

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)

DATE

February 1999

BUDGET ACTIVITY

PE NUMBER AND TITLE

5 - Engineering and Manufacturing Dev

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)

COST (In Thousands)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	120624	110943	116365	100296	165639	172041	110967	79050	Continuing	Continuing
BJ5 BIOLOGICAL DEFENSE	44331	34104	11460	6042	47073	60750	15800	1519	Continuing	Continuing
CA5 CONTAMINATION AVOIDANCE	43802	44113	62735	48435	24272	9850	21560	21306	Continuing	Continuing
CO5 COLLECTIVE PROTECTION	1086	1233	5758	6423	6182	5644	4583	5241	Continuing	Continuing
CP5 COUNTERPROLIFERATION SUPPORT	0	0	5612	0	0	0	0	0	0	5612
DE5 DECONTAMINATION	4645	3911	3780	3701	7001	12516	11933	15403	Continuing	Continuing
IP5 INDIVIDUAL PROTECTION	5945	10687	7263	10250	22016	12174	12768	0	0	81103
MB5 MEDICAL BIOLOGICAL DEFENSE	15924	15158	19007	24347	57621	69546	42744	33953	Continuing	Continuing
MC5 MEDICAL CHEMICAL DEFENSE	4891	1737	750	1098	1474	1561	1579	1628	Continuing	Continuing

A. Mission Description and Budget Item Justification: Operational forces have an immediate need to safely operate, survive and sustain operations in a chemical and biological agent threat environment across the continuum of global, contingency, special operations/low intensity conflict, counternarcotics, and other high risk missions. Operating forces have a critical need for defense against worldwide proliferation of Chemical/Biological (CB) warfare capabilities and for medical treatment of casualties in medical treatment facilities. Congress directed centralized management of DoD CB Defense initiatives, both medical and non-medical. This program element supports the Engineering Manufacturing Development (EMD) of CB defensive equipment, both medical and non-medical, and addresses various shortcomings identified in CONDUCT OF THE PERSIAN GULF WAR: FINAL REPORT TO CONGRESS, April 1992. These projects have been restructured to consolidate Joint and Service unique tasks within four commodity areas: contamination avoidance, force protection (individual and collective), decontamination and medical countermeasures. The consolidation will provide for development and operational testing of equipment for Joint Service as well as Service unique requirements.

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

The medical chemical defense engineering and manufacturing development program funds improved medical equipment and drugs essential to counteracting lethal and performance-degrading effects of chemical threats, and medical equipment essential to meeting medical requirements on the integrated battlefield with emphasis on decreased size/weight and high mobility, yet supporting large numbers of combat casualties. Additionally, foreign medical materiel may be procured for exploitation of advanced technology and development to meet medical defense goals. This program element supports the full-scale development of prophylactic and therapeutic drugs and rapid identification and diagnostic systems.

DoD Biological Defense mission requires the detection and identification of validated biological threat agents to provide early warning capabilities on mobile and fixed platforms. This program element will provide theater protection through the development of point and stand-off detection systems. The detection system concept will provide detection, identification, warning and sample collection for verification that a biological agent attack has occurred. The Counterproliferation Support Program was funded in FY00 to complete the development of the Long Range Biological Stand-off Detection System (LR-BSDS) for IOT&E prior to production. This program element also provides for the development of biological defense medical programs. DoD Biological Defense medical mission will address: (1) protective vaccines - vaccination capability against the most probable biological threat agents; (2) identification - clinical identification of biological threat agents through medical evaluation and laboratory analysis to augment early warning capabilities.

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B. Program Change Summary:	FY 1998	FY 1999	FY 2000	FY 2001
Previous President's Budget (FY1999 PB)	120535	125312	156606	141603
Appropriated Value	126302	124943		
Adjustments to Appropriated Value				
a. Congressional General Reductions				
b. SBIR/STTR	-2120			
c. Omnibus or Other Above Threshold Reductions		-14000		
d. Below Threshold Reprogramming	-3558			
e. Rescissions				
Adjustments to Budget Years Since FY 1999 PB			-40241	-41307
Current Budget Submit (FY2000/FY2001 PB)	120624	110943	116365	100296

Change Summary Explanation:

Funding: FY99 - BJ5 ABPORT ACTD (-14000) moved to ABPORT ACTD equipment for procurement of bio sensors for CINC's. FY00 - BJ5 JBREWS (-25945) delayed JBREWS RDTE by two years to take advantage of efforts in ABPORT ACTD, BJ5 ABPORT ACTD (-4000) moved to ABPORT ACTD equipment for procurement of bio sensors for CINC's, CA5 JCAD (579) moved from CA4 JCAD to correctly align efforts; CA5 NBCRSBLKII (6984) initiated RDTE program, CP5 LRBSDS (5706) added funds for refurb of test items, IP5 JSGPM (-6846) moved funding to IP4 JSGPM to correctly align effort, IP5 JPACE (2515) initiates RDTE, MB5 Vaccines (-23263) moved to MB4 Vaccines and Vaccine procurement, CO5 JTCOPS (2656) initiates RDTE, (3327) other adjustments for higher priority efforts, (-1954) for revised economic assumptions. FY01 - BJ5 JBREWS (-32486) delayed JBREWS RDTE by two years to take advantage of efforts in ABPORT ACTD, BJ5 ABPORT ACTD (-4000) moved to ABPORT ACTD equipment for procurement of bio sensors for CINC's, CA5 JCAD (435) moved from CA4 JCAD, CA5 JSLSCAD (14900) increased funding for RDTE on additional service platforms, CA5 NBCRSBLKII (13166) establishes RDTE program; IP5 JSGPM (-9733) moved funding to IP4 JSGPM to correctly align efforts, IP5 JPACE (3801) initiates RDTE, MB5 Vaccines (-29282) moved to MB4 Vaccines and Vaccine procurement, CO5 JTCOPS (3196) initiates RDTE, (489) other adjustments for higher priority efforts, (-1793) for revised economic assumptions.

Schedule:

Technical:

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BUDGET ACTIVITY		PE NUMBER AND TITLE								PROJECT	
5 - Engineering and Manufacturing Dev		0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)								BJ5	
COST (In Thousands)		FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	Cost to Complete	Total Cost
		Actual	Estimate								
BJ5	BIOLOGICAL DEFENSE	44331	34104	11460	6042	47073	60750	15800	1519	Continuing	Continuing

A. Mission Description and Budget Item Justification:

Project BJ5 BIOLOGICAL DEFENSE: DoD Biological Defense mission requires the detection and identification of biological threat agents to provide early warning capabilities to mobile forces and high value fixed site assets. The detection system concept will provide detection, identification, warning, and sample collection for verification of large area and point source biological agent attacks.

This project completed development of the Army's ground-based Biological Integrated Detection System (BIDS) P3I program in FY98.

The Joint Biological Point Detection System (JBPDS) program is an integration of the Army BIDS, Navy Interim Biological Agent Detector (IBAD) and Air Force and Marine Corps Service specific development programs. The detection suite will meet the Service requirements as outlined in the Joint Operational Requirements Document (JORD). The suite will be capable of identifying, within 15 minutes, as a minimum, Biological Warfare (BW) agents listed in category A of International Task Force (ITF) 6 Report, dated 9 Feb 90. The suite will be integrated into each Services' platform (e.g. High Mobility Multi-Purpose Wheeled Vehicle (HMMWV), ship, truck, etc.) or airbase or port to provide a common detection capability with joint interoperability and supportability. The JBPDS will: increase the number of agents that can be identified by the BIDS and IBAD systems; provide automated knowledge-based, near real-time identification; and provide a first time point detection capability to the Air Force and Marine Corps. An evolutionary component/suite upgrade acquisition approach will be used to provide the Services a common point detection capability. The program is structured into two Block EMD phases. Block I EMD will provide the Services with an automated BW agent identification capability. Block II will upgrade the Block I production suites to full compliance with the JORD requirements.

This project includes the completion of installation of IBAD rapid prototypes aboard Naval ships in FY99 and their continued operational support. IBAD gives the Navy an interim point detection capability aboard ships at sea, which will be part of the theater protection strategy. The JBPDS will replace the IBAD.

This project also supports the Air Base/Port Bio Detection (Portal Shield) Advanced Concept Technology Demonstration (ACTD) which will provide: 1) BW perimeter detection system; 2) Automated NBC Warning; 3) unmasking procedures; 4) sensor decontamination equipment; 5) Contamination Detection sampling kits; and 6) evaluation of commercial oronasal masks for potential civilian/Noncombatant Evacuation Operations (NEO) applications in CENTCOM/PACOM Area of Responsibility (AOR) .

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BJ5

The Critical Reagent Program (CRP) began in FY97 with MB4 funding. This project will integrate and consolidate all DoD reagents/antibodies/DNA biological detection requirements (PDRR through production). CRP will ensure the availability of high quality reagents throughout the life cycle of all BW detection/identification systems. This project supports all aspects of manufacturing "SCALE-UP" of developmental protocols for Critical Reagent Program developed products.

FY 1998 Accomplishments:

- 750 Air Base/Port ACTD - Continued aerosol background sampling and analysis at CENTCOM/PACOM air base/port sites.
- 11915 Air Base/Port ACTD - Initiated fabrication of four ACTD perimeter biological detector networks for CENTCOM/PACOM air base/port sites.
- 1310 Air Base/Port ACTD - Initiated contractor logistics support and fielding for CENTCOM/PACOM air base/port sites.
- 1852 Air Base/Port ACTD - Successfully completed an integrated biological/chemical perimeter detector network field test at Dugway Proving Ground (DPG).
- 1543 BIDS - Conducted Limited User Test.
- 2566 CRP - Produced reagents in support of testing and development of the Portal Shield, the BIDS P3I, and the JBPDS. Established a limited prototype production line for hand-held assays (HHAs). Provided HHAs in support of Operation Desert Thunder, to support the Army's BIDS, the Navy's IBAD and 2 foreign militaries. Began planning and budgeting for an antibodygene probe and primer repository at ERDEC and an agent/interferent repository at DPG.
- 193 IBAD - Continued support of rapid prototype systems and investigation of aerosol background.
- 4076 JBPDS - Initiated and completed preliminary Detection suite design and purchased EDT Block I Detection suite components.
- 3770 JBPDS - Completed fabrication of Block I Detection suite components and eight EDT prototypes.
- 701 JBPDS - Initiated EDT planning.
- 4026 JBPDS - Initiated and completed software development of Block I Detection suite.
- 3928 JBPDS - Completed system integration design for fixed-site and man portable installations.
- 1022 JBPDS - Conducted annual Joint Field Trials (JFTs) 4.0 and 4.5 at Dugway Proving Ground.
- 3070 JBPDS - Completed system integration design for shipboard and S-788 Shelter installation.
- 1904 JBPDS - Completed hardware and software design documentation.
- 1705 JBPDS - Developed integrated support plan.

Total 44331

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BJ5

FY 1999 Planned Program:

- 1506 Air Base/Port Biological Detection (Portal Shield) ACTD - Provide for contractor logistics support and fielding at CENTCOM/USFK Air Base/Port sites.
- 2206 CRP - Develop 4-5 new antibody based reagents to support the development of the Airbase/Port (Portal Shield) and Joint Biological Point Detection System (JBPDS) Block I.
- 1691 CRP - Production of prototype hand-held assays to support development of identification technologies for the Airbase/Port (Portal Shield) ACTD and the Joint Biological Point Detection System (JBPDS) Block I.
- 225 IBAD - Continue support of rapid prototype systems, continue installation on Naval ships, and investigate aerosol background of Naval areas of operations.
- 2400 JBPDS - Complete Post-test refurbishment and modification of Block 1 System components.
- 3417 JBPDS - Complete fabrication of IOT&E Block I bio-detection suite components.
- 3293 JBPDS - Complete PPQT for shipboard, fixed-site, S788 shelter and man portable configurations.
- 3900 JBPDS - Complete system integration of USN shipboard and US Army 788 Shelter configurations.
- 2949 JBPDS - Complete system integration of US Air Force fixed site and USMC man portable configurations.
- 500 JBPDS - Initiate IOT&E planning.
- 750 JBPDS - Conduct annual Joint Field Trials at Dugway Proving Ground.
- 2500 JBPDS - Complete EDT and eight prototype systems.
- 1457 JBPDS - Complete software integration and acceptance testing.
- 3255 JBPDS - Develop equipment publications and training packages.
- 1950 JBPDS - Complete RAM analysis and maintainability demonstration.
- 1550 JBPDS - Develop a provisioning database.
- 555 SBIR/STTR

Total 34104

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BJ5

FY 2000 Planned Program:

- 2000 Air Base/Port ACTD - Continue contractor logistics support of installed ACTD detector networks in CENTCOM/PACOMs AO.
- 500 Air Base/Port ACTD - Continue to provide depot repairs and spares for detector networks in CENTCOM/PACOM AO.
- 320 Air Base/Port ACTD - Initiate upgrade to sampling system to incorporate collector/concentrator.
- 1255 CRP - Transition newly developed reagent protocols to full scale production. Transition newly developed Hand Held Assays (HHAs) to production.
- 340 IBAD - Continue support of rapid prototype systems and investigation of aerosol background.
- 1358 JBPDS - Complete IOT&E for USN shipboard, USN & USAF fixed site, USMC manportable and USA shelter systems at all three sites.
- 2202 JBPDS - Complete Logistic Support Analysis Records, Provisioning Data Base, Technical Manuals, Drawings and Performance Specifications.
- 1459 JBPDS - Complete refurbishment of 18 IOT&E systems.
- 1126 JBPDS - Conduct annual Joint Field Trial at Dugway Proving Ground.
- 900 JBPDS - Completion of procurement planning, solicitation and award documentation for Block I production contract.

Total 11460

FY 2001 Planned Program:

- 1140 CRP - Continue transition of reagents and HHAs into JPO-BD managed programs and to production.
- 334 IBAD - Continue support of rapid prototype systems.
- 1316 JBPDS - Review and develop Block II JBPDS Bio-suite hardware concept improvements.
- 288 JBPDS - Develop Block II JBPDS concept drawings and specifications.
- 723 JBPDS - Develop Block II JBPDS Integrated Logistics Support (ILS) concepts.
- 900 JBPDS - Develop Block II EMD contract plans, solicitation and award documentation and monitor contract execution.
- 1341 JBPDS - Review and develop Block II JBPDS Bio-suite concept improvements to Block II bio suite software.

Total 6042

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BJ5

B. Other Program Funding Summary:

	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Compl	Total Cost
G47101 JOINT WARNING & REPORTING NETWORK (JWARN)	0	10174	9012	8923	11641	10527	12067	12168	Cont'd	Cont'd
JP0100 JOINT BIO POINT DETECTION SYSTEM (JBPDS)	0	0	48406	53935	62138	62302	44302	45951	Cont'd	Cont'd
JPO200 JT BIO REM EARLY WARNING SYS (JBREWS)	0	0	0	0	0	0	34575	36398	Cont'd	Cont'd
JPO210 CRITICAL REAGENTS PROGRAM (CRP)	0	1746	2432	1923	1928	2024	1866	1923	Cont'd	Cont'd
JPO220 LONG RANGE BIO STANDOFF DET SYS (LRBSDS)	0	0	1923	11807	11885	0	0	0	0	25615
JPO230 Portal Shield Equipment	0	13936	3909	3903	3896	0	0	0	0	25644
JX0008 JPO System Fielding Support/Spares	0	0	0	0	0	0	675	697	Cont'd	Cont'd
M93001 BIO INTEGRATED DETECTOR SYSTEM (BIDS)	37371	14900	19479	0	0	0	0	0	0	71750
MC0100 JT SVC LTWT NBC RECON SYS (LNBCRS)	0	0	0	39478	80887	66478	59854	69084	Cont'd	Cont'd

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BUDGET ACTIVITY 5 - Engineering and Manufacturing Dev	PE NUMBER AND TITLE 0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)	PROJECT BJ5
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D. Schedule Profile:	FY 1996				FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				FY 2004				FY 2005			
	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	1	2	3	4	1	2	3	4	1	2	3	4
CRP (Contd)																																								
Develop Reagents for 30 BW Agents																	X	X	X	X																				
IBADS																																								
Fielding			X	X	X	X																																		
JBPDS																																								
Start of Work Meeting							X																																	
Preliminary Design Review								X																																
Critical Design Review								X	X	X																														
Perform EDT										X	X																													
Perform PPQT										X	X																													
Perform IOT&E											X	X																												
Block I MS III												X																												
Conduct concept analysis for Block II										X	X	X	X	X	X	X																								
JBREWS																																								
JBREWS ACTD -Fielding Support (CLS)																	X	X	X	X																				

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BJ5

A. Project Cost Breakdown:	FY 1998	FY 1999	FY 2000	FY 2001
Development Test and Evaluation	1451	5793	0	0
Engineering Design	11074	2206	1255	2456
Fabrication	18251	12666	1779	0
Hardware Development	0	1691	0	0
Integrated Logistics, Support	3208	5231	5042	1057
Operational Test and Evaluation	1543	500	1358	0
Regulatory Affairs	0	555	0	0
Software Development	4026	1457	0	1341
Technical Data/Documentation	1904	3255	900	1188
Test & Evaluation	2874	750	1126	0
Total	44331	34104	11460	6042

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BUDGET ACTIVITY 5 - Engineering and Manufacturing Dev				PE NUMBER AND TITLE 0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)					PROJECT CA5		
COST (In Thousands)		FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
CA5	CONTAMINATION AVOIDANCE	43802	44113	62735	48435	24272	9850	21560	21306	Continuing	Continuing
<p>A. Mission Description and Budget Item Justification:</p> <p>Project CA5 CONTAMINATION AVOIDANCE: This project provides EMD of an array of chemical detection and warning systems comprising the basis of Joint Service Program efforts. The Joint Service Point Detection Program will explore leveraging technologies, to include the M22 Automatic Chemical Agent Alarm (ACADA) which is more sensitive and responsive than current detectors with similar applications and is capable of concurrent nerve and blister agent detection, and the CB Mass Spectrometer (CBMS) which identifies chemical and biological agents collected and is a potential component for the Biological Integrated Detection System (BIDS), the NBC Reconnaissance System (NBCRS) and the Lightweight NBCRS. The Joint Chemical Agent Detector (JCAD) program will develop a miniturized, ruggedized and portable point chemical agent detector that automatically and simultaneously detects, identifies, quantifies and alerts in the presense of nerve, blister and blood agents. It will be used for aircraft, shipboard, wheeled vehicles, stand alone and individual soldier applications. The Joint Service Lightweight Standoff Chemical Agent Detector Program (JSLSCAD), utilizing passive infrared technology provides an automatic scanner and stand-off detector capability. The Joint Service Lightweight NBC Reconnaissance System (JSLNBCRS) provides a warning and reporting capability of a NBC hazard for light assault, air bases and expeditionary forces. The Joint Service Warning and Reporting Network (JWARN) will evaluate the current technologies which automate NBC warning collected from detectors in the field and transmit them to adjacent units and command centers. The Multipurpose Integrated Chemical Agent Detector (MICAD) is an integrated component of hardware and software that can process data for use by the JWARN for evaluation and transmitting on the Joint C4I Battlefield and also can be used by stand alone systems. The Shipboard Automatic Liquid Agent Detector (SALAD) is an externally mounted detector that will detect both blister and nerve agents.</p>											
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BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - Engineering and Manufacturing Dev	0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)	CA5
FY 1998 Accomplishments:		
<ul style="list-style-type: none"> • 19 ACADA/AVAD - Continued support of production and fielding planning efforts. • 1948 CBMS - Completed preliminary design. • 5566 CBMS - Developed detailed design. • 1993 CBMS - Fabricated engineering prototypes. • 1891 CBMS - Developed preliminary detection algorithm. • 3109 JCAD - Initiated, built and tested hardware. • 2178 JCAD - Initiated and developed software and systems integration for multiple platforms. • 1227 JCAD - Initiated planning and development of equipment for test/flyoff. • 958 JCAD - Provided in-house program support. • 302 JCAD - Planned and prepared documentation for EMD contract award. • 33 JSLSCAD - Completed USAF program integration support. • 605 JSLSCAD - Completed USN engineering design for ship applications. • 5333 JSLSCAD - Initiated design of Engineering Design Test (EDT) hardware JSLSCAD - Initiated design of prototype hardware and software. • 1952 JSLSCAD - Completed prototype hardware and software for algorithm development. • 15 JSLSCAD - Completed USMC program integration support. • 4297 JSLNBCRS -Awarded EMD contract. • 3100 MICAD - Fabricated and tested installation kits. • 685 MICAD - Conducted IOT&E. • 1475 MICAD - Planned and prepared documentation for production contract. • 445 MICAD - Conducting MS III Type Classification IPR 14 Sep 98. • 4466 JWARN - Completed Phase I. • 1974 JWARN - Initiated Phase II development and integration. • 231 SALAD - Completed developmental and operational testing, prepared production contract. 		
Total	43802	
Project CA5		

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FY 1999 Planned Program:		
<ul style="list-style-type: none"> • 5280 CBMS - Develop final design. • 738 CBMS - Retrofit engineering prototypes. • 2355 CBMS - Develop final detection algorithm. • 4045 CBMS - Conduct engineering tests. • 4582 JCAD - Continue development of test units hardware and software to include mission-specific components. • 1391 JCAD - Initiate and conduct DT&E/Engineering Development Test (EDT). • 1083 JCAD - Continue systems integration. • 1267 JCAD - Continue in-house program management and support. • 205 JCAD - Continue development and documentation of technology options for Naval aviation chem/bio defense requirement and concept of operations for aircraft survivability. • 834 JSLSCAD - Joint Service Support. • 2206 JSLSCAD - Initiate fabrication of EDT units. • 1890 JSLSCAD - Complete software and CADSIE tools. • 520 JSLSCAD - Complete initial design and conduct PDR. • 4025 JSLSCAD - Finalize detail design and conduct DDR. • 7278 JSLNBCRS - HMMWV Variant - Conduct Analysis of Alternatives (AoA) and complete System Design Review (SDR). • 5681 JWARN - Continue Phase II development and integration. • 733 SBIR/STTR 		
Total	44113	
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FY 2000 Planned Program:

- 1815 CBMS - Finalize design.
- 2415 CBMS - Build preproduction units.
- 2643 CBMS - Conduct engineering tests.
- 2599 CBMS - Prepare documentation.
- 4697 JCAD - Continue EMD test units hardware and software development.
- 2879 JCAD - Continue application development, test and evaluation.
- 1536 JCAD - Continue systems integration.
- 1238 JCAD - Continue in-house program management and support.
- 3513 JCAD - Continue technology development options.
- 1800 JSLSCAD - Complete fabrication of EDT.
- 4250 JSLSCAD - Complete CDR and evaluate issues through EDT.
- 4635 JSLSCAD - Conduct engineering test.
- 1653 JSLSCAD - Purchase long lead items for PQT/IOT&E.
- 799 JSLSCAD - Joint Service support.
- 1500 JSLSCAD - Integration for test platforms.
- 2788 JSLNBCRS - Start integration of LAV variant.
- 2789 JSLNBCRS - Complete DT I/OT I.
- 1071 JSLNBCRS - Complete TDP.
- 7621 JWARN - Continue Phase II development and integration.
- 3627 JWARN - Conduct DT.
- 6867 NBCRS Blk II - R&D Contract award, concept design and trade off studies.

Total 62735

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CA5

FY 2001 Planned Program:

- 1238 JCAD - Continue EMD In-house program management and support.
- 3343 JCAD - Finalize hardware and software test units development.
- 2796 JCAD - Finalize technology development efforts.
- 4676 JCAD - Finalize test & evaluation.
- 731 JCAD - Finalize EMD Systems Integration efforts.
- 1015 JSLSCAD - Integration for test platform.
- 3000 JSLSCAD - EDT test review and modify design based on EDT test review.
- 4000 JSLSCAD - Fabricate PQT/OT units.
- 6581 JSLSCAD - Conduct PQT and IOT&E.
- 799 JSLSCAD - Joint Service Support.
- 5321 JWARN - Continue Phase II integration.
- 2000 JWARN - Conduct Operational Testing (OT).
- 6435 NBCRS Blk II - Fabrication of prototype six systems.
- 3100 NBCRS Blk II - Complete engineering and logistics documentation.
- 3400 NBCRS Blk II - Conduct system test.

Total 48435

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B. Other Program Funding Summary:

	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Compl	Total Cost
G47101 JOINT WARNING & REPORTING NETWORK (JWARN)	0	10174	9012	8923	11641	10527	12067	12168	Cont'd	Cont'd
JF0100 JOINT CHEM AGENT DETECTOR (JCAD)	0	0	0	0	27142	27743	25566	25779	Cont'd	Cont'd
JX0002 CA SYSTEM FIELDING SUPPORT/SPARES	885	1067	1108	1987	2330	2379	3309	3092	Cont'd	Cont'd
M98801 AUTO CHEMICAL AGENT ALARM (ACADA), M22	15722	29633	37224	48744	0	0	0	0	0	131323
MA0601 RECON SYSTEM, FOX NBC (NBCRS) MODS	25335	26044	24918	31752	6362	5486	33907	35138	Cont'd	Cont'd
MC0100 JT SVC LTWT NBC RECON SYS (LNBCRS)	0	0	0	39478	80887	66478	59854	69084	Cont'd	Cont'd
N00041 SHIPBOARD DETECTOR MODIFICATIONS	4647	9138	11515	6953	8762	8664	5795	1528	Cont'd	Cont'd
S02201 IMPROVED CHEMICAL AGENT MONITOR (ICAM)	9247	9465	12788	12551	0	0	0	0	0	44051
S10801 JS LTWT STANDOFF CW AGT DETECTOR (LSCAD)	0	0	0	0	3109	8935	18936	28640	Cont'd	Cont'd

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PROJECT

5 - Engineering and Manufacturing Dev

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)

CA5

C. Acquisition Strategy:

JWARN Contract development and integration of software, start Phase II of JWARN program.

JCAD Contract development and fabrication of test prototypes, contractor/in-house testing, contract fabrication of pre-production units.

ACADA NDI contract fabrication of test items, in-house testing, contract fabrication of production units with option from multiple sources.

CBMS Contract development and fabrication of prototype test hardware, contractor testing, integration by host platforms, contract fabrication of production units.

JSLSCAD Contract development, in-house/contract testing, in-house/contract platform integration, contract fabrication of production units.

SALAD In-house development and in-house/contract fabrication of test prototypes; in-house testing, contract fabrication of production units.

JSLNBCRS Development and fabrication of prototypes. Execute option for contract platform integration.

MICAD Contract development and fabrication of test prototypes, contractor/in-house testing, contract fabrication of production units.

NBCRS Block II The Block II mod is an integration effort of new Army materiel to improve the Fox NBCRS.

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D. Schedule Profile:	FY 1996				FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				FY 2004				FY 2005			
	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	1	2	3	4	1	2	3	4	1	2	3	4
CBMS																																								
BLK I - PPT			X	X																																				
BLK II - Dev Contract Award					X																																			
BLK I - Prod Decision						X																																		
BLK I - Prod Contr Awd								X																																
BLK I - BIDS P3I DT/OT						X	X																																	
BLK I - BIDS P3I MS IV (TC-STDA1)											X																													
BLK II - Critical Design Review											X																													
BLK II - Fabricate Engr Prototypes											X	X	X	X	X	X	X																							
BLK II - Engr Tests											X	X	X	X																										
BLK II - PPT														X	X																									
BLK II - Prod Decision															X																									
JCAD																																								
JORD						X	X	X																																
SAF/AQ MS 0 Approval						X																																		
Release RFP							X																																	
Source Selection							X	X	X																															
Award EMD Contract								X																																
EMD								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																	
JSLSCAD																																								
Fabricate EDT Units											X	X	X	X																										
Critical Design Review															X																									

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D. Schedule Profile:	FY 1996				FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				FY 2004				FY 2005			
	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	1	2	3	4	1	2	3	4	1	2	3	4
JSLSCAD (Contd)																																								
Conduct Engineering Test															X	X	X	X	X	X																				
Fabricate Test Hardware and Software															X	X	X	X	X																					
PQT/IOT&E																	X	X	X	X	X																			
JSLTNBCRS																																								
MS I											X																													
Integration Contract											X																													
Concept Exploration											X	X	X																											
SDR													X																											
PDR - HMMWV													X	X	X	X																								
MS II											X	X	X																											
Build/Integrate LAV																																								
JSWILD																																								
JS ORD Available																	X																							
Milestone 1																	X																							
Award DEM/VAL contract																	X																							
Phase 1 Design																	X	X	X																					
Initiate Fabrication																					X																			
JWARN																																								
Phase I Interim/Standardization								X																																
MS I/III									X																															
Contract Award									X	X																														

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D. Schedule Profile:	FY 1996				FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				FY 2004				FY 2005			
	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	1	2	3	4	1	2	3	4	1	2	3	4
JWARN (Contd)																																								
Verification Test									X																															
Phase I A, B&C									X																															
Phase II Development and Integration									X	X	X	X	X	X	X	X																								
DT/OT													X	X	X	X	X																							
MS III																	X	X																						
IOC																	X																							
NBCRSBLK2																																								
Block II R&D contract award																	X																							
Block II Type Classification																									X															

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PROJECT

5 - Engineering and Manufacturing Dev

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)

CA5

A. Project Cost Breakdown:	FY 1998	FY 1999	FY 2000	FY 2001
Aircraft Modification Design/Integrations	0	0	453	0
Contractor Engineering/Management Support	14218	13549	11651	5782
Development Test and Evaluation	555	2142	4954	3350
Engineering Design	11239	9844	8423	3487
Fabrication	1993	2853	4126	2866
Fabrication Hardware	0	0	0	2770
Government Engineering Support	338	2244	2150	1169
Hardware Development	4807	1516	5062	4721
Integrated Logistics, Support	295	450	1888	2319
Operational Test and Evaluation	0	0	1440	2338
Program Office Support	230	590	1141	850
Project Development	136	1083	1536	731
Project Management	390	1045	790	490
Regulatory Affairs	185	1064	232	228
Software Development	1855	1266	7205	3131
Technical Data/Documentation	345	315	5516	2265
Test & Evaluation	7216	6152	6168	11938
Total	43802	44113	62735	48435

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BUDGET ACTIVITY 5 - Engineering and Manufacturing Dev			PE NUMBER AND TITLE 0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)						PROJECT CO5	
COST (In Thousands)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
CO5 COLLECTIVE PROTECTION	1086	1233	5758	6423	6182	5644	4583	5241	Continuing	Continuing

A. Mission Description and Budget Item Justification:

Project CO5 COLLECTIVE PROTECTION: This project provides EMD of Joint Service NBC collective protection systems that are smaller, lighter, less costly to build and maintain and more logistically supportable to enable mission accomplishment in NBC environments. Collective protection platforms include shelters, vehicles, ships, aircraft, buildings and hospitals. Shipboard Collective Protection Equipment (CPE) will provide a contaminant-free environment within specified zone boundaries of high priority ships. Equipment developed under Shipboard CPE is critical to the viability of shipboard CPE due to improved effectiveness and greatly reduced logistics costs. Joint Collective Protection Equipment (JCPE) will provide needed improvements and cost saving standardization to currently fielded systems. JCPE will use the latest technologies in filtration, shelter materials, and environmental controls to provide affordable, lightweight, easy to operate and maintain equipment. The Joint Transportable Collective Protection System (JTCOPS) will be a lightweight, modular, self-supporting collective protection shelter system that will provide relief from psychological and physiological stresses during sustained operations in a contaminated environment. It will be used as stand-alone billeting, medical, and operational facilities, or within fixed facilities to take advantage of existing structures. It will be equipped with environmental control, NBC filters and blowers, and power generation systems.

FY 1998 Accomplishments:

- 1086 Shipboard Collective Protection Equipment (SCPE) - Integrated high pressure fan and filter improvements for shipboard use. Continued long-term shipboard testing of improved filter systems. Approved drawings for new high pressure fans. Updated technical documentation.

Total 1086

FY 1999 Planned Program:

- 1212 SCPE - Continue improved filter and fan component testing, evaluation, documentation, and integration.
- 21 SBIR/STTR

Total 1233

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5 - Engineering and Manufacturing Dev

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)

CO5

FY 2000 Planned Program:

- 2420 JCPE - Program Start. Begin development of improved High-Efficiency Particulate Arresting (HEPA) filter, motor blower, and Auxiliary Power Unit (APU)/Environmental Control Unit (ECU). Evaluate ECUs for integration with the PCPS. Begin standardization of individual Collective Protection system components.
- 2613 JTCOPS - Conduct market investigation; evaluate, select and acquire major components.
- 725 SCPE - Introduce fan and filter improvements to the fleet, continue long-term shipboard testing of improvements.

Total 5758

FY 2001 Planned Program:

- 2570 JCPE - Complete procurement of ECUs for PCPS. Complete development of improved HEPA filter, motor blower, and APU/ECU. Begin development of filter residual life indicator.
- 3140 JTCOPS - Conduct component testing and system integration/assembly.
- 713 SCPE - Complete long term testing of shipboard fan and filter improvements.

Total 6423

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5 - Engineering and Manufacturing Dev

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)

CO5

B. Other Program Funding Summary:

	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Compl	Total Cost
JCP001 COLLECTIVELY PROTECTED DEPLOYABLE MEDICAL SYSTEM	0	0	2768	2902	2001	0	0	0	0	7671
JF0102 TRANSPORTABLE COLLECTIVE PROT SYS	4730	3878	6581	0	0	0	0	0	0	15189
JN0012 NAVY SHORE EQUIPMENT	334	0	0	1562	2305	3762	0	0	0	7963
JN0014 COLLECTIVE PROT SYS AMPHIB BACKFIT	0	0	12157	18305	18351	17469	19600	19096	Cont'd	Cont'd
JN0017 JOINT COLLECTIVE PROT SYSTEMS & IMPROVEMENTS	0	0	1202	1059	685	690	4546	4584	Cont'd	Cont'd
JX0004 CO SYSTEM FIELDING SUPPORT/SPARES	24	0	0	0	0	0	340	344	Cont'd	Cont'd
R12301 CB PROTECTIVE SHELTER (CBPS)	19192	16419	14024	14642	16513	16547	20594	20678	Cont'd	Cont'd

C. Acquisition Strategy:

Shipboard CPE In-house/contract design and fabrication of prototype components with in-house testing. Equipment will be procured as part of new ship construction using SCN funds.

JCPE Improvement and standardization of currently fielded collective protection equipment. Improved equipment will be procured through the stock system as needed.

JTCOPS Government/contractor integration of system components followed by government testing. Low Rate Initial Production to meet Initial Operational Capability followed by Full Rate Production to meet Full Operational Capability.

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5 - Engineering and Manufacturing Dev

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)

CO5

A. Project Cost Breakdown:	FY 1998	FY 1999	FY 2000	FY 2001
Contractor Engineering/Management Support	0	0	155	90
Development Test and Evaluation	200	287	209	230
Engineering Design	0	0	700	600
Fabrication	0	0	300	300
Fabrication Hardware	0	0	50	60
Hardware Development	575	575	2365	2580
Integrated Logistics, Support	100	100	137	127
Operational Test and Evaluation	11	50	0	0
Program Office Support	0	0	74	75
Project Development	0	0	1173	1694
Project Management	0	0	275	377
Regulatory Affairs	0	21	0	0
Technical Data/Documentation	200	200	320	290
Total	1086	1233	5758	6423

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BUDGET ACTIVITY 5 - Engineering and Manufacturing Dev			PE NUMBER AND TITLE 0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)						PROJECT CP5	
COST (In Thousands)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
CP5 COUNTERPROLIFERATION SUPPORT	0	0	5612	0	0	0	0	0	0	5612

A. Mission Description and Budget Item Justification:

Project CP5 COUNTERPROLIFERATION SUPPORT: The Counterproliferation Support Program was funded in FY00 to complete the development of the Long Range Biological Stand-off Detection System (LR-BSDS) for IOT&E prior to production.

FY 1998 Planned Program: No planned program

FY 1999 Planned Program: No planned program

FY 2000 Planned Program:

- 2200 LR-BSDS - Complete Fabrication of Systems 3 & 4.
- 3150 LR-BSDS - Conduct Performance Tests and IOT&E Tests.
- 262 LR-BSDS - Conduct MS III IPR.

Total 5612

FY 2001 Planned Program: No planned program

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BUDGET ACTIVITY 5 - Engineering and Manufacturing Dev	PE NUMBER AND TITLE 0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)	PROJECT CP5
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A. Project Cost Breakdown:	FY 1998	FY 1999	FY 2000	FY 2001
Fabrication Hardware	0	0	2659	0
Operational Test and Evaluation	0	0	2453	0
Regulatory Affairs	0	0	500	0
Total	0	0	5612	0

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BUDGET ACTIVITY 5 - Engineering and Manufacturing Dev			PE NUMBER AND TITLE 0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)						PROJECT DE5	
COST (In Thousands)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
DE5 DECONTAMINATION	4645	3911	3780	3701	7001	12516	11933	15403	Continuing	Continuing

A. Mission Description and Budget Item Justification:

Project DE5 DECONTAMINATION: This project provides EMD of decontamination equipment for the Joint Service Fixed Site Decontamination (JSFXSD) Program aimed at developing a decontamination capability for airfields, ports, and logistic centers. The goal is to provide soldiers, sailors, marines, and airmen the equipment necessary to fully decontaminate their vital areas to sustain critical cargo flow into theater. Funding is provided for development and testing of critical decontaminants and delivery systems for those decontaminants. Project was supplemented (\$4.0M) for JSFXSD in FY99 as a result of the DOD Quadrennial Defense Review (QDR).

FY 1998 Accomplishments:

- 90 JSFXSD - Completed data and literature search.
- 905 JSFXSD - Initiated Hazard Analysis.
- 645 JSFXSD - Completed biological agent decontamination field trial.
- 720 JSFXSD - Initiated chemical reaction testing.
- 719 JSFXSD - Initiated aircraft decontamination testing.
- 339 JSFXSD - Initiated operational test planning.
- 860 JSFXSD - Initiated initial decontaminant efficiency testing.
- 217 JSFXSD - Initiated chemical agent absorption, decomposition, and evaporation testing.
- 150 JSFXSD - Completed market study.

Total 4645

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BUDGET ACTIVITY 5 - Engineering and Manufacturing Dev	PE NUMBER AND TITLE 0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)	PROJECT DE5
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FY 1999 Planned Program:

- 250 JSFXSD - Conduct life cycle/logistics study.
- 650 JSFXSD - Prepare Test Plans for selected Decon equipment.
- 223 JSFXSD - Prepare solicitation package for test items.
- 2723 JSFXSD - Procure prototypes and conduct DT.
- 65 SBIR/STTR

Total 3911

FY 2000 Planned Program:

- 1680 JSFXSD - Continue DT/OT.
- 1200 JSFXSD - Prepare Engineering Change Purposal (ECP) for DT/OT.
- 900 JSFXSD - Prepare procurement package(s) for EMD selected Decon equipment.

Total 3780

FY 2001 Planned Program:

- 1767 JSFXSD - Conduct DT/OT on EMD Decon equipment.
- 1934 JSFXSD - Prepare Logistics Support Package (s) and Complete MS III documentation.

Total 3701

B. Other Program Funding Summary:

	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Compl	Total Cost
JN0010 JOINT SERVICE FIXED SITE DECON (JSFXD)	0	0	0	0	5027	5015	7576	6684	Cont'd	Cont'd

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C. Acquisition Strategy: JSFXD In-house/contractor design, development and fabrication of prototype test hardware.

D. Schedule Profile:	FY 1996				FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				FY 2004				FY 2005			
	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	1	2	3	4	1	2	3	4	1	2	3	4
JSFXD																																								
Milestone II/III																				X																				

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PROJECT

5 - Engineering and Manufacturing Dev

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)

DE5

A. Project Cost Breakdown:	FY 1998	FY 1999	FY 2000	FY 2001
Contractor Engineering/Management Support	745	0	0	0
Development Test and Evaluation	750	2946	0	0
Fabrication	850	0	0	0
Government Engineering Support	900	0	0	0
Hardware Development	700	0	0	0
Integrated Logistics, Support	0	250	0	0
Operational Test and Evaluation	0	0	1680	1767
Regulatory Affairs	0	65	0	0
Technical Data/Documentation	700	650	2100	1934
Total	4645	3911	3780	3701

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BUDGET ACTIVITY 5 - Engineering and Manufacturing Dev			PE NUMBER AND TITLE 0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)						PROJECT IP5	
COST (In Thousands)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
IP5 INDIVIDUAL PROTECTION	5945	10687	7263	10250	22016	12174	12768	0	0	81103

A. Mission Description and Budget Item Justification:

Project IP5 INDIVIDUAL PROTECTION: This project provides EMD of individual protection equipment, such as the Explosive Ordnance Disposal (EOD) ensemble, aimed at maintaining current protection levels while reducing physiological and logistical burdens. The goal is to provide equipment which allows the individual soldier, sailor, airman or marine to operate in a contaminated NBC environment with no or minimal degradation of his/her performance. Funding is provided for: (1) Design of Aircrew Eye-Respiratory Protection (AERP) systems modification kits to install in aircraft, (2) Completion of Joint Service Lightweight Suit Technology (JSLIST) EMD phase, (3) Joint Service General Purpose Mask program initiation and (4) Joint Service Aviation Mask (JSAM), (5) Completion of Improved Toxicological Agent Protective (ITAP) suit EMD and (6) Start of the JSLIST P3I program.

FY 1998 Accomplishments:

- 176 AERP - Continue Aircraft Modification Design.
- 86 AERP - In House Program Support.
- 350 JSLIST (JPACE) - Continue evaluation of service inventory C/B suits for Joint Protective Aircrew Ensemble (JPACE) interim procurement.
- 3600 JSLIST P3I - Completed material screening tests on 53 candidate materials/items received from industry during Phase 1A.
- 1733 JSLIST P3I - Initiated material screening tests on 52 candidate materials/items received from industry during phase IB.

Total 5945

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5 - Engineering and Manufacturing Dev

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)

IP5

FY 1999 Planned Program:

- 632 AERP - Aircraft Modification Design.
- 160 AERP - In House Program Support.
- 1200 JSGPM - Technical definition/transfer.
- 599 JSGPM - Solicitation preparation and award.
- 1000 JSGPM - Program documentation.
- 800 JSGPM - Contract award.
- 5748 JSLIST P3I - Complete materiel screening tests analysis and candidate selection. Conduct field testing to address requirements for all Four Services and Special Operations Forces.
- 371 JSLIST P3I - Procure prototypes for field evaluation.
- 177 SBIR/STTR

Total 10687

FY 2000 Planned Program:

- 104 AERP - Aircraft modification design.
- 2474 JPACE - Develop requirements, prepare specifications, develop prototypes, conduct developmental testing.
- 40 JSAM - Conduct source selection for Development contract, prepare for and conduct Milestone decision.
- 3697 JSAM - Initiate development contract.
- 948 JSAM - Provide Government program support.

Total 7263

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5 - Engineering and Manufacturing Dev

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IP5

FY 2001 Planned Program:

- 109 AERP - Aircraft modification design.
- 3734 JPACE - Continue developmental testing, procure limited quantities for operational testing, begin operational test and evaluation.
- 156 JSAM - Initiate planning for DT testing.
- 2820 JSAM - Continue Government program support.
- 3431 JSAM - Continue system development and fabricate test hardware.

Total 10250

B. Other Program Funding Summary:

	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Compl	Total Cost
JN0011 AERP AIRCRAFT MODS	1362	4086	1895	893	1263	956	0	0	0	10455
JN0013 INDIVIDUAL PROTECTIVE GEAR	246	579	3415	5431	1566	1520	0	0	0	12757
JX0001 IP SYSTEM FIELDING SUPPORT/SPARES	303	684	649	91	93	320	1633	1875	Cont'd	Cont'd
M95801 PROTECTION ASSESSMENT TEST SYSTEM (PATS) M41	5246	5335	5328	0	0	0	0	0	0	15909
M99501 MASK, AIRCRAFT M45	6192	2194	0	0	0	0	0	0	0	8386
M99601 MASK, CHEM-BIOLOGICAL PROTECTIVE FIELD:M40/M40A1	6439	15925	10281	1375	0	0	0	0	0	34020
MA0400 PROTECTIVE CLOTHING	57873	91315	95646	86086	90144	87574	86157	86877	Cont'd	Cont'd
N00020 CB RESPIRATORY SYSTEM - AIRCREW	7324	7334	7398	4054	0	0	0	0	0	26110

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D. Schedule Profile:	FY 1996				FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				FY 2004				FY 2005			
	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	1	2	3	4	1	2	3	4	1	2	3	4
JSAM (Contd)																																								
Milestone III																												X												
Initial Operational Capability																																								X
JSGPM																																								
AP Approved												X																												
Dev Contract Award												X																												
Milestone III/TC IPR																																				X				
PROT CLTH																																								
JSLIST P3I DT									X	X	X	X	X																											
DT/OT												X	X	X																										
Milestone IIIA																X																								

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5 - Engineering and Manufacturing Dev

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)

IP5

A. Project Cost Breakdown:	FY 1998	FY 1999	FY 2000	FY 2001
Development Test and Evaluation	0	0	855	956
Engineering Design	0	0	369	395
Fabrication	1733	0	459	733
Government Engineering Support	0	0	0	500
Hardware Development	262	4231	3801	4109
Integrated Logistics, Support	0	0	251	340
Operational Test and Evaluation	0	5748	0	621
Program Office Support	0	160	948	1126
Project Development	0	0	0	705
Project Management	0	0	350	545
Regulatory Affairs	0	177	0	0
Technical Data/Documentation	350	0	230	220
Test & Evaluation	3600	371	0	0
Total	5945	10687	7263	10250

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BUDGET ACTIVITY		PE NUMBER AND TITLE								PROJECT	
5 - Engineering and Manufacturing Dev		0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)								MB5	
COST (In Thousands)		FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	Cost to	Total Cost
		Actual	Estimate	Complete							
MB5	MEDICAL BIOLOGICAL DEFENSE	15924	15158	19007	24347	57621	69546	42744	33953	Continuing	Continuing

A. Mission Description and Budget Item Justification:

Project MB5 MEDICAL BIOLOGICAL DEFENSE: This project funds the engineering and manufacturing development (EMD) phase of vaccines, drugs and diagnostic medical devices which are directed against validated biological warfare (BW) agents to include bacteria, viruses, and toxins of biological origin. The EMD phase of medical biological defense product development largely involves pre-production manufacturing, scale-up, and phase 2 expanded clinical and experimental efforts which evaluate product safety and efficacy. Results from these efforts and those conducted during program definition and risk reduction (PDRR) phase will be used to submit product and establishment applications to the Food and Drug Administration (FDA) for product licensure.

FY 1998 Accomplishments:

- 6986 Continued EMD efforts on two biological defense (BD) vaccines.
- 3834 Conducted Botulinum A-E clinical and animal studies; prepared ELA/PLA documentation.
- 1503 Conducted Anthrax vaccine licensure efforts/vulnerability analysis.
- 101 Investigational New Drug (IND) approved and initiated phase 1 clinical study of new Botulism Antitoxin Heptavalent Equine vaccine.
- 100 Supported the special immunization program at Ft. Detrick to protect at risk personnel from exposure to potential BW agents in the laboratory and in the field, and maintained capability to continue EMD for de-speciated Botulinum antiserum.
- 3400 Funding realigned to support research and development for Joint Protective Aircrew Ensemble (JPACE), Joint Warning and Reporting Network (JWARN), Joint Biological Point Detection System (JBPDS), Advanced Integrated Collective Protection System (AICPS), and Chemical Biological Protection System (CBPS).

Total 15924

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BUDGET ACTIVITY 5 - Engineering and Manufacturing Dev	PE NUMBER AND TITLE 0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)	PROJECT MB5
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FY 1999 Planned Program:

- 12373 Continue EMD efforts on two BD vaccines and maintain a capability for consistent vaccine lot production.
- 1284 Continue clinical trials to complete data collection/analysis to submit license applications to the FDA for Botulism Pentavalent Toxoid vaccine.
- 1024 Complete clinical and non-clinical studies evaluating the protective immunity stimulated during a reduced immunization schedule with Anthrax vaccine and submit application for license.
- 225 Support the special immunization program at Ft. Detrick to protect at risk personnel from exposure to potential BW agents in the laboratory and in the field, and maintain capability to continue EMD for de-speciated Botulinum antiserum.
- 252 SBIR/STTR

Total 15158

FY 2000 Planned Program:

- 12142 Continue pre-production scale-up for two BD vaccines.
- 6865 Continue licensure efforts for Botulinum pentavalent Toxoid.

Total 19007

FY 2001 Planned Program:

- 2739 Complete license application for one BD vaccine.
- 5752 Continue follow-on clinical study regarding antibody maintenance (booster vaccination) and begin studies on additional lots for Botulinum Pentavalent Toxoid.
- 3312 Begin consistency lot manufacturing and stability testing for one BD vaccine.
- 12544 Continue stability testing, clinical trials and consistency lot production for one BD vaccine.

Total 24347

B. Other Program Funding Summary:

	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Compl	Total Cost
JX0005 DoD Biological Vaccine Procurement	25685	10990	23424	27810	40724	46033	61410	64697	Cont'd	Cont'd

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BUDGET ACTIVITY 5 - Engineering and Manufacturing Dev	PE NUMBER AND TITLE 0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)	PROJECT MB5
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C. Acquisition Strategy: Prime systems integration contract for advanced development, licensure, production and storage of biological defense vaccines.

D. Schedule Profile:	FY 1996				FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				FY 2004				FY 2005			
	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	1	2	3	4	1	2	3	4	1	2	3	4
VACCINES																																								
Botulinum toxoid vac licensure effort		X																																						
AVA licensure amendment effort	X	X	X		X	X	X	X	X	X	X	X	X	X																										

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BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - Engineering and Manufacturing Dev

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)

MB5

A. Project Cost Breakdown:	FY 1998	FY 1999	FY 2000	FY 2001
Development Test and Evaluation	1500	0	0	0
Fabrication	1252	1491	2281	4139
Hardware Development	1500	0	0	0
Operational Test and Evaluation	400	0	0	0
Program Office Support	877	1342	1140	730
Regulatory Affairs	0	5022	380	24
Technical Data/Documentation	868	1543	1330	1704
Test & Evaluation	9527	5760	13876	17750
Total	15924	15158	19007	24347

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BUDGET ACTIVITY		PE NUMBER AND TITLE								PROJECT	
5 - Engineering and Manufacturing Dev		0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)								MC5	
COST (In Thousands)		FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	Cost to	Total Cost
		Actual	Estimate	Complete							
MC5	MEDICAL CHEMICAL DEFENSE	4891	1737	750	1098	1474	1561	1579	1628	Continuing	Continuing

A. Mission Description and Budget Item Justification:

Project MC5 MEDICAL CHEMICAL DEFENSE: This project funds the development of medical materiel and other medical equipment items necessary to provide an effective capability for medical defense against chemical agent threats facing U.S. forces in the field. This project supports research efforts in the engineering and manufacturing development phases of the acquisition strategy for pretreatment therapeutic drugs, diagnostic equipment, and other life support equipment for protection against and management of chemical warfare agents.

FY 1998 Accomplishments:

- 240 Prepared New Drug Application (NDA) and initiated stability testing for topical skin protectant (TSP).
- 15 Initiated Convulsant Antidote Nerve Agent (CANA) long-term stability testing.
- 849 Continued testing and development of Multichambered Autoinjector.
- 1819 Conducted type classification of CB collective protection shelter.
- 1632 Production line upgraded for Multichambered Autoinjector.
- 336 Conducted manufacturing scale-up of TSP.

Total 4891

FY 1999 Planned Program:

- 52 Conduct stability testing and respond to regulatory requirements for multichamber autoinjector.
- 13 Complete CANA long-term stability testing.
- 440 Update of regulatory documents and conduct LRIP for TSP after NDA approval.
- 1203 Conduct large-scale effectiveness and safety studies for cyanide pretreatment.
- 29 SBIR/STTR

Total 1737

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BUDGET ACTIVITY 5 - Engineering and Manufacturing Dev	PE NUMBER AND TITLE 0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)	PROJECT MC5
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FY 2000 Planned Program:

- 50 Continue shelf-life stability testing of TSP.
- 553 Conclude surrogate validation study of Pyridostigmine Bromide.
- 147 Prepare and submit licensure documentation for Pyridostigmine Bromide.

Total 750

FY 2001 Planned Program:

- 243 Initiate large population safety study of Cyanide Pretreatment.
- 510 Continue manufacturing scale-up and process validation of Cyanide Pretreatment.
- 295 Initiate drug interaction studies of Cyanide Pretreatment.
- 50 Follow-up with FDA on Pyridostigmine Bromide licensure approval.

Total 1098

B. Other Program Funding Summary:

	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Compl	Total Cost
R12301 CB PROTECTIVE SHELTER (CBPS)	19192	16419	14024	14642	16513	16547	20594	20678	Cont'd	Cont'd

C. Acquisition Strategy: Test and evaluate in-house and commercially developed products in government managed trials.

D. Schedule Profile:

	FY 1996				FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				FY 2004				FY 2005			
	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	1	2	3	4	1	2	3	4	1	2	3	4
MEDCHEM																																								
Multichambered Autoinjector - MSIII																X																								
Topical Skin Protectant - Milestone III																X																								

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BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - Engineering and Manufacturing Dev

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)

MC5

A. Project Cost Breakdown:	FY 1998	FY 1999	FY 2000	FY 2001
Operational Test and Evaluation	587	1186	92	132
Project Development	2886	82	442	648
Project Management	783	240	119	176
Regulatory Affairs	635	229	97	142
Total	4891	1737	750	1098