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**Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Chemical and Biological Defense Program** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400: Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP I Chemical and Biological Defense (Operational Systems Development)
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	0.000	55.359	65.588	80.495	0.000	80.495	83.683	89.178	84.877	66.102	Continuing	Continuing
UN7: Understand (Op Sys Dev)	-	0.000	40.414	50.603	0.000	50.603	58.881	71.869	68.839	50.628	Continuing	Continuing
PT7: Protect (Op Sys Dev)	-	0.000	20.076	26.818	0.000	26.818	22.815	15.490	14.193	13.612	Continuing	Continuing
MT7: Mitigate (Op Sys Dev)	-	0.000	5.098	3.074	0.000	3.074	1.987	1.819	1.845	1.862	Continuing	Continuing
CA7: Contamination Avoidance (Op Sys Dev)	-	12.244	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.244
CM7: Homeland Defense (Op Sys Dev)	-	1.463	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.463
C07: Collective Protection (Op Sys Dev)	-	9.645	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.645
DE7: Decontamination (Op Sys Dev)	-	1.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.020
IP7: Individual Protection (Op Sys Dev)	-	11.659	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	11.659
IS7: Information Systems (Op Sys Dev)	-	14.589	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	14.589
MB7: Medical Biological Defense (Op Sys Dev)	-	3.726	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.726
MC7: Medical Chemical Defense (Op Sys Dev)	-	1.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.013

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

This program element (PE) resources Operational System Development across the Understand, Protect, and Mitigate portfolios. Chemical Biological Defense Program (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 upgrade of systems that have been fielded or have received approval for full-rate production in order to maintain Joint Force readiness.

Individual Projects include:

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- Understand (UN7): Technology refresh, modernization and continuous engineering of software applications and information systems to shape and inform the battlespace against CBRN threats. Continued development and testing of CB sensor equipment to maintain system interoperability with emerging information technology and decrease size, weight, and power requirements to reduce the logistical burden of associated capabilities. Technology refresh of fielded medical diagnostic systems and associated capabilities (e.g., assays) that contribute to the layered medical defenses against biological warfare agents and upgrade of fielded medical nerve agent treatment system that contribute to the layered medical defenses against chemical warfare agent threats facing U.S. Forces in the field.

- Protect (PT7): Efforts to refresh technology of fielded individual and protective equipment that enables the Joint Force to operate in a contaminated chemical, biological, and radiological (CBR) environment with little or no degradation of performance. Technology refresh efforts for fielded collective protection systems that are smaller, lighter, less costly to produce and maintain, and more logistically supportable, enabling mission accomplishment in spaces safe from the effects of CBR contamination.

- Mitigate (MT7): Technology refresh of fielded Contamination Mitigation (ConMit) systems that will remove and/or detoxify contaminated material without damaging combat equipment, personnel, or the environment.

- Contamination Avoidance (CA7), Homeland Defense (CM7), Collective Protection (C07), Decontamination (DE7), Individual Protection (IP7), Information Systems (IS7), Medical Biological Defense (MB7) and Medical Chemical Defense (MC7) are no longer active FY24 Projects due to budget restructuring.

The projects in this PE support operational systems development necessary to maintain operational effectiveness and are, therefore, correctly placed in Budget Activity 7.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	58.261	68.030	55.189	-	55.189
Current President's Budget	55.359	65.588	80.495	-	80.495
Total Adjustments	-2.902	-2.442	25.306	-	25.306
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-2.442			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-1.937	-			
• SBIR/STTR Transfer	-0.965	-			
• Other Adjustments	-	-	25.306	-	25.306

**Change Summary Explanation**

Funding: FY 2022 (-\$1.937 Million): Below threshold reprogramming to System Development & Demonstration, Budget Activity 5 in support of sensor and detection efforts.

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<b>Appropriation/Budget Activity</b>	<b>R-1 Program Element (Number/Name)</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>

FY 2022 (-\$0.965 Million): Transfer of funding to support Small Business Innovative Research/Small Business Technology Transfer efforts.

FY 2023 (-\$2.442 Million): Congressional Directed Reductions.

FY 2024 (+\$25.306 Million): Increase for Departmental inflation rate adjustments (+\$0.403 Million) and to address modernization, obsolescence and continuous engineering of collective protection systems, sensor equipment and information systems, and CBRN medical devices. These efforts will increase the readiness, sustainability, reliability, and affordability of these systems.

Schedule: N/A

Technical: N/A

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 0400 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>				<b>Project (Number/Name)</b> UN7 / <i>Understand (Op Sys Dev)</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
UN7: <i>Understand (Op Sys Dev)</i>	-	0.000	40.414	50.603	0.000	50.603	58.881	71.869	68.839	50.628	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The Understand Operational System Development Project provides the Joint Force continued readiness of fielded sensor, information technology and medical diagnostic capabilities and provides size, weight and power improvements to reduce logistical burden on the Warfighter and Services. In FY 2023, the Chemical Biological Defense Program (CBDP) RDT&E Projects were restructured to align with the CBDP portfolio construct. UN7 efforts in FY 2022 remain in Projects CA7, CM7, IP7, IS7, and MB7. This restructuring provided standardization and alignment across CBDP research, development and acquisition efforts.

Efforts included in this Project are:

- (1) Modernization Chemical Biological Radiological Nuclear Information Systems (MOD CBRN IS),
- (2) CBRN Support to Command and Control (CSC2),
- (3) Enhanced Maritime Biological Detection (EMBD),
- (4) Reactive Chemistry Orthogonal Surface and Environmental Threat Ticket Array (ROSETTA),
- (5) Modernization Sensors (MOD SEN),
- (6) Modernization Medical (MOD MED),
- (7) Special Purpose Unit Rapid Capability Development and Deployment (SPU RCDD), and
- (8) Weapons of Mass Destruction - Civil Support Team (WMD CST)

MOD CBRN IS combines CBRN IS (Cloud), Joint Effects Model (JEM), the Joint Warning and Reporting Network (JWARN), and the Software Support Activity within one portfolio. MOD CBRN IS provides for the continuous engineering and sustainment efforts to modernize capabilities and conduct Post Deployment Software Support (PDSS) to fielded CBRN software programs. Activities include: software code updates and modernization to correct deficiencies; compliance with system architectural changes to ensure interoperability; cybersecurity updates ensuring compliance with policies and standards; test and evaluation to identify possible cybersecurity vulnerabilities; configuration management; software redistribution, documentation, and training. In FY24, MOD CBRN IS funding will be consolidated under CBRN Support to Command and Control (CSC2).

Effort consolidates CBRN Support to Command and Control (CSC2) with MOD CBRN IS in order to gain efficiencies of managing funding and programmatic efforts under one line. Additionally, it allows the consolidation of continuous engineering for the currently deployed legacy CBRN information systems (Joint Effects Model (JEM)/Joint Warning and Reporting Network (JWARN), CBRN Information System (CBRN IS)). Effort encompasses the processes, procedures, people, material and information required to support and modernize fielded CBRN information systems and applications. Legacy capabilities and efforts will be transitioned to the CSC2 Capability set in the FY27-29 time frame, maintaining the stopgap capability for CBRN warning, reporting, and effects modeling while setting conditions for the sun

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program	<b>Date:</b> March 2023
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<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> UN7 / <i>Understand (Op Sys Dev)</i>
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setting of the legacy capabilities. The approach to consolidate simplifies software BA7 management under one line and synchronizes the sunset of legacy JEM and JWARN capabilities as replacement capabilities are deployed through CSC2.

The EMBD program will undertake engineering efforts to combat Diminishing Manufacturing Sources and Material Shortages (DMSMS) and maintain a stable production line. The EMBD program will address major obsolescence problems identified by the prime contractor that could affect a stable production line and to ensure new EMBD hardware/software remains procurable, field upgradeable and backwards compatible with previously fielded units. In FY24, EMBD will undertake engineering efforts to resolve obsolescence of the flash memory in the Rapid Agent Aerosol Detector (RAAD), multiple circuit card electrical components and Developmental Testing (DT) of all new components.

ROSETTA is a modernization effort to provide the General Forces a low-cost, easy to use surface and/or vapor hazard detection ticket for a wide range of chemical warfare agents (CWAs) and non-traditional agents (NTAs). These highly-selective, multiplexed array tickets will enable accurate hazard identification in the presence of common battlefield interferents at the tactical-level. ROSETTA is based on colorimetric technology and will be eye-readable and has potential for integration onto unmanned platforms especially micro-sized unmanned aerial sensors. In addition, the ROSETTA tickets will provide improved hazard detection performance with reduced false alarm rate, potential for increased number of chemicals detected, reduced detection time especially for compounds of interest (CWAs, pharmaceutical based agents (PBAs), NTAs and toxic industrial chemicals (TICs)), and potential for integration onto unmanned platforms especially micro-sized unmanned aerial sensors. ROSETTA funding discontinues after FY23, program deemed un-executable in FY24.

The MOD SEN program conducts technology refresh, modernization and continuous engineering of software applications and information systems to shape and inform the battlespace against CBRN threats for the Analytical Laboratory System Modification (ALS MOD), Common Analytical Laboratory System (CALs) Field Confirmatory Analytical Capability Set (FC ACS), CALs Theater Validation Integrated System (TV IS), CBRN Dismounted Reconnaissance System (DRS), M8, and Enhanced Maritime Biological Detection (EMBD) programs. Continued development and testing of CB sensor equipment is planned to address obsolescence of critical equipment and functionality issues for the Services in order to maintain system interoperability with emerging information technology and decrease size, weight and power requirements to reduce logistical burden of associated capabilities. In FY24, MOD SEN supports the evaluation of components for technical refreshment of the CBRN DRS, CALs, ALS MOD, M8, and EMBD.

The MOD MED program supports improvements to fielded systems and supports post-fielding U.S. Food & Drug Administration (FDA) requirements for CBRN medical devices, including FDA-approved autoinjectors and diagnostic equipment, in order to mitigate obsolescence and maintain fielded capabilities. In FY24, MOD MED will continue annual cyber security updates and management of hardware and software configurations for diagnostic systems; initiate development of a Next Generation Diagnostic System Increment 1 (NGDS 1) replacement system to maintain the current Biological Warfare diagnostics capability, and; support Department of Defense (DoD) sponsored regulatory activities for legacy autoinjectors and continue FDA Post-Marketing Commitments.

SPU RCDD facilitates Joint Special Operations Command (JSOC) rapid response requirements to near-term and emergent chemical-biological defensive capabilities. This includes select elements from across the Special Operations Force (SOF) Enterprise such as CBRN Assessment Response Teams (CARTs) and other Joint Force enabling units such as the 20th Chemical, Biological, Radiological, Nuclear and Explosives Command. SPU RCDD mitigates risk across the Chemical Biological

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Defense Program (CBDP) by creating a portfolio of operationally-relevant CB capabilities that can be quickly transitioned in response to the articulated, emergent capability needs of the geographic combatant commanders. These objectives are met by the early transitioning of promising science and technologies (S&T); the focused conduct of combat evaluations and mission-oriented operational assessments to assess technological and mission suitability; and the active leveraging of 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 “buy-try-decide-acquire” acquisition strategies. SPU RCDD initiates efforts such as respiratory breathing systems, biological identification, unmanned aerial and ground platform sensor integration, development of enhanced and augmented reality systems, and modernization of protective Chemical and Biological ensembles that have gone through requirements validation, and continues product enhancement development and technology upgrades on currently fielded SOF equipment to counter emerging threats.

Weapons of Mass Destruction Civil Support Team (WMD CST) supports the fielded system upgrade and ongoing assessment and acquisition of Commercial Off The Shelf (COTS) and Government Off The Shelf (GOTS) analytical detection, protection, decontamination and sampling equipment for survey in order to expand/enhance the operational capabilities of the WMD CST. Program efforts support upgrades of key components of the WMD CST Program that have become obsolete, or are no longer being supported by the manufacturer. In FY24, the WMD CST program continues system-related test activities, including costs of specially fabricated hardware to obtain or validate engineering data on the performance of the system.

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<p><b>Title:</b> 1) MOD CBRN IS</p> <p><b>Description:</b> CBRN Information Systems Modernization</p> <p><b>FY 2023 Plans:</b> Perform management, preplanned product improvements and continuous engineering efforts to modernize currently fielded capabilities of the Joint Effects Model (JEM), Joint Warning and Reporting Network (JWARN) and CBRN IS hosted on cloud and Joint Service Command and Control (C2) systems. Update host architectures, operating systems, cyber security requirements and North Atlantic Treaty Organization (NATO) standards in order to maintain interoperability, efficiency and functionality and compliance. Continue Government developmental and operational testing on software updates and modernization efforts. Provide program/financial management, costing, contracting, scheduling and acquisition oversight. Provide product support for software redeployment and training to operational forces.</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Program/project funding transferred to another funding line. In FY24, MOD CBRN IS funding will be consolidated under CBRN Support to Command and Control (CSC2).</p>	-	18.995	-
<p><b>Title:</b> 2) CSC2</p> <p><b>Description:</b> Continuous engineering, and post-production software support of CSC2 and CBRN information systems</p>	-	-	20.485

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<p><b><i>FY 2024 Plans:</i></b> Continue engineering, integration, and delivery of the CSC2 capability set in support of the Minimum Viable Capability Release (MVCR). Continue post-production software support of the Legacy CBRN information systems, until the CSC2 is available to deploy. This continued development will include updates to host architectures, operating systems, cyber security requirements and North Atlantic Treaty Organization (NATO) standards. Supports continuous software developmental and operational testing on software updates and modernization efforts. Provide program/financial management, costing, contracting, scheduling and acquisition oversight and product support for software redeployment and training to operational forces.</p> <p><b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> Program/project funding transferred from another funding line. FY23 funding under MOD CBRN IS. Software acquisition pathway requires regular delivery of capabilities within one year of the execution decision. Provide for continuous engineering of the deployed capabilities.</p>			
<p><b><i>Title:</i></b> 3) EMBD <b><i>Description:</i></b> Product Development, Test and Evaluation, and Management</p> <p><b><i>FY 2023 Plans:</i></b> Continue obsolescence support to include production efforts, testing and verification efforts.</p> <p><b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> Program/project funding transferred to another funding line. FY 24 funding is combined under MOD SEN Project UN7 to execute obsolescence needs.</p>	-	1.748	-
<p><b><i>Title:</i></b> 4) ROSETTA <b><i>Description:</i></b> Product Development, Engineering Design &amp; Testing</p> <p><b><i>FY 2023 Plans:</i></b> Continue contract efforts and conduct contractor testing for down select.</p> <p><b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> Program/project terminated in FY 2024.</p>	-	2.447	-
<p><b><i>Title:</i></b> 5) MOD SEN <b><i>Description:</i></b> Sensors Modernization</p>	-	6.379	11.666

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<p><b>FY 2023 Plans:</b> Complete evaluation of improved and integrated sensors and personal protective equipment (PPE) for CBRN Dismounted Reconnaissance System (DRS), identifying new electrochemiluminescence (ECL) technology to refresh CBRN DRS, Common Analytical Laboratory System (CALs) and Analytical Laboratory System (ALS) Modification (MOD). Initiate evaluation of Liquid Chromatography Mass Spectrometry (LCMS) technology and assay development to refresh ALS.</p> <p><b>FY 2024 Plans:</b> Complete evaluation of prototyping efforts associated with the CBRN Dismounted Reconnaissance Systems (DRS) Systems Modernization Program (SMP), and the continued technical refreshment of CBRN DRS, Common Analytical Laboratory System (CALs), Analytical Laboratory System (ALS) Modification (MOD), M8, and Enhanced Maritime Biological Detection (EMBD). Plans include laboratory information systems and gas chromatography mass spectrometer refreshments for CALs, suit refreshment and communications updates for DRS, modernizing the M8 to refresh the technology originally manufactured in the 1960s, and software refreshments and electronics components obsolescence for EMBD.</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Program/project funding transferred from another funding line. In FY24 MOD SEN combines the MOD SEN funding line with ROSETTA (M8 MWO) and EMBD UN7 lines to execute those activities' specific obsolescence needs.</p>			
<p><b>Title:</b> 6) MOD MED - Diagnostic System Upgrades / Assay Development</p> <p><b>Description:</b> Maintain system hardware and software configurations for fielded diagnostics.</p> <p><b>FY 2023 Plans:</b> Annual cyber security updates and management of hardware and software configurations, and develop additional assays for fielded systems.</p> <p><b>FY 2024 Plans:</b> Continue annual cyber security updates and management of hardware and software configurations, and develop additional assays for NGDS 1.</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Decrease due to change in program/project schedule. Delay of MPDS Milestone C to FY25.</p>	-	5.354	3.024
<p><b>Title:</b> 7) MOD MED - Autoinjector Post Marketing Commitments and Requirements (PMRs/PMCs)</p> <p><b>Description:</b> Food and Drug Administration (FDA) required Post-Marketing Commitments and Requirements for combination products.</p>	-	0.527	1.906

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<p><b>FY 2023 Plans:</b> Office Regulatory Affairs (ORA) Support - regulatory activities for legacy autoinjectors.</p> <p><b>FY 2024 Plans:</b> Support Army, Office of the Surgeon General (OTSG) - Sponsored regulatory activities for legacy autoinjectors. Initiate FDA Post-Marketing Commitments.</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Increase due to change in program/project schedule. Due to the delays to Dual Drug Delivery Device (D4) pushing FDA approval to Dec 2024.</p>			
<p><b>Title:</b> 8) MOD MED - NGDS 1 Tech Refresh</p> <p><b>Description:</b> NGDS 1 technology refresh</p> <p><b>FY 2024 Plans:</b> Initiate developmental activities for system to maintain the Biological Warfare diagnostics capability currently provided by NGDS 1.</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> New effort within MOD MED.</p>	-	-	8.043
<p><b>Title:</b> 9) SPU RCDD - System Modernization</p> <p><b>Description:</b> This line includes Product Development, Test and Evaluation, and Management Services, to modernize technology across multiple commodity areas in order to rapidly field solutions in response to emergent threats.</p> <p><b>FY 2023 Plans:</b> Initiate product enhancement, development, and technology upgrades on currently fielded equipment to counter emerging threats, conduct limited user evaluations and operational assessments, and provide program management support. Continue the Modular Self Contained Breathing Apparatus (M-SCBA) and Enhanced Warfighter Augmented Training (EWAT) product enhancement, development, and technology upgrades, conduct limited user evaluation, and operational assessments, and provide program management support.</p> <p><b>FY 2024 Plans:</b> Continue product enhancement, development, and technology upgrades on currently fielded equipment to counter emerging threats, conduct limited user evaluations and operational assessments, and provide program management support. Continue</p>	-	1.463	1.835

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
the MSCBA and EWAT product enhancement, development, and technology upgrades, conduct limited user evaluation, and operational assessments, and provide program management support.  <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Minor change due to routine program adjustments.			
<b>Title:</b> 10) WMD CST  <b>Description:</b> System Upgrade and Support  <b>FY 2023 Plans:</b> Continue system-related test activities, including costs of specially fabricated hardware to obtain or validate engineering data on the performance of the system. Continue the detailed planning, conduct, support, data reduction, and reports from such testing, as well as hardware items that are consumed or planned to be consumed in the conduct of such operations. Conduct logistics engineering and integrated logistics support (ILS) management (e.g., maintenance support, facilities, personnel, training, testing, and activation of the system). Initiate start of Phase III unmanned aerial sensors (UAS) testing and larger scale Decon effluent testing.  <b>FY 2024 Plans:</b> FY24 funding address capability gaps and obsolescence issues that were identified by the commercial of the shelf (COTS) modification (MOD) process in collaboration with the National Guard Bureau.  <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Minor change due to routine program adjustments.	-	3.501	3.644
<b>Accomplishments/Planned Programs Subtotals</b>	-	40.414	50.603

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u> <u>Base</u>	<u>FY 2024</u> <u>OCO</u>	<u>FY 2024</u> <u>Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• CA5: Contamination Avoidance (SDD)	84.967	-	-	-	-	-	-	-	-	0.000	84.967
• CA7: Contamination Avoidance (Op Sys Dev)	12.244	-	-	-	-	-	-	-	-	0.000	12.244
• CM7: Homeland Defense (Op Sys Dev)	1.463	-	-	-	-	-	-	-	-	0.000	1.463

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
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**C. Other Program Funding Summary (\$ in Millions)**

Line Item	FY 2022	FY 2023	FY 2024	FY 2024	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	Cost To	
			Base	OCO	Total					Complete	Total Cost
• IP5: <i>Individual Protection (SDD)</i>	18.690	-	-	-	-	-	-	-	-	0.000	18.690
• IP7: <i>Individual Protection (Op Sys Dev)</i>	11.659	-	-	-	-	-	-	-	-	0.000	11.659
• IS7: <i>Information Systems (Op Sys Dev)</i>	14.589	-	-	-	-	-	-	-	-	0.000	14.589
• MB7: <i>Medical Biological Defense (Op Sys Dev)</i>	3.726	-	-	-	-	-	-	-	-	0.000	3.726
• UN5: <i>Understand (SDD)</i>	-	126.071	182.726	-	182.726	137.991	127.671	108.908	68.088	Continuing	Continuing
• JS0005: <i>Common Analytical Laboratory System (CALS)</i>	48.258	30.530	7.167	-	7.167	-	-	-	-	0.000	128.728
• JS5230: <i>Modernization CBRN Information Systems (MOD CBRN IS)</i>	0.611	0.656	-	-	-	-	-	-	-	0.000	1.267
• MC0101: <i>CBRN Dismounted Reconnaissance Systems (CBRN DRS)</i>	21.611	47.324	60.492	-	60.492	64.556	37.802	23.292	-	Continuing	Continuing
• PHM018: <i>SPU Rapid Capability Development And Demo (SPU RCDD)</i>	10.834	9.914	49.455	-	49.455	20.689	20.180	24.216	26.638	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**

MODERNIZATION CBRN INFORMATION SYSTEMS (MOD CBRN IS)

MOD CBRN IS funding will be consolidated under CBRN Support to Command and Control (CSC2) starting in FY24 to gain program management efficiencies and to adequately sustain Joint Effects Model (JEM) and Joint Warning and Reporting Network (JWARN) capabilities until a CSC2 capability is available.

CBRN SUPPORT TO C2 (CSC2)

Effort combines the MOD CBRN IS effort with CSC2. The acquisition strategy utilizes a managed portfolio approach to align multiple capabilities in support of continuous engineering and modernization of CBRN Information Systems. This encompasses the continuous engineering to maintain, modernize, and conduct post production and

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program	<b>Date:</b> March 2023
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<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> UN7 / <i>Understand (Op Sys Dev)</i>
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deployment support to fielded CBRN software information systems and capabilities. CSC2 will leverage and modernize the existing capabilities formally under the MOD CBRN IS effort to reduce cost and technical risk through the existing infrastructure and software platforms for integration and delivery of the modular capability set. As well as initiate the sun setting of the legacy capabilities associated with MOD CBRN IS.

**ENHANCED MARITIME BIOLOGICAL DETECTION (EMBD)**

The EMBD program uses a streamlined acquisition strategy utilizing a Full Rate Production (FRP) contract with options for production of EMBD kits and Obsolescence Support in Production (OSIP) to resolve diminishing sources and obsolescence issues. The FY24 OSIP Option will address major obsolescence problems identified by the prime contractor that could affect a stable production line and to ensure new EMBD hardware/software remains procurable, field upgradeable and backwards compatible with previously fielded units. The FY24 OSIP Option will undertake engineering efforts to resolve obsolescence of the flash memory in the Rapid Agent Aerosol Detector (RAAD), multiple circuit card electrical components and Developmental Testing (DT) of all new components.

**REACTIVE CHEMISTRY ORTHOGONAL SURFACE AND ENVIRONMENTAL THREAT TICKET ARRAY (ROSETTA)**

ROSETTA will use a streamlined approach to rapidly field multiple components of the modernization of the M256A2 kit. This approach is based on technology that will transition from Science and Technology Efforts and/or commercial off the shelf (COTS) products to the M256 kit. These efforts will utilize multiple contract vehicles including Countering Weapons of Mass Destruction (CWMD) Other Transactional Authority (OTA) and Joint Enterprise- Research, Development, Acquisition, Production/Procurement (JERDAP) in order to streamline the acquisition of the products. The ROSETTA funding will complete the acquisition of the M8 component to the M256 kit and will support the acquisition of a pharmaceutical based agent (PBA) ticket, the M256 vapor unmasking tool, and the other non-traditional agents (NTAs) and toxic industrial chemicals (TICs). These products will be transitioned to TACOM for production.

**MODERNIZATION SENSORS (MOD SEN)**

MOD SEN program uses a Commercial Off-The-Shelf (COTS)/Government Off-The-Shelf (GOTS) approach to manage modernization for multiple CBRN sensor programs. This strategy employs a Non-developmental Item acquisition concept to translate mission needs and emerging technology capabilities into a fieldable component to solve obsolescence and technology update needs. Current planned funding supports CALS TV-IS, FC-ACS, ALS MOD, CBRN DRS, M8 Modification, and EMBD modernization activities. The program maintains baseline capabilities with obsolescence management, technology insertions, and enhancements based on changes in requirements. This program modernizes the Joint Force to combat advancing threats and current capability gaps in analytical laboratory and sensitive site assessment and exploitation capabilities require a system modernization strategy for each system.

**MODERNIZATION MEDICAL (MOD MED)**

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program	<b>Date:</b> March 2023
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MOD MED leverages an existing Indefinite Delivery/Indefinite Quantity (IDIQ) Delivery Order contract with the Next Generation Diagnostic System Increment 1 (NGDS 1) original equipment manufacturer for both hardware and software updates, including cybersecurity, as well as for development of additional assays (i.e. tests) to address emerging biological threats and diseases.

MOD MED will mitigate obsolescence of the NGDS 1, by awarding contracts and/or Other Transaction Authority (OTA) agreements to develop, test and evaluate a replacement for the current commercial system, and maintain the existing Biological Warfare diagnostic capability.

MOD MED for AUTOINJ will ensure post-marketing commitments and requirements are anticipated as a result of the U.S. Food & Drug Administration (FDA) approval, and will be the responsibility of the performer and the government. AUTOINJ uses contracts and Other Transaction Authority (OTA) agreements in which the performer shall be responsible for conducting post-approval FDA requirements.

**SPU RAPID CAPABILITY DEVELOPMENT AND DEPLOYMENT (SPU RCDD)**

The SPU RCDD overall acquisition strategy allows for rapid prototyping and testing of novel and modified COTS or GOTS systems against mission critical capabilities to enhance mission success. The SPU RCDD will use technical and functional evaluations of currently fielded items to identify materiel that requires modernization and incorporate operationally-relevant system developments. This will be accomplished through competitive contracting vehicles such as Multiple Award Indefinite Delivery Indefinite Quantify Task Order and the Countering Weapons of Mass Destruction Other Transaction Authority (CWMD OTA) for the development of prototype test assets. The SPU RCDD will use Government Agencies for prototype development, test and evaluation, and technical support.

**WMD - CIVIL SUPPORT TEAMS (WMD CST)**

The Weapons of Mass Destruction Civil Support Team Program (WMD-CST) is a COTS based program that supports the evaluation of advancements in CBRN commercial off the shelf (COTS)/government-off-the-shelf (GOTS) equipment against the current technology baseline of equipment fielded to the (57) WMD CST Teams, this is to address analytical equipment obsolescence.

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program</b>												<b>Date: March 2023</b>			
<b>Appropriation/Budget Activity</b> 0400 / 7						<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / Chemical and Biological Defense (Operational Systems Development)						<b>Project (Number/Name)</b> UN7 / Understand (Op Sys Dev)			

<b>Product Development (\$ in Millions)</b>				<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
MOD CBRN IS - SW S - Modernization	Various	Various : N/A	-	0.000		13.118	Dec 2022	0.000		-		0.000	0.000	13.118	0.000
CSC2 - Continuous Engineering CBRN-IS	TBD	Various : N/A	-	0.000		0.000		11.681	Dec 2023	-		11.681	Continuing	Continuing	0.000
CSC2 - Modernization CBRN Warning & Reporting	C/CPIF	Various : N/A	-	0.000		0.000		2.137	Jan 2024	-		2.137	Continuing	Continuing	0.000
EMBD - HW SB - Obsolescence Support in Production	C/CPIF	Various : N/A	-	0.000		1.059	Dec 2022	0.000		-		0.000	0.000	1.059	0.000
ROSETTA - HW C - Program and OGA Support	MIPR	Various : N/A	-	0.000		2.203	Apr 2023	0.000		-		0.000	0.000	2.203	0.000
MOD SEN - HW C - Government Team Labor	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	0.000		0.345	Nov 2022	0.992	Nov 2023	-		0.992	Continuing	Continuing	0.000
MOD MED - HW C - Product Management	Various	Various : N/A	-	0.000		1.756	Dec 2022	3.520	Dec 2023	-		3.520	Continuing	Continuing	0.000
MOD MED - HW C - Autoinjector ORA	MIPR	U.S. Army Medical Research and Development Command (USAMRDC) : Fort Detrick, MD	-	0.000		0.193	Nov 2022	0.794	Nov 2023	-		0.794	Continuing	Continuing	0.000
MOD MED - HW C - Autoinjector PMR/PMCs	C/CPFF	Kaleo : Richmond, VA	-	0.000		0.334	Sep 2023	0.000		-		0.000	0.000	0.334	0.000
MOD MED - HW C - Next Generation Diagnostic System 1 (NGDS 1)	C/CPFF	BioFire Dx : Salt Lake City, UT	-	0.000		3.029	Feb 2023	2.160	Dec 2023	-		2.160	Continuing	Continuing	0.000

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> UN7 / <i>Understand (Op Sys Dev)</i>
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<b>Product Development (\$ in Millions)</b>				<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
MOD MED - HW C - NGDS 1 Tech Refresh	C/CFFF	TBD : N/A	-	0.000		0.000		4.792	Mar 2024	-		4.792	Continuing	Continuing	0.000
SPU RCDD - HW C - Prototype development	Various	Various : N/A	-	0.000		1.253	Dec 2022	1.613	Dec 2023	-		1.613	Continuing	Continuing	0.000
WMD CST - HW S - Team Labor	Various	Various : N/A	-	0.000		0.000		0.853	Nov 2023	-		0.853	Continuing	Continuing	0.000
<b>Subtotal</b>			-	0.000		23.290		28.542		-		28.542	Continuing	Continuing	N/A

<b>Support (\$ in Millions)</b>				<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
MOD CBRN IS - ES S - milCloud	MIPR	Various : N/A	-	0.000		2.477	Dec 2022	0.000		-		0.000	0.000	2.477	0.000
CSC2 - CBRN-IS Platform Maintenance	MIPR	Various : N/A	-	0.000		0.000		3.763	Jan 2024	-		3.763	Continuing	Continuing	0.000
EMBD - ES S - Software Support	C/CPIF	Various : N/A	-	0.000		0.054	Dec 2022	0.000		-		0.000	0.000	0.054	0.000
MOD SEN - ES C - Science and Engineering Support	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	0.000		0.170	Nov 2022	0.000		-		0.000	0.000	0.170	0.000
MOD SEN - ES C - Obsolescent Management	Various	Various : N/A	-	0.000		0.784	Nov 2022	3.408	Nov 2023	-		3.408	Continuing	Continuing	0.000
WMD CST - ES C - Science & Engineering Support	MIPR	Naval Air Warfare Center (Aircraft Division) : Patuxent River, MD	-	0.000		0.120	Jan 2023	0.190	Nov 2023	-		0.190	Continuing	Continuing	0.000

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / Chemical and Biological Defense (Operational Systems Development)	<b>Project (Number/Name)</b> UN7 / Understand (Op Sys Dev)
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<b>Support (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
WMD CST - ES C - Government Product Development Team Labor	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	0.000		0.384	Feb 2023	0.190	Nov 2023	-		0.190	Continuing	Continuing	0.000
<b>Subtotal</b>			-	0.000		3.989		7.551		-		7.551	Continuing	Continuing	N/A

<b>Test and Evaluation (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MOD CBRN IS - OTHT S - System Testing	MIPR	Various : N/A	-	0.000		1.500	Dec 2022	0.000		-		0.000	0.000	1.500	0.000
CSC2 - System update T&E	TBD	U.S. Navy Space and Naval Warfare (SPAWAR) Systems Center : San Diego, CA	-	0.000		0.000		0.952	Oct 2023	-		0.952	Continuing	Continuing	0.000
EMBD - Obsolescence Support in Production testing and verification	C/CPIF	Various : N/A	-	0.000		0.401	Dec 2022	0.000		-		0.000	0.000	0.401	0.000
MOD SEN - DTE C - Component Test and Evaluation	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	0.000		0.959	Nov 2022	0.750	Nov 2023	-		0.750	Continuing	Continuing	0.000

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program</b>												<b>Date: March 2023</b>			
<b>Appropriation/Budget Activity</b> 0400 / 7						<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / Chemical and Biological Defense (Operational Systems Development)						<b>Project (Number/Name)</b> UN7 / Understand (Op Sys Dev)			

<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
MOD SEN - DTE C - Information Assurance	Various	Various : N/A	-	0.000		0.247	Nov 2022	0.000		-		0.000	0.000	0.247	0.000
MOD SEN - DTE C - System Modernization	Various	Various : N/A	-	0.000		3.274	Nov 2022	4.953	Nov 2023	-		4.953	Continuing	Continuing	0.000
WMD CST - OTHC C - CBRN COTS Component	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	0.000		1.120	Feb 2023	1.680	Nov 2023	-		1.680	Continuing	Continuing	0.000
WMD CST - OTHC C - CBRN COTS Component	MIPR	Naval Air Warfare Center (Aircraft Division) : Patuxent River, MD	-	0.000		1.574	Jan 2023	0.367	Nov 2023	-		0.367	Continuing	Continuing	0.000
<b>Subtotal</b>			-	0.000		9.075		8.702		-		8.702	Continuing	Continuing	N/A

<b>Management Services (\$ in Millions)</b>				<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
MOD CBRN IS - PM/MS S - Program Management Support	Various	Various : N/A	-	0.000		1.900	Dec 2022	0.000		-		0.000	0.000	1.900	0.000
CSC2 - Program Management Office Support	Various	Various : N/A	-	0.000		0.000		1.952	Oct 2023	-		1.952	Continuing	Continuing	0.000
EMBD - PM/MS S - Program Management Support	MIPR	Various : N/A	-	0.000		0.234	Dec 2022	0.000		-		0.000	0.000	0.234	0.000

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / Chemical and Biological Defense (Operational Systems Development)	<b>Project (Number/Name)</b> UN7 / Understand (Op Sys Dev)
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<b>Management Services (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
ROSETTA - PM/MS S - Program Management Support	MIPR	Various : N/A	-	0.000		0.244	Jan 2023	0.000		-		0.000	0.000	0.244	0.000
MOD SEN - PM/MS C - Program Management Cost	Various	Various : N/A	-	0.000		0.000		1.563	Nov 2023	-		1.563	Continuing	Continuing	0.000
MOD SEN - PM/MS S - Program Management Support	Various	Various : N/A	-	0.000		0.600	Jan 2023	0.000		-		0.000	0.000	0.600	0.000
MOD MED - PM/MS C - Management Services	Various	Various : N/A	-	0.000		0.569	Dec 2022	1.707	Dec 2023	-		1.707	Continuing	Continuing	0.000
SPU RCDD - PM/MS C - Program Management Support	Various	Various : N/A	-	0.000		0.210	Dec 2022	0.222	Dec 2023	-		0.222	Continuing	Continuing	0.000
WMD CST - PM/MS S - Program Management Support	MIPR	Various : N/A	-	0.000		0.303	Dec 2022	0.364	Nov 2023	-		0.364	Continuing	Continuing	0.000
<b>Subtotal</b>			-	0.000		4.060		5.808		-		5.808	Continuing	Continuing	N/A

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	-	0.000	40.414	50.603	-	50.603	Continuing	Continuing	N/A

**Remarks**







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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MOD CBRN IS - Modernization	1	2022	4	2023
MOD CBRN IS - Continuous Engineering/SW Codes Updates	1	2022	4	2023
MOD CBRN IS - Cyber Security Compliance	1	2022	4	2023
MOD CBRN IS - Operating system architecture updates	1	2022	4	2023
MOD CBRN IS - Configuration Management and Test and Evaluation	1	2022	4	2023
MOD CBRN IS - Validation, Verification and Accreditation	1	2022	4	2023
CSC2 - SWP Execution Phase Decision	2	2023	2	2023
CSC2 - Continuous Software DT/OT	3	2023	4	2028
CSC2 - MVP (CDP-1)	4	2023	4	2023
CSC2 - Service Common Operating Environment Integration	1	2024	4	2028
CSC2 - Cyber Security Compliance	1	2024	4	2028
CSC2 - CD-Capability Drop - MVCR Delivery 1 (CDP-1)	4	2024	4	2025
CSC2 - MVP (CDP-2)	4	2024	4	2024
CSC2 - Continuous Engineering & Software Updates	1	2025	4	2028
CSC2 - Operating System Architecture Updates	1	2025	4	2028
CSC2 - CD-Capability Drop - MVCR Delivery 2 (CDP-2)	4	2025	4	2026
CSC2 - Future MVPs	2	2026	4	2028
CSC2 - CD-Capability Drop - Future MVCR Deliveries	4	2026	4	2028
EMBD - IOC-Initial Operational Capability	2	2023	2	2023
EMBD - FRP Production	1	2022	3	2027
EMBD - FOC-Full Operational Capability	4	2028	4	2028

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2024 Chemical and Biological Defense Program **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> UN7 / <i>Understand (Op Sys Dev)</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
ROSETTA - Testing & Demonstrations (M8)	1	2022	2	2022
ROSETTA - Engineering Design	4	2022	2	2023
ROSETTA - OTA Contract Award	3	2022	4	2027
MOD SEN - DT/OT for refreshed components and obsolescence management within MOD SEN	1	2023	4	2028
MOD MED - Diagnostic System Upgrades / Assay Development	1	2023	4	2028
MOD MED - NGDS 1 Tech Refresh	4	2023	4	2028
MOD MED - Autoinjector Post Marketing Commitments and Requirements (PMRs/ PMCs)	1	2023	4	2028
SPU RCDD - Modernize CBRN Materiel	1	2022	4	2027
SPU RCDD - Develop Modular Self Contained Breathing Apparatus (MSCBA)	1	2022	4	2024
SPU RCDD - Develop Enhanced Warfighter Augmented Training (EWAT)	1	2022	4	2024
SPU RCDD - Prototype Novel CBRN Equipment	1	2022	4	2027
SPU RCDD - Develop Low Temperature Plasma Mass Spectrometer (LTPMS)	1	2022	4	2024
SPU RCDD - Develop Optimized CBRN Hydration System (OCHS)	1	2022	2	2023
SPU RCDD - Develop Assault Respirator	1	2022	4	2023
SPU RCDD - Develop USSOCOM-specific UGV/UAS Sensor Integration	1	2022	4	2023
WMD CST - Upgrade Fielded Systems	1	2022	4	2027

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 0400 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>					<b>Project (Number/Name)</b> PT7 / <i>Protect (Op Sys Dev)</i>		
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
PT7: <i>Protect (Op Sys Dev)</i>	-	0.000	20.076	26.818	0.000	26.818	22.815	15.490	14.193	13.612	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The Protect Operational System Development Project provides the Joint Force the continued readiness of fielded collective and individual protective capabilities and provides size, weight and power improvements to reduce logistical burden on the Warfighter and Services. In FY 2023, the Chemical Biological Defense Program (CBDP) RDT&E Projects were restructured to align with the CBDP portfolio construct. PT7 efforts in FY 2022 remain in Projects C07 and IP7. This restructuring provided standardization and alignment across CBDP research, development and acquisition efforts.

Efforts included in this Project are:

- (1) Modernization Protection Collective Protection (MODPROT CP), and
- (2) Modernization Protection Individual Protection (MODPROT IP)

Modernization Protection Collective Protection (MODPROT CP) addresses modernization and obsolescence across the DoD CP portfolio to increase readiness, sustainability, reliability, and affordability of these systems. The obsolescence of critical equipment, if not modernized, will continue to face significantly increased cost and long lead times making the equipment unaffordable and unprocurable to meet major weapon system program's requirements and schedules. MODPROT CP modernizes decades old collective protection equipment reducing costs, shortening lead times, and updating key components to extend service life and ensure affordable and procurable to warfighters. In FY24, MODPROT CP will continue M48A1 Filter Redesign, Collective Protection Modernization for Ships and Buildings, and begin shipboard system installation. Additionally, the program will continue Mobile Platform Filter Modernization to reduce logistics costs and continue conducting collective protection system filter surveillance testing to improve system sustainment.

Modernization Protection Individual Protection (MODPROT IP) addresses obsolescence issues with Individual Protective (IP) equipment and the need to modernize fielded IP with capabilities to meet or exceed the Services requirements. MODPROT IP will also conduct modernization efforts and reverse engineering of maintenance and repair procedures for the Joint Services Mask Leakage Tester (JSMLT). MODPROT IP will also provide mask and filter system upgrades and modernization of fielded protection systems to enhance respiratory and ocular protection resulting in an increased lethality of fighter aircraft by mitigating risk due to operationally unsuitable aircrew Chemical Biological Radiological Nuclear (CBRN) masks. Modernization efforts will include technical manual updates and a Logistics Demonstration for an updated, lightweight version of the Joint Protective Aircrew Ensemble (JPACE). Testing and analysis with aircraft will fully validate and refine new Tactics, Techniques and Procedures (TTPs) that allow aircrews to operate without restrictive CBRN protective equipment by determining time and techniques required to reduce cockpit hazards to acceptable levels by flushing with clean air. The impact of funding these programs will address modernization and obsolescence across the DoD IP portfolio to increase readiness, sustainability, reliability, and affordability of these systems. In FY24, MODPROT IP will continue modernization of the Joint Mask Leakage Tester (JSMLT), continue Fixed Wing Aircraft/Aircrew Personal Protective Equipment (PPE) optimization effort for multiple airframes, finalize Second

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**Exhibit R-2A, RDT&E Project Justification:** PB 2024 Chemical and Biological Defense Program **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> PT7 / <i>Protect (Op Sys Dev)</i>
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Generation Filter Engineering Change Proposal (ECP), initiate performance characterization for whole life of Individual Protective Equipment (IPE) products, initiate Chemical Biological Incident Response Force (CBIRF) Class 3 Modernization, and initiate Chemical Biological Radiological and Nuclear Response Enterprise Personal Protective Equipment (CRE PPE) Unit Modernization. FY24 increase of \$3M for Personal Protective Equipment (PPE) Modernization efforts.

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

	FY 2022	FY 2023	FY 2024
<p><b>Title:</b> 1) MODPROT CP</p> <p><b>Description:</b> Upgrades, improvements, and modernizations to fielded collective protection (CP) systems</p> <p><b>FY 2023 Plans:</b> Continue redesign of M49 gas filters. Continue M48A1 Filter Redesign. Continue Collective Protection Modernization for Ships and Buildings and complete system lab testing and system design packages for platform installation. Continue conducting collective protection system filter surveillance testing to improve system sustainment.</p> <p><b>FY 2024 Plans:</b> Continue M48A1 Filter Redesign. Continue Collective Protection (CP) Modernization for Ships and Buildings and begin shipboard system installation. Continue Mobile Platform Filter Modernization to reduce logistics costs. Continue conducting CP system filter surveillance testing to improve system sustainment.</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Increase due to fact of life change in the program/project. The increase to MODPROT CP is related to the high costs expected from the Shipboard ColPro Modernization project's effort to install prototype hardware on a test ship for evaluation.</p>	-	10.088	13.468
<p><b>Title:</b> 2) MODPROT IP</p> <p><b>Description:</b> Upgrades, improvements, and modernizations to fielded individual protection (IP) systems</p> <p><b>FY 2023 Plans:</b> Continue modernization of the Joint Mask Leakage Tester (JSMLT). Continue Fixed Wing Aircraft/Aircrew PPE optimization effort for multiple airframes. Finalize Second Generation Filter Engineering Change Proposal (ECP). Initiate Third Generation Filter Prototype Developmental Testing (DT).</p> <p><b>FY 2024 Plans:</b> Continue modernization of the Joint Mask Leakage Tester (JSMLT). Continue Fixed Wing Aircraft/Aircrew Personal Protective Equipment (PPE) optimization effort for multiple airframes. Finalize Second Generation Filter Engineering Change Proposal (ECP). Initiate performance characterization for whole life of Individual Protective Equipment (IPE) products. Initiate Chemical</p>	-	9.988	13.350

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> PT7 / <i>Protect (Op Sys Dev)</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Biological Incident Response Force (CBIRF) Class 3 Modernization. Initiate Chemical Biological Radiological and Nuclear Response Enterprise Personal Protective Equipment (CRE PPE) Unit Modernization.			
<b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> Increase due to change in program/project technical parameters. FY24 increase of \$3M for Personal Protective Equipment Modernization efforts.			
<b>Accomplishments/Planned Programs Subtotals</b>	-	20.076	26.818

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• IP7: Individual Protection (Op Sys Dev)	11.659	-	-	-	-	-	-	-	-	0.000	11.659
• PHM036: Modernization Protection Collective Protection (MODPROT CP)	1.385	1.385	-	-	-	-	-	1.375	2.517	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**

MODERNIZATION PROTECTION COLLECTIVE PROTECTION (MODPROT CP)

Modernization Protection Collective Protection (MODPROT CP) leverages mature technology from contractor developed components to address and replace obsolete components of various fielded collective protection systems. Modernization efforts will also use items developed by the Government that have transitioned from lower to higher technology readiness levels that can be inserted into fielded systems. A combination of competitive and sole source contracts to various industry vendors and project orders to various Government activities will be used to adapt previously developed components to modernize systems. Robust component and system level testing to meet applicable military standards will validate both Government and contractor furnished improvements. The improvements will be added into the specific systems' updated Technical Data Packages (TDPs) to be used in Engineering Change Proposals (ECPs) and provided to the item managers.

MODERNIZATION PROTECTION INDIVIDUAL PROTECTION (MODPROT IP)

Modernization Protection Individual Protection (MODPROT IP) leverages mature technology from contractor developed components to address and replace obsolete components of various fielded individual protection systems. Modernization efforts will also use items developed by the Government that have transitioned from lower to higher technology readiness levels that can be inserted into fielded systems. A combination of competitive and sole source contracts to various industry vendors and

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> PT7 / <i>Protect (Op Sys Dev)</i>

project orders to various Government activities will be used to adapt previously developed components to modernize systems. Robust component and system level testing will validate both Government and contractor furnished improvements. The improvements will be added into the specific system's updated TDP to be used in ECPs and provided to the item managers.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> PT7 / <i>Protect (Op Sys Dev)</i>
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<b>Product Development (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MODPROT CP - HW C - Collective Protection Modernization for Ships	Various	Various : N/A	-	0.000		6.604	Nov 2022	8.604	Nov 2023	-		8.604	Continuing	Continuing	0.000
MODPROT CP - HW C - Filter Redesign & Modernization, Filter Life Extension Residual Life Indicator (RLI)	MIPR	Various : N/A	-	0.000		0.721	Nov 2022	1.167	Nov 2023	-		1.167	Continuing	Continuing	0.000
MODPROT IP - HW C - Filter Prototypes, JSMLT Modernization, and CBIRF & CRE Modernization	Various	Various : N/A	-	0.000		3.732	Dec 2022	4.576	Nov 2023	-		4.576	Continuing	Continuing	0.000
<b>Subtotal</b>			-	0.000		11.057		14.347		-		14.347	Continuing	Continuing	N/A

<b>Support (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MODPROT CP - ES C - IPT, Technical, Engineering and Logistics Support	MIPR	Various : N/A	-	0.000		0.549	Nov 2022	1.652	Nov 2023	-		1.652	Continuing	Continuing	0.000
MODPROT IP - ES C - IPT, Engineering, Technical, Logistics Support	MIPR	Various : N/A	-	0.000		0.545	Dec 2022	1.318	Nov 2023	-		1.318	Continuing	Continuing	0.000
<b>Subtotal</b>			-	0.000		1.094		2.970		-		2.970	Continuing	Continuing	N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> PT7 / <i>Protect (Op Sys Dev)</i>
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<b>Test and Evaluation (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MODPROT CP - DTE C - CP Modernization Testing	Various	Various : N/A	-	0.000		1.465	Oct 2022	1.219	Nov 2023	-		1.219	Continuing	Continuing	0.000
MODPROT IP - DTE C - Fixed Wing Aircraft/Aircrew PPE Optimization Effort	MIPR	Various : N/A	-	0.000		3.200	Dec 2022	3.497	Nov 2023	-		3.497	Continuing	Continuing	0.000
MODPROT IP - DTE C - Filter Prototype Testing	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	0.000		1.770	Dec 2022	3.141	Nov 2023	-		3.141	Continuing	Continuing	0.000
<b>Subtotal</b>			-	0.000		6.435		7.857		-		7.857	Continuing	Continuing	N/A

<b>Management Services (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MODPROT CP - PM/MS C - Program Management Support	MIPR	Various : N/A	-	0.000		0.749	Nov 2022	0.826	Nov 2023	-		0.826	Continuing	Continuing	0.000
MODPROT IP - PM/MS C - Program Management Support	MIPR	Various : N/A	-	0.000		0.741	Dec 2022	0.818	Nov 2023	-		0.818	Continuing	Continuing	0.000
<b>Subtotal</b>			-	0.000		1.490		1.644		-		1.644	Continuing	Continuing	N/A

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract		
<b>Project Cost Totals</b>		-	0.000	20.076	26.818	-		26.818	Continuing	Continuing	N/A

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> PT7 / <i>Protect (Op Sys Dev)</i>

	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
MODPROT CP - M93 GPFU Electro Magnetic Interference	██████████																											
MODPROT CP - Non Destructive (ND) Acceptance Leak Test CP Filters	██████████																											
MODPROT CP - Environmental M98 Guard Bed Testing	██████████																											
MODPROT CP - M49 Filter Modernization	██████████																											
MODPROT CP - Filter Prototype Design Analysis and Development	██████████																											
MODPROT CP - Collective Protection Training Development	██████████																											
MODPROT CP - M48A1 Filter Redesign	██████████				██████████				██████████				██████████				██████████				██████████							
MODPROT CP - Collective Protection Modernization for Ships and Buildings	██████████				██████████				██████████				██████████				██████████				██████████							
MODPROT CP - M14 Protective Entrance Modernization	██████████																											
MODPROT CP - Filter Prototype Laboratory Testing and Evaluation					██████████																							
MODPROT CP - Contaminated Filter Changeout Procedures					██████████																							
MODPROT CP - Filter Technical Design Package and Procurement of Filter Design Test Articles					██████████																							
MODPROT CP - Platform Interoperability Testing and Final Technical Design Package									██████████																			
MODPROT CP - Mobile Platform Filter Modernization													██████████															

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**Exhibit R-4, RDT&E Schedule Profile:** PB 2024 Chemical and Biological Defense Program **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> PT7 / <i>Protect (Op Sys Dev)</i>
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	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
MODPROT CP - Filter Surveillance Testing																												
MODPROT IP - Second Generation Filter & NIOSH DT																												
MODPROT IP - JSMLT Modernization																												
MODPROT IP - LJPAGE TM Updates & LOGDEMO																												
MODPROT IP - MALO Shelf Life Extension Testing																												
MODPROT IP - Fixed Wing Aircraft/Aircrew PPE Optimization Effort																												
MODPROT IP - Maximum Age Study for JB2GU nFR Glove																												
MODPROT IP - Second Generation Filter ECP																												
MODPROT IP - CBIRF Class 3 Modernization																												
MODPROT IP - CRE PPE Modernization																												
MODPROT IP - Third Generation Filter Prototype DT																												
MODPROT IP - Third Generation Filter Technology ECP																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> PT7 / <i>Protect (Op Sys Dev)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MODPROT CP - M93 GPFU Electro Magnetic Interference	1	2022	4	2022
MODPROT CP - Non Destructive (ND) Acceptance Leak Test CP Filters	1	2022	4	2022
MODPROT CP - Environmental M98 Guard Bed Testing	1	2022	4	2022
MODPROT CP - M49 Filter Modernization	1	2022	4	2022
MODPROT CP - Filter Prototype Design Analysis and Development	1	2022	4	2022
MODPROT CP - Collective Protection Training Development	1	2022	4	2022
MODPROT CP - M48A1 Filter Redesign	1	2022	4	2025
MODPROT CP - Collective Protection Modernization for Ships and Buildings	1	2022	4	2026
MODPROT CP - M14 Protective Entrance Modernization	1	2022	4	2022
MODPROT CP - Filter Prototype Laboratory Testing and Evaluation	1	2023	2	2023
MODPROT CP - Contaminated Filter Changeout Procedures	3	2022	4	2023
MODPROT CP - Filter Technical Design Package and Procurement of Filter Design Test Articles	1	2023	4	2023
MODPROT CP - Platform Interoperability Testing and Final Technical Design Package	1	2024	4	2024
MODPROT CP - Mobile Platform Filter Modernization	1	2025	4	2025
MODPROT CP - Filter Surveillance Testing	1	2025	4	2028
MODPROT IP - Second Generation Filter & NIOSH DT	1	2022	4	2022
MODPROT IP - JSMLT Modernization	1	2022	4	2026
MODPROT IP - LJPACE TM Updates & LOGDEMO	1	2022	4	2022
MODPROT IP - MALO Shelf Life Extension Testing	1	2022	2	2022
MODPROT IP - Fixed Wing Aircraft/Aircrew PPE Optimization Effort	1	2023	4	2026
MODPROT IP - Maximum Age Study for JB2GU nFR Glove	2	2022	4	2022

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2024 Chemical and Biological Defense Program **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> PT7 / <i>Protect (Op Sys Dev)</i>
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<b>Events</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
MODPROT IP - Second Generation Filter ECP	1	2023	2	2023
MODPROT IP - CBIRF Class 3 Modernization	2	2024	4	2024
MODPROT IP - CRE PPE Modernization	2	2024	4	2024
MODPROT IP - Third Generation Filter Prototype DT	1	2025	4	2025
MODPROT IP - Third Generation Filter Technology ECP	1	2026	2	2026

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 0400 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>					<b>Project (Number/Name)</b> MT7 / <i>Mitigate (Op Sys Dev)</i>		
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
MT7: <i>Mitigate (Op Sys Dev)</i>	-	0.000	5.098	3.074	0.000	3.074	1.987	1.819	1.845	1.862	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The Mitigate Operational System Development Project provides the Joint Force continued readiness of fielded personnel and materiel contamination mitigation and chemical agent therapeutic capabilities and provides size, weight and power improvements to reduce logistical burden on the Warfighter. In FY 2023, the Chemical Biological Defense Program (CBDP) RDT&E Projects were restructured to align with the CBDP portfolio construct. MT7 efforts in FY 2022 remain in Projects MC7 and DE7. This restructuring provided standardization and alignment across CBDP research, development and acquisition efforts.

Efforts included in this Project are:

- (1) Improved Nerve Agent Treatment System Centrally Acting (INATS CA), and
- (2) Modernization Protection Decontamination (MODPROT DE)

INATS CA includes modernization of Soman Nerve Agent Pretreatment Pyridostigmine (SNAPP; pyridostigmine bromide [PB] tablets). In FY24, INATS CA continues studies on the Food and Drug Administration (FDA)-approved SNAPP, a medical pretreatment against nerve agent poisoning to upgrade its joint service utility and ensure its continued safety and efficacy. Also in FY24, the INATS CA program will submit to the FDA for approval, documents supporting sustained release PB tablets in blister packs. These tablets will provide a single tablet per day dose alternative to the current SNAPP dosing regimen for the pretreatment against soman nerve agent poisoning.

Modernization Protection Decontamination (MODPROT DE) addresses modernization and obsolescence across the DoD DE portfolio to increase readiness, sustainability, reliability, and affordability of these systems. Beginning with the obsolescence and technical data concerns, beginning with the M26 Joint Services Transportable Decontamination System-Small Scale (JSTDS-SS) through validation and verification of Technical Manual (TM) changes as well as technical data for spare and repair parts; the M12A1 Power Driven Decontamination Apparatus (PDDA) by updating technical references and performing the necessary validation and verification before publishing an updated TM. In FY24, MODPROT DE will complete the M12 Pressure Accumulator Project, continue M26 modernization efforts to extend service life and sustainment support to include Technical Manual updates with verification and validation, and initiate and complete the M295 and M100 Performance Characterization Project.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<b>Title:</b> 1) INATS CA - SNAPP	-	0.346	0.506

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> MT7 / <i>Mitigate (Op Sys Dev)</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<p><b>Description:</b> SNAPP Shelf Life Modernization: Studies required by the FDA and/or users to modernize or upgrade medical chemical defense countermeasures.</p> <p><b>FY 2023 Plans:</b> Continue SNAPP stability studies.</p> <p><b>FY 2024 Plans:</b> Completing on-going stability activities and initiating New Drug Application (NDA) package preparation for FDA submission.</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> In FY24 activities are completing due to the acceleration of the program.</p>			
<p><b>Title:</b> 2) INATS CA - PB Tablet</p> <p><b>Description:</b> Pyridostigmine Bromide (PB) Extended Release Tablet Development</p> <p><b>FY 2023 Plans:</b> Continuing Extended Release Tablet Development.</p> <p><b>FY 2024 Plans:</b> Continue Extended Release Tablet Development.</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Decrease due to change in program/project schedule. In FY24 activities are completing early due to the acceleration of the program in prior years.</p>	-	3.664	0.369
<p><b>Title:</b> 3) MODPROT DE</p> <p><b>Description:</b> Upgrades, improvements, and modernizations to fielded decontamination systems</p> <p><b>FY 2023 Plans:</b> Continue to update technical data for spares and repair parts for M26 Joint Service Transportable Decontamination System - Small Scale (JSTDS-SS) Technical Data Package (TDP). Continue to update technical references and validation/verification efforts for M12A1 Power Driven Decontamination Apparatus (PDDA) Technical Manual (TM).</p> <p><b>FY 2024 Plans:</b></p>	-	1.088	2.199

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**Exhibit R-2A, RDT&E Project Justification:** PB 2024 Chemical and Biological Defense Program **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> MT7 / <i>Mitigate (Op Sys Dev)</i>
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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	FY 2022	FY 2023	FY 2024
Complete the M12 Pressure Accumulator Project. Continue M26 modernization efforts to extend service life and sustainment support, to include Technical Manual (TM) updates with verification and validation. Initiate and complete the M295 and M100 Performance Characterization Project.			
<b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> Increase due to change in program/project schedule. The increase of an additional \$1.1M in FY24 BA7 for tactical decon outdoor testing, which will conduct testing to validate decon TTPs for recent programs, such as Joint Service Equipment Wipe (JSEW), General Purpose Decontaminant (GPD), and Contamination Indicator Decontamination Assurance System (CIDAS).			
<b>Accomplishments/Planned Programs Subtotals</b>	-	5.098	3.074

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• DE7: <i>Decontamination (Op Sys Dev)</i>	1.020	-	-	-	-	-	-	-	-	0.000	1.020
• MC5: <i>Medical Chemical Defense (SDD)</i>	38.936	-	-	-	-	-	-	-	-	0.000	38.936
• MC7: <i>Medical Chemical Defense (Op Sys Dev)</i>	1.013	-	-	-	-	-	-	-	-	0.000	1.013
• MT5: <i>Mitigate (SDD)</i>	-	74.225	88.441	-	88.441	92.279	91.431	87.773	93.250	Continuing	Continuing
• JD0050: <i>Decontamination Family Of Systems (DFoS)</i>	7.797	4.795	6.062	-	6.062	8.673	8.820	16.518	5.996	Continuing	Continuing
• PHM040: <i>Improved Nerve Agent Treatment Centrally Acting (INATS CA)</i>	-	-	-	-	-	-	-	6.511	33.883	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**

IMPROVED NERVE AGENT TREATMENT CENTRALLY ACTING (INATS CA)

The INATS CA BA7 program consists of modernization efforts for the FDA-approved Soman Nerve Agent Pretreatment Pyridostigmine (SNAPP), a medical pretreatment against nerve agent poisoning, and the development of a novel pyridostigmine bromide (PB) once-a-day tablet that will allow the services an alternative to the currently used SNAPP product. Both efforts utilize contracts and Other Transactional Agreements (OTAs) in which the performer shall be responsible for conducting

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**Exhibit R-2A, RDT&E Project Justification:** PB 2024 Chemical and Biological Defense Program **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> MT7 / <i>Mitigate (Op Sys Dev)</i>
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development and testing activities consistent with current Food and Drug Administration (FDA) regulations. The contractor shall work with the current SNAPP sponsor, the Office of Regulatory Affairs (ORA), to submit all relevant data and forms to the FDA, or in the case of the novel PB once-a-day tablet, sponsor the product to the FDA and hold all approvals and/or licenses.

The Soman Nerve Agent Pre-Treatment Pyridostigmine (SNAPP) effort under INATS CA is a modernization effort for pyridostigmine bromide (PB) tablet requirements from the joint service users for the FDA approved SNAPP product. The effort uses OTAs for conducting development and testing activities consistent with current FDA regulations.

**MODERNIZATION DECONTAMINATION (MODPROT DE)**

MODPROT DE leverages mature technology from contractor developed components to address and replace obsolete components of various fielded decontamination systems. Modernization efforts will also use items developed by the Government that have transitioned from lower to higher technology readiness levels that can be inserted into fielded systems. A combination of competitive and sole source contracts to various industry vendors and project orders to various Government activities will be used to adapt previously developed components to modernize systems. Robust component and system level testing will validate both Government and contractor furnished improvements. The improvements will be added into the specific system's updated Technical Data Packages (TDPs) to be used in Engineering Change Proposals (ECPs) and provided to the item managers.

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program</b>												<b>Date: March 2023</b>			
<b>Appropriation/Budget Activity</b> 0400 / 7						<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / Chemical and Biological Defense (Operational Systems Development)						<b>Project (Number/Name)</b> MT7 / Mitigate (Op Sys Dev)			

<b>Product Development (\$ in Millions)</b>				<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
INATS CA - HW C - Shelf Life Modernization (SNAPP)	C/CPFF	CMC Pharma : Cleveland, OH	-	0.000		0.150	Dec 2022	0.330	Nov 2023	-		0.330	Continuing	Continuing	0.000
INATS CA - HW C - PB Extended Release	C/FP	Amneal Pharmaceuticals : Hauppauge, NY	-	0.000		2.935	Dec 2022	0.329	Oct 2023	-		0.329	Continuing	Continuing	0.000
INATS CA - HW C - Direct Labor	Various	JPEO Chem, Bio, Rad, and Nuc Defense (JPEO-CBRND) : Aberdeen Proving Ground, MD	-	0.000		0.000		0.040	Nov 2023	-		0.040	Continuing	Continuing	0.000
INATS CA - HW C - Product Management	Various	JPM CBRN Medical, JPEO-CBRND : Fort Detrick, MD	-	0.000		0.000		0.080	Nov 2023	-		0.080	Continuing	Continuing	0.000
MODPROT DE - HW C - M26 Tech Data Package; Modernization Update / M12A1 TM Update	Various	Various : N/A	-	0.000		0.787	Nov 2022	1.735	Nov 2023	-		1.735	Continuing	Continuing	0.000
<b>Subtotal</b>			-	0.000		3.872		2.514		-		2.514	Continuing	Continuing	N/A

<b>Support (\$ in Millions)</b>				<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
MODPROT DE - DTE C - IPT, Engineering, Technical, Logistics Support	MIPR	Various : N/A	-	0.000		0.230	Nov 2022	0.329	Nov 2023	-		0.329	Continuing	Continuing	0.000
<b>Subtotal</b>			-	0.000		0.230		0.329		-		0.329	Continuing	Continuing	N/A



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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> MT7 / <i>Mitigate (Op Sys Dev)</i>

	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
INATS CA - MS B-Milestone B																												
INATS CA - Clinical Trials																												
INATS CA - Manufacturing/Auto-Injector																												
INATS CA - Non-Clinical Studies																												
INATS CA - NDA Submission-New Drug Application Submission																												
INATS CA - FDA Approval-Food and Drug Administration Approval																												
INATS CA - SNAPP Modernization - BA7																												
INATS CA - PB Extended Release Tablet Development - BA7																												
MODPROT DE - M12A1 TM Update																												
MODPROT DE - M26 JSTDS-SS TDP																												
MODPROT DE - M26 JSTDS-SS Modernization																												
MODPROT DE - M12 Pressure Accumulator																												
MODPROT DE - M295 & M100 Performance Characterization																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> MT7 / <i>Mitigate (Op Sys Dev)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
INATS CA - MS B-Milestone B	2	2022	2	2022
INATS CA - Clinical Trials	1	2022	4	2024
INATS CA - Manufacturing/Auto-Injector	1	2022	2	2025
INATS CA - Non-Clinical Studies	1	2022	2	2025
INATS CA - NDA Submission-New Drug Application Submission	1	2026	3	2026
INATS CA - FDA Approval-Food and Drug Administration Approval	3	2026	1	2028
INATS CA - SNAPP Modernization - BA7	1	2022	4	2025
INATS CA - PB Extended Release Tablet Development - BA7	1	2023	1	2026
MODPROT DE - M12A1 TM Update	1	2022	4	2023
MODPROT DE - M26 JSTDS-SS TDP	1	2022	4	2023
MODPROT DE - M26 JSTDS-SS Modernization	1	2022	4	2025
MODPROT DE - M12 Pressure Accumulator	1	2024	4	2024
MODPROT DE - M295 & M100 Performance Characterization	1	2024	4	2024

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 0400 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>				<b>Project (Number/Name)</b> CA7 / <i>Contamination Avoidance (Op Sys Dev)</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
CA7: <i>Contamination Avoidance (Op Sys Dev)</i>	-	12.244	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.244
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The Project supports technology upgrade and refresh of fielded dismounted reconnaissance and detection systems that minimize chemical, biological, and radiological (CBR) contamination and prevent further cross-contamination during operations. In FY2023, the CBDP RDT&E Projects have been restructured to align to the CBDP portfolio. CA7 efforts in FY2022 progress to the Understand (UN7) portfolio. This restructuring is intended to provide standardization and alignment across CBDP research, development and acquisition efforts.

Efforts included in this Project are:

- (1) Enhanced Maritime Biological Detection (EMBD) **\*\*Progresses to UN7 in FY2023\*\***, and
- (2) Modernization Sensors (MOD SEN) **\*\*Progresses to UN7 in FY2023\*\***

The EMBD program will undertake engineering efforts to combat Diminishing Manufacturing Sources and Material Shortages (DMSMS) and maintain a stable production line. Specific efforts in FY24 include flash memory and in the Rapid Agent Aerosol Detector (RAAD), multiple circuit card electrical components and Developmental Testing (DT).

The MOD SEN program addresses obsolescence of critical equipment and functionality issues for the Services by establishing a modernization plan to integrate and incorporate advancements in technology for the Analytical Laboratory System Modification (ALS MOD), Common Analytical Laboratory System (CALS) Field Confirmatory Analytical Capability Set (FC ACS), CALS Theater Validation Integrated System (TV IS), CBRN Dismounted Reconnaissance System (DRS), and M8 Modernization. In FY24, MOD SEN supports the evaluation of components for technical refreshment of the CBRN DRS, CALS, ALS MOD, M8, and EMBD under UN7.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<b>Title:</b> 1) EMBD	0.869	-	-
<b>Description:</b> Obsolescence and replacement efforts			
<b>Title:</b> 2) MOD SEN	11.375	-	-
<b>Description:</b> Sensors Modernization			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> CA7 / <i>Contamination Avoidance (Op Sys Dev)</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<b>Accomplishments/Planned Programs Subtotals</b>	12.244	-	-

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u> <u>Base</u>	<u>FY 2024</u> <u>OCO</u>	<u>FY 2024</u> <u>Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• CA5: <i>Contamination Avoidance (SDD)</i>	84.967	-	-	-	-	-	-	-	-	0.000	84.967
• CM7: <i>Homeland Defense (Op Sys Dev)</i>	1.463	-	-	-	-	-	-	-	-	0.000	1.463
• UN7: <i>Understand (Op Sys Dev)</i>	-	40.414	50.603	-	50.603	58.881	71.869	68.839	50.628	Continuing	Continuing
• JS0005: <i>Common Analytical Laboratory System (CALs)</i>	48.258	30.530	7.167	-	7.167	-	-	-	-	0.000	128.728
• MC0101: <i>CBRN Dismounted Reconnaissance Systems (CBRN DRS)</i>	21.611	47.324	60.492	-	60.492	64.556	37.802	23.292	-	Continuing	Continuing
• SA0003: <i>Enhanced Maritime Biological Detection (EMBD)</i>	21.473	21.472	21.899	-	21.899	21.203	26.500	2.240	-	Continuing	Continuing
• SA0025: <i>Analytical Laboratory System Modification (ALS MOD)</i>	1.056	3.894	4.256	-	4.256	4.806	5.088	9.137	15.109	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**

ENHANCED MARITIME BIOLOGICAL DETECTION (EMBD)

The EMBD program uses a streamlined acquisition strategy and awarded a Full Rate Production (FRP) contract in 1QFY22 with options for production of EMBD kits and Obsolescence Support in Production (OSIP) to resolve diminishing sources and obsolescence issues. The FY24 OSIP Option will address major obsolescence problems identified by the prime contractor that could affect a stable production line and to ensure new EMBD hardware/software remains procurable, field upgradeable and backwards compatible with previously fielded units. The FY24 OSIP Option will undertake engineering efforts to resolve obsolescence of the flash memory in the Rapid Agent Aerosol Detector (RAAD), multiple circuit card electrical components and Developmental Testing (DT) of all new components.

MODERNIZATION SENSORS (MOD SEN)

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> CA7 / <i>Contamination Avoidance (Op Sys Dev)</i>
<p>MOD SEN program uses a Commercial Off-The-Shelf (COTS)/Government Off-The-Shelf (GOTS) approach to manage modernization for multiple CBRN sensor programs. This strategy employs a Non-developmental Item acquisition concept to translate mission needs and emerging technology capabilities into a fieldable component to solve obsolescence and technology update needs. Current planned funding supports CALS TV-IS, FC-ACS, ALS MOD, CBRN DRS, M8 Modification, and EMBD modernization activities. The program maintains baseline capabilities with obsolescence management, technology insertions, and enhancements based on changes in requirements. This program modernizes the Joint Force to combat advancing threats and current capability gaps in analytical laboratory and sensitive site assessment and exploitation capabilities require a system modernization strategy for each system.</p>		

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / Chemical and Biological Defense (Operational Systems Development)	<b>Project (Number/Name)</b> CA7 / Contamination Avoidance (Op Sys Dev)
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<b>Product Development (\$ in Millions)</b>				<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
EMBD - HW SB - Obsolescence Support in Production	C/CPIF	Various : N/A	-	0.469	Dec 2021	0.000		0.000		-		0.000	0.000	0.469	0.000
MOD SEN - HW C - Government Product Development Team Labor	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	1.285	Feb 2022	0.000		0.000		-		0.000	0.000	1.285	0.000
MOD SEN - HW C - System Modernization	C/FFP	FLIR Systems, Inc. : Elkridge, MD	-	6.817	Jan 2022	0.000		0.000		-		0.000	0.000	6.817	0.000
MOD SEN - SW C - Training Software	MIPR	CCDC AVIATION AND MISSILE CENTER : Huntsville, AL	-	0.121	Jul 2022	0.000		0.000		-		0.000	0.000	0.121	0.000
MOD SEN - HW C - Technology Readiness Evaluation	C/FFP	MRIGlobal : Kansas City, MO	-	0.712	Jul 2022	0.000		0.000		-		0.000	0.000	0.712	0.000
MOD SEN - HW C - Cost Estimating Support	C/FFP	DCS Corps : Alexandria, VA	-	0.034	Jul 2022	0.000		0.000		-		0.000	0.000	0.034	0.000
<b>Subtotal</b>			-	9.438		0.000		0.000		-		0.000	0.000	9.438	N/A

<b>Support (\$ in Millions)</b>				<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
MOD SEN - Test Support	MIPR	Various : N/A	-	0.232	Apr 2022	0.000		0.000		-		0.000	0.000	0.232	0.000
MOD SEN - Science and Engineering Support	C/FFP	Johns Hopkins University - Applied	-	0.191	Jul 2022	0.000		0.000		-		0.000	0.000	0.191	0.000

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / Chemical and Biological Defense (Operational Systems Development)	<b>Project (Number/Name)</b> CA7 / Contamination Avoidance (Op Sys Dev)
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<b>Support (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Physics Laboratory : Laurel, MD													
MOD SEN - ES C - Engineering Support	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	-	0.046	Jul 2022	0.000		0.000		-		0.000	0.000	0.046	0.000
MOD SEN - ES C - Program OGA Support	Various	Various : N/A	-	0.071	Jul 2022	0.000		0.000		-		0.000	0.000	0.071	0.000
<b>Subtotal</b>			-	0.540		0.000		0.000		-		0.000	0.000	0.540	N/A

<b>Test and Evaluation (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
EMBD - Obsolescence Support in Production testing and verification	C/CPIF	Various : N/A	-	0.252	Dec 2021	0.000		0.000		-		0.000	0.000	0.252	0.000
MOD SEN - DTE C - Information Assurance	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Armaments Center : Picatinny, NJ	-	0.279	Jul 2022	0.000		0.000		-		0.000	0.000	0.279	0.000
MOD SEN - DTE C - Component Test and Evaluation	MIPR	Aberdeen Test Center (ATC) : Aberdeen Proving Ground, MD	-	0.480	Apr 2022	0.000		0.000		-		0.000	0.000	0.480	0.000
<b>Subtotal</b>			-	1.011		0.000		0.000		-		0.000	0.000	1.011	N/A



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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> CA7 / <i>Contamination Avoidance (Op Sys Dev)</i>

	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
EMBD - IOC-Initial Operational Capability																												
EMBD - FRP Production																												
EMBD - FOC-Full Operational Capability																												
MOD SEN - DT/OT for refreshed components and obsolescence management within MOD SEN																												

**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> CA7 / <i>Contamination Avoidance (Op Sys Dev)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
EMBD - IOC-Initial Operational Capability	2	2023	2	2023
EMBD - FRP Production	1	2022	3	2027
EMBD - FOC-Full Operational Capability	4	2028	4	2028
MOD SEN - DT/OT for refreshed components and obsolescence management within MOD SEN	1	2023	4	2028

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**Exhibit R-2A, RDT&E Project Justification:** PB 2024 Chemical and Biological Defense Program **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / Chemical and Biological Defense (Operational Systems Development)	<b>Project (Number/Name)</b> CM7 / Homeland Defense (Op Sys Dev)
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
CM7: Homeland Defense (Op Sys Dev)	-	1.463	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.463
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

This project supports technology refresh of fielded analytical laboratory system capabilities which allows the conduct on-site analysis of any unknown sample and test potential life-threatening substances. In FY2023, the CBDP RDT&E Projects have been restructured to align to the CBDP portfolio. CM7 efforts in FY2022 progress to the Understand (UN7) portfolio. This restructuring is intended to provide standardization and alignment across CBDP research, development and acquisition efforts.

The effort included in this Project is:

- (1) Weapons of Mass Destruction - Civil Support Team (WMD CST) \*\*Progresses to UN7 in FY2023\*\*

The WMD CST program supports the fielded system upgrade and ongoing assessment and acquisition of commercial off-the-shelf (COTS) and Government off-the-shelf (GOTS) analytical detection, protection, decontamination and sampling equipment for survey in order to expand/enhance the operational capabilities of the (57) WMD CST Teams. Program efforts support upgrades of key components of the WMD CST Program that have become obsolete, or are no longer being supported by the manufacturer. In FY24 the WMD CST program continues system-related test activities, including costs of specially fabricated hardware to obtain or validate engineering data on the performance of the system.

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

	FY 2022	FY 2023	FY 2024
<b>Title:</b> 1) WMD CST	1.463	-	-
<b>Description:</b> System Upgrade and Support			
<b>Accomplishments/Planned Programs Subtotals</b>	1.463	-	-

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024 Base</u>	<u>FY 2024 OCO</u>	<u>FY 2024 Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• UN7: Understand (Op Sys Dev)	-	40.414	50.603	-	50.603	58.881	71.869	68.839	50.628	Continuing	Continuing

**Remarks**

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> CM7 / <i>Homeland Defense (Op Sys Dev)</i>

**D. Acquisition Strategy**

WMD - CIVIL SUPPORT TEAMS (WMD CST)

The Weapons of Mass Destruction Civil Support Team Program (WMD-CST) is a COTS based program that supports the evaluation of advancements in CBRN commercial off the shelf (COTS)/government-off-the-shelf (GOTS) equipment against the current technology baseline of equipment fielded to the (57) WMD CST Teams, this is to address analytical equipment obsolescence.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / Chemical and Biological Defense (Operational Systems Development)	<b>Project (Number/Name)</b> CM7 / Homeland Defense (Op Sys Dev)
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<b>Support (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
WMD CST - ES C - Science & Engineering Support	MIPR	Various : N/A	0.096	0.250	Nov 2021	0.000		0.000		-		0.000	0.000	0.346	0.000
<b>Subtotal</b>			0.096	0.250		0.000		0.000		-		0.000	0.000	0.346	N/A

<b>Test and Evaluation (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
WMD CST - OTHC C - CBRN COTS Component	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	7.372	1.051	Feb 2022	0.000		0.000		-		0.000	0.000	8.423	0.000
<b>Subtotal</b>			7.372	1.051		0.000		0.000		-		0.000	0.000	8.423	N/A

<b>Management Services (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
WMD CST - PM/MS S - Program Management Support	MIPR	Various : N/A	2.625	0.162	Dec 2021	0.000		0.000		-		0.000	0.000	2.787	0.000
<b>Subtotal</b>			2.625	0.162		0.000		0.000		-		0.000	0.000	2.787	N/A

			Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>			10.093	1.463	0.000	0.000	-	0.000	0.000	11.556	N/A



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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> CM7 / <i>Homeland Defense (Op Sys Dev)</i>

	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
WMD CST - Upgrade Fielded Systems	[REDACTED]																											

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> CM7 / <i>Homeland Defense (Op Sys Dev)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
WMD CST - Upgrade Fielded Systems	1	2022	4	2027

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**Exhibit R-2A, RDT&E Project Justification:** PB 2024 Chemical and Biological Defense Program **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / Chemical and Biological Defense (Operational Systems Development)	<b>Project (Number/Name)</b> C07 / Collective Protection (Op Sys Dev)
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
C07: Collective Protection (Op Sys Dev)	-	9.645	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.645
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

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

This project provides for technology upgrade and refresh of fielded Collective Protection (CP) equipment and systems that are smaller, lighter, less costly to produce and maintain, and more logistically supportable enabling mission accomplishment in spaces safe from the effects of chemical, biological, and radiological (CBR) contamination. In FY2023, the CBDP RDT&E Projects have been restructured to align to the CBDP portfolio. C07 efforts in FY2022 progress to the Protect (PT7) portfolio. This restructuring is intended to provide standardization and alignment across CBDP research, development and acquisition efforts.

The effort included in this Project is:

- (1) Modernization Protection Collective Protection (MODPROT CP) \*\*Progresses to PT7 in FY2023\*\*

Modernization Protection Collective Protection (MODPROT CP) incorporates a value engineering approach to address the need to reduce logistics cost and minimizes supply chain shortages by addressing obsolescence issues to the DoD /Joint Services fielded Chemical Biological and Radiological (CBR) protection portfolio for mobile, transportable, fixed facility and shipboard CP systems without the high cost of requiring a new program of record. The obsolescence of critical equipment, if not modernized, will continue to face significantly increased cost and long lead times making the equipment unaffordable and unprocurable to meet major weapon system program's requirements and schedules. MODPROT CP modernizes decades old collective protection equipment reducing costs, shortening lead times, and updating key components to extend service life and ensure affordable and procurable to warfighters.

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

	FY 2022	FY 2023	FY 2024
<b>Title:</b> 1) MODPROT CP	9.645	-	-
<b>Description:</b> Upgrades, improvements, and modernizations to fielded CP systems			
<b>Accomplishments/Planned Programs Subtotals</b>	9.645	-	-

**C. Other Program Funding Summary (\$ in Millions)**

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• CO5: Collective Protection (SDD)	2.888	-	-	-	-	-	-	-	-	0.000	2.888
• PT7: Protect (Op Sys Dev)	-	20.076	26.818	-	26.818	22.815	15.490	14.193	13.612	Continuing	Continuing

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> C07 / <i>Collective Protection (Op Sys Dev)</i>

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2024</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• JP1111: <i>Joint Expeditionary Collective Protection (JECP)</i>	22.719	30.737	-	-	-	3.000	3.750	-	-	Continuing	Continuing
• PHM036: <i>Modernization Protection Collective Protection (MODPROT CP)</i>	1.385	1.385	-	-	-	-	-	1.375	2.517	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**

MODERNIZATION PROTECTION COLLECTIVE PROTECTION (MODPROT CP)

Modernization Protection Collective Protection (MODPROT CP) leverages mature technology from contractor developed components to address and replace obsolete components of various fielded collective protection systems. Modernization efforts will also use items developed by the Government that have transitioned from lower to higher technology readiness levels that can be inserted into fielded systems. A combination of competitive and sole source contracts to various industry vendors and project orders to various Government activities will be used to adapt previously developed components to modernize systems. Robust component and system level testing to meet applicable military standards will validate both Government and contractor furnished improvements. The improvements will be added into the specific systems' updated Technical Data Packages (TDPs) to be used in Engineering Change Proposals (ECPs) and provided to the item managers.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / Chemical and Biological Defense (Operational Systems Development)	<b>Project (Number/Name)</b> C07 / Collective Protection (Op Sys Dev)
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<b>Product Development (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MODPROT CP - HW C - Collective Protection Modernization for Ships	Various	Various : N/A	0.773	2.295	Nov 2021	0.000		0.000		-		0.000	0.000	3.068	0.000
MODPROT CP - HW C - Filter Redesign, Non-Destructive Leak Test, ColPro Training Dev	MIPR	Various : N/A	2.815	0.736	Nov 2021	0.000		0.000		-		0.000	0.000	3.551	0.000
MODPROT CP - HW C - Collective Protection Modernization for Ships	Various	Indian Head : Indian Head, MD	1.909	3.021	Nov 2021	0.000		0.000		-		0.000	0.000	4.930	0.000
<b>Subtotal</b>			5.497	6.052		0.000		0.000		-		0.000	0.000	11.549	N/A

<b>Support (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MODPROT CP - IPT, Technical, Engineering and Logistics Support	MIPR	Various : N/A	0.704	0.735	Dec 2021	0.000		0.000		-		0.000	0.000	1.439	0.000
<b>Subtotal</b>			0.704	0.735		0.000		0.000		-		0.000	0.000	1.439	N/A

<b>Test and Evaluation (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MODPROT CP - DTE C - CP Modernization Testing	Various	Various : N/A	1.137	2.183	Nov 2021	0.000		0.000		-		0.000	0.000	3.320	0.000
<b>Subtotal</b>			1.137	2.183		0.000		0.000		-		0.000	0.000	3.320	N/A



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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> C07 / <i>Collective Protection (Op Sys Dev)</i>

	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
MODPROT CP - M93 GPFU Electro Magnetic Interference	██████████																											
MODPROT CP - Non Destructive (ND) Acceptance Leak Test CP Filters	██████████																											
MODPROT CP - Environmental M98 Guard Bed Testing	██████████																											
MODPROT CP - M49 Filter Modernization	██████████																											
MODPROT CP - Filter Prototype Design Analysis and Development	██████████																											
MODPROT CP - Collective Protection Training Development	██████████																											
MODPROT CP - M48A1 Filter Redesign	██████████				██████████				██████████				██████████				██████████				██████████							
MODPROT CP - Collective Protection Modernization for Ships and Buildings	██████████				██████████				██████████				██████████				██████████				██████████							
MODPROT CP - M14 Protective Entrance Modernization	██████████																											
MODPROT CP - Filter Prototype Laboratory Testing and Evaluation					██████████																							
MODPROT CP - Contaminated Filter Changeout Procedures					██████████																							
MODPROT CP - Filter Technical Design Package and Procurement of Filter Design Test Articles					██████████																							
MODPROT CP - Platform Interoperability Testing and Final Technical Design Package									██████████																			
MODPROT CP - Mobile Platform Filter Modernization													██████████															

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**Exhibit R-4, RDT&E Schedule Profile:** PB 2024 Chemical and Biological Defense Program **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> C07 / <i>Collective Protection (Op Sys Dev)</i>
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	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
MODPROT CP - Filter Surveillance Testing																												

**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> C07 / <i>Collective Protection (Op Sys Dev)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MODPROT CP - M93 GPFU Electro Magnetic Interference	1	2022	4	2022
MODPROT CP - Non Destructive (ND) Acceptance Leak Test CP Filters	1	2022	4	2022
MODPROT CP - Environmental M98 Guard Bed Testing	1	2022	4	2022
MODPROT CP - M49 Filter Modernization	1	2022	4	2022
MODPROT CP - Filter Prototype Design Analysis and Development	1	2022	4	2022
MODPROT CP - Collective Protection Training Development	1	2022	4	2022
MODPROT CP - M48A1 Filter Redesign	1	2022	4	2025
MODPROT CP - Collective Protection Modernization for Ships and Buildings	1	2022	4	2026
MODPROT CP - M14 Protective Entrance Modernization	1	2022	4	2022
MODPROT CP - Filter Prototype Laboratory Testing and Evaluation	1	2023	2	2023
MODPROT CP - Contaminated Filter Changeout Procedures	3	2022	4	2023
MODPROT CP - Filter Technical Design Package and Procurement of Filter Design Test Articles	1	2023	4	2023
MODPROT CP - Platform Interoperability Testing and Final Technical Design Package	1	2024	4	2024
MODPROT CP - Mobile Platform Filter Modernization	1	2025	4	2025
MODPROT CP - Filter Surveillance Testing	1	2025	4	2028

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 0400 / 7				<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / Chemical and Biological Defense (Operational Systems Development)				<b>Project (Number/Name)</b> DE7 / Decontamination (Op Sys Dev)				
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
DE7: Decontamination (Op Sys Dev)	-	1.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.020
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

This project addresses obsolescence issues with decontamination equipment and the need to modernize the Joint Services fielded chemical and biological with capabilities meeting or exceeding the Services requirements. In FY2023, the CBDP RDT&E Projects have been restructured to align to the CBDP portfolio. DE7 efforts in FY2022 progress to the Mitigate (MT7) portfolio. This restructuring is intended to provide standardization and alignment across CBDP research, development and acquisition efforts.

The effort included in this project is:

- (1) Modernization Protection Decontamination (MODPROT DE) \*\*Progresses to MT7 in FY2023\*\*

Modernization Protection Decontamination (MODPROT DE) addresses obsolescence and technical data concerns, beginning with the M26 Joint Services Transportable Decontamination System-Small Scale (JSTDS-SS) through validation and verification of Technical Manual (TM) changes as well as technical data for spare and repair parts; the M12A1 Power Driven Decontamination Apparatus (PDDA) by updating technical references and performing the necessary validation and verification before publishing an updated Technical Manual (TM); Conduct biological efficacy at relevant environment (i.e. ambient, desert, cold) for Joint Service Equipment Wipe (JSEW) to expand wipe capabilities to include performance against biological agents.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<b>Title:</b> 1) MODPROT DE	1.020	-	-
<b>Description:</b> Upgrades, improvements, and modernizations to fielded decontamination systems			
<b>Accomplishments/Planned Programs Subtotals</b>	1.020	-	-

**C. Other Program Funding Summary (\$ in Millions)**

<b>Line Item</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• MT7: Mitigate (Op Sys Dev)	-	5.098	3.074	-	3.074	1.987	1.819	1.845	1.862	Continuing	Continuing
• JD0050: Decontamination Family Of Systems (DFoS)	7.797	4.795	6.062	-	6.062	8.673	8.820	16.518	5.996	Continuing	Continuing

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> DE7 / <i>Decontamination (Op Sys Dev)</i>

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u> <u>Base</u>	<u>FY 2024</u> <u>OCO</u>	<u>FY 2024</u> <u>Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
<b>Remarks</b>											

**D. Acquisition Strategy**

MODERNIZATION DECONTAMINATION (MODPROT DE)

MODPROT DE leverages mature technology from contractor developed components to address and replace obsolete components of various fielded decontamination systems. Modernization efforts will also use items developed by the Government that have transitioned from lower to higher technology readiness levels that can be inserted into fielded systems. A combination of competitive and sole source contracts to various industry vendors and project orders to various Government activities will be used to adapt previously developed components to modernize systems. Robust component and system level testing will validate both Government and contractor furnished improvements. The improvements will be added into the specific system's updated Technical Data Packages (TDPs) to be used in Engineering Change Proposals (ECPs) and provided to the item managers.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / Chemical and Biological Defense (Operational Systems Development)	<b>Project (Number/Name)</b> DE7 / Decontamination (Op Sys Dev)
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<b>Product Development (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MODPROT DE - HW C - M26 Tech Data Package; Modernization Update / M12A1 TM Update, JSEW	MIPR	Various : N/A	0.365	0.534	Nov 2021	0.000		0.000		-		0.000	0.000	0.899	0.000
<b>Subtotal</b>			0.365	0.534		0.000		0.000		-		0.000	0.000	0.899	N/A

<b>Support (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MODPROT DE - DTE C - IPT, Engineering, Technical, Logistics Support	MIPR	Various : N/A	0.268	0.406	Oct 2021	0.000		0.000		-		0.000	0.000	0.674	0.000
<b>Subtotal</b>			0.268	0.406		0.000		0.000		-		0.000	0.000	0.674	N/A

<b>Management Services (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MODPROT DE - PM/MS C - Program Management Support	Various	Various : N/A	-	0.080	Oct 2021	0.000		0.000		-		0.000	0.000	0.080	0.000
<b>Subtotal</b>			-	0.080		0.000		0.000		-		0.000	0.000	0.080	N/A

			Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>			0.633	1.020	0.000	0.000	-	0.000	0.000	1.653	N/A

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> DE7 / <i>Decontamination (Op Sys Dev)</i>

	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
MODPROT DE - M12A1 TM Update	[REDACTED]																											
MODPROT DE - M26 JSTDS-SS TDP	[REDACTED]																											
MODPROT DE - M26 JSTDS-SS Modernization	[REDACTED]																											
MODPROT DE - M12 Pressure Accumulator	[REDACTED]																											
MODPROT DE - M295 & M100 Performance Characterization	[REDACTED]																											

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> DE7 / <i>Decontamination (Op Sys Dev)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MODPROT DE - M12A1 TM Update	1	2022	4	2023
MODPROT DE - M26 JSTDS-SS TDP	1	2022	4	2023
MODPROT DE - M26 JSTDS-SS Modernization	1	2022	4	2025
MODPROT DE - M12 Pressure Accumulator	1	2024	4	2024
MODPROT DE - M295 & M100 Performance Characterization	1	2024	4	2024

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 0400 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>					<b>Project (Number/Name)</b> IP7 / <i>Individual Protection (Op Sys Dev)</i>		
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
IP7: <i>Individual Protection (Op Sys Dev)</i>	-	11.659	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	11.659
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The project supports technology refresh of fielded individual protective equipment which enable the warfighter to operate in a contaminated CBR environment with little or no degradation to his/her performance. In FY2023, the CBDP RDT&E Projects have been restructured to align to the CBDP portfolio. IP7 efforts in FY2022 progress to the Protect (PT7) and Understand (UN7) portfolios. This restructuring is intended to provide standardization and alignment across CBDP research, development and acquisition efforts.

Efforts included in this Project are:

- (1) Modernization Protection Individual Protection (MODPROT IP) **\*\*Progresses to PT7 in FY2023\*\***, and
- (2) Special Purpose Unit Rapid Capability Development and Deployment (SPU RCDD) **\*\*Progresses to UN7 in FY2023\*\***

Modernization Protection Individual Protection (MODPROT IP) addresses obsolescence issues with Individual Protective (IP) equipment and the need to modernize fielded IP with capabilities to meet or exceed the Services requirements. MODPROT IP will also conduct modernization efforts and reverse engineering of maintenance and repair procedures for the Joint Services Mask Leakage Tester (JSMLT). MODPROT IP will also provide mask and filter system upgrades and modernization of fielded protection systems to enhance respiratory and ocular protection resulting in an increased lethality of fighter aircraft by mitigating risk due to operationally unsuitable aircrew Chemical Biological Radiological Nuclear (CBRN) masks. Modernization efforts will include technical manual updates and a Logistics Demonstration for an updated, lightweight version of the Joint Protective Aircrew Ensemble (JPACE). Testing and analysis with aircraft will fully validate and refine new Tactics, Techniques and Procedures (TTPs) that allow aircrews to operate without restrictive CBRN protective equipment by determining time and techniques required to reduce cockpit hazards to acceptable levels by flushing with clean air. The impact of funding these programs will address modernization and obsolescence across the DoD IP portfolio to increase readiness, sustainability, reliability, and affordability of these systems.

SPU RCDD facilitates Joint Special Operations Command (JSOC) rapid response requirements to near-term and emergent chemical-biological defensive capabilities. This includes select elements from across the Special Operations Force (SOF) Enterprise such as CBRN Assessment Response Teams (CARTs) and other Joint Force enabling units such as the 20th Chemical, Biological, Radiological, Nuclear and Explosives Command. SPU RCDD mitigates risk across the Chemical Biological Defense Program (CBDP) by creating a portfolio of operationally-relevant CB capabilities that can be quickly transitioned in response to the articulated, emergent capability needs of the geographic combatant commanders. These objectives are met by the early transitioning of promising science and technologies (S&T); the focused conduct of combat evaluations and mission-oriented operational assessments to assess technological and mission suitability; and the active leveraging of existing Commercial-Off-The-Shelf (COTS) and Government-Off-The-Shelf (GOTS) products along with novel redesign approaches to optimize existing solutions to

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> IP7 / <i>Individual Protection (Op Sys Dev)</i>

new challenges supported by “buy-try-decide-acquire” acquisition strategies. SPU RCDD initiates efforts such as respiratory breathing systems, biological identification, unmanned aerial and ground platform sensor integration, development of enhanced and augmented reality systems, and modernization of protective Chemical and Biological ensembles that have gone through requirements validation, and continues product enhancement development and technology upgrades on currently fielded SOF equipment to counter emerging threats.

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<b>Title:</b> 1) MODPROT IP <b>Description:</b> Upgrades, improvements, and modernizations to fielded IP systems.	7.850	-	-
<b>Title:</b> 2) SPU RCDD - System Modernization <b>Description:</b> This line includes Product Development, Test and Evaluation, and Management Services, to modernize technology across multiple commodity areas in order to rapidly field solutions in response to emergent threats.	3.809	-	-
<b>Accomplishments/Planned Programs Subtotals</b>	11.659	-	-

**C. Other Program Funding Summary (\$ in Millions)**

<b>Line Item</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• IP5: <i>Individual Protection (SDD)</i>	18.690	-	-	-	-	-	-	-	-	0.000	18.690
• PT7: <i>Protect (Op Sys Dev)</i>	-	20.076	26.818	-	26.818	22.815	15.490	14.193	13.612	Continuing	Continuing
• UN5: <i>Understand (SDD)</i>	-	126.071	182.726	-	182.726	137.991	127.671	108.908	68.088	Continuing	Continuing
• UN7: <i>Understand (Op Sys Dev)</i>	-	40.414	50.603	-	50.603	58.881	71.869	68.839	50.628	Continuing	Continuing
• PHM018: <i>SPU Rapid Capability Development And Demo (SPU RCDD)</i>	10.834	9.914	49.455	-	49.455	20.689	20.180	24.216	26.638	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**

MODERNIZATION PROTECTION INDIVIDUAL PROTECTION (MODPROT IP)

Modernization Protection Individual Protection (MODPROT IP) leverages mature technology from contractor developed components to address and replace obsolete components of various fielded individual protection systems. Modernization efforts will also use items developed by the Government that have transitioned from lower to higher technology readiness levels that can be inserted into fielded systems. A combination of competitive and sole source contracts to various industry vendors and project orders to various Government activities will be used to adapt previously developed components to modernize systems. Robust component and system

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> IP7 / <i>Individual Protection (Op Sys Dev)</i>

level testing will validate both Government and contractor furnished improvements. The improvements will be added into the specific system's updated Technical Data Package (TDP) to be used in Engineering Change Proposals (ECPs) and provided to the item managers.

**SPU RAPID CAPABILITY DEVELOPMENT AND DEPLOYMENT (SPU RCDD)**

The SPU RCDD overall acquisition strategy allows for rapid prototyping and testing of novel and modified COTS or GOTS systems against mission critical capabilities to enhance mission success. The SPU RCDD will use technical and functional evaluations of currently fielded items to identify materiel that requires modernization and incorporate operationally-relevant system developments. This will be accomplished through competitive contracting vehicles such as Multiple Award Indefinite Delivery Indefinite Quantify Task Order and the Countering Weapons of Mass Destruction Other Transaction Authority (CWMD OTA) for the development of prototype test assets. The SPU RCDD will use Government Agencies for prototype development, test and evaluation, and technical support.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / Chemical and Biological Defense (Operational Systems Development)	<b>Project (Number/Name)</b> IP7 / Individual Protection (Op Sys Dev)
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<b>Product Development (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MODPROT IP - HW C - Filter Prototypes & JSMLT Modernization	Various	Various : N/A	1.472	2.867	Nov 2021	0.000		0.000		-		0.000	0.000	4.339	0.000
SPU RCDD - HW C - EWAT Product Development	Various	MRIGlobal : Kansas City, MO	2.768	2.389	Dec 2021	0.000		0.000		-		0.000	0.000	5.157	0.000
SPU RCDD - HW S - Improved PPE Bag	C/CPFF	MRIGlobal : Kansas City, MO	-	0.127	Feb 2022	0.000		0.000		-		0.000	0.000	0.127	0.000
SPU RCDD - HW C - M-SCBA Product Development	C/CPFF	Advanced Technologies International : Summerville, SC	0.503	0.680	Mar 2022	0.000		0.000		-		0.000	0.000	1.183	0.000
<b>Subtotal</b>			4.743	6.063		0.000		0.000		-		0.000	0.000	10.806	N/A

<b>Support (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MODPROT IP - ES C - IPT, Engineering, Technical, Logistics Support	MIPR	Various : N/A	0.301	1.176	Oct 2021	0.000		0.000		-		0.000	0.000	1.477	0.000
<b>Subtotal</b>			0.301	1.176		0.000		0.000		-		0.000	0.000	1.477	N/A

<b>Test and Evaluation (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MODPROT IP - DTE C - Fixed Wing Aircraft/Aircrew PPE Optimization Effort	MIPR	Various : N/A	-	1.800	Dec 2021	0.000		0.000		-		0.000	0.000	1.800	0.000

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / Chemical and Biological Defense (Operational Systems Development)	<b>Project (Number/Name)</b> IP7 / Individual Protection (Op Sys Dev)
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<b>Test and Evaluation (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MODPROT IP - DTE C - Filter Prototype Testing	MIPR	U.S. Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) : Aberdeen Proving Ground, MD	1.005	1.419	Dec 2021	0.000		0.000		-		0.000	0.000	2.424	0.000
<b>Subtotal</b>			1.005	3.219		0.000		0.000		-		0.000	0.000	4.224	N/A

<b>Management Services (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MODPROT IP - PM/MS C - Program Management Support	MIPR	Various : N/A	0.110	0.588	Jan 2022	0.000		0.000		-		0.000	0.000	0.698	0.000
SPU RCDD - PM/MS C - Program Management Support	Various	Various : N/A	1.556	0.613	Nov 2021	0.000		0.000		-		0.000	0.000	2.169	0.000
<b>Subtotal</b>			1.666	1.201		0.000		0.000		-		0.000	0.000	2.867	N/A

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	7.715	11.659	0.000	0.000	-	0.000	0.000	19.374	N/A

**Remarks**



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**Exhibit R-4, RDT&E Schedule Profile:** PB 2024 Chemical and Biological Defense Program **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> IP7 / <i>Individual Protection (Op Sys Dev)</i>
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FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

SPU RCDD - Develop Low Temperature Plasma Mass Spectrometer (LTPMS)	
SPU RCDD - Develop Optimized CBRN Hydration System (OCHS)	
SPU RCDD - Develop Assault Respirator	
SPU RCDD - Develop USSOCOM-specific UGV/UAS Sensor Integration	

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> IP7 / <i>Individual Protection (Op Sys Dev)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MODPROT IP - Second Generation Filter & NIOSH DT	1	2022	4	2022
MODPROT IP - JSMLT Modernization	1	2022	4	2026
MODPROT IP - LJPACE TM Updates & LOGDEMO	1	2022	4	2022
MODPROT IP - MALO Shelf Life Extension Testing	1	2022	2	2022
MODPROT IP - Fixed Wing Aircraft/Aircrew PPE Optimization Effort	1	2023	4	2026
MODPROT IP - Maximum Age Study for JB2GU nFR Glove	2	2022	4	2022
MODPROT IP - Second Generation Filter ECP	1	2023	2	2023
MODPROT IP - CBIRF Class 3 Modernization	2	2024	4	2024
MODPROT IP - CRE PPE Modernization	2	2024	4	2024
MODPROT IP - Third Generation Filter Prototype DT	1	2025	4	2025
MODPROT IP - Third Generation Filter Technology ECP	1	2026	2	2026
SPU RCDD - Modernize CBRN Materiel	1	2022	4	2027
SPU RCDD - Develop Modular Self Contained Breathing Apparatus (MSCBA)	1	2022	4	2024
SPU RCDD - Develop Enhanced Warfighter Augmented Training (EWAT)	1	2022	4	2024
SPU RCDD - Prototype Novel CBRN Equipment	1	2022	4	2027
SPU RCDD - Develop Low Temperature Plasma Mass Spectrometer (LTPMS)	1	2022	4	2024
SPU RCDD - Develop Optimized CBRN Hydration System (OCHS)	1	2022	2	2023
SPU RCDD - Develop Assault Respirator	1	2022	4	2023
SPU RCDD - Develop USSOCOM-specific UGV/UAS Sensor Integration	1	2022	4	2023

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 0400 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / Chemical and Biological Defense (Operational Systems Development)				<b>Project (Number/Name)</b> IS7 / Information Systems (Op Sys Dev)			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
IS7: Information Systems (Op Sys Dev)	-	14.589	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	14.589
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

This Project provides for the upgrade and modernization of fielded Information Systems. During this phase efforts will execute modernization, bug fixes, provide support at fielded locations, and maintain training and logistics support. In FY2023, the CBDP RDT&E Projects have been restructured to align to the CBDP portfolio. IS7 efforts in FY2022 progress to the Understand (UN7) portfolio. This restructuring is intended to provide standardization and alignment across CBDP research, development and acquisition efforts.

Efforts included in this Project are:

- (1) Modernization Chemical Biological Radiological Nuclear Information Systems (MOD CBRN IS) \*\*Progresses to UN7 in FY2023\*\*

MOD CBRN IS combines CBRN IS (Cloud), Joint Effects Model (JEM), the Joint Warning and Reporting Network (JWARN) and the Software Support Activity within one portfolio. MOD CBRN IS provides for the continuous engineering and sustainment efforts to modernize capabilities and conduct Post Deployment Software Support (PDSS) to fielded CBRN software programs. Activities include: software code updates and modernization to correct deficiencies; compliance with system architectural changes to ensure interoperability; cybersecurity updates ensuring compliance with policies and standards; test and evaluation to identify possible cybersecurity vulnerabilities; configuration management; software redistribution, documentation, and training. In FY24, MOD CBRN IS funding will be consolidated under CBRN Support to Command and Control (CSC2).

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<b>Title:</b> 1) MOD CBRN IS	14.589	-	-
<b>Description:</b> CBRN Information Systems Modernization			
<b>Accomplishments/Planned Programs Subtotals</b>	14.589	-	-

**C. Other Program Funding Summary (\$ in Millions)**

<b>Line Item</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• UN7: Understand (Op Sys Dev)	-	40.414	50.603	-	50.603	58.881	71.869	68.839	50.628	Continuing	Continuing

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**Exhibit R-2A, RDT&E Project Justification:** PB 2024 Chemical and Biological Defense Program **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> IS7 / <i>Information Systems (Op Sys Dev)</i>
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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u> <u>Base</u>	<u>FY 2024</u> <u>OCO</u>	<u>FY 2024</u> <u>Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• JS5230: <i>Modernization CBRN Information Systems (MOD CBRN IS)</i>	0.611	0.656	-	-	-	-	-	-	-	0.000	1.267
• SA0050: <i>CBRN Support to C2 (CSC2)</i>	1.750	11.803	2.186	-	2.186	2.257	2.366	2.451	2.549	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**

MODERNIZATION CBRN INFORMATION SYSTEMS (MOD CBRN IS)

MOD CBRN IS combines CBRN IS, Joint Effects Model (JEM), Joint Warning and Reporting Network(JWARN) and the Software Support Activity under one portfolio. The acquisition strategy utilizes a managed portfolio approach to align multiple capabilities in support of modernization of CBRN Information Systems. MOD CBRN IS leverages the concepts of CBRN Hazard Awareness and Understanding and the DISA milCloud Enterprise Services to integrate current CBRN capabilities and intelligence services, applications, and systems to provide increased situational awareness and decision support to commanders for CBRN defense. This strategy provides an integration platform and supports the implementation of CSC2 and other emerging technologies from advanced technology demonstrations (ATD) and experimental capability demonstrations (ECD). MOD CBRN IS provides for the continuous engineering and modernization of fielded information systems for JEM and JWARN and Next Generation hazard prediction, warning and reporting, and CBRN decision support tool applications. MOD CBRN IS utilizes the Agile software development and IT Box to provide for the continuous spiral development, and fielding of modular capability packages. In FY23, MOD CBRN IS will transition from IS7 to UN7.

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program</b>												<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 0400 / 7						<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / Chemical and Biological Defense (Operational Systems Development)						<b>Project (Number/Name)</b> IS7 / Information Systems (Op Sys Dev)		

<b>Product Development (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MOD CBRN IS - SW S - Modernization	Various	Various : N/A	-	10.176	Oct 2021	0.000		0.000		-		0.000	0.000	10.176	0.000
<b>Subtotal</b>			-	10.176		0.000		0.000		-		0.000	0.000	10.176	N/A

<b>Support (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MOD CBRN IS - ES S - milCloud Support	MIPR	Various : N/A	-	1.977	Oct 2021	0.000		0.000		-		0.000	0.000	1.977	0.000
<b>Subtotal</b>			-	1.977		0.000		0.000		-		0.000	0.000	1.977	N/A

<b>Test and Evaluation (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MOD CBRN IS - OTH S - System Testing	MIPR	Various : N/A	-	0.803	Oct 2021	0.000		0.000		-		0.000	0.000	0.803	0.000
<b>Subtotal</b>			-	0.803		0.000		0.000		-		0.000	0.000	0.803	N/A

<b>Management Services (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MOD CBRN IS - PM/MS S - Program Management Support	Various	Various : N/A	-	1.633	Oct 2021	0.000		0.000		-		0.000	0.000	1.633	0.000
<b>Subtotal</b>			-	1.633		0.000		0.000		-		0.000	0.000	1.633	N/A





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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> IS7 / <i>Information Systems (Op Sys Dev)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MOD CBRN IS - Modernization	1	2022	4	2023
MOD CBRN IS - Continuous Engineering/SW Codes Updates	1	2022	4	2023
MOD CBRN IS - Cyber Security Compliance	1	2022	4	2023
MOD CBRN IS - Operating system architecture updates	1	2022	4	2023
MOD CBRN IS - Configuration Management and Test and Evaluation	1	2022	4	2023
MOD CBRN IS - Validation, Verification and Accreditation	1	2022	4	2023

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 0400 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / Chemical and Biological Defense (Operational Systems Development)				<b>Project (Number/Name)</b> MB7 / Medical Biological Defense (Op Sys Dev)			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
MB7: Medical Biological Defense (Op Sys Dev)	-	3.726	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.726
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The project supports technical upgrades of fielded medical devices and systems, including diagnostic systems and nerve agent treatment systems that contribute to the layered medical defenses against biological and chemical warfare threats facing U.S. Forces on the battlefield. In FY2023, the CBDP RDT&E Projects have been restructured to align to the CBDP portfolio. MB7 efforts in FY2022 progress to the Understand (UN7) portfolio. This restructuring is intended to provide standardization and alignment across CBDP research, development and acquisition efforts.

Efforts in this Project include:

- (1) MODERNIZATION MEDICAL (MOD MED) \*\*Progresses to UN7 in FY2023\*\*

The MOD MED program supports improvements to fielded systems and supports post-fielding Food and Drug Administration (FDA) requirements for CBRN medical devices, including FDA-approved autoinjectors and diagnostic equipment, in order to mitigate obsolescence and maintain fielded capabilities. It exploits new and emerging FDA-compliant technologies and updated manufacturing guidelines, supports FDA-required post-marketing commitments (PMCs) and post-marketing requirements (PMRs), and continually mitigates cybersecurity risks. In FY22, MOD MED continued annual cyber security updates and management of hardware and software configurations and addressed efforts to mitigate obsolescence and maintain fielded capabilities. In FY23, MOD MED transitioned to UN7.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<b>Title:</b> 1) MOD MED - Next Generation Diagnostic System (NGDS) 1	3.726	-	-
<b>Description:</b> Maintain Fielded Systems / Obsolescence Management			
<b>Accomplishments/Planned Programs Subtotals</b>	3.726	-	-

**C. Other Program Funding Summary (\$ in Millions)**

<b>Line Item</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• MC5: Medical Chemical Defense (SDD)	38.936	-	-	-	-	-	-	-	-	0.000	38.936
• MT5: Mitigate (SDD)	-	74.225	88.441	-	88.441	92.279	91.431	87.773	93.250	Continuing	Continuing

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> MB7 / <i>Medical Biological Defense (Op Sys Dev)</i>

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u> <u>Base</u>	<u>FY 2024</u> <u>OCO</u>	<u>FY 2024</u> <u>Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• UN7: <i>Understand (Op Sys Dev)</i>	-	40.414	50.603	-	50.603	58.881	71.869	68.839	50.628	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**  
 MODERNIZATION MEDICAL (MOD MED)  
 MOD MED ensures system upgrades for both hardware and software track to latest updates, including cybersecurity, for the commercial devices from the original equipment manufacturer. MOD MED will also fund development of additional assays (i.e. tests), for fielded systems, to address emerging biological threats and diseases. MOD MED leverages an existing Indefinite Delivery/Indefinite Quantity (IDIQ) Delivery Order contract for required system upgrades and assay development.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / Chemical and Biological Defense (Operational Systems Development)	<b>Project (Number/Name)</b> MB7 / Medical Biological Defense (Op Sys Dev)
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<b>Product Development (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MOD MED - Product Management	Various	Various : N/A	-	1.264	Dec 2021	0.000		0.000		-		0.000	0.000	1.264	0.000
MOD MED - HW C - Next Generation Diagnostic System 1 (NGDS 1)	C/CPFF	BioFire Diagnostics : Salt Lake City, UT	-	2.036	Jan 2022	0.000		0.000		-		0.000	0.000	2.036	0.000
<b>Subtotal</b>			-	3.300		0.000		0.000		-		0.000	0.000	3.300	N/A

<b>Support (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MOD MED - ES S - NGDS 1 - Technical Support	C/CPFF	Battelle Memorial Institute : Aberdeen, MD	-	0.095	May 2022	0.000		0.000		-		0.000	0.000	0.095	0.000
<b>Subtotal</b>			-	0.095		0.000		0.000		-		0.000	0.000	0.095	N/A

<b>Management Services (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MOD MED - PM/MS C - Management Services	Various	Various : N/A	-	0.331	Feb 2022	0.000		0.000		-		0.000	0.000	0.331	0.000
<b>Subtotal</b>			-	0.331		0.000		0.000		-		0.000	0.000	0.331	N/A

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>		-	3.726	0.000	0.000	0.000	0.000	3.726	N/A

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> MB7 / <i>Medical Biological Defense (Op Sys Dev)</i>

	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
MOD MED - Diagnostic System Upgrades / Assay Development	[REDACTED]																											
MOD MED - NGDS 1 Tech Refresh	[REDACTED]																											
MOD MED - Autoinjector Post Marketing Commitments and Requirements (PMRs/ PMCs)	[REDACTED]																											

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> MB7 / <i>Medical Biological Defense (Op Sys Dev)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MOD MED - Diagnostic System Upgrades / Assay Development	1	2023	4	2028
MOD MED - NGDS 1 Tech Refresh	4	2023	4	2028
MOD MED - Autoinjector Post Marketing Commitments and Requirements (PMRs/ PMCs)	1	2023	4	2028

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**Exhibit R-2A, RDT&E Project Justification:** PB 2024 Chemical and Biological Defense Program **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / Chemical and Biological Defense (Operational Systems Development)	<b>Project (Number/Name)</b> MC7 / Medical Chemical Defense (Op Sys Dev)
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
MC7: Medical Chemical Defense (Op Sys Dev)	-	1.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.013
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

This project provides for the upgrade and modernization of fielded medical nerve agent treatment system that contribute to the layered medical defenses against chemical warfare agent threats facing U.S. Forces in the field. In FY2023, the CBDP RDT&E Projects have been restructured to align to the CBDP portfolio. MC7 efforts in FY2022 progress to the Mitigate (MT7) portfolio. This restructuring is intended to provide standardization and alignment across CBDP research, development and acquisition efforts.

The effort included in this Project is:

- (1) Improved Nerve Agent Treatment System Centrally Acting (INATS CA) \*\*Progresses to MT7 in FY2023\*\*

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

	FY 2022	FY 2023	FY 2024
<b>Title:</b> 1) INATS CA	0.800	-	-
<b>Description:</b> Pyridostigmine Bromide (PB) Extended Release Tablet Development			
<b>Title:</b> 2) INATS CA	0.213	-	-
<b>Description:</b> SNAPP Shelf Life Modernization: Studies required by the FDA and/or users to modernize or upgrade medical chemical defense countermeasures.			
<b>Accomplishments/Planned Programs Subtotals</b>			1.013

**C. Other Program Funding Summary (\$ in Millions)**

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• MC5: Medical Chemical Defense (SDD)	38.936	-	-	-	-	-	-	-	-	0.000	38.936
• MT5: Mitigate (SDD)	-	74.225	88.441	-	88.441	92.279	91.431	87.773	93.250	Continuing	Continuing
• MT7: Mitigate (Op Sys Dev)	-	5.098	3.074	-	3.074	1.987	1.819	1.845	1.862	Continuing	Continuing

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> MC7 / <i>Medical Chemical Defense (Op Sys Dev)</i>

**C. Other Program Funding Summary (\$ in Millions)**

<b>Line Item</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PHM040: <i>Improved Nerve Agent Treatment Centrally Acting (INATS CA)</i>	-	-	-	-	-	-	-	6.511	33.883	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**

IMPROVED NERVE AGENT TREATMENT CENTRALLY ACTING (INATS CA)

For scopolamine autoinjector development INATS CA 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, a follow-on procurement agreement will be used to procure initial operational capability (IOC) / full operational capability (FOC).

The pyridostigmine bromide (PB) modernization effort will utilize OTAs for conducting development and testing activities to generate data to submit to the FDA.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Chemical and Biological Defense Program** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / Chemical and Biological Defense (Operational Systems Development)	<b>Project (Number/Name)</b> MC7 / Medical Chemical Defense (Op Sys Dev)
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<b>Product Development (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
INATS CA - Shelf Life Modernization (SNAPP)	C/CPFF	CMC Pharma : Cleveland, OH	0.449	0.196	Jun 2022	0.000		0.000		-		0.000	0.000	0.645	0.000
INATS CA - HW C - PB Extended Release	C/FFP	Amneal Pharmaceuticals : Hauppauge, NY	1.179	0.737	Nov 2021	0.000		0.000		-		0.000	0.000	1.916	0.000
<b>Subtotal</b>			1.628	0.933		0.000		0.000		-		0.000	0.000	2.561	N/A

<b>Management Services (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
INATS CA - Management Services	Various	JPEO Chem, Bio, Rad, and Nuc Defense (JPEO-CBRND) : Aberdeen Proving Ground, MD	0.126	0.080	Dec 2021	0.000		0.000		-		0.000	0.000	0.206	0.000
<b>Subtotal</b>			0.126	0.080		0.000		0.000		-		0.000	0.000	0.206	N/A

			Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>			1.754	1.013	0.000	0.000	-	0.000	0.000	2.767	N/A

**Remarks**

**UNCLASSIFIED**

<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> MC7 / <i>Medical Chemical Defense (Op Sys Dev)</i>

	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
INATS CA - MS B-Milestone B																												
INATS CA - Clinical Trials																												
INATS CA - Manufacturing/Auto-Injector																												
INATS CA - Non-Clinical Studies																												
INATS CA - NDA Submission-New Drug Application Submission																												
INATS CA - FDA Approval-Food and Drug Administration Approval																												
INATS CA - SNAPP Modernization - BA7																												
INATS CA - PB Extended Release Tablet Development - BA7																												

**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Chemical and Biological Defense Program		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607384BP / <i>Chemical and Biological Defense (Operational Systems Development)</i>	<b>Project (Number/Name)</b> MC7 / <i>Medical Chemical Defense (Op Sys Dev)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
INATS CA - MS B-Milestone B	2	2022	2	2022
INATS CA - Clinical Trials	1	2022	4	2024
INATS CA - Manufacturing/Auto-Injector	1	2022	2	2025
INATS CA - Non-Clinical Studies	1	2022	2	2025
INATS CA - NDA Submission-New Drug Application Submission	1	2026	3	2026
INATS CA - FDA Approval-Food and Drug Administration Approval	3	2026	1	2028
INATS CA - SNAPP Modernization - BA7	1	2022	4	2025
INATS CA - PB Extended Release Tablet Development - BA7	1	2023	1	2026