	1.900	Nov 2023	1.594	Dec 2024	-		1.594	Continuing	Continuing	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD													
CSIRP - HW C - Chem Sensor Design	C/CPFF	Charles Stark Draper Laboratories, Inc. : Cambridge, MA	-	1.110	Nov 2022	1.600	Nov 2023	0.000		-		0.000	0.000	2.710	0.000
CSIRP - HW C - Sensor Prototype and Integration	C/FFP	Radiation Monitoring Devices, Inc : Boston, MA	-	0.172	Nov 2022	0.000		0.076	Dec 2024	-		0.076	Continuing	Continuing	0.000
CSIRP - HW C - Sensor Integration	C/FFP	FLIR Systems, Inc. : Elkridge, MD	-	2.403	Nov 2022	2.500	Nov 2023	4.103	Dec 2024	-		4.103	Continuing	Continuing	0.000
CSIRP - HW C - Contractor Product Development Team Labor	C/FFP	Various : N/A	-	0.589	Jan 2023	0.540	Feb 2024	0.617	Feb 2025	-		0.617	Continuing	Continuing	0.000
CSIRP - HW C - Standoff Detection	C/CPFF	U.S. Naval Air Warfare Center (Aircraft Division) : Patuxent River, MD	-	0.890	Sep 2023	0.000		1.851	Dec 2024	-		1.851	Continuing	Continuing	0.000
CSIRP - HW C - UAS Manufacturing and Design	MIPR	Various : N/A	-	0.000		5.500	Nov 2023	0.000		-		0.000	0.000	5.500	0.000
CSIRP - SW C - UAS and Sensor Manufacturing and Design	C/CPFF	T2S Solutions (T2S, LLC) : Belcamp, MD	-	0.654	Jul 2023	0.000		0.000		-		0.000	0.000	0.654	0.000
CSIRP - SW C - Sensor Integration	C/CPFF	Charles Stark Draper Laboratories, Inc. : Cambridge, MA	-	0.974	Jul 2023	1.400	Nov 2023	4.330	Dec 2024	-		4.330	Continuing	Continuing	0.000
CVCAD - HW S - CWMD OTA Phase 3 Task Awards	C/CPFF	Advanced Technologies International : Summerville, SC	-	0.565	Dec 2023	9.200	May 2024	4.105	Dec 2024	-		4.105	Continuing	Continuing	0.000
DBPAP - HW C - Development of Select	MIPR	Various : N/A	-	3.618	Mar 2023	4.869	Feb 2024	4.932	Feb 2025	-		4.932	Continuing	Continuing	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Biological Threat Agent Reference Materials and Assays															
DBPAP-ENBD - HW C - Targeted Acquisition of Reference Materials Augmenting Capabilities (TARMAC) initiative	MIPR	Various : N/A	-	2.548	Feb 2023	1.900	Feb 2024	2.050	Feb 2025	-		2.050	Continuing	Continuing	0.000
FFBS - HW S - Hardware - prototype refinement and maturation	Various	Various : N/A	-	0.000		1.363	Apr 2024	0.000		-		0.000	0.000	1.363	0.000
JBTDS - HW S - Government Product Development Team Labor	MIPR	Various : N/A	-	3.314	Jan 2023	0.829	Jan 2024	0.278	Dec 2024	-		0.278	Continuing	Continuing	0.000
MFK - SW S - Modernization	C/CPFF	Various : N/A	-	0.000		3.000	Oct 2023	3.120	Oct 2024	-		3.120	Continuing	Continuing	0.000
MFK - SW S - Cyber Security Sustainment	MIPR	TBD : N/A	-	0.000		0.620	Mar 2024	0.645	Mar 2025	-		0.645	Continuing	Continuing	0.000
MFK - ES S - CSC2 Interoperability	TBD	Various : N/A	-	0.000		0.550	Oct 2023	0.571	Oct 2024	-		0.571	Continuing	Continuing	0.000
MFK - SW S - Interoperability	C/CPFF	Various : N/A	-	0.000		0.389	Mar 2024	0.404	Mar 2025	-		0.404	Continuing	Continuing	0.000
NBCRV SSU - HW C - compact Standoff Detection System (cSDS) On The Move	MIPR	MRIGlobal : Kansas City, MO	-	1.008	Nov 2022	0.000		0.000		-		0.000	0.000	1.008	0.000
NBCRV SSU - HW C - OTA CS2.1 Integration	C/FFP	FLIR Systems, Inc. : Elkridge, MD	-	1.845	Nov 2022	0.000		0.000		-		0.000	0.000	1.845	0.000
NBCRV SSU - HW C - Chemical Surface Detector (CSD) Maturation	C/FFP	Various : N/A	-	5.653	Nov 2022	7.418	Nov 2023	0.000		-		0.000	0.000	13.071	0.000
NBCRV SSU - HW C - Government Product Development Team Labor	MIPR	U.S. Army Combat Capabilities Development	-	0.000		0.000		2.306	Dec 2024	-		2.306	Continuing	Continuing	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD													
NBCRV SSU - HW C - Contractor Product Development Team Labor	C/FFP	Various : N/A	-	0.000		0.000		0.431	Feb 2025	-		0.431	Continuing	Continuing	0.000
NBCRV SSU - HW C - CS2.2 Integration	C/FFP	TBD : N/A	-	0.000		0.000		7.949	Jun 2025	-		7.949	Continuing	Continuing	0.000
NGDS 2 CHEMDX - HW S - Product Development	C/CPFF	MRIGlobal : Kansas City, MO	-	4.484	Nov 2022	3.895	Dec 2023	0.557	Dec 2024	-		0.557	Continuing	Continuing	0.000
NGDS 2 CHEMDX - HW C - Product Management	Various	Various : N/A	-	1.912	Nov 2022	2.304	Dec 2023	1.344	Dec 2024	-		1.344	Continuing	Continuing	0.000
NGDS 2 MPDS - HW C - Product Development	C/CPFF	Cepheid : Sunnyvale, CA	-	6.155	Jun 2023	11.870	Dec 2023	8.638	Dec 2024	-		8.638	Continuing	Continuing	0.000
NGDS 2 MPDS - HW C - Product Management	Various	Various : N/A	-	3.279	Nov 2022	3.930	Dec 2023	3.119	Dec 2024	-		3.119	Continuing	Continuing	0.000
PCAD - HW S - Government Team Labor	Various	Various : N/A	-	0.000		0.000		2.000	Nov 2024	-		2.000	Continuing	Continuing	0.000
PM2S - SW C - Algorithm Hardening & Integration	C/CPFF	Various : N/A	-	0.000		0.000		5.835	Dec 2024	-		5.835	Continuing	Continuing	0.000
PM2S - SW C - Algorithm Test Bed Integration	C/CPFF	Various : N/A	-	0.000		0.000		3.890	Dec 2024	-		3.890	Continuing	Continuing	0.000
SPU RCDD - HW C - Prototype Procurement	Various	Various : N/A	-	4.664	Dec 2022	4.156	Dec 2023	4.091	Dec 2024	-		4.091	Continuing	Continuing	0.000
WARP - HW C - Prototype Development	Various	Various : N/A	-	0.000		2.100	Dec 2023	2.650	Dec 2024	-		2.650	Continuing	Continuing	0.000
MPCAD - HW S - EMD Contract	C/CPFF	FLIR Systems, Inc. : West Lafayette, IN	-	0.000		1.035	Nov 2023	0.000		-		0.000	0.000	1.035	0.000
MPCAD - HW S - EMD Contract	C/CPFF	Signature Science : Austin, TX	-	0.256	Sep 2023	1.035	Nov 2023	0.000		-		0.000	0.000	1.291	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MPCAD - PM/MS S - Government Team Labor	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	0.671	Nov 2022	1.804	Nov 2023	0.000		-		0.000	0.000	2.475	0.000
MPCAD - HW C - Contract Support	C/FFP	Various : N/A	-	0.179	Feb 2023	0.161	Feb 2024	0.000		-		0.000	0.000	0.340	0.000
SPCHAR-ENBD - SW C - JEONS JS 0003 Integration	C/CPFF	Various : N/A	-	1.000	Jan 2023	0.000		0.000		-		0.000	0.000	1.000	0.000
		Subtotal	-	87.441		106.802		95.172		-		95.172	Continuing	Continuing	N/A

Remarks

JBTDS: Program received $2.936M realignment in FY23. The additional funding was applied to Prod Dev.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AVCAD - ES C - OGAs	MIPR	Various : N/A	-	0.958	Feb 2023	2.907	Nov 2023	0.500	Nov 2024	-		0.500	Continuing	Continuing	0.000
CB WEARABLES-ENBD - ES S - Technical Support	MIPR	Various : N/A	-	4.023	Jan 2023	5.200	Dec 2023	1.589	Dec 2024	-		1.589	Continuing	Continuing	0.000
CSIRP - ES C - Engineering Support	Various	Various : N/A	-	0.626	Nov 2022	0.395	Nov 2023	1.060	Dec 2024	-		1.060	Continuing	Continuing	0.000
CSIRP - ES C - Cyber Security and ETPs	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) C5ISR Center : Aberdeen	-	0.362	Apr 2023	0.000		0.000		-		0.000	0.000	0.362	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program			Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Proving Grounds, MD													
CSIRP - ES C - Test Support	Various	Various : N/A	-	0.819	Nov 2022	0.000		0.931	Dec 2024	-		0.931	Continuing	Continuing	0.000
CSIRP - ES C - Logistics Training and Support	C/FFP	L2 Defense Inc. : Baltimore, MD	-	0.000		0.000		0.421	Jan 2025	-		0.421	Continuing	Continuing	0.000
CVCAD - ES S - OGA Support and Analysis	Various	Various : N/A	-	0.000		3.000	Feb 2024	0.771	Dec 2024	-		0.771	Continuing	Continuing	0.000
DBPAP - ES S - Select Biological Threat Agent Reference Material Support	MIPR	Various : N/A	-	1.683	Mar 2023	1.714	Feb 2024	1.536	Feb 2025	-		1.536	Continuing	Continuing	0.000
DBPAP - ES S - Select Biological Threat Agent Reference Material Regulatory/Quality Assurance (QA) Support	MIPR	Edgewood Chemical Biological Center (ECBC) : Aberdeen Proving Ground, MD	-	1.699	Mar 2023	1.730	Feb 2024	1.552	Feb 2025	-		1.552	Continuing	Continuing	0.000
FFBS - ES S - System engineering and design support	Various	Various : N/A	-	0.000		0.212	Nov 2023	0.536	Nov 2024	-		0.536	Continuing	Continuing	0.000
JBTDS - ES S - Contract and Product Support	MIPR	Various : N/A	-	0.558	Nov 2022	0.000		0.613	Feb 2025	-		0.613	Continuing	Continuing	0.000
NBCRV SSU - ILS C - Logistics and Product Contract Support	C/FFP	Various : N/A	-	0.508	Nov 2022	0.900	Nov 2023	0.300	Dec 2024	-		0.300	Continuing	Continuing	0.000
PCAD - ES S - OGA Support	MIPR	Various : N/A	-	0.000		0.000		1.673	Nov 2024	-		1.673	Continuing	Continuing	0.000
PM2S - ES S - Technical Support	MIPR	Various : N/A	-	0.000		0.000		0.715	Dec 2024	-		0.715	Continuing	Continuing	0.000
SPU RCDD - Engineering Support	Various	Various : N/A	-	0.626	Dec 2022	0.669	Dec 2023	0.682	Nov 2024	-		0.682	Continuing	Continuing	0.000
		Subtotal	-	11.862		16.727		12.879		-		12.879	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program			Date: March 2024
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604384BP / *Chemical and Biological Defense Program - EMD*	Project (Number/Name) UN5 / *Understand (SDD)*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract

Remarks

CVCAD: FY24 support cost will be updated during the BES26, adjustments are due to the delay of MS B.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AET DEFENSE - DTE C - Technology Assessments	MIPR	Various : N/A	-	0.284	Feb 2023	0.300	Mar 2024	0.000		-		0.000	0.000	0.584	0.000
AET DEFENSE - DTE S - Technology Assessments	Various	Various : N/A	-	0.284	Dec 2022	0.000		0.940	Dec 2024	-		0.940	Continuing	Continuing	0.000
AET DEFENSE - DTE C - Technology Assessments	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	0.000		0.906	Mar 2024	0.842	Mar 2025	-		0.842	Continuing	Continuing	0.000
AVCAD - OTE C - DT/OT Test Activities	MIPR	Various : N/A	-	6.037	Dec 2022	5.374	Jun 2024	0.500	Nov 2024	-		0.500	Continuing	Continuing	0.000
CB WEARABLES-ENBD - DTE S - System DT&E	MIPR	Various : N/A	-	0.725	Jan 2023	1.475	Jan 2024	1.045	Jan 2025	-		1.045	Continuing	Continuing	0.000
CSIRP - DTE C - Testing and Evaluation	Various	Various : N/A	-	0.302	Nov 2022	1.530	Nov 2023	1.426	Dec 2024	-		1.426	Continuing	Continuing	0.000
CSIRP - DTE C - JHU Applied Physics Lab	MIPR	Johns Hopkins University - Applied Physics Lab : Laurel, MD	-	0.775	Nov 2022	0.660	Jan 2024	0.450	Dec 2024	-		0.450	Continuing	Continuing	0.000
CVCAD - DTE S - Developmental Test Activities	MIPR	Various : N/A	-	0.000		2.834	May 2024	2.310	Dec 2024	-		2.310	Continuing	Continuing	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FFBS - DTE S - T&E for prototype refinement and maturation	Various	Various : N/A	-	0.000		0.665	Apr 2024	1.180	Jan 2025	-		1.180	Continuing	Continuing	0.000
JBTDS - OTE S - Operational Test and Evaluation	MIPR	Various : N/A	-	0.000		3.000	Feb 2024	1.945	Feb 2025	-		1.945	Continuing	Continuing	0.000
JBTDS - DTE S - DT/OT Test Activities	MIPR	Various : N/A	-	1.439	Nov 2022	3.125	Feb 2024	2.063	Dec 2024	-		2.063	Continuing	Continuing	0.000
MFK - DTE S - Integration and Interoperability T&E	MIPR	Various : N/A	-	0.000		1.200	Oct 2023	1.250	Oct 2024	-		1.250	Continuing	Continuing	0.000
NBCRV SSU - DTE C - Test and Evaluation	Various	TBD : N/A	-	0.934	Jan 2023	0.000		9.000	Dec 2024	-		9.000	Continuing	Continuing	0.000
NBCRV SSU - DTE C - System Level Developmental Testing	Various	Various : N/A	-	1.230	Jan 2023	1.200	Nov 2023	0.000		-		0.000	0.000	2.430	0.000
NBCRV SSU - DTE C - System Level Developmental Testing	C/FFP	MRIGlobal : Kansas City, MO	-	0.000		1.800	Nov 2023	0.000		-		0.000	0.000	1.800	0.000
NBCRV SSU - DTE C - System Level Testing Developmental Testing	MIPR	Aberdeen Test Center (ATC) : Aberdeen Proving Ground, MD	-	0.661	Mar 2023	7.000	Nov 2023	0.000		-		0.000	0.000	7.661	0.000
NBCRV SSU - OTE S - Limited User Test Activities	MIPR	Various : N/A	-	2.398	Mar 2023	0.000		0.000		-		0.000	0.000	2.398	0.000
NBCRV SSU - LFTE S - Live Fire Testing	MIPR	Various : N/A	-	0.145	Mar 2023	0.000		0.000		-		0.000	0.000	0.145	0.000
NGDS 2 CHEMDX - DTE S - Testing	MIPR	Various : N/A	-	0.000		0.750	Dec 2023	0.000		-		0.000	0.000	0.750	0.000
NGDS 2 MPDS - OTHT C - Analytical/Clinical Testing	MIPR	U.S. Army Medical Research and Development Command (USAMRDC) : Fort Detrick, MD	-	0.739	Jun 2023	1.430	Dec 2023	0.458	Dec 2024	-		0.458	Continuing	Continuing	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program			Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NGDS 2 MPDS - OTE S - System Test & Evaluation	MIPR	Various : N/A	-	0.000		0.000		0.857	Dec 2024	-		0.857	Continuing	Continuing	0.000
PCAD - DTE S - Testing	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	0.000		0.000		2.000	Nov 2024	-		2.000	Continuing	Continuing	0.000
PM2S - DTE S - Algorithm Performance DT&E	MIPR	Various : N/A	-	0.000		0.000		0.946	Jan 2025	-		0.946	Continuing	Continuing	0.000
SPU RCDD - DTE C - Testing and Evaluation	Various	Various : N/A	-	0.449	Dec 2022	1.249	Dec 2023	1.363	Feb 2025	-		1.363	Continuing	Continuing	0.000
WARP - DTE C - Prototype Testing	Various	Various : N/A	-	0.000		1.100	Dec 2023	1.450	Feb 2025	-		1.450	Continuing	Continuing	0.000
MPCAD - DTE C - DT/OT Chemical Chamber Event	MIPR	West Desert Test Center : Dugway, UT	-	0.631	Nov 2022	1.000	Dec 2023	0.000		-		0.000	0.000	1.631	0.000
MPCAD - OTE S - Multi-Service Test	MIPR	Operational Test Command (OTC) : Fort Hood, TX	-	0.050	Sep 2023	0.838	Nov 2023	0.000		-		0.000	0.000	0.888	0.000
MPCAD - DTE C - OGA - Test	MIPR	Various : N/A	-	0.274	Mar 2023	1.607	Dec 2023	0.000		-		0.000	0.000	1.881	0.000
		Subtotal	-	17.357		39.043		30.025		-		30.025	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AET DEFENSE - PM/MS S - IPT Support/Program Management	MIPR	JPEO Chem, Bio, Rad, and Nuc Defense (JPEO-	-	0.089	Dec 2022	0.242	Dec 2023	0.060	Dec 2024	-		0.060	Continuing	Continuing	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		CBRND) : Aberdeen Proving Ground, MD													
AVCAD - PM/MS S - Program Management	MIPR	Various : N/A	-	1.652	May 2023	1.159	Nov 2023	0.300	Nov 2024	-		0.300	Continuing	Continuing	0.000
CB WEARABLES-ENBD - PM/MS C - Program Management	MIPR	Various : N/A	-	3.676	Jan 2023	4.686	Dec 2023	2.679	Nov 2024	-		2.679	Continuing	Continuing	0.000
CSIRP - PM/MS C - PM/MS S Program Management Support	Various	JPM CBRN Sensors, JPEO-CBRND : Aberdeen Proving Ground, MD	-	1.320	Jan 2023	2.480	Jan 2024	2.609	Jan 2025	-		2.609	Continuing	Continuing	0.000
CVCAD - PM/MS C - Program Management Support	MIPR	Various : N/A	-	0.032	Jul 2023	1.800	Oct 2023	1.190	Dec 2024	-		1.190	Continuing	Continuing	0.000
DBPAP - PM/MS C - Product Management Contractor Support	SS/FFP	Various : N/A	-	0.999	Mar 2023	0.000		0.000		-		0.000	0.000	0.999	0.000
FFBS - PM/MS C - Program management	Various	Various : N/A	-	0.000		0.248	Nov 2023	0.273	Nov 2024	-		0.273	Continuing	Continuing	0.000
JBTDS - PM/MS S - Program Management	MIPR	Various : N/A	-	0.169	Mar 2023	0.938	Jan 2024	0.759	Jan 2025	-		0.759	Continuing	Continuing	0.000
MFK - PM/MS S - Program Management Office Support	MIPR	TBD : N/A	-	0.000		0.541	Oct 2023	0.562	Oct 2024	-		0.562	Continuing	Continuing	0.000
NBCRV SSU - PM/MS S - Program Management Support	Various	Various : N/A	-	2.194	Jan 2023	3.311	Jan 2024	3.358	Jan 2025	-		3.358	Continuing	Continuing	0.000
NGDS 2 CHEMDX - PM/MS S - Management Services	Various	Various : N/A	-	0.286	Nov 2022	0.859	Dec 2023	0.228	Dec 2024	-		0.228	Continuing	Continuing	0.000
NGDS 2 MPDS - PM/MS S - Management Services	Various	Various : N/A	-	0.402	Nov 2022	2.129	Dec 2023	1.565	Dec 2024	-		1.565	Continuing	Continuing	0.000
PCAD - PM/MS S - Program Management	MIPR	Various : N/A	-	0.000		0.000		0.799	Nov 2024	-		0.799	Continuing	Continuing	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PM2S - PM/MS C - Management for Algorithm Development	MIPR	Various : N/A	-	0.000		0.000		1.214	Nov 2024	-		1.214	Continuing	Continuing	0.000
SPU RCDD - PM/MS C - Program Management Support	Various	Various : N/A	-	0.986	Dec 2022	0.976	Dec 2023	0.986	Nov 2024	-		0.986	Continuing	Continuing	0.000
MPCAD - PM/MS S - Program Management Support	MIPR	Various : N/A	-	0.000	Mar 2023	0.785	Nov 2023	0.000		-		0.000	0.000	0.785	0.000
SPCHAR-ENBD - PM/MS C - Program Management	MIPR	Various : N/A	-	0.372	Jan 2023	0.000		0.000		-		0.000	0.000	0.372	0.000
		Subtotal	-	12.177		20.154		16.582		-		16.582	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	128.837		182.726		154.658		-		154.658	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

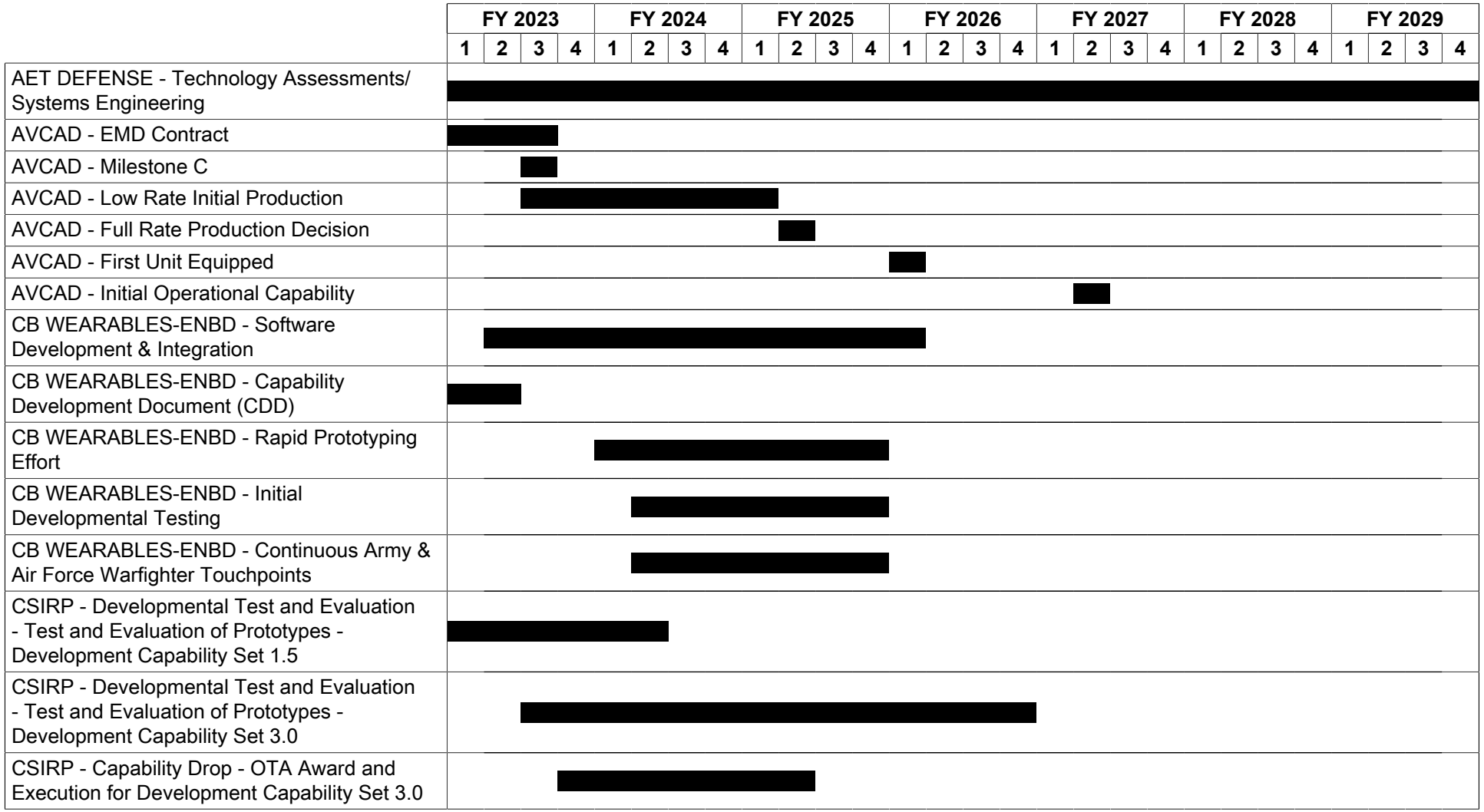

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

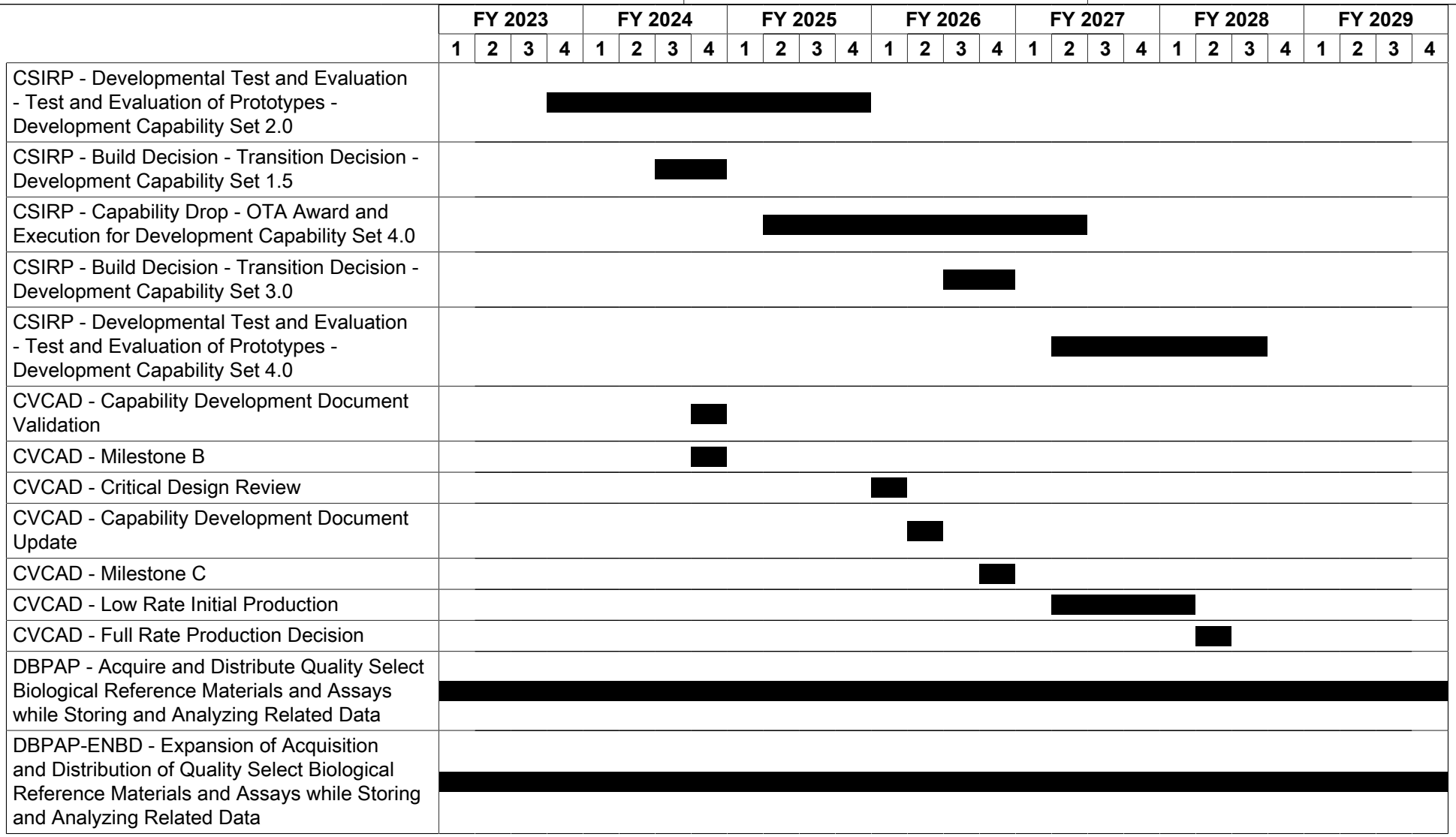

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

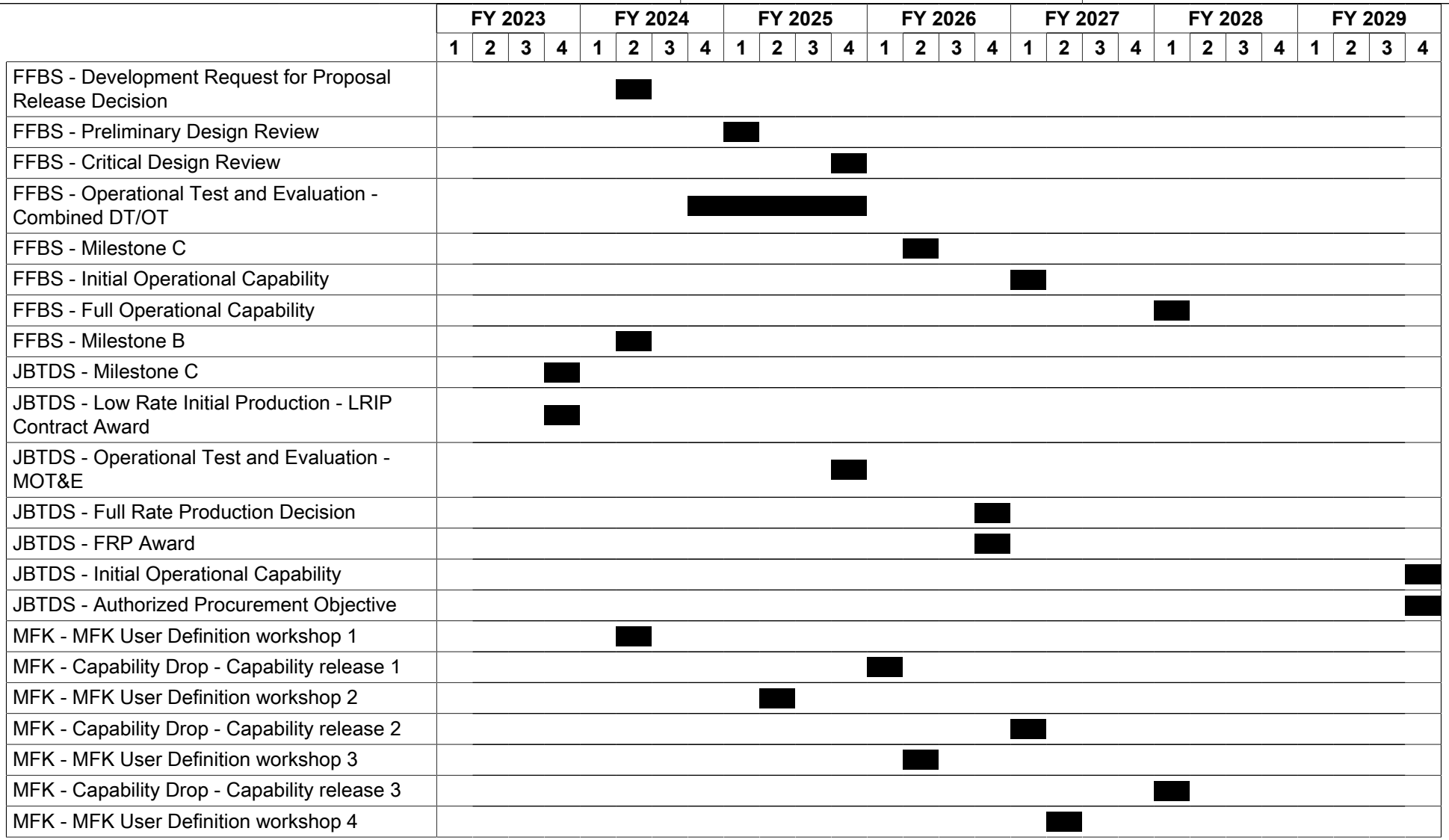

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

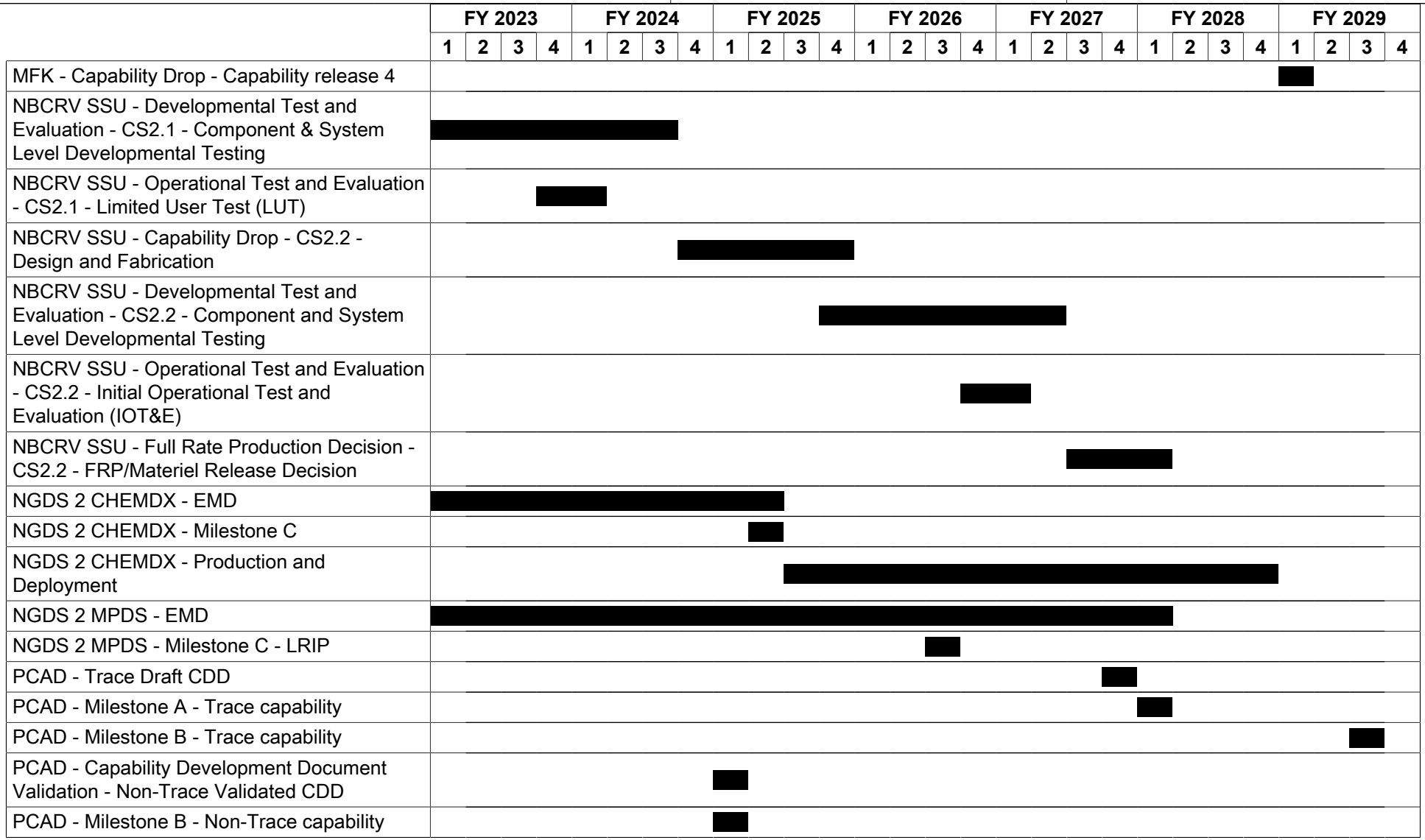

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

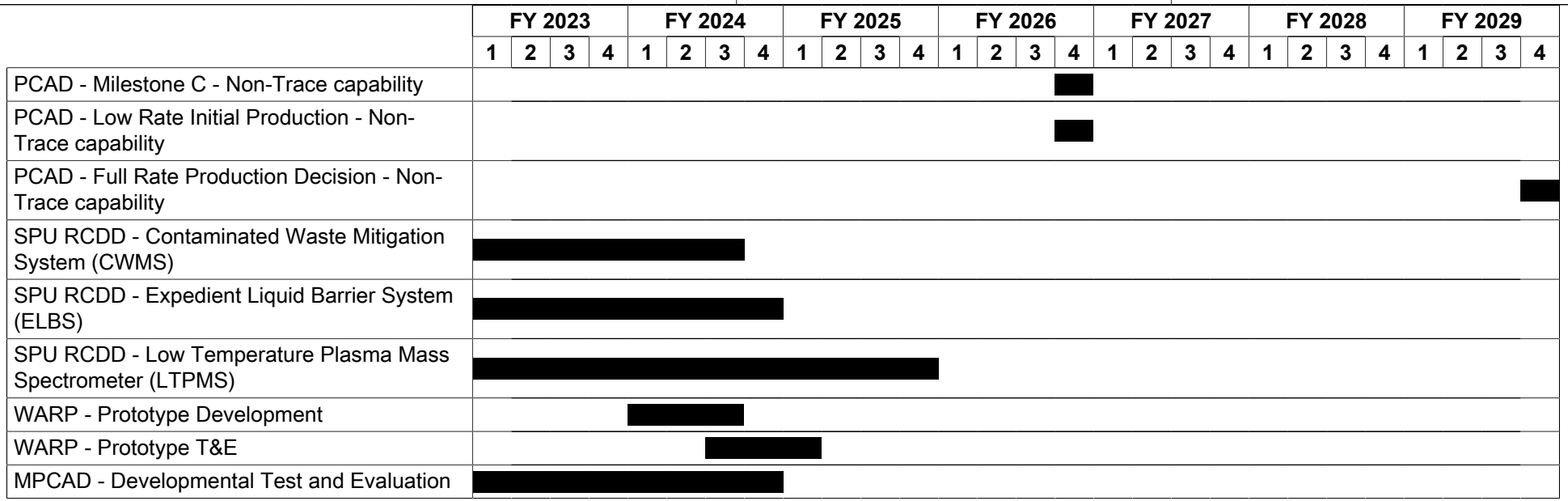

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
AET DEFENSE - Technology Assessments/Systems Engineering	1	2023	4	2029
AVCAD - EMD Contract	1	2023	3	2023
AVCAD - Milestone C	3	2023	3	2023
AVCAD - Low Rate Initial Production	3	2023	1	2025
AVCAD - Full Rate Production Decision	2	2025	2	2025
AVCAD - First Unit Equipped	1	2026	1	2026
AVCAD - Initial Operational Capability	2	2027	2	2027
CB WEARABLES-ENBD - Software Development & Integration	2	2023	1	2026
CB WEARABLES-ENBD - Capability Development Document (CDD)	1	2023	2	2023
CB WEARABLES-ENBD - Rapid Prototyping Effort	1	2024	4	2025
CB WEARABLES-ENBD - Initial Developmental Testing	2	2024	4	2025
CB WEARABLES-ENBD - Continuous Army & Air Force Warfighter Touchpoints	2	2024	4	2025
CSIRP - Developmental Test and Evaluation - Test and Evaluation of Prototypes - Development Capability Set 1.5	1	2023	2	2024
CSIRP - Developmental Test and Evaluation - Test and Evaluation of Prototypes - Development Capability Set 3.0	3	2023	4	2026
CSIRP - Capability Drop - OTA Award and Execution for Development Capability Set 3.0	4	2023	2	2025
CSIRP - Developmental Test and Evaluation - Test and Evaluation of Prototypes - Development Capability Set 2.0	4	2023	4	2025
CSIRP - Build Decision - Transition Decision - Development Capability Set 1.5	3	2024	4	2024
CSIRP - Capability Drop - OTA Award and Execution for Development Capability Set 4.0	2	2025	2	2027
CSIRP - Build Decision - Transition Decision - Development Capability Set 3.0	3	2026	4	2026

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
CSIRP - Developmental Test and Evaluation - Test and Evaluation of Prototypes - Development Capability Set 4.0	2	2027	3	2028
CVCAD - Capability Development Document Validation	4	2024	4	2024
CVCAD - Milestone B	4	2024	4	2024
CVCAD - Critical Design Review	1	2026	1	2026
CVCAD - Capability Development Document Update	2	2026	2	2026
CVCAD - Milestone C	4	2026	4	2026
CVCAD - Low Rate Initial Production	2	2027	1	2028
CVCAD - Full Rate Production Decision	2	2028	2	2028
DBPAP - Acquire and Distribute Quality Select Biological Reference Materials and Assays while Storing and Analyzing Related Data	1	2023	4	2029
DBPAP-ENBD - Expansion of Acquisition and Distribution of Quality Select Biological Reference Materials and Assays while Storing and Analyzing Related Data	1	2023	4	2029
FFBS - Development Request for Proposal Release Decision	2	2024	2	2024
FFBS - Preliminary Design Review	1	2025	1	2025
FFBS - Critical Design Review	4	2025	4	2025
FFBS - Operational Test and Evaluation - Combined DT/OT	4	2024	4	2025
FFBS - Milestone C	2	2026	2	2026
FFBS - Initial Operational Capability	1	2027	1	2027
FFBS - Full Operational Capability	1	2028	1	2028
FFBS - Milestone B	2	2024	2	2024
JBTDS - Milestone C	4	2023	4	2023
JBTDS - Low Rate Initial Production - LRIP Contract Award	4	2023	4	2023
JBTDS - Operational Test and Evaluation - MOT&E	4	2025	4	2025
JBTDS - Full Rate Production Decision	4	2026	4	2026
JBTDS - FRP Award	4	2026	4	2026

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
JBTDS - Initial Operational Capability	4	2029	4	2029
JBTDS - Authorized Procurement Objective	4	2029	4	2029
MFK - MFK User Definition workshop 1	2	2024	2	2024
MFK - Capability Drop - Capability release 1	1	2026	1	2026
MFK - MFK User Definition workshop 2	2	2025	2	2025
MFK - Capability Drop - Capability release 2	1	2027	1	2027
MFK - MFK User Definition workshop 3	2	2026	2	2026
MFK - Capability Drop - Capability release 3	1	2028	1	2028
MFK - MFK User Definition workshop 4	2	2027	2	2027
MFK - Capability Drop - Capability release 4	1	2029	1	2029
NBCRV SSU - Developmental Test and Evaluation - CS2.1 - Component & System Level Developmental Testing	1	2023	3	2024
NBCRV SSU - Operational Test and Evaluation - CS2.1 - Limited User Test (LUT)	4	2023	1	2024
NBCRV SSU - Capability Drop - CS2.2 - Design and Fabrication	4	2024	4	2025
NBCRV SSU - Developmental Test and Evaluation - CS2.2 - Component and System Level Developmental Testing	4	2025	2	2027
NBCRV SSU - Operational Test and Evaluation - CS2.2 - Initial Operational Test and Evaluation (IOT&E)	4	2026	1	2027
NBCRV SSU - Full Rate Production Decision - CS2.2 - FRP/Materiel Release Decision	3	2027	1	2028
NGDS 2 CHEMDX - EMD	1	2023	2	2025
NGDS 2 CHEMDX - Milestone C	2	2025	2	2025
NGDS 2 CHEMDX - Production and Deployment	3	2025	4	2028
NGDS 2 MPDS - EMD	1	2023	1	2028
NGDS 2 MPDS - Milestone C - LRIP	3	2026	3	2026
PCAD - Trace Draft CDD	4	2027	4	2027
PCAD - Milestone A - Trace capability	1	2028	1	2028

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** UN5 / *Understand (SDD)*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
PCAD - Milestone B - Trace capability	3	2029	3	2029
PCAD - Capability Development Document Validation - Non-Trace Validated CDD	1	2025	1	2025
PCAD - Milestone B - Non-Trace capability	1	2025	1	2025
PCAD - Milestone C - Non-Trace capability	4	2026	4	2026
PCAD - Low Rate Initial Production - Non-Trace capability	4	2026	4	2026
PCAD - Full Rate Production Decision - Non-Trace capability	4	2029	4	2029
SPU RCDD - Contaminated Waste Mitigation System (CWMS)	1	2023	3	2024
SPU RCDD - Expedient Liquid Barrier System (ELBS)	1	2023	4	2024
SPU RCDD - Low Temperature Plasma Mass Spectrometer (LTPMS)	1	2023	4	2025
WARP - Prototype Development	1	2024	3	2024
WARP - Prototype T&E	3	2024	1	2025
MPCAD - Developmental Test and Evaluation	1	2023	4	2024

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program											Date: March 2024	
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0604384BP / *Chemical and Biological Defense Program - EMD*				Project (Number/Name) PT5 / *Protect (SDD)*			
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
PT5: *Protect (SDD)*	-	86.221	97.975	41.664	0.000	41.664	25.670	15.951	34.836	58.658	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Protect System Development & Demonstration (SDD) Project enhances mission performance and provides effective protection against current and emerging threats by rapidly developing and fielding modernized protection capabilities. Developmental efforts focus on advances in materials and systems engineering to enhance protective properties against a broader array of hazards, while reducing Countering Weapons of Mass Destruction (CWMD) operational challenges and logistical burdens. Developmental efforts focus on advanced medical countermeasures that provide safe and effective medical defenses against biological agents (bacteria, toxins, and viruses), emerging infectious diseases, and chemical agents.

Efforts included in this Project are:

(1) Advanced System for Protection and Integration Reduction of Encumbrances (ASPIRE)
(2) Advanced System for Protection and Integration Reduction of Encumbrances - Enhanced Biological Defense (ASPIRE-ENBD)
(3) Botulinum Monoclonal Antibodies (BOT MAB)
(4) Collective Protection Conex - Enhanced Biological Defense (COL PRO CONEX-ENBD)
(5) Biological Containment Isolation System - Enhanced Biological Defense (BCIS-ENBD)
(6) Portable Patient Transport System - Enhanced Biological Defense (PPTS-ENBD)
(7) Shipboard Isolation System (SIS)
(8) Uniform Integrated Protective Ensemble Family of Systems Air (UIPE FOS AIR)
(9) Uniform Integrated Protective Ensemble Family of Systems General Purpose (UIPE FOS GP)
(10) Uniform Integrated Protective Ensemble Family of Systems Gloves (UIPE FOS GLOVES)
(11) Special Immunization Program (VAC SIP)
(12) Rapid Access to Products in Development (RAPID)

The Advanced System for Protection and Integrated Reduction of Encumbrances (ASPIRE) program allows near normal operations in a Chemical, Biological, Radiological, and Nuclear (CBRN) environment by minimizing or eliminating physical and psychological burden and increasing Warfighter lethality. The ASPIRE program will provide respiratory and ocular protection against CBRN threats. The program will provide the capability to incorporate upgrades into the current ground masks to improve the suit hood/mask interface (HMI) with Uniform Integrated Protective Ensemble Family of Systems General Purpose (UIPE FoS GP). In addition, this program, in conjunction with work by Joint Science and Technology Office (JSTO), will lay out the strategy and path forward required to minimize the burden to the warfighter while still providing respiratory and ocular protection against chemical, biological, radiological and nuclear agents. In FY25, ASPIRE/UIPE FoS HMI will continue to execute the phases of the Other Transactional Authority (OTA) Contract, perform developmental testing on interface prototypes and conduct acquisition program activities to include engineering reviews and documentation in support of the FY25 Milestone (MS) B decision review.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*

The ASPIRE ENBD is a new start program in FY24 and will support unencumbering warfighters and revolutionizing respiratory and ocular protection against Chemical, Biological, Radiological and Nuclear (CBRN) threats, including protection from biological, toxic industrial chemicals, and other emerging threats. ASPIRE-ENBD will provide a revolutionized capability to the Services for the next generation of respiratory and ocular protection by developing bio-masks that are low-burden, provide protection against bio threats, and are designed as a reusable system with modularity and/or scalability for additional ocular protection. In FY25, the ASPIRE-ENBD program will continue prototype development, evaluation, and testing for down selection of bio half mask and to inform the ASPIRE program.

The Botulinum Monoclonal Antibodies (BOT MAB) program will develop and deliver Food and Drug Administration (FDA) approved botulinum monoclonal antibodies to the warfighter. The BOT MAB will be a monoclonal antibody solution that protects the warfighter against exposure to botulinum toxins A and B. This product will do large scale Good Manufacturing Practices (GMP) in the DoD Advanced Development Manufacturing (ADM) facility. In FY25, BOT MAB will deliver a post exposure prophylaxis (PEP) pre-Emergency Use Authorization (pre-EUA) submission to the U.S. Food and Drug Administration (FDA) with the positioning of >5,000 doses to the Rapid Acquisition of Products in Development (RAPID) program that could be used in case of an emergency.

The Collective Protection CONEX-Enhanced Biological Defense (COL PRO CONEX-ENBD) is a new start program in FY24 and has been renamed the Biological Containment Isolation System-Enhanced Biological Defense (BCIS-ENBD) to accurately reflect the capability and applicability of the system. Funding has been transferred in FY25.

The Biological Containment Isolation System - Enhanced Biological Defense (BCIS-ENBD) will provide a negative pressure shelter system for medical treatment of biologically contaminated patients in an Army field hospital environment. BCIS-ENBD will provide a ground-based isolation area for personnel infected or suspected of infection from a biological threat and allows medical staff to monitor and/or treat while decreasing the risk of infecting other patients and staff. This project was funded in FY24 under the Collective Protection CONEX-Enhanced Biological Defense (COL PRO CONEX-ENBD) effort, and was renamed BCIS-ENBD to accurately reflect the capability and applicability of the system. In FY25, BCIS-ENBD will complete concept design, system planning and conduct an initial concept demonstration.

The Portable Biocontainment Patient Transport System-Enhanced Biodefense (PPTS-ENBD) is a new start program in FY24 and will provide a biocontainment isolation system to safely transport personnel infected or suspected of infection from a biological threat. In FY25, PPTS ENBD will begin system test and evaluation and develop logistics products.

The Shipboard Isolation System (SIS) is a new start program in FY24 and will provide the capability to temporarily isolate or quarantine personnel to prevent the spread of a biological threat and safely evacuate patients for transfer off the ship. SIS will be used on multiple Navy ship types to contain and medically monitor/treat patients while protecting embarked crew and personnel. In FY25, SIS will release Request for Proposals (RFP), award contract for prototypes, and delivery of prototypes.

The Uniform Integrated Protective Ensemble Family of Systems Air (UIPE FoS Air) program will provide the warfighter percutaneous protection from operationally relevant traditional and non-traditional Chemical, Biological, Radiological, Nuclear (CBRN) threats. UIPE FoS Air will improve aircrew performance and survivability under CBRN conditions by reducing thermal burden and bulk, while increasing mobility and resulting in an increase operational effectiveness. The UIPE FoS Air is composed of two variants. The UIPE FoS Air Chemical, Biological, Radiological Layer (CBRL) to address the specific requirements of the United States Air Force

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*

(USAF) tactical/ejection fixed wing platforms and the Two Piece Undergarment (2PUG) to address the remaining USAF and United States Navy / United States Marine Corps tactical/ejection seat (rotary wing) and non-ejection (fixed wing) platforms.

The Uniform Integrated Protective Ensemble Family of Systems General Purpose (UIPE FoS GP) is part of a family of systems that will give the warfighter percutaneous protection from operationally relevant traditional, non-traditional, and advanced Chemical, Biological, Radiological and Nuclear (CBRN)/Toxic Industrial Material (TIM) threats likely to be encountered during joint force operations. The legacy chemical biological garment is nearing the end of its service life and does not meet updated requirements. The UIPE FoS GP is a two-piece lightweight (compared to the legacy system) duty uniform-like replacement. In FY25, program will begin Multi Service Operational Test and Evaluation (MOT&E) and continue low rate initial production (LRIP). FY25 is last year of BA5 funding, program is transitioning to Production and Deployment Phase.

The Uniform Integrated Protective Ensemble Family of Systems Gloves (UIPE FOS GLOVES) program provides percutaneous protection to the hand and wrist interface of the warfighter against traditional and non-traditional Chemical, Biological, Radiological and Nuclear (CBRN) threats. UIPE FoS Gloves will provide improved comfort, tactility and dexterity and for certain mission profiles enhanced touch screen and flame resistant capability. In FY25, the UIPE FoS Gloves program will complete Developmental Testing/Operational Testing (DT/OT) and go to Full Rate Production (FRP) decision.

The Special Immunizations Program (VAC SIP) restructures to the Rapid Access to Products in Development (RAPID) program in FY24. VAC SIP continually manages, updates, and executes the Investigational New Drugs (INDs) of selected prophylaxis, treatments and diagnostics development products which provide additional protection to individuals that are at high risk of exposure to CBRN agents. DoD has the mission to maintain IND vaccines in Good Manufacturing Practice (GMP) storage and to conduct the periodic potency and stability testing of these materials to support submissions to the U.S. Food & Drug Administration (FDA).

RAPID (Rapid Access to Products in Development) an FY24 restructure of the VAC SIP program, will allow access to prototype medical countermeasures (MCMs) that are being developed to differential states of readiness by storing and maintaining data packages and doses of countermeasures. These data packages and doses enable Interim Fielding Capability (IFC), continued development, or transition to other USG partners as a Programs of Record. In FY25 RAPID will continue to employ a tiered system to increase clarity of each MCM's state of development and how quickly/costly it will be to achieve IFC.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: 1) ASPIRE	-	4.776	6.962
Description: Respiratory and Ocular Protection Development			
FY 2024 Plans: Initiate optimization of the current ground mask systems to address suit hood/mask interface and conduct prototype build and evaluation of suit hood/mask interface improvements into current ground masks for down selection and refinement.			
FY 2025 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Perform developmental testing (DT) on interface prototypes. Conduct acquisition program activities to include engineering reviews and documentation in support of the FY25 Milestone (MS) B decision review. Execute the phases of the Other Transactional Authority (OTA) Contract. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase supports activities, including DT, to support an MS B decision in FY25.			
Title: 2) ASPIRE-ENBD ***Description:*** Development of Low burden mask for biological protection ***FY 2024 Plans:*** Initiate bio mask/half-mask prototype development and evaluation for down selection and refinement. ***FY 2025 Plans:*** Continue prototype evaluation, and testing of bio mask. Incorporate initial user feedback and evaluations into prototype. Evaluate ocular protection scalability to inform ASPIRE program. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase due to conducting multiple prototype development and evaluation builds of bio masks and incorporating scalability for ocular protection into prototypes.	-	1.600	1.850
Title: 3) BOT MAB - Manufacturing ***Description:*** Manufacturing ***FY 2024 Plans:*** Complete large scale GMP manufacturing and initiate Process Qualification runs for final drug product. ***FY 2025 Plans:*** Submit a pre-Emergency Use Authorization (pre-EUA) to the U.S. Food and Drug Administration (FDA) and program closeout. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Decrease due to program entering completion and will transition product to the Rapid Acquisition of Products in Development (RAPID) program.	34.271	16.528	1.000
Title: 4) BOT MAB - Clinical and Nonclinical Studies ***Description:*** Clinical and Nonclinical Studies ***FY 2024 Plans:***	27.744	48.000	3.826

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Complete large scale Good Manufacturing Practices (GMP) manufacturing and initiate Process Qualification runs for final drug product. ***FY 2025 Plans:*** Complete the Clinical comparability study and final nonclinical studies. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Decrease due to program entering completion and will transition product to the Rapid Acquisition of Products in Development (RAPID) program.			
Title: 5) COL PRO CONEX-ENBD ***Description:*** Prototype, test and evaluate ground based biocontainment isolation systems. ***FY 2024 Plans:*** Complete concept design, system planning and conduct an initial concept demonstration. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Program funding transferred due to program name change from Collective Protection CONEX-Enhanced Biological Defense (COL PRO CONEX-ENBD) to Biological Containment Isolation System-Enhanced Biological Defense (BCIS-ENBD).	-	4.600	-
Title: 6) BCIS-ENBD ***Description:*** Prototype, test and evaluate ground based biocontainment isolation systems. ***FY 2025 Plans:*** Complete system design. Conduct developmental testing. Generate program Technical Manuals and supporting documentation. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Program funding transferred due to program name change from Collective Protection CONEX-Enhanced Biological Defense (COL PRO CONEX-ENBD) to Biological Containment Isolation System-Enhanced Biological Defense (BCIS-ENBD) to accurately reflect the capability and applicability of the system. Decrease due to completion of concept demonstration and design as well as initial prototyping.	-	-	2.100
Title: 7) PPTS-ENBD ***Description:*** Prototype, test and evaluate Portable Patient Transport Systems for biocontainment and isolation. ***FY 2024 Plans:***	-	5.300	5.300

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Begin system test and evaluation and develop logistics products. ***FY 2025 Plans:*** Continue system test and evaluation and developing logistics products. Initiate Multi-service Operational Test and Evaluation (MOT&E)			
Title: 8) SIS ***Description:*** Prototype Development and Testing ***FY 2024 Plans:*** Begin system planning and award Countering Weapons of Mass Destruction Other Transaction Authority (CWMD OTA) Prototype Contract. ***FY 2025 Plans:*** Finalize prototype contract award and initiate fabrication and testing. Update system specifications and technical documentation ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding increase accounts for FY25 prototype contract award and to begin prototype test and evaluation.	-	0.976	3.035
Title: 9) UIPE FOS AIR ***Description:*** Test and Integration of the 2 Piece Undergarment (2PUG)	0.600	-	-
Title: 10) UIPE FOS GP ***Description:*** Development of the next generation protective ensembles. ***FY 2024 Plans:*** Conduct Multi Service Operational Test and Evaluation (MOT&E) and evaluate program cost reduction material alternatives. ***FY 2025 Plans:*** Begin Multi Service Operational Test and Evaluation (MOT&E) and continue low rate initial production (LRIP). ***FY 2024 to FY 2025 Increase/Decrease Statement:*** BA5 funding ramps down as program completes transition to the Production and Deployment Phase.	9.388	7.052	5.925
Title: 11) UIPE FOS GLOVES ***Description:*** Development of the Next Generation Protective Glove ***FY 2024 Plans:***	7.410	3.856	1.759

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Conduct developmental testing, complete prototype development on multiple mission profiles (General Purpose, Aviation Heavy and Aviation Light) and conduct operational testing on prototypes for the multiple mission profiles. ***FY 2025 Plans:*** Achieve MS C and Full Rate Production (FRP) decision, complete Developmental Testing/Operational Testing (DT/OT). ***FY 2024 to FY 2025 Increase/Decrease Statement:*** BA5 funding ramps down as program completes transition to the Production and Deployment Phase.			
Title: 12) VAC SIP ***Description:*** Storage, Distribution, Potency Testing	6.808	-	-
Title: 13) RAPID ***Description:*** Storage, Stability, Testing ***FY 2024 Plans:*** Initiate RAPID storage and stability testing by leveraging existing Accelerated Antibodies-Enhanced Biodefense (AA-ENBD), Vaccine Acceleration by Modular Progression-Enhanced Biodefense (VAMP-ENBD), RAIDR, and Generative Unconstrained Intelligent Drug Engineering-Enhanced Biodefense (GUIDE-ENBD) program data packages and prototype doses; Design and build a RAPID database that will be the interface for Department of Defense stakeholders for key data associated with the status and availability of medical countermeasures in development. ***FY 2025 Plans:*** Continue the development/optimization of RAPID database to include implementation of the first version; release incremental RAPID database updates to stakeholders; evaluate RAPID operational capability through stakeholder exercises. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Additional investment for increased preparedness and access to additional MCMs.	-	5.287	9.907
Accomplishments/Planned Programs Subtotals	86.221	97.975	41.664

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• PT4: *Protect (ACD&P)*	170.788	179.158	172.190	-	172.190	154.024	131.577	137.660	120.758	Continuing	Continuing
• PT7: *Protect (Op Sys Dev)*	19.649	26.818	22.815	-	22.815	15.610	14.319	13.717	10.220	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program			Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*	

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• PHM039: *Botulinum Monoclonal Antibodies (BOT MAB)*	-	-	-	-	-	-	-	-	-	0.000	0.000
• JP1111: *Joint Expeditionary Collective Protection (JECP)*	29.295	-	-	-	-	3.750	3.000	-	-	Continuing	Continuing
• PHM034: *Uniform Integrated Protection Ensemble Family of Systems Air (UIPE FOS AIR)*	23.407	25.794	26.195	-	26.195	17.943	0.475	0.492	0.492	Continuing	Continuing
• PHM033: *Uniform Integrated Protective Ensemble Family of Systems General Purpose (UIPE FOS GP)*	30.145	55.100	82.861	-	82.861	101.750	99.653	110.658	145.328	Continuing	Continuing
• PHM032: *Uniform Integrated Protective Ensemble Family of Systems Gloves (UIPE FOS GLOVES)*	-	4.978	6.215	-	6.215	7.974	8.328	8.926	9.478	Continuing	Continuing

Remarks

D. Acquisition Strategy

Advanced System for Protection and Integration Reduction of Encumbrances (ASPIRE)

The Advanced System for Protection and Integration Reduction of Encumbrances (ASPIRE) next generation respirator efforts will focus providing upgrades improving the hood/mask interface (HMI) utilizing the Countering Weapons of Mass Destruction Other Transaction Authority (CWMD OTA). Prototypes will be developed and produced for test and evaluation and eventual down selection to a final solution.

Advanced System for Protection and Integration Reduction of Encumbrances - Enhanced Biological Defense (ASPIRE-ENBD)

The ASPIRE-ENBD Efforts will be accomplished by awarding an agreement through the Countering Weapons of Mass Destruction Other Transaction Authority (CWMD OTA) to develop prototype for evaluation and further refinement.

Botulinum Monoclonal Antibodies (BOT MAB)

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*

The Botulinum Monoclonal Antibodies (BOT MAB) program is the development of a Post-Exposure Prophylaxis (PEP) through the Engineering, Manufacturing and Development (EMD) phase against the Botulinum Neuro Toxin (BoNT). This Medical Countermeasure (MCM) will reduce the incidence or progression of botulism disease, following exposure to BoNT serotypes A and B. The program will deliver a PEP pre-Emergency Use Authorization (pre-EUA) submission to the U.S. Food and Drug Administration (FDA) with the positioning of >5,000 doses to the Rapid Acquisition of Products in Development (RAPID) program that could be used in case of an emergency.

Biological Containment Isolation System - Enhanced Biological Defense (BCIS-ENBD)

The BCIS-ENBD approach will fund prototype system design and development through the Countering Weapons of Mass Destruction Other Transaction Agreement (CWMD OTA) contract. Prototypes will undergo evaluation and further refinement to optimize performance and minimize total ownership cost.

Portable Patient Transport System - Enhanced Biological Defense (PPTS-ENBD)

The PPTS-ENBD effort will resource prototype system design and development through the Countering Weapons of Mass Destruction Other Transaction Authority (CWMD OTA). Leverage lessons learned from previous efforts to optimize performance and minimize total ownership cost.

Shipboard Isolation System (SIS)

The SIS program will utilize the Countering Weapons of Mass Destruction Other Transaction Authority (CWMD OTA) to design, procure, and test iterative prototypes to meet the shipboard isolation requirements. Once a final prototype design is selected and successfully completes testing and user evaluations, a technical data package (TDP) and logistics package will be developed. The program will culminate in the procurement and fielding of systems for ship use that will be stored at fleet concentration areas on both CONUS and OCONUS locations.

Uniform Integrated Protective Ensemble Family of Systems Air (UIPE FOS AIR)

The UIPE FoS Air utilizes a streamlined acquisition strategy that identifies mature technology and capitalizes on work accomplished by the United States Air Force (USAF) Integrated Aircrew Ensemble (IAE) and UIPE FoS General Purpose (GP) programs. The UIPE FoS Air will utilize a Milestone A-C acquisition strategy that will accelerate fielding to the warfighter. The contract strategy leveraged the USAF IAE Small Business Innovation Research (SBIR) Phase III contract to procure UIPE Air CBRL. The UIPE FoS Air 2PUG is a government owned design and as an item on the Federal Procurement List, will be produced by Source America and Ready One Industries.

Uniform Integrated Protective Ensemble Family of Systems General Purpose (UIPE FOS GP)

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*

The UIPE FoS GP program used the Countering Weapons of Mass Destruction Other Transaction Authority (CWMD OTA) and Government designed prototypes produced in conjunction with an Industry Partner to acquire prototypes for early user testing. UIPE FoS GP executed multiple awards leading to MS C in FY24 to allow for completion of UIPE evaluation (effectiveness, suitability and survivability) prior to award of a high ceiling production contract. In FY23,the program began a cost reduction initiative to evaluate alternative materials as well as non-material design changes. Any material or non-material changes will be implemented in the form of product improvement insertions as the program continues forward in the acquisition process.

Uniform Integrated Protective Ensemble Family of Systems Gloves (UIPE FOS GLOVES)

The UIPE FOS Gloves program will utilize the Countering Weapons of Mass Destruction Other Transaction Authority (CWMD OTA) to conduct market research through Requests for Information (RFIs) and a call for White Papers. A Middle Tier Acquisition Rapid Prototyping strategy was used. Testing characterized chemical protection performance, interoperability, operation in induced and natural environments, and availability and logistical supportability. Developmental Testing/Operational Testing (DT/OT) will further evaluate the performance of the UIPE FoS Glove solutions at both a material and system level.

SPECIAL IMMUNIZATION PROGRAM (VAC SIP) (VAC SIP)

The SIP program manages the continual storage, testing, compliance, and distribution activities associated with Investigational New Drugs (INDs) for legacy prophylactic medical countermeasures, as well as the recent Bot and Plague vaccine candidates. Additionally, the SIP maintains interagency agreements with US Army Medical Research and Development Command to support testing and compliance requirements. This Department of Defense program supports the Federal interagency with this effort, as well as academic and industry partners.

Rapid Access to Products in Development (RAPID)

RAPID will leverage existing Chemical Biological Defense Program (CBDP) development programs within the Joint Program Executive Office for Chemical, Biological, Radiological, and Nuclear Defense (JPEO-CBRND) and Defense Threat Reduction Agency (DTRA)-Joint Science and Technology Office (JSTO) to build a repository of MCMs at different readiness levels, in order to establish a rapid response capability by providing access to products still in development.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program			Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ASPIRE - HW S - Prototype Development ASPIRE (HMI)	C/FFP	ATI Solutions, Inc. : Tysons Corner, VA	-	0.000		2.708	Jan 2024	3.326	May 2025	-		3.326	Continuing	Continuing	0.000
ASPIRE-ENBD - HW C - Bio half-mask Prototype Development	TBD	Various : N/A	-	0.000		0.700	Dec 2023	0.425	Jan 2025	-		0.425	Continuing	Continuing	0.000
BOT MAB - SW C - BOT MONO	C/CPFF	Resilience Government Services, Inc. : Alachua, Florida	-	49.328	Dec 2022	54.011	Dec 2023	4.826	Dec 2024	-		4.826	Continuing	Continuing	0.000
COL PRO CONEX-ENBD - HW S - Concept Design	Various	TBD : N/A,	-	0.000		2.187	Nov 2023	0.000		-		0.000	0.000	2.187	0.000
BCIS-ENBD - HW S - Concept Design	Various	TBD : N/A	-	0.000		0.000		1.000	Jan 2025	-		1.000	Continuing	Continuing	0.000
PPTS-ENBD - HW S - Prototyping Contract	TBD	TBD : N/A	-	0.000		2.461	Jan 2024	0.698	Jan 2025	-		0.698	Continuing	Continuing	0.000
SIS - HW S - Develop Requirements and Specifications, Develop Shipboard Isolation System Concepts	TBD	TBD : N/A	-	0.000		0.481	Dec 2023	1.256	Jun 2025	-		1.256	Continuing	Continuing	0.000
UIPE FOS GP - HW C - Prototype Development	MIPR	TBD : N/A	-	1.055	Sep 2023	1.750	Nov 2023	0.200	Nov 2024	-		0.200	Continuing	Continuing	0.000
UIPE FOS GLOVES - HW C - Prototype Manufacturing, Demonstration and Down-select	MIPR	Various : N/A	-	0.218	Jul 2023	0.400	Nov 2023	0.000		-		0.000	0.000	0.618	0.000
		Subtotal	-	50.601		64.698		11.731		-		11.731	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program			Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ASPIRE - ES C - Engineering Support ASPIRE (HMI)	Various	Various : N/A	-	0.000		0.716	Nov 2023	1.487	Nov 2024	-		1.487	Continuing	Continuing	0.000
ASPIRE-ENBD - ES S - Engineering and Technical Support	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	0.000		0.240	Nov 2023	0.661	Nov 2024	-		0.661	Continuing	Continuing	0.000
BOT MAB - PM/MS C - BOT MONO	Various	JPEO Chem, Bio, Rad, and Nuc Defense (JPEO-CBRND) : Aberdeen Proving Ground, MD	-	6.202	Dec 2022	4.517	Dec 2023	0.000		-		0.000	0.000	10.719	0.000
BOT MAB - PM/MS C - BOT MONO	Various	ATI Solutions, Inc. : Tysons Corner, VA	-	6.485	Mar 2023	6.000	Dec 2023	0.000		-		0.000	0.000	12.485	0.000
COL PRO CONEX-ENBD - ES S - Engineering, Logistics, Technical, IPT Support	MIPR	Various : N/A	-	0.000		0.956	Nov 2023	0.000		-		0.000	0.000	0.956	0.000
BCIS-ENBD - ES S - Engineering, Logistics, Technical, IPT Support	MIPR	Various : N/A	-	0.000		0.000		0.321	Nov 2024	-		0.321	Continuing	Continuing	0.000
PPTS-ENBD - ES S - Engineering, Logistics, Technical, IPT Support	MIPR	Various : N/A	-	0.000		1.962	Nov 2023	1.521	Nov 2024	-		1.521	Continuing	Continuing	0.000
SIS - ES S - Engineering, Logistics, Technical, IPT Support	TBD	TBD : N/A	-	0.000		0.150	Dec 2023	0.466	Dec 2024	-		0.466	Continuing	Continuing	0.000
UIPE FOS AIR - ES C - Engineering and IPT Support	Various	Various : N/A	-	0.090	Nov 2022	0.000		0.000		-		0.000	0.000	0.090	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program			Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
UIPE FOS GP - ILS C - Integrated Log Support-System	Various	Various : N/A	-	0.588	Nov 2022	0.442	Nov 2023	0.378	Nov 2024	-		0.378	Continuing	Continuing	0.000
UIPE FOS GP - ES C - Engineering & Technical IPT Support / SME Support	Various	Various : N/A	-	0.820	Nov 2022	0.610	Nov 2023	0.510	Nov 2024	-		0.510	Continuing	Continuing	0.000
UIPE FOS GLOVES - ES C - Engineering, Logistics, Technical, IPT Support	MIPR	Various : N/A	-	0.827	Nov 2022	0.578	Nov 2023	0.263	Nov 2024	-		0.263	Continuing	Continuing	0.000
		Subtotal	-	15.012		16.171		5.607		-		5.607	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ASPIRE - OTHT C - Prototype Evaluation ASPIRE (HMI)	Various	Various : N/A	-	0.000		1.157	Nov 2023	1.450	Nov 2024	-		1.450	Continuing	Continuing	0.000
ASPIRE-ENBD - OTHT C - Prototype Evaluation	MIPR	Various : N/A	-	0.000		0.562	Dec 2023	0.487	Dec 2024	-		0.487	Continuing	Continuing	0.000
COL PRO CONEX-ENBD - DTE C - T&E Support	MIPR	Various : N/A	-	0.000		1.175	Nov 2023	0.000		-		0.000	0.000	1.175	0.000
BCIS-ENBD - DTE S - Test and Evaluation	MIPR	Various : N/A	-	0.000		0.000		0.537	Nov 2024	-		0.537	Continuing	Continuing	0.000
PPTS-ENBD - DTE S - T&E Support	MIPR	Various : N/A	-	0.000		0.552	Nov 2023	2.519	Nov 2024	-		2.519	Continuing	Continuing	0.000
SIS - DTE S - Develop T&E strategy, Provide T&E Inputs to Contract Documentation, Begin T&E	TBD	TBD : N/A	-	0.000		0.285	Dec 2023	0.982	Dec 2024	-		0.982	Continuing	Continuing	0.000
UIPE FOS AIR - DTE C - System Level Testing	Various	Various : N/A	-	0.452	Nov 2022	0.000		0.000		-		0.000	0.000	0.452	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
UIPE FOS GP - DTE C - DT/OT	Various	Various : N/A	-	6.007	Nov 2022	3.993	Nov 2023	4.242	Nov 2024	-		4.242	Continuing	Continuing	0.000
UIPE FOS GLOVES - OTE S - Final DT/OT, Operational Demos	MIPR	Various : N/A	-	5.911	Nov 2022	2.642	Nov 2023	1.320	Nov 2024	-		1.320	Continuing	Continuing	0.000
VAC SIP - OTHT C - Storage and Distribution of Vaccines	SS/FP	Fisher BioServices : Rockville, MD	-	1.365	Mar 2023	0.000		0.000		-		0.000	0.000	1.365	0.000
VAC SIP - OTHT C - Potency Testing of Vaccines	MIPR	US Army Medical Research Institute of Infectious Disease (USAMRIID) : Fort Detrick, MD	-	1.196	Mar 2023	0.000		0.000		-		0.000	0.000	1.196	0.000
VAC SIP - OTHT C - Potency Testing of Vaccines	C/CPFF	Battelle Memorial Institute : Columbus, OH	-	1.642	Jan 2023	0.000		0.000		-		0.000	0.000	1.642	0.000
VAC SIP - OTHT C - BOT & PLG Stability	C/CPFF	TBD : N/A	-	2.080	Jan 2023	0.000		0.000		-		0.000	0.000	2.080	0.000
RAPID - OTHT C - Testing, Stability	TBD	Various : N/A	-	0.000		4.927	Dec 2023	9.015	Dec 2024	-		9.015	Continuing	Continuing	0.000
		Subtotal	-	18.653		15.293		20.552		-		20.552	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ASPIRE - PM/MS S - Management Support Services ASPIRE (HMI)	Various	Various : N/A	-	0.000		0.195	Nov 2023	0.699	Nov 2024	-		0.699	Continuing	Continuing	0.000
ASPIRE-ENBD - PM/MS C - Program Management Support	Various	Various : N/A	-	0.000		0.098	Dec 2023	0.277	Nov 2024	-		0.277	Continuing	Continuing	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
COL PRO CONEX-ENBD - PM/MS S - Program Management	MIPR	Various : N/A	-	0.000		0.282	Nov 2023	0.000		-		0.000	0.000	0.282	0.000
BCIS-ENBD - PM/MS S - Program Management	MIPR	Various : N/A	-	0.000		0.000		0.242	Nov 2024	-		0.242	Continuing	Continuing	0.000
PPTS-ENBD - PM/MS S - Program Management	MIPR	Various : N/A	-	0.000		0.325	Nov 2023	0.562	Nov 2024	-		0.562	Continuing	Continuing	0.000
SIS - PM/MS S - Program Management Support	Various	Various : N/A	-	0.000		0.060	Dec 2023	0.331	Dec 2024	-		0.331	Continuing	Continuing	0.000
UIPE FOS AIR - PM/MS C - Program Management Services	MIPR	Various : N/A	-	0.058	Nov 2022	0.000		0.000		-		0.000	0.000	0.058	0.000
UIPE FOS GP - PM/MS C - Program Management Support	Various	Various : N/A	-	0.918	Nov 2022	0.257	Nov 2023	0.595	Nov 2024	-		0.595	Continuing	Continuing	0.000
UIPE FOS GLOVES - PM/MS C - Program Management Support	Various	Various : N/A	-	0.454	Dec 2022	0.236	Nov 2023	0.176	Nov 2024	-		0.176	Continuing	Continuing	0.000
VAC SIP - PM/MS S - PM Support	Various	JPL CBRND Enabling Biotechnologies, JPEO-CBRND : Fort Detrick, MD	-	0.525	Jan 2023	0.000		0.000		-		0.000	0.000	0.525	0.000
RAPID - PM/MS C - Program Management	C/CPFF	Various : N/A	-	0.000		0.360	Dec 2023	0.892	Dec 2024	-		0.892	Continuing	Continuing	0.000
		Subtotal	-	1.955		1.813		3.774		-		3.774	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	86.221		97.975		41.664		-		41.664	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*

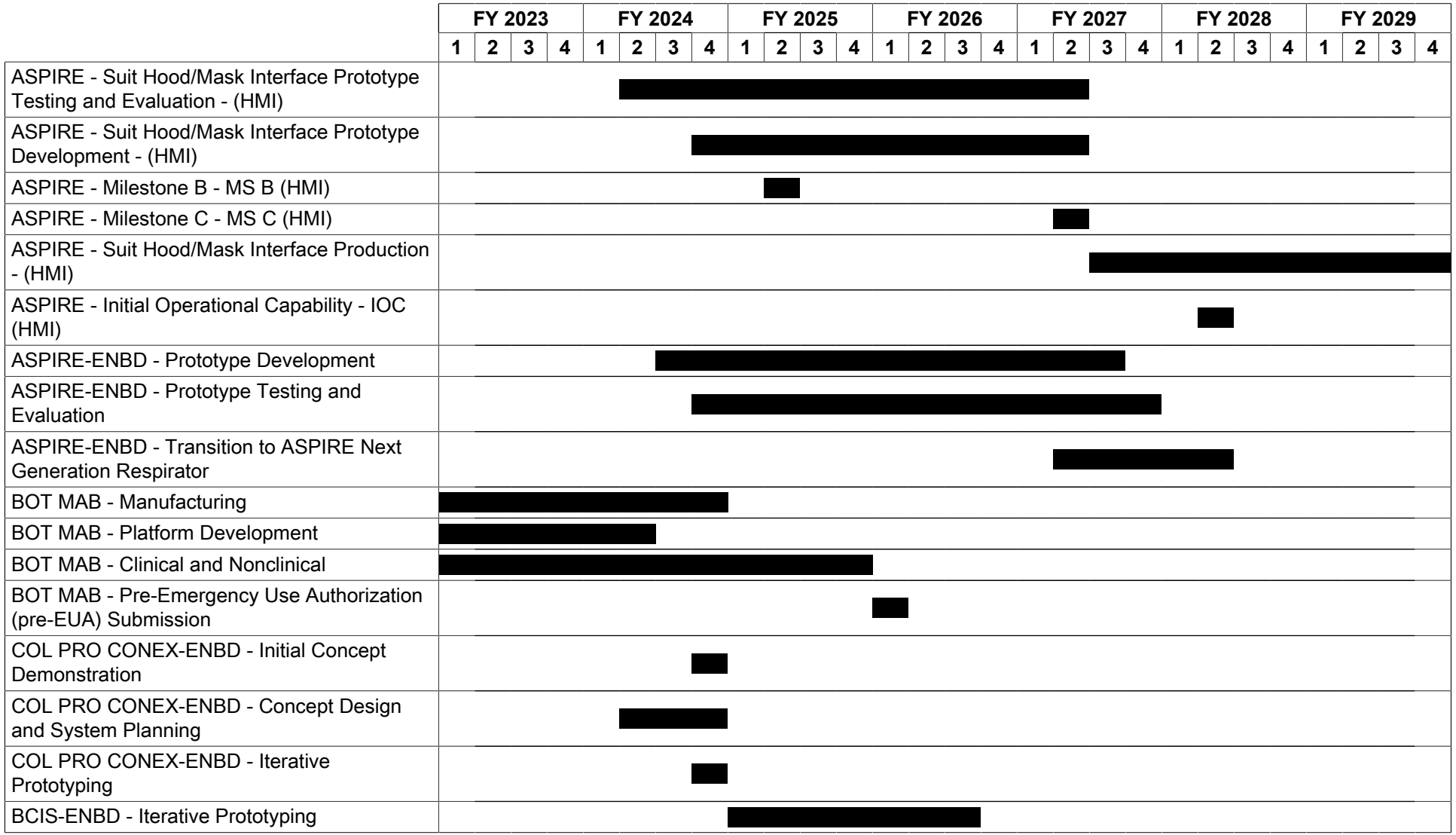

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*

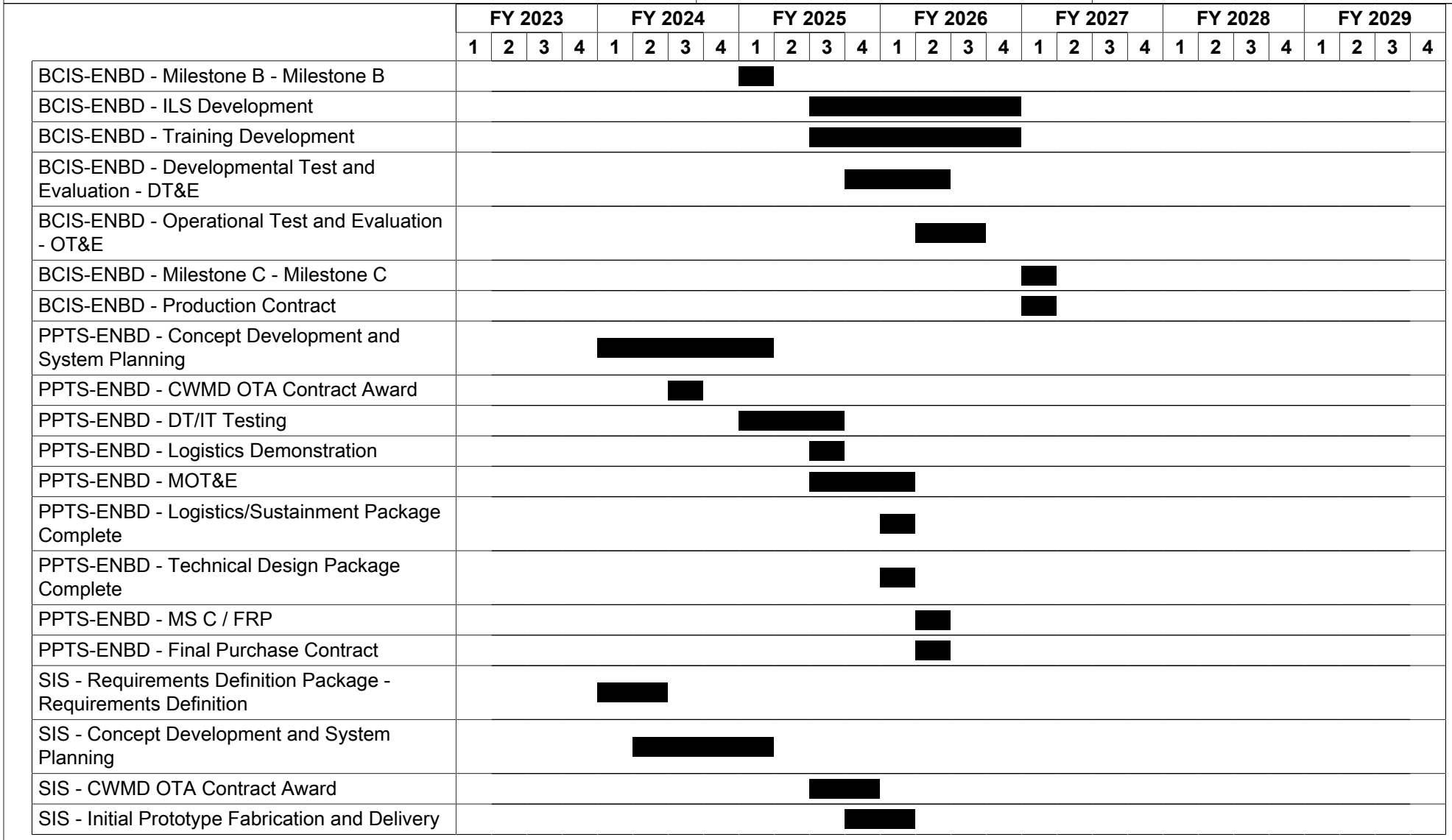

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*

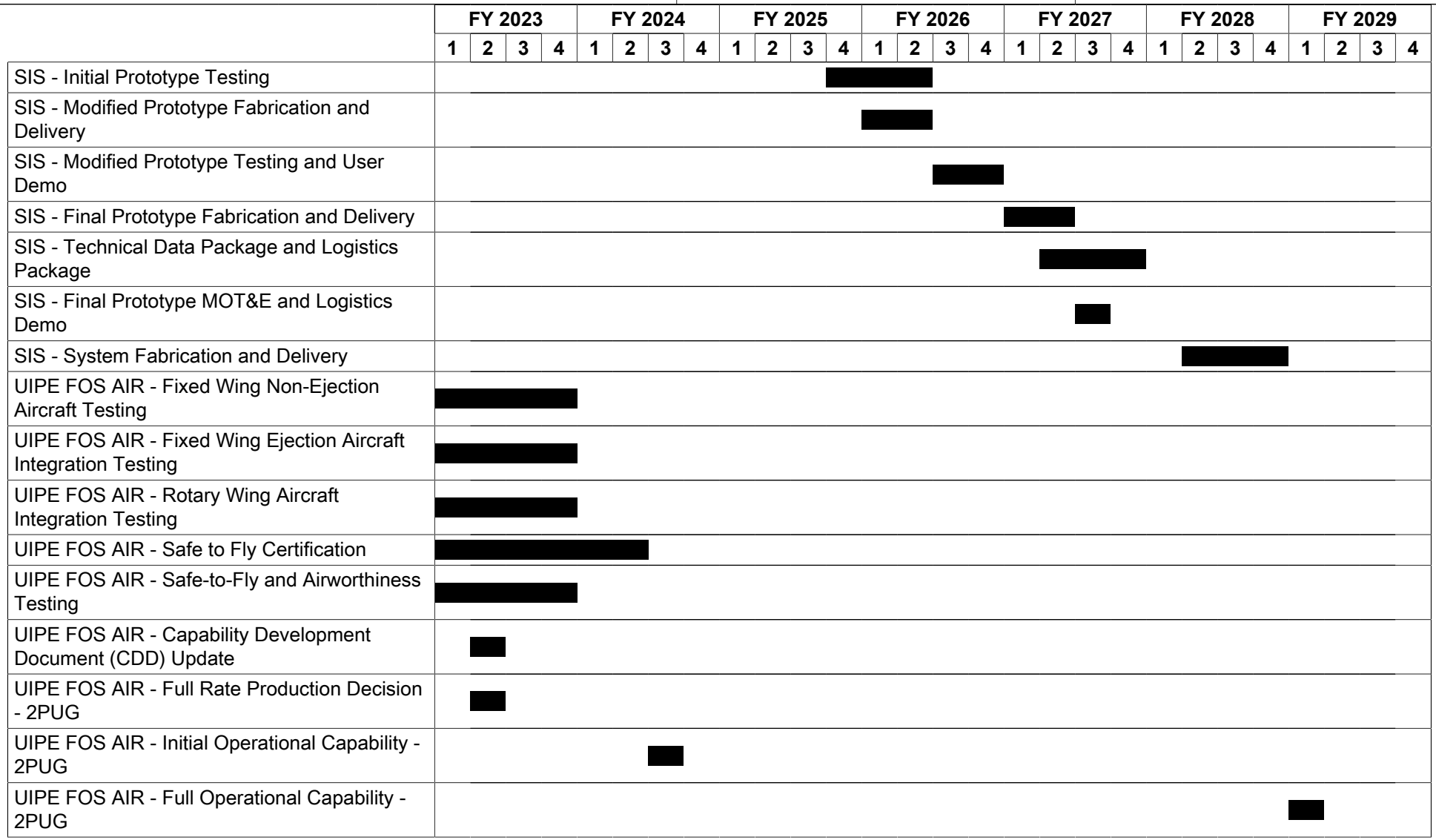

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*

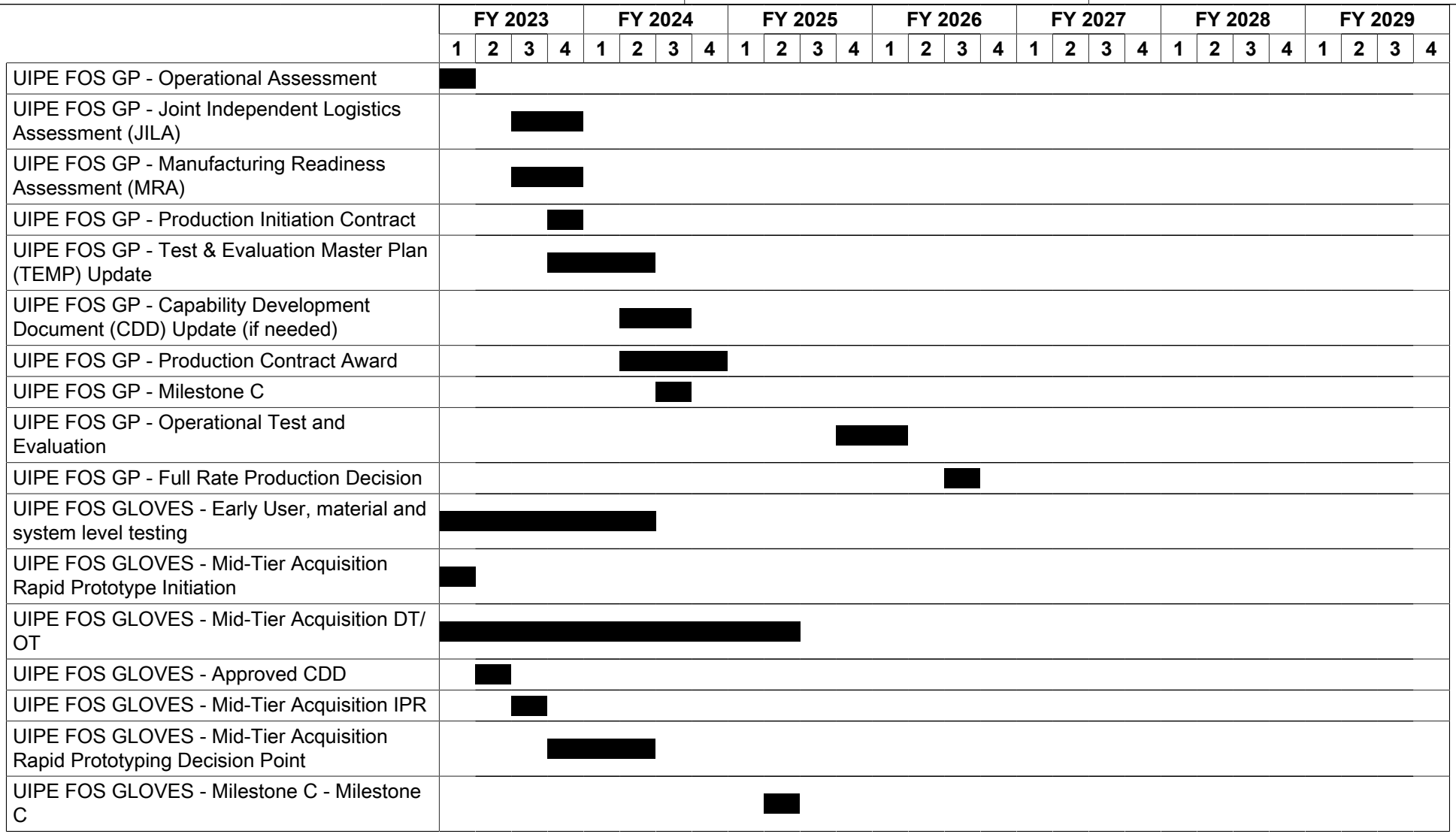

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*

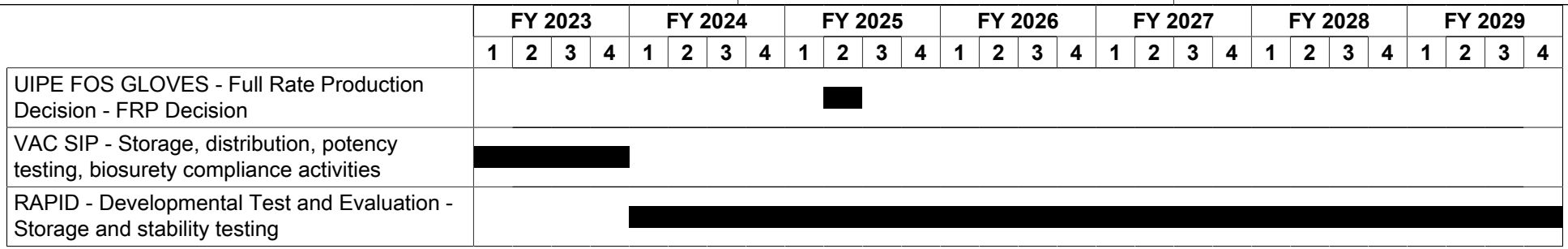

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
ASPIRE - Suit Hood/Mask Interface Prototype Testing and Evaluation - (HMI)	2	2024	2	2027
ASPIRE - Suit Hood/Mask Interface Prototype Development - (HMI)	4	2024	2	2027
ASPIRE - Milestone B - MS B (HMI)	2	2025	2	2025
ASPIRE - Milestone C - MS C (HMI)	2	2027	2	2027
ASPIRE - Suit Hood/Mask Interface Production - (HMI)	3	2027	4	2029
ASPIRE - Initial Operational Capability - IOC (HMI)	2	2028	2	2028
ASPIRE-ENBD - Prototype Development	3	2024	3	2027
ASPIRE-ENBD - Prototype Testing and Evaluation	4	2024	4	2027
ASPIRE-ENBD - Transition to ASPIRE Next Generation Respirator	2	2027	2	2028
BOT MAB - Manufacturing	1	2023	4	2024
BOT MAB - Platform Development	1	2023	2	2024
BOT MAB - Clinical and Nonclinical	1	2023	4	2025
BOT MAB - Pre-Emergency Use Authorization (pre-EUA) Submission	1	2026	1	2026
COL PRO CONEX-ENBD - Initial Concept Demonstration	4	2024	4	2024
COL PRO CONEX-ENBD - Concept Design and System Planning	2	2024	4	2024
COL PRO CONEX-ENBD - Iterative Prototyping	4	2024	4	2024
BCIS-ENBD - Iterative Prototyping	1	2025	3	2026
BCIS-ENBD - Milestone B - Milestone B	1	2025	1	2025
BCIS-ENBD - ILS Development	3	2025	4	2026
BCIS-ENBD - Training Development	3	2025	4	2026
BCIS-ENBD - Developmental Test and Evaluation - DT&E	4	2025	2	2026
BCIS-ENBD - Operational Test and Evaluation - OT&E	2	2026	3	2026

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
BCIS-ENBD - Milestone C - Milestone C	1	2027	1	2027
BCIS-ENBD - Production Contract	1	2027	1	2027
PPTS-ENBD - Concept Development and System Planning	1	2024	1	2025
PPTS-ENBD - CWMD OTA Contract Award	3	2024	3	2024
PPTS-ENBD - DT/IT Testing	1	2025	3	2025
PPTS-ENBD - Logistics Demonstration	3	2025	3	2025
PPTS-ENBD - MOT&E	3	2025	1	2026
PPTS-ENBD - Logistics/Sustainment Package Complete	1	2026	1	2026
PPTS-ENBD - Technical Design Package Complete	1	2026	1	2026
PPTS-ENBD - MS C / FRP	2	2026	2	2026
PPTS-ENBD - Final Purchase Contract	2	2026	2	2026
SIS - Requirements Definition Package - Requirements Definition	1	2024	2	2024
SIS - Concept Development and System Planning	2	2024	1	2025
SIS - CWMD OTA Contract Award	3	2025	4	2025
SIS - Initial Prototype Fabrication and Delivery	4	2025	1	2026
SIS - Initial Prototype Testing	4	2025	2	2026
SIS - Modified Prototype Fabrication and Delivery	1	2026	2	2026
SIS - Modified Prototype Testing and User Demo	3	2026	4	2026
SIS - Final Prototype Fabrication and Delivery	1	2027	2	2027
SIS - Technical Data Package and Logistics Package	2	2027	4	2027
SIS - Final Prototype MOT&E and Logistics Demo	3	2027	3	2027
SIS - System Fabrication and Delivery	2	2028	4	2028
UIPE FOS AIR - Fixed Wing Non-Ejection Aircraft Testing	1	2023	4	2023
UIPE FOS AIR - Fixed Wing Ejection Aircraft Integration Testing	1	2023	4	2023
UIPE FOS AIR - Rotary Wing Aircraft Integration Testing	1	2023	4	2023

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
UIPE FOS AIR - Safe to Fly Certification	1	2023	2	2024
UIPE FOS AIR - Safe-to-Fly and Airworthiness Testing	1	2023	4	2023
UIPE FOS AIR - Capability Development Document (CDD) Update	2	2023	2	2023
UIPE FOS AIR - Full Rate Production Decision - 2PUG	2	2023	2	2023
UIPE FOS AIR - Initial Operational Capability - 2PUG	3	2024	3	2024
UIPE FOS AIR - Full Operational Capability - 2PUG	1	2029	1	2029
UIPE FOS GP - Operational Assessment	1	2023	1	2023
UIPE FOS GP - Joint Independent Logistics Assessment (JILA)	3	2023	4	2023
UIPE FOS GP - Manufacturing Readiness Assessment (MRA)	3	2023	4	2023
UIPE FOS GP - Production Initiation Contract	4	2023	4	2023
UIPE FOS GP - Test & Evaluation Master Plan (TEMP) Update	4	2023	2	2024
UIPE FOS GP - Capability Development Document (CDD) Update (if needed)	2	2024	3	2024
UIPE FOS GP - Production Contract Award	2	2024	4	2024
UIPE FOS GP - Milestone C	3	2024	3	2024
UIPE FOS GP - Operational Test and Evaluation	4	2025	1	2026
UIPE FOS GP - Full Rate Production Decision	3	2026	3	2026
UIPE FOS GLOVES - Early User, material and system level testing	1	2023	2	2024
UIPE FOS GLOVES - Mid-Tier Acquisition Rapid Prototype Initiation	1	2023	1	2023
UIPE FOS GLOVES - Mid-Tier Acquisition DT/OT	1	2023	2	2025
UIPE FOS GLOVES - Approved CDD	2	2023	2	2023
UIPE FOS GLOVES - Mid-Tier Acquisition IPR	3	2023	3	2023
UIPE FOS GLOVES - Mid-Tier Acquisition Rapid Prototyping Decision Point	4	2023	2	2024
UIPE FOS GLOVES - Milestone C - Milestone C	2	2025	2	2025
UIPE FOS GLOVES - Full Rate Production Decision - FRP Decision	2	2025	2	2025
VAC SIP - Storage, distribution, potency testing, biosurety compliance activities	1	2023	4	2023

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** PT5 / *Protect (SDD)*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
RAPID - Developmental Test and Evaluation - Storage and stability testing	1	2024	4	2029

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program			Date: March 2024
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604384BP / *Chemical and Biological Defense Program - EMD*	Project (Number/Name) MT5 / *Mitigate (SDD)*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
MT5: *Mitigate (SDD)*	-	66.596	88.441	65.958	0.000	65.958	68.516	80.822	100.320	97.781	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Mitigate System Development & Demonstration (SDD) Project provides the Joint Force the ability to recover from exposure to chemical and biological hazards and quickly return to the fight. Efforts include development of U.S. Food & Drug Administration (FDA) approved medical countermeasures (MCMs) to protect the lives and maintain the battle readiness of the warfighter. Efforts also provide safe, effective MCMs to enable warfighter recovery and return to duty after exposure to chemical threat agents, and reduce logistics needs of decontamination methods with operationally-relevant test methods and allows personnel to reduce Mission-Oriented Protective Posture (MOPP) levels as rapidly as possible. Activities in this project realize considerable efficiencies through cost sharing agreements.

Efforts included in this Project are:

(1) Alternative Autoinjector Manufacturer Capability (AUTOINJ)
(2) Countering Emerging Threats Rapid Acquisition and Investigation of Drugs for Repurposing (CET RAIDR)
(3) Countering Emerging Threats Rapid Acquisition and Investigation of Drugs for Repurposing-Enhanced Biological Defense (CET RAIDR-ENBD)
(4) Improved Nerve Agent Treatment Centrally Acting (INATS CA)
(5) Service Equipment Decontamination System (SEDS)
(6) Tactical Contamination Mitigation System (TCMS)
(7) Decontamination Family of Systems Contamination Indicator Decontamination Assurance Spray Blister (DFoS CIDAS BLISTER)
(8) Antiviral Therapeutics (AV TX)
(9) Forward Area Mobility Spray System (FAMS-S)

The Alternative Autoinjector Manufacturer Capability (AUTOINJ) program expands the industrial base to provide Food and Drug Administration (FDA)-approved alternative source(s) for currently-fielded autoinjectors that deliver Department of Defense (DOD) Nerve Agent (NA) antidote and treatment capabilities to the warfighter. This industrial base expansion reduces the inventory risk of a single source and mitigates capability fielding and operational readiness risks. This program augments legacy autoinjectors - Antidote Treatment Nerve Agent Autoinjector (ATNAA) and AtroPen, by providing alternative commercial sources, which includes the Dual Drug Delivery Device (D4), the Atropine Autoinjector, and Reconstitution Autoinjector Device - Atropine (RAD-A), previously referred to as Wet-Dry Autoinjector. In FY25, the program will be initiating the development of the semi-automated manufacturing line for RAD-A.

The Countering Emerging Threats Rapid Acquisition and Investigation of Drugs for Repurposing (CET RAIDR) program will develop repurposed drugs as medical countermeasures towards known, potential, and emerging threats, bridging the gap from when a threat is identified until targeted countermeasures are available. CET RAIDR will repurpose U.S. Food & Drug Administration (FDA) approved therapeutics to reduce risk to the warfighter by providing medical countermeasures to CBRN threat symptoms. CET RAIDR will evaluate FDA-approved and/or late-stage products through nonclinical studies to repurpose as a CBRN Medical Countermeasure.

Studies will generate safety and efficacy data to support the use of these tested products against CBRN threats. In FY25, the CET RAIDR program will generate data to inform the Clinical Practice Guidelines.

The Countering Emerging Threats Rapid Acquisition and Investigation of Drugs for Repurposing - Enhanced Biological Defense (CET RAIDR-ENBD) program will use nonclinical safety/efficacy model studies to evaluate FDA-approved and/or late stage products to repurpose as a CBRN Medical Countermeasures toward known, potential, and emerging threats, bridging the gap from when a threat is identified until targeted countermeasures are available. Studies will generate safety and efficacy data to support the use of these tested product against CBRN threats. In FY25, the CET RAIDR-ENBD program will generate safety/efficacy model data to inform the Clinical Practice Guidelines.

The Improved Nerve Agent Treatment System Centrally Acting (INATS CA) program will develop the centrally-acting anticholinergic, scopolamine, to increase survivability and decrease morbidity following exposure to toxic nerve agents. When added to currently fielded nerve agent treatments, scopolamine will improve overall medical outcomes and will be available in both a vial for use at definitive care, and in an autoinjector for use in the field. In FY25, INATS CA will complete all non-clinical studies required to support the scopolamine vial new drug application (NDA) submission, continue scopolamine vial stability studies, submit NDA for scopolamine vial, continue functional and environmental testing for the autoinjector device, and begin manufacturing of current Good Manufacturing Practice (cGMP) autoinjector registration lots. Interaction with the FDA through Public Law 115-92 prioritization will continue throughout non-clinical testing, scopolamine vial NDA review and autoinjector development.

The Service Equipment Decontamination System (SEDS) program consists of two efforts, Joint SEDS and Special Operations Forces (SOF) Critical Equipment Decontamination (CEDS), which will develop reliable and modular hardware intended to decontaminate military equipment in operational environments, including personal effects and weapons, to pre-contamination conditions. This capability is needed to reduce logistical burdens in order to increase tactical agility and sustain a resilient force posture and align with the National Defense Strategy (NDS). SEDS and CEDS will provide contamination mitigation capabilities for critical equipment exposed to chemical and biological contamination and achieve efficacy levels that allow unprotected post-decontamination exposures for long periods with less than negligible severity effects. In FY25, Joint Service SEDS Engineering & Manufacturing Development (EMD) Phase continues with Developmental Testing, Operational Testing (DT/OT), and Operational Assessment (OA). In FY25, the CEDS (SOF) will complete DT/OT testing and program documentation in preparation for entry into the Production and Deployment (P&D) phase.

The Tactical Contamination Mitigation System (TCMS) will address gaps related to the decontamination of critical equipment and vehicles and reduce the time and logistics associated with decontamination. TCMS will limit the spread and mitigate the effects of Chemical, Biological, and Radiological (CBR) contamination to allow warfighters to continue their mission for an extended period of time in a high threat, CBR contaminated environment. The effort will mitigate risk to personnel by limiting the potential spread of CBR contamination and eliminate the need for subsequent decontamination to mitigate contamination on military equipment. TCMS, when combined with weathering, may reduce Mission Oriented Protective Posture (MOPP) level requirements. FY25 BA5 funding will achieve Milestone B, conduct critical design review (CDR) and a test readiness review to support the initiation of Development Testing/Operational Testing (DT/OT).

The Decontamination Family of Systems Contamination Indicator Decontamination Assurance Spray Blister (DFoS CIDAS BLISTER) program addresses traditional blister agents, two separate threat scenarios that require different materiel solutions, modernizing a key capability to help build a more lethal force, as outlined in the

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** MT5 / *Mitigate (SDD)*

National Defense Strategy. Program efforts terminate in FY24 and all CIDAS Blister programmatic documentation will be archived and the Joint Requirements Office will enter the Capability Development Document (for the CIDAS Blister KSA) in the Knowledge Management/Decision Support tool for Archiving.

The Anti-viral Therapeutics (AV TX) program will develop and deliver a Food and Drug Administration (FDA) approved antiviral therapeutics for the warfighter. The initial therapeutic candidate is a treatment against the Marburg virus. Developed broad spectrum antiviral therapeutics will be employed after suspected or confirmed exposure to the relevant threat agents and AV TX Medical Countermeasures (MCM) will ameliorate the effect of threat agents to the warfighter. In the event of a natural occurring outbreak, antiviral therapeutics can be provided to ensure freedom of operation.

The FAMS-S will provide Special Operations Forces (SOF) and SOF Task Forces (SOTFs) with transportable, rapidly-deployable decontamination systems in three variants: man-portable, small vehicle-mounted, and large vehicle-mounted systems to rapidly decontaminate chemical and biological (CB) agents from the exterior of vehicles and support equipment to a level that is clean enough for re-use during missions without the need for donning CB personal protective equipment. This will maximize tactical flexibility and fighting strength while minimizing the logistical burden and the cost of conducting Countering Weapons of Mass Destruction (CWMD) and CB operations. BA5/RDTE activities closed out in FY23.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: 1) AUTOINJ - RAD-A	5.165	35.694	18.669
Description: Reconstituting Autoinjector Device - Atropine (RAD-A) development ***FY 2024 Plans:*** Initiate formulation and device development with two performers which includes the evaluation of three different formulation methods for atropine. Initiate human factors evaluation of the atropine autoinjector. Initiate technology transfer and batch production of atropine. Initiate equipment purchases and certification/qualification to good manufacturing practice (GMP) standards. ***FY 2025 Plans:*** Continue formulation and device development with one performer which includes the evaluation of three different formulation methods for atropine. Continue human factors evaluation of the atropine autoinjector. Continue technology transfer and batch production of atropine. Continue the equipment purchases and certification/qualification to good manufacturing practice (GMP) standards. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding decrease is due to previously planned Alt Midazolam effort which has now been transferred to RAD-A, which was planned to be two performers and now is only one performer.			
Title: 2) AUTOINJ - Dual Drug Delivery Device (D4)	0.715	0.776	-
Description: Food and Drug Administration (FDA) Coordination			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** MT5 / *Mitigate (SDD)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
FY 2024 Plans: Continue FDA submission of FDA application for Dual Drug Delivery Device (D4) & ALT-Diazepam. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Decrease in FY25 due to cost-sharing agreement in place with performer thus no cost to government in FY25.			
Title: 3) CET RAIDR ***Description:*** Advanced Development ***FY 2024 Plans:*** Continue nonclinical studies to evaluate up to two (2) FDA-approved and/or late-stage products to repurpose as a CBRN Medical Countermeasure. Studies will generate safety and efficacy data to support the use of the tested product against CBRN symptoms. ***FY 2025 Plans:*** Continue nonclinical studies to evaluate FDA-approved and/or late-stage products to repurpose as a CBRN Medical Countermeasure. Studies will generate safety and efficacy data to support the use of the tested product against CBRN symptoms. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increased investment provided to support further non-clinical studies to generate additional safety and efficacy data to support drug repurposing.	7.713	13.703	16.022
Title: 4) CET RAIDR-ENBD ***Description:*** Advanced Development ***FY 2024 Plans:*** Continue safety/efficacy model studies to evaluate FDA-approved therapeutics to repurpose as a CBRN Medical Countermeasure. These studies will generate data to support potential expansion of use against CBRN symptoms. ***FY 2025 Plans:*** Continue nonclinical studies to evaluate FDA-approved and/or late-stage products to repurpose as a CBRN Medical Countermeasure. Studies will generate safety and efficacy data to support the use of the tested product against CBRN symptoms. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Decrease in funding due to completion of projects within FY24 and new projects beginning in FY25 with differing costs.	8.329	8.500	7.500
Title: 5) INATS CA - Clinical	-	4.572	4.390

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** MT5 / *Mitigate (SDD)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Description: Clinical Testing to support FDA approval. ***FY 2024 Plans:*** Initiate Bioavailability/Bioequivalent (BA/BE) clinical trial with autoinjector. ***FY 2025 Plans:*** Complete the BA/BE clinical trial with the Autoinjector (AI). Clinical testing to support the FDA approval of this novel medical countermeasure for use against nerve agents. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Decrease due to completion of the clinical trial.			
Title: 6) INATS CA - Manufacturing ***Description:*** Manufacture drug product and device development ***FY 2024 Plans:*** Continuing manufacturing of registration lots, and stability studies. ***FY 2025 Plans:*** Continue vial stability studies, manufacture cGMP scopolamine drug product, and manufacture autoinjector (AI) registration lots. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Decrease due to ramping down manufacturing activities.	12.017	6.019	5.627
Title: 7) INATS CA - Non-Clinical ***Description:*** Non-Clinical Efficacious Studies ***FY 2024 Plans:*** Continuing Non-Clinical Studies. Continue Pivotal Animal and Efficacy Studies. ***FY 2025 Plans:*** Complete all non-clinical and pivotal safety/efficacy model studies in support of the New Drug Application (NDA) submission. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Decrease due to bulk of studies occurring in FY24.	9.874	5.652	3.649
Title: 8) SEDS	6.154	11.025	6.398

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** MT5 / *Mitigate (SDD)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Description: Engineering, Manufacturing and Development (EMD) activities and Product Development ***FY 2024 Plans:*** Continue through the Joint SEDS Engineering, Manufacturing and Development (EMD) phase with Developmental Testing (DT) and post MS B activities. Conduct a CDR and complete EMD phase for SOF. ***FY 2025 Plans:*** Joint Service SEDS will continue with Developmental Testing (DT), Operational Testing (OT) and Operational Assessment (OA). SOF CEDS will complete system testing, configuration management and conduct manufacturing readiness. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** FY25 decrease due to program SOF CEDS transitioning into the Production and Deployment Phase. Joint Service SEDS Program will continue EMD phase until Q2FY26 MS-C decision.			
Title: 9) TCMS ***Description:*** Milestone (MS) B support and DT/OT ***FY 2025 Plans:*** Achieve Milestone B. Conduct a Critical Design Review (CDR), a Test Readiness Review and initiate Development Testing/ Operational Testing (DT/OT). ***FY 2024 to FY 2025 Increase/Decrease Statement:*** FY25 increase to initiate Engineering and Manufacturing Development (EMD) phase.	-	-	3.703
Title: 10) DFoS CIDAS BLISTER ***Description:*** Blister Indicator Kits and Large Scale Applicators (LSA) ***FY 2024 Plans:*** Conduct a Manufacturing Readiness Assessment (MRA) and a Physical Configuration Audit (PCA) with Prime Contractor and complete Operational Testing (OT) in support of Full Rate Production (FRP)/Fielding Decision. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Program terminated in FY24, CIDAS Blister program will transition back to Science & Technology (S&T).	3.216	2.500	-
Title: 11) AV TX ***Description:*** Enabling Technologies	10.506	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** MT5 / *Mitigate (SDD)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: 12) FAMS-S	2.907	-	-
Description: Complete FAMS-S small and large variant prototype development and close out of remaining DT/OT activities.			
Accomplishments/Planned Programs Subtotals	66.596	88.441	65.958

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• MT4: *Mitigate (ACD&P)*	16.935	28.785	43.364	-	43.364	44.601	36.558	5.309	11.643	Continuing	Continuing
• MT7: *Mitigate (Op Sys Dev)*	4.977	3.074	1.987	-	1.987	1.819	1.845	1.862	1.034	Continuing	Continuing
• JD0050: *Decontamination Family of Systems (DFoS)*	4.795	6.062	4.878	-	4.878	3.891	5.965	4.996	-	Continuing	Continuing
• PHM025: *Forward Area Mobility Spray System (FAMS-S)*	4.333	4.824	4.724	-	4.724	4.724	4.724	4.889	-	Continuing	Continuing
• PHM040: *Improved Nerve Agent Treatment System Centrally Acting (INATS CA)*	-	-	-	-	-	-	31.678	39.322	40.108	Continuing	Continuing
• PHM007: *Service Equipment Decontamination System (SEDS)*	-	-	14.028	-	14.028	22.531	24.920	13.050	11.258	Continuing	Continuing

Remarks

D. Acquisition Strategy

Alternate Autoinjector Manufacturer Capability (AUTOINJ)

The AUTOINJ will identify an alternative source(s) to develop and provide required Food and Drug Administration (FDA)-approved autoinjector-delivered nerve agent antidote and treatment capabilities to the DoD. The AUTOINJ effort leverages novel technologies and industrial base expansion in order to develop the autoinjector products. AUTOINJ uses contracts and Other Transactional Agreements (OTAs) in which the performer shall be responsible for conducting development and testing activities consistent with current FDA regulations. The contractor shall sponsor the combination product to the FDA and hold all approvals and/or licenses. Upon FDA approval, purchases for product sustainment will be made by the Defense Logistics Agency.

Countering Emerging Threats Rapid Acquisition and Investigation of Drugs for Repurposing (CET RAIDR)

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
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Countering Emerging Threats Rapid Acquisition and Investigation of Drugs for Repurposing (CET RAIDR) is an investment program that leverages established manufacturing and safety databases to conduct studies to evaluate U.S. Food & Drug Administration (FDA) approved and late-stage development therapeutics against CBRN threats. Data generated from these efforts will be used to provide a solution to protect the warfighter against CBRN threats that do not have any identified medical countermeasures. CET RAIDR utilizes multiple contracting and management strategies through existing service laboratory Interagency Agreements (IAAs), Cooperative Research and Development Agreements (CRADAs), flexible contracts, Broad Agency Announcements, and Other Transaction Authority (OTA) agreements.

Countering Emerging Threats Rapid Acquisition and Investigation of Drugs for Repurposing - Enhanced Biological Defense (CET RAIDR-ENBD)

Countering Emerging Threats Rapid Acquisition and Investigation of Drugs for Repurposing - Enhanced Biological Defense (CET RAIDR-ENBD) program will conduct safety/efficacy model studies to evaluate FDA-approved therapeutics against CBRN threats. Data generated from these efforts will be utilized to support potential expansion of use against CBRN symptoms. CET RAIDR ENBD utilizes multiple contracting and management strategies through existing service laboratory IAAs, Cooperative Research and Development Agreements (CRADAs), flexible contracts, Broad Agency Announcements, and Other Transaction Authority (OTA) agreements.

Improved Nerve Agent Treatment Centrally Acting (INATS CA)

The Improved Nerve Agent Treatment System Centrally Acting (INATS CA) consists of scopolamine in an autoinjector as adjunct therapy to current nerve agent medical countermeasure (MCM) treatments. Addition of scopolamine to existing treatments for nerve agent exposure increases survival of casualties compared to treatment without scopolamine and reduces the logistical burden for additional atropine. The contractors shall be the sponsor and conduct drug development activities to achieve U.S. Food and Drug Administration (FDA) approval of both a vialed product, and the drug-device combination product. Upon FDA approval, a follow-on procurement contract will allow the contractor to manufacture and deliver sufficient quantities of the autoinjector to meet Full Operational Capability (FOC). Product sustainment will be the responsibility of Defense Logistics Agency Troop Support. Post marketing commitments and requirements are anticipated as a result of FDA approval and will be the responsibility of the contractor and the government.

Service Equipment Decontamination System (SEDS)

The SEDS program will utilize the Countering Weapons of Mass Destruction Other Transaction Authority (CWMD OTA) to design and develop state of the art equipment using competitive and iterative prototyping. The program will test prototypes against live chemical warfare agents and biological warfare agents, conduct reliability, availability, and maintainability testing, conduct regular user evaluations to identify human system integration issues, and will conduct testing to ensure the system meets military standards. The program will use the Request for Prototype Proposals (RPP), under the CWMD OTA, followed by awards of Prototype Agreements.

Tactical Contamination Mitigation System (TCMS)

The TCMS will utilize the Countering Weapons of Mass Destruction Other Transaction Authority (CWMD OTA) to conduct market research through Requests for Information (RFIs) and a call for White Papers. Data collected will inform a Milestone A decision in FY23. The OTA vehicle will also be used to request prototypes, which

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
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will undergo technology demonstrations and Early Field testing, followed by an analysis to determine the most suitable candidate. Results of Prototyping will inform Milestone B and Request for Proposals (RFPs) followed by developmental and operational testing and Milestone C/Full Rate Production Approval.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program			Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** MT5 / *Mitigate (SDD)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AUTOINJ - HW C - RAD-A	C/CPFF	Kaleo : Richmond, VA	-	0.000		30.372	Dec 2023	14.381	Dec 2024	-		14.381	Continuing	Continuing	0.000
AUTOINJ - HW C - D4	C/CPFF	Emergent Biosolutions : Gaithersburg, MD	-	0.585	Dec 2022	0.000		0.000		-		0.000	0.000	0.585	0.000
AUTOINJ - HW C - Program Management Labor	Various	JPM CBRN Medical, JPEO-CBRND : Fort Detrick, MD	-	0.966	Dec 2022	1.670	Nov 2023	1.009	Dec 2024	-		1.009	Continuing	Continuing	0.000
AUTOINJ - HW C - Direct Product Support	C/CPFF	JPEO Chem, Bio, Rad, and Nuc Defense (JPEO-CBRND) : Aberdeen Proving Ground, MD	-	0.240	Dec 2022	2.011	Nov 2023	1.609	Dec 2024	-		1.609	Continuing	Continuing	0.000
AUTOINJ - HW C - Diazepam	C/CPFF	Emergent Biosolutions : Gaithersburg, MD	-	0.436	Dec 2023	0.000		0.000		-		0.000	0.000	0.436	0.000
AUTOINJ - HW C - Business Case Analysis	MIPR	Booz Allen Hamilton, Inc. : Belcamp, MD	-	0.335	Mar 2023	0.000		0.000		-		0.000	0.000	0.335	0.000
CET RAIDR - HW C - Direct Product Support	Various	Various : N/A	-	1.274	Dec 2022	1.254	Dec 2023	1.328	Dec 2024	-		1.328	Continuing	Continuing	0.000
CET RAIDR-ENBD - HW C - Nonclinical Studies	Various	Various : N/A	-	5.536	Dec 2022	6.787	Dec 2023	6.045	Dec 2024	-		6.045	Continuing	Continuing	0.000
CET RAIDR-ENBD - HW C - Direct Program Support	Various	Various : N/A	-	2.284	Nov 2022	0.778	Dec 2023	0.653	Dec 2024	-		0.653	Continuing	Continuing	0.000
INATS CA - HW C - Clinical	C/CPFF	Battelle Memorial Institute : Columbus, OH	-	3.141	Dec 2022	3.531	Dec 2023	3.555	Dec 2024	-		3.555	Continuing	Continuing	0.000
INATS CA - HW C - Non-Clinical	C/CPFF	Battelle Memorial Institute : Columbus, OH	-	3.529	Nov 2022	4.290	Dec 2023	1.743	Dec 2024	-		1.743	Continuing	Continuing	0.000
INATS CA - HW C - Manufacturing	C/CPFF	Battelle Memorial Institute : Columbus, OH	-	3.424	Mar 2023	0.000		3.917	Dec 2024	-		3.917	Continuing	Continuing	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** MT5 / *Mitigate (SDD)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
INATS CA - HW C - Manufacturing	C/FFP	Aktivax : Boulder, CO	-	4.173	Dec 2022	3.915	Dec 2023	0.000		-		0.000	0.000	8.088	0.000
INATS CA - HW C - Program Management Labor	Allot	JPM CBRN Medical, JPEO-CBRND : Fort Detrick, MD	-	3.315	Dec 2022	1.234	Nov 2023	1.800	Dec 2024	-		1.800	Continuing	Continuing	0.000
INATS CA - PM/MS C - Direct Product Support	Various	JPEO Chem, Bio, Rad, and Nuc Defense (JPEO-CBRND) : Aberdeen Proving Ground, MD	-	1.127	Dec 2022	1.486	Nov 2023	1.189	Dec 2024	-		1.189	Continuing	Continuing	0.000
SEDS - HW S - SEDS - Prototypes	C/FFP	ATI Solutions, Inc. : Tysons Corner, VA	-	0.468	May 2023	3.453	Nov 2023	0.813	Nov 2024	-		0.813	Continuing	Continuing	0.000
SEDS - HW S - CEDS	C/CPFF	ATI Solutions, Inc. : Tysons Corner, VA	-	2.295	Sep 2023	1.712	Jan 2024	1.145	Jan 2025	-		1.145	Continuing	Continuing	0.000
TCMS - HW S - Product Development	C/FFP	ATI Solutions, Inc. : Tysons Corner, VA	-	0.000		0.000		2.031	Nov 2024	-		2.031	Continuing	Continuing	0.000
DFoS CIDAS BLISTER - HW S - Small and Large Scale Applicators/Kits	SS/FPIF	FLIR Systems, Inc. : Stillwater, OK	-	0.815	Jan 2023	0.000		0.000		-		0.000	0.000	0.815	0.000
AV TX - HW GFPP - Nonclinical Trials - OTA	C/FP	Gilead Sciences : San Francisco, CA	-	10.506	Dec 2022	0.000		0.000		-		0.000	0.000	10.506	0.000
FAMS-S - HW S - System Development and Prototype Refinement	C/CPIF	ATI Solutions, Inc. : Tysons Corner, VA	-	1.085	May 2023	0.000		0.000		-		0.000	0.000	1.085	0.000
		Subtotal	-	45.534		62.493		41.218		-		41.218	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AUTOINJ - ES C - MITRE	MIPR	Various : N/A	-	0.531	Sep 2023	0.000		0.000		-		0.000	0.000	0.531	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** MT5 / *Mitigate (SDD)*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SEDS - ILS S - SEDS - Logistics, Engineering and IPT Support	MIPR	Various : N/A	-	0.000		0.836	Nov 2023	0.911	Nov 2024	-		0.911	Continuing	Continuing	0.000
SEDS - ES S - CEDS	MIPR	Various : N/A	-	0.151	Apr 2023	0.210	Nov 2023	0.337	Nov 2024	-		0.337	Continuing	Continuing	0.000
TCMS - ES S - Logistics, Engineering and IPT Support	MIPR	Various : N/A	-	0.000		0.000		0.300	Nov 2024	-		0.300	Continuing	Continuing	0.000
DFoS CIDAS BLISTER - TD/D S - IPT and Technical Support	MIPR	Various : N/A	-	0.656	Nov 2022	0.375	Nov 2023	0.000		-		0.000	0.000	1.031	0.000
FAMS-S - ES C - Systems Engineer/Technical SME Support	MIPR	Various : N/A	-	0.710	Dec 2022	0.000		0.000		-		0.000	0.000	0.710	0.000
		Subtotal	-	2.048		1.421		1.548		-		1.548	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CET RAIDR - DTE C - Continuing Repurposing Efforts	Various	Various : N/A	-	5.702	Dec 2022	10.942	Dec 2023	13.064	Dec 2024	-		13.064	Continuing	Continuing	0.000
SEDS - OTHT S - SEDS - T&E IPR Test Planning	MIPR	Various : N/A	-	0.000		0.944	Nov 2023	1.902	Nov 2024	-		1.902	Continuing	Continuing	0.000
SEDS - DTE S - CEDS T&E	C/CPFF	MRIGlobal : Kansas City, MO	-	2.820	Nov 2022	3.177	Jan 2024	0.232	Jan 2025	-		0.232	Continuing	Continuing	0.000
TCMS - OTHT S - Prototype T&E IPR Test Planning	MIPR	Various : N/A	-	0.000		0.000		1.020	Nov 2024	-		1.020	Continuing	Continuing	0.000
DFoS CIDAS BLISTER - OTHT S - DT/OT	MIPR	Various : N/A	-	1.462	Nov 2022	1.972	Nov 2023	0.000		-		0.000	0.000	3.434	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** MT5 / *Mitigate (SDD)*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FAMS-S - DTE S - Decon Solution Analysis	C/CPFF	MRIGlobal : Kansas City, MO	-	0.894	Jan 2023	0.000		0.000		-		0.000	0.000	0.894	0.000
		Subtotal	-	10.878		17.035		16.218		-		16.218	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AUTOINJ - PM/MS C - Management Services	Various	Various : N/A	-	2.787	Dec 2022	2.417	Nov 2023	1.670	Dec 2024	-		1.670	Continuing	Continuing	0.000
CET RAIDR - PM/MS S - Management Support	Various	Various : N/A	-	0.737	Nov 2022	1.507	Dec 2023	1.630	Dec 2024	-		1.630	Continuing	Continuing	0.000
CET RAIDR-ENBD - PM/MS S - Management Support	Various	Various : N/A	-	0.509	Dec 2022	0.935	Dec 2023	0.802	Dec 2024	-		0.802	Continuing	Continuing	0.000
INATS CA - PM/MS C - Management Services	Various	JPEO Chem, Bio, Rad, and Nuc Defense (JPEO-CBRND) : Aberdeen Proving Ground, MD	-	3.182	Dec 2022	1.787	Nov 2023	1.462	Dec 2024	-		1.462	Continuing	Continuing	0.000
SEDS - PM/MS C - SEDS - PM/MS S - Program Management Support	MIPR	Various : N/A	-	0.025	Mar 2023	0.341	Nov 2023	0.487	Nov 2024	-		0.487	Continuing	Continuing	0.000
SEDS - PM/MS C - CEDS	MIPR	Various : N/A	-	0.395	Apr 2023	0.352	Nov 2023	0.571	Nov 2024	-		0.571	Continuing	Continuing	0.000
TCMS - PM/MS S - Program Management Support	Various	Various : N/A	-	0.000		0.000		0.352	Nov 2024	-		0.352	Continuing	Continuing	0.000
DFoS CIDAS BLISTER - PM/MS S - Program Management Support	MIPR	Various : N/A	-	0.283	Nov 2022	0.153	Nov 2023	0.000		-		0.000	0.000	0.436	0.000
FAMS-S - PM/MS S - Indirect Program Management	MIPR	JPEO Chem, Bio, Rad, and Nuc Defense (JPEO-	-	0.218	Dec 2022	0.000		0.000		-		0.000	0.000	0.218	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** MT5 / *Mitigate (SDD)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		CBRND) : Aberdeen Proving Ground, MD													
		Subtotal	-	8.136		7.492		6.974		-		6.974	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	66.596		88.441		65.958		-		65.958	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** MT5 / *Mitigate (SDD)*

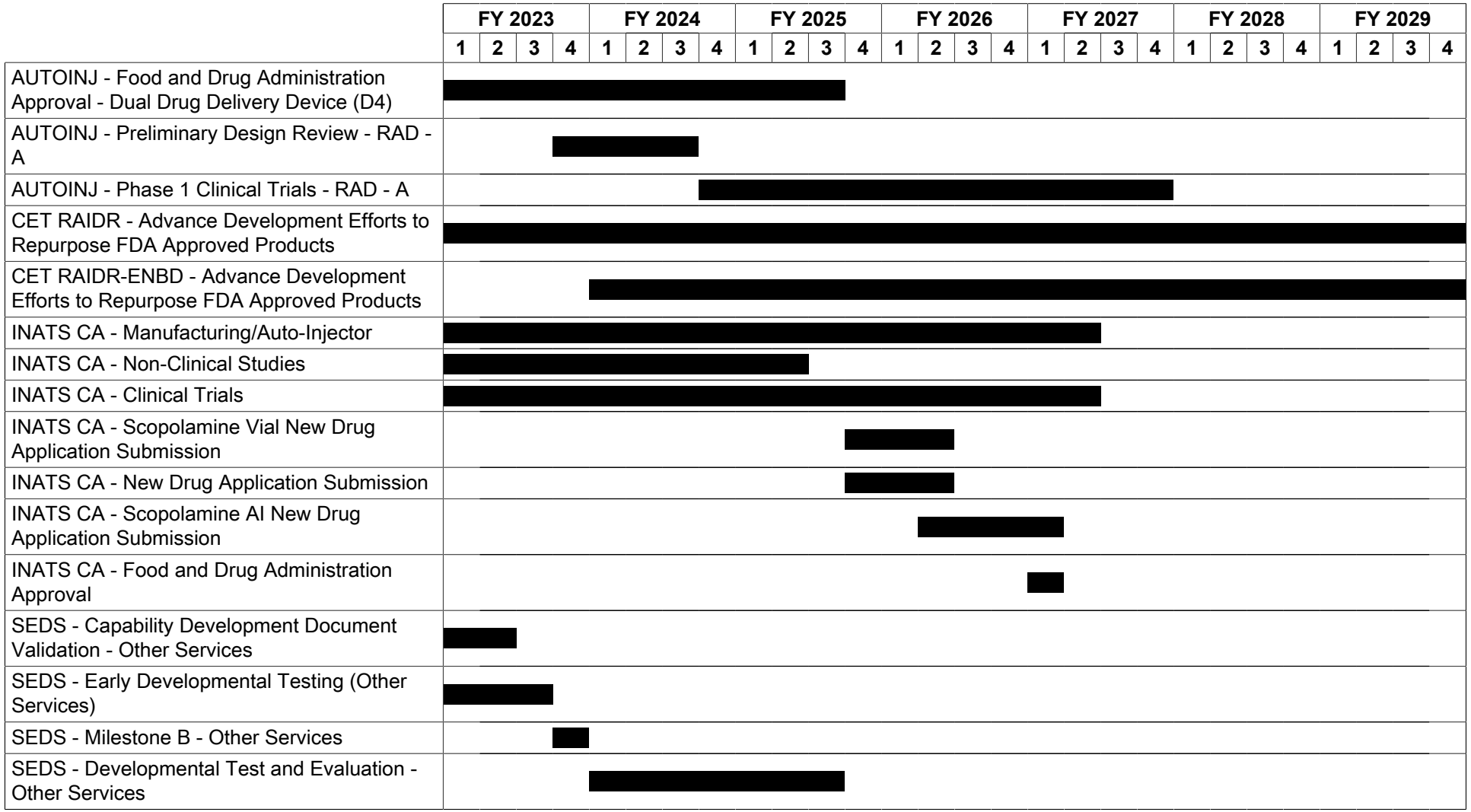

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** MT5 / *Mitigate (SDD)*

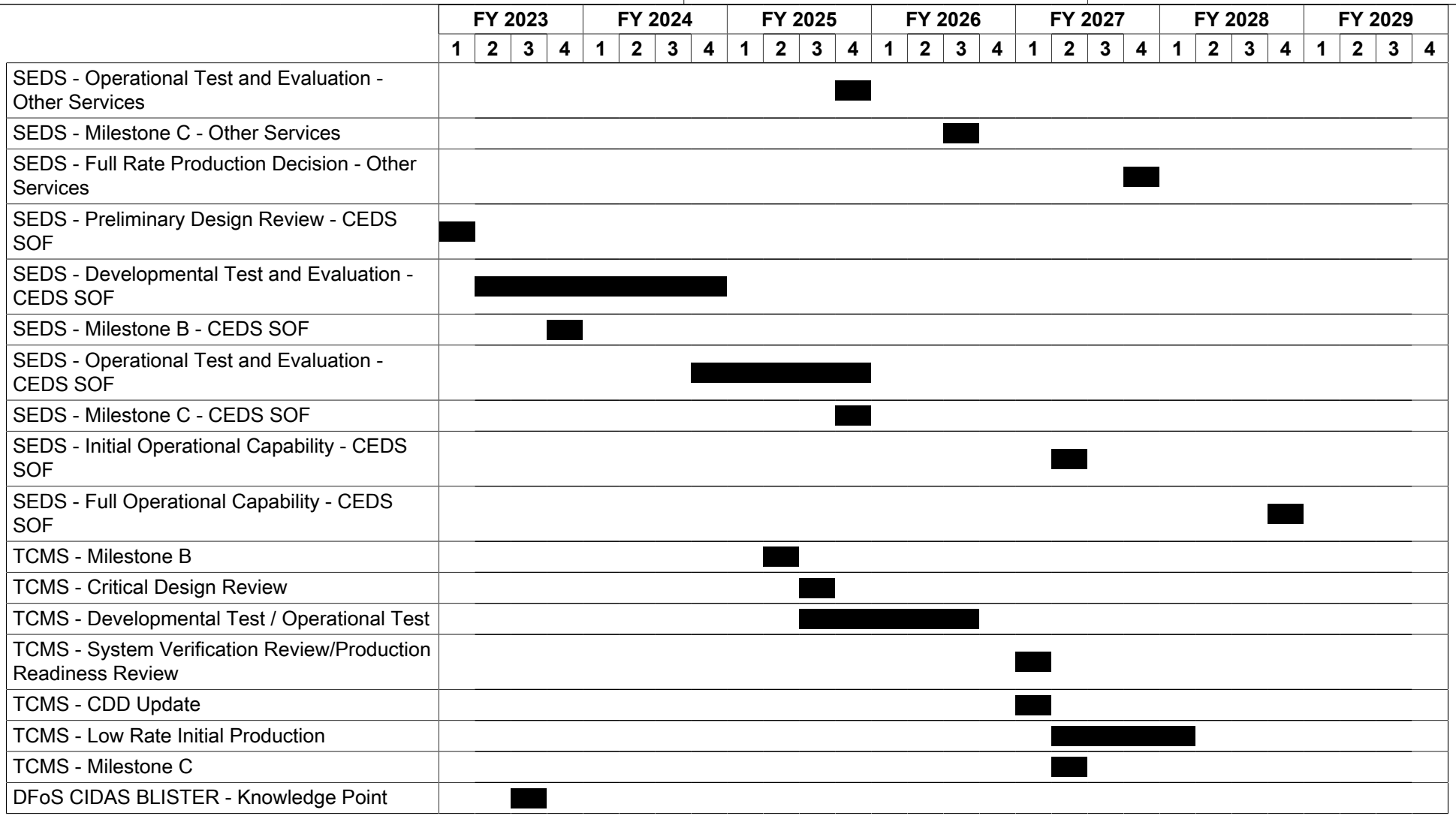

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** MT5 / *Mitigate (SDD)*

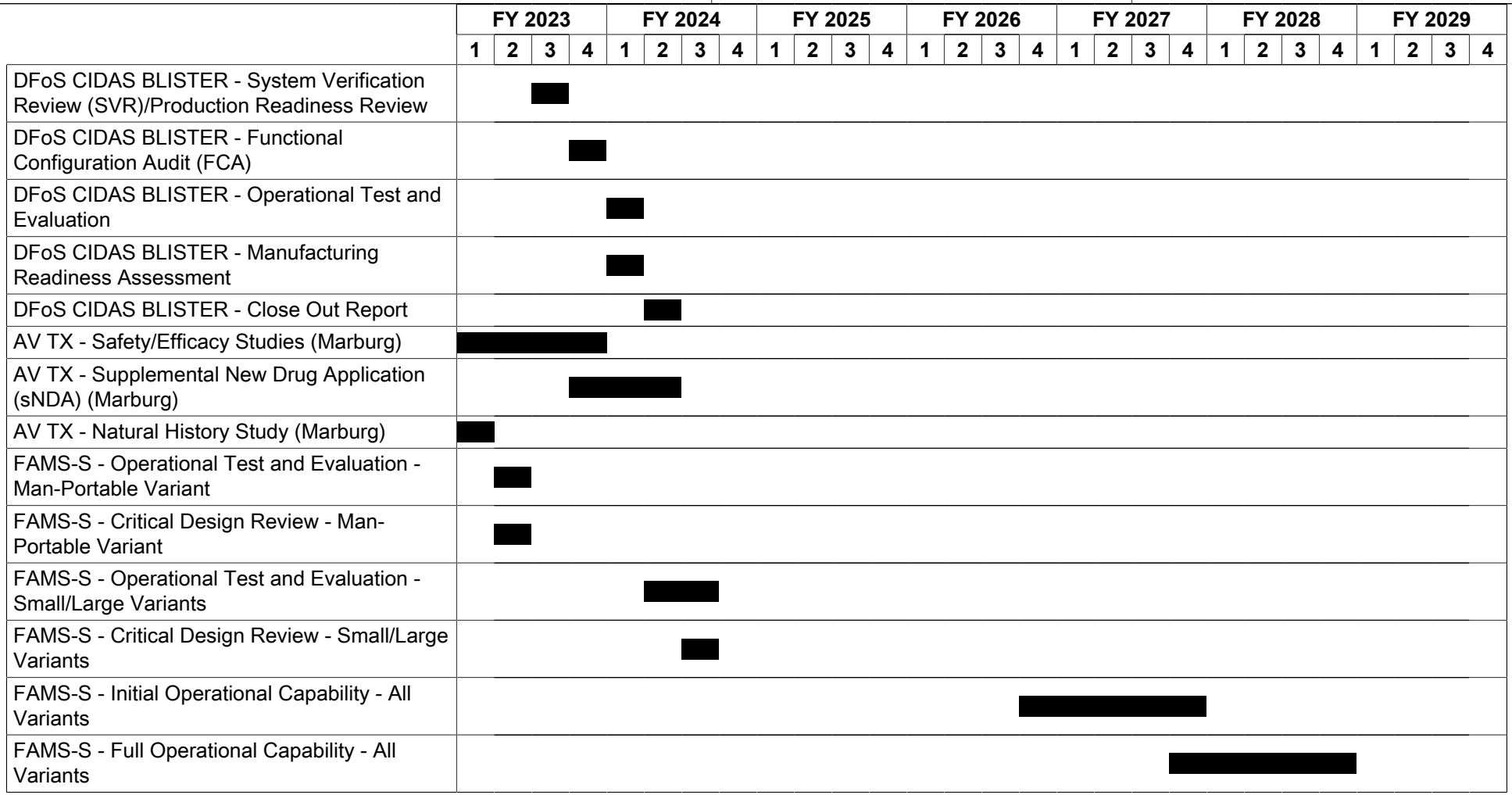

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** MT5 / *Mitigate (SDD)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
AUTOINJ - Food and Drug Administration Approval - Dual Drug Delivery Device (D4)	1	2023	3	2025
AUTOINJ - Preliminary Design Review - RAD - A	4	2023	3	2024
AUTOINJ - Phase 1 Clinical Trials - RAD - A	4	2024	4	2027
CET RAIDR - Advance Development Efforts to Repurpose FDA Approved Products	1	2023	4	2029
CET RAIDR-ENBD - Advance Development Efforts to Repurpose FDA Approved Products	1	2024	4	2029
INATS CA - Manufacturing/Auto-Injector	1	2023	2	2027
INATS CA - Non-Clinical Studies	1	2023	2	2025
INATS CA - Clinical Trials	1	2023	2	2027
INATS CA - Scopolamine Vial New Drug Application Submission	4	2025	2	2026
INATS CA - New Drug Application Submission	4	2025	2	2026
INATS CA - Scopolamine AI New Drug Application Submission	2	2026	1	2027
INATS CA - Food and Drug Administration Approval	1	2027	1	2027
SEDS - Capability Development Document Validation - Other Services	1	2023	2	2023
SEDS - Early Developmental Testing (Other Services)	1	2023	3	2023
SEDS - Milestone B - Other Services	4	2023	4	2023
SEDS - Developmental Test and Evaluation - Other Services	1	2024	3	2025
SEDS - Operational Test and Evaluation - Other Services	4	2025	4	2025
SEDS - Milestone C - Other Services	3	2026	3	2026
SEDS - Full Rate Production Decision - Other Services	4	2027	4	2027
SEDS - Preliminary Design Review - CEDS SOF	1	2023	1	2023
SEDS - Developmental Test and Evaluation - CEDS SOF	2	2023	4	2024

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** MT5 / *Mitigate (SDD)*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
SEDS - Milestone B - CEDS SOF	4	2023	4	2023
SEDS - Operational Test and Evaluation - CEDS SOF	4	2024	4	2025
SEDS - Milestone C - CEDS SOF	4	2025	4	2025
SEDS - Initial Operational Capability - CEDS SOF	2	2027	2	2027
SEDS - Full Operational Capability - CEDS SOF	4	2028	4	2028
TCMS - Milestone B	2	2025	2	2025
TCMS - Critical Design Review	3	2025	3	2025
TCMS - Developmental Test / Operational Test	3	2025	3	2026
TCMS - System Verification Review/Production Readiness Review	1	2027	1	2027
TCMS - CDD Update	1	2027	1	2027
TCMS - Low Rate Initial Production	2	2027	1	2028
TCMS - Milestone C	2	2027	2	2027
DFoS CIDAS BLISTER - Knowledge Point	3	2023	3	2023
DFoS CIDAS BLISTER - System Verification Review (SVR)/Production Readiness Review	3	2023	3	2023
DFoS CIDAS BLISTER - Functional Configuration Audit (FCA)	4	2023	4	2023
DFoS CIDAS BLISTER - Operational Test and Evaluation	1	2024	1	2024
DFoS CIDAS BLISTER - Manufacturing Readiness Assessment	1	2024	1	2024
DFoS CIDAS BLISTER - Close Out Report	2	2024	2	2024
AV TX - Safety/Efficacy Studies (Marburg)	1	2023	4	2023
AV TX - Supplemental New Drug Application (sNDA) (Marburg)	4	2023	2	2024
AV TX - Natural History Study (Marburg)	1	2023	1	2023
FAMS-S - Operational Test and Evaluation - Man-Portable Variant	2	2023	2	2023
FAMS-S - Critical Design Review - Man-Portable Variant	2	2023	2	2023
FAMS-S - Operational Test and Evaluation - Small/Large Variants	2	2024	3	2024
FAMS-S - Critical Design Review - Small/Large Variants	3	2024	3	2024

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** MT5 / *Mitigate (SDD)*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
FAMS-S - Initial Operational Capability - All Variants	4	2026	4	2027
FAMS-S - Full Operational Capability - All Variants	4	2027	4	2028

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program											Date: March 2024	
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0604384BP / *Chemical and Biological Defense Program - EMD*				Project (Number/Name) EN5 / *Enabling Investments (SDD)*			
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
EN5: *Enabling Investments (SDD)*	-	13.120	13.835	7.985	0.000	7.985	13.436	11.811	18.542	16.527	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Enabling Investments System Development & Demonstration (SDD) Project provides the capability to rapidly develop, manufacture, and approve medical countermeasures through sustaining the Department of Defense advanced development manufacturing facility. Enabling efforts in this area support dedicated infrastructure capabilities, demonstrations, and overarching development support functions as portfolio enablers responding to emerging threats. Additional efforts facilitate incorporation of chemical and biological (CB) survivability equipment into service major acquisition programs.

Efforts included in this Project are:

(1) Chemical Biological Incident Preparedness and Response - Advanced Development and Manufacturing (CBIPR-ADM)
(2) Chemical Biological Incident Preparedness and Response - Secure Biolaboratory Consortium (CBIPR-SBC)
(3) Major Defense Acquisition Program (MDAP)

The CBIPR-ADM ensures prioritization to domestic biopharmaceutical manufacturing capacities, capabilities, and infrastructure (e.g. the DoD-ADM Facility and other strategic partners) that are operationally ready to rapidly develop and manufacture medical countermeasures (MCMs) against current and emerging chemical and biological threats including pandemic response. Prioritization is achieved by establishing and enhancing proven biopharmaceutical manufacturing platform technologies and infrastructure at these facilities. Thus, these facilities will have the capability to accelerate development of MCMs at all stages of development, enhance preparedness for existing threats, and rapidly respond to emerging threats as part of a medical integrated layered defense. MCMs that benefit from these efforts include: Vaccines for Viral Agents, Vaccines for Bacterial Agents and Toxins, monoclonal antibodies, antibody fragments and conjugates for therapeutic and prophylactic use across all agent classes. In FY25, CBIPR-ADM transitions to CBIPR-SBC based on current incident preparedness and response requirements.

The Chemical Biological Incident Preparedness and Response – Secure Biolaboratory Consortium (CBIPR-SBC) program will establish a robust capability to analyze and characterize inbound threat samples and nucleic acid sequences in classified environment for risk stratification, understanding of pathogenic potential, and response strategy development. Inherent to both characterization and drug development are requirements for a robust laboratory infrastructure up to biosafety level 4 (BSL-4) that can work with highly classified (up to TS/SCI) intelligence data. This capability can be utilized across the Chemical Biological Defense (CBD) Enterprise and will support the GUIDE program to include “live fire” exercises.

The MDAP CBRN Survivability Support and Services (CS3) initiative provides enabling support to DoD programs designated as CBRN Mission Critical or requiring CBRN capabilities. Enabling support facilitates alignment with CBRN capabilities through the following: acquisition strategy, systems engineering, CBRN assessment, technical requirements analysis and management, customized CBRN defense solutions for each weapon system program, development, and integration of CBRN

equipment, test and evaluation support, logistics support, modeling and simulation support, documentation, technical review support, IPT support, and/or CBRN subject matter expertise.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: 1) CBIPR-ADM ***Description:*** Establishing new manufacturing capacities, capabilities, and infrastructure at the DoD ADM. ***FY 2024 Plans:*** Continue activities to enhance and optimize known manufacturing platform technologies that will maintain the DoD ADM and other strategic partner facilities in a state of operational readiness to support the development and manufacture of medical countermeasure (MCMs). This approach ensures that the DoD's efforts are not limited to a single facility. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Program/project funding transferred to another funding line. Decrease due to funding transition for current incident preparedness and response requirements under CBIPR-SBC.	10.751	11.465	-
Title: 2) CBIPR-SBC ***Description:*** Analyze and Characterize Threat Samples ***FY 2025 Plans:*** Expand existing capabilities and establish new testing capabilities as required to support CBD Enterprise. Conduct threat characterization studies and MCM screening studies for prototypes generated by the GUIDE program. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Program/project funding transferred from another funding line. Overall program decrease due to revised priorities within the CBIPR portfolio from the CBIPR-ADM transfer to support threat characterization and MCM screening studies.	-	-	5.000
Title: 3) MDAP ***Description:*** The MDAP Chemical, Biological, Radiological, and Nuclear (CBRN) Survivability Support and Services (CS3) initiative assists weapon system programs in meeting their CBRN defense requirements. ***FY 2024 Plans:*** Provide subject matter expertise in the execution of CBRN survivability requirements for both materiel and non-material solutions. Review and assist in document preparation for milestones and programs reviews. Conduct CBRN survivability compliance reviews for Optionally Manned Fighting Vehicle, Robotic Combat Vehicle, Future Long Range Assault Aircraft, Future Attack Reconnaissance Aircraft, Synthetic Training Environment, Precision Navigation and Timing, multiple Soldier Lethality programs,	2.369	2.370	2.985

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** EN5 / *Enabling Investments (SDD)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
and other CBRN survivability system integration in preparation for various program acquisition milestones, design reviews and low rate initial production reviews. ***FY 2025 Plans:*** Increase subject matter expertise in the execution of CBRN survivability requirements for both materiel and non-material solutions. Review and assist in document preparation for milestones and programs reviews. Conduct CBRN survivability compliance and interoperability reviews for CBRN on major acquisition efforts for the Joint Force, to include; CCMD Deployed Unit Assessment, Foreign Comparative Test (FCT) for Optionally Manned Fighting Vehicle, CBRN Survivability studies, Nuclear Biological Chemical Reconnaissance Vehicle Sensor Suite Upgrade COEs, Stryker Predictive Maintenance Pilot testing, CBRN Equipment Prepositioning Assessments, warfighter Integrated Sensor Ensemble, Contested Environment Chemical- Kinetic Single Operating Location Table Top Exercises and Maneuver Contaminated Operating Environment Table Top Exercises. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase due to additional subject matter experts addressing CBRN Survivability and Interoperability risk for USAF, USA and USMC major acquisition programs & efforts.			
Accomplishments/Planned Programs Subtotals	13.120	13.835	7.985

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• EN4: *Enabling Investments (ACD&P)*	6.645	47.272	35.700	-	35.700	23.500	17.800	25.800	20.200	Continuing	Continuing

Remarks

D. Acquisition Strategy

Chemical Biological Incident Preparedness and Response Advanced Design Manufacturing (CBIPR-ADM)

By establishing new capabilities at the DoD-ADM Facility and other strategic partners, the CBIPR-ADM line ensures that the DoD will have priority access to critical technologies and infrastructure that are operationally ready to support the rapid development and manufacture of MCMs. The CBIPR-ADM line will continue to establish, enhance, and optimize new manufacturing platform technologies and infrastructure to support the production of MCMs. These new manufacturing technologies can come from any government sources (including Joint Science & Technology Office for Chemical Biological Defense (JSTO-CBD), the Walter Reed Army Institute of Research (WRAIR), the Biomedical Advanced Research and Development Authority (BARDA), etc. when mature enough for BA4 funding) and/or other external sources and targets of opportunity from industry.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** EN5 / *Enabling Investments (SDD)*

Chemical Biological Incident Preparedness and Response - Secure Biolaboratory Consortium (CBIPR-SBC)

The CBIPR-SBC program will leverage existing agreements with the Department of Homeland Security (DHS) to utilize and build upon the existing classified research capability at the National Biodefense Analysis and Countermeasures Center (NBACC). Existing capabilities will be expanded, and new capabilities established as required at the NBACC facility. Leveraging existing agreements with DHS and utilizing the NBACC facility allows the CBIPR-SBC program to have an immediate capability for conducting secure classified research in support of the CBD enterprise.

Major Defense Acquisition Program (MDAP)

MDAP effort provides CBRN capability requirements integration support to Major Defense Acquisition Programs, Services, and Program Executive Offices. Cross-walk requirements with program execution plans, introduce new/existing materiel solutions, develop common integrated CBRN solutions, support Modernization and Readiness efforts.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** EN5 / *Enabling Investments (SDD)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CBIPR-ADM - HW S - Capability Optimization	C/CPFF	Resilience Government Services, Inc. : Alachua, Florida	-	9.946	Dec 2022	10.763	Dec 2023	0.000		-		0.000	0.000	20.709	0.000
CBIPR-SBC - HW S - Product Development	Various	TBD : N/A	-	0.000		0.000		4.785	Dec 2024	-		4.785	Continuing	Continuing	0.000
		Subtotal	-	9.946		10.763		4.785		-		4.785	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MDAP - TD/D SB - IPT and Technical Support	MIPR	Various : N/A	-	2.081	Nov 2022	0.921	Jan 2024	1.519	Jan 2025	-		1.519	Continuing	Continuing	0.000
		Subtotal	-	2.081		0.921		1.519		-		1.519	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MDAP - OTHT C - Non CBRN Platform Interoperability and Survivability T&E	MIPR	Various : N/A	-	0.000		0.900	Mar 2024	1.116	Feb 2025	-		1.116	Continuing	Continuing	0.000
		Subtotal	-	0.000		0.900		1.116		-		1.116	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** EN5 / *Enabling Investments (SDD)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CBIPR-ADM - PM/MS C - Program Management Support (SETA)	Various	JPL CBRND Enabling Biotechnologies, JPEO-CBRND : Fort Detrick, MD	-	0.805	Dec 2022	0.702	Dec 2023	0.000		-		0.000	0.000	1.507	0.000
CBIPR-SBC - PM/MS S - Program Management	Various	Various : N/A	-	0.000		0.000		0.215	Dec 2024	-		0.215	Continuing	Continuing	0.000
MDAP - PM/MS S - Program Management Support	MIPR	Various : N/A	-	0.288	Nov 2022	0.549	Nov 2023	0.350	Feb 2025	-		0.350	Continuing	Continuing	0.000
		Subtotal	-	1.093		1.251		0.565		-		0.565	Continuing	Continuing	N/A

	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	13.120		13.835		7.985		-		7.985	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** EN5 / *Enabling Investments (SDD)*

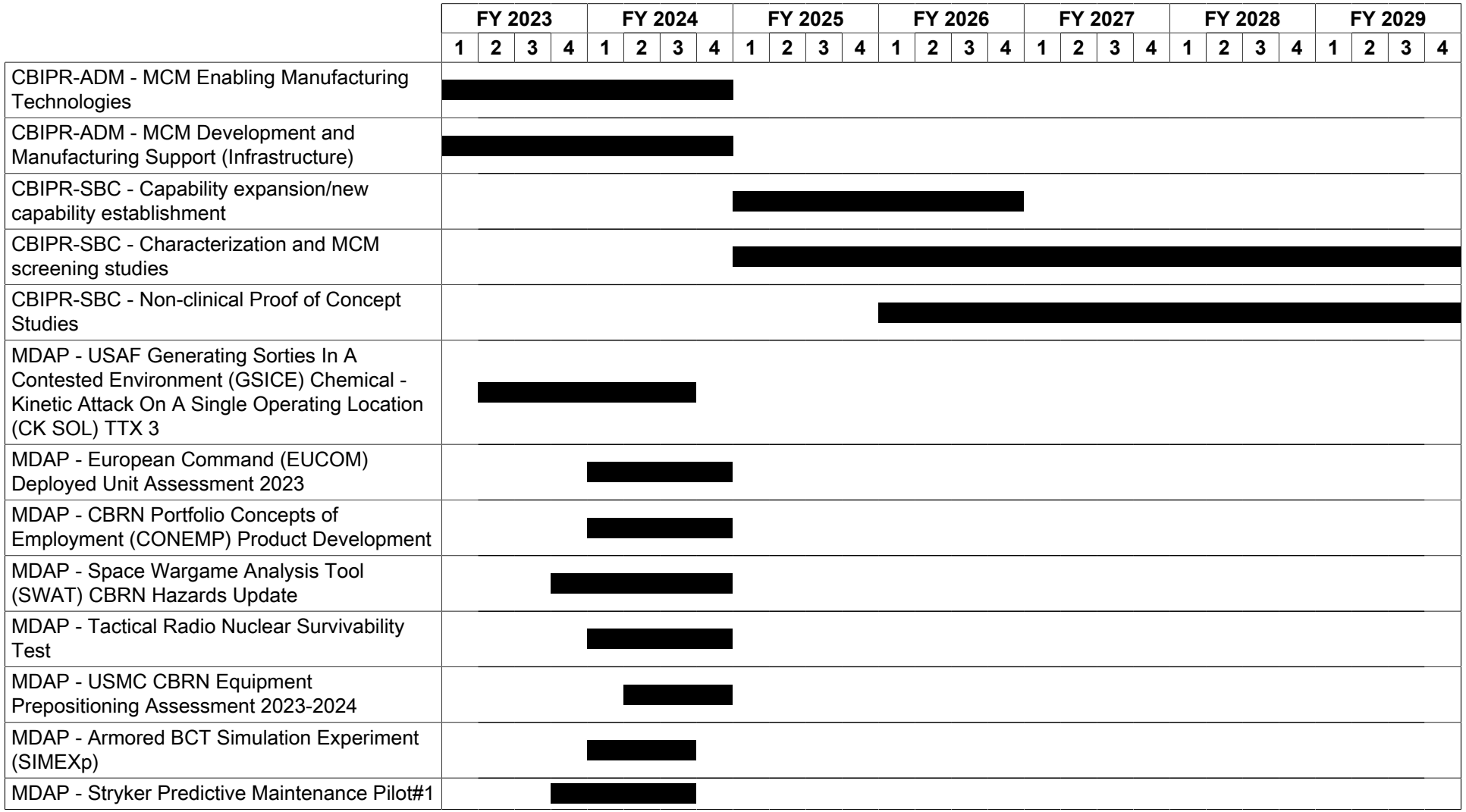

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Chemical and Biological Defense Program		Date: March 2024
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0604384BP / *Chemical and Biological Defense Program - EMD*	**Project (Number/Name)** EN5 / *Enabling Investments (SDD)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
CBIPR-ADM - MCM Enabling Manufacturing Technologies	1	2023	4	2024
CBIPR-ADM - MCM Development and Manufacturing Support (Infrastructure)	1	2023	4	2024
CBIPR-SBC - Capability expansion/new capability establishment	1	2025	4	2026
CBIPR-SBC - Characterization and MCM screening studies	1	2025	4	2029
CBIPR-SBC - Non-clinical Proof of Concept Studies	1	2026	4	2029
MDAP - USAF Generating Sorties In A Contested Environment (GSICE) Chemical - Kinetic Attack On A Single Operating Location (CK SOL) TTX 3	2	2023	3	2024
MDAP - European Command (EUCOM) Deployed Unit Assessment 2023	1	2024	4	2024
MDAP - CBRN Portfolio Concepts of Employment (CONEMP) Product Development	1	2024	4	2024
MDAP - Space Wargame Analysis Tool (SWAT) CBRN Hazards Update	4	2023	4	2024
MDAP - Tactical Radio Nuclear Survivability Test	1	2024	4	2024
MDAP - USMC CBRN Equipment Prepositioning Assessment 2023-2024	2	2024	4	2024
MDAP - Armored BCT Simulation Experiment (SIMEXp)	1	2024	3	2024
MDAP - Stryker Predictive Maintenance Pilot#1	4	2023	3	2024