

## UNCLASSIFIED

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)**DATE  
**June 2001**

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)**

COST (In Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate							
Total Program Element (PE) Cost	112908	102707	159943							
BJ5 BIOLOGICAL DEFENSE (EMD)	13575	5950	18178							
CA5 CONTAMINATION AVOIDANCE (EMD)	61717	61208	64099							
CO5 COLLECTIVE PROTECTION (EMD)	4835	3232	4012							
CP5 COUNTERPROLIFERATION SUPPORT (EMD)	6784	0	0							
DE5 DECONTAMINATION SYSTEMS (EMD)	0	2580	2514							
IP5 INDIVIDUAL PROTECTION (EMD)	10328	7379	20850							
MB5 MEDICAL BIOLOGICAL DEFENSE (EMD)	14945	21277	48818							
MC5 MEDICAL CHEMICAL DEFENSE (EMD)	724	1081	1472							

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)

DATE  
June 2001

## BUDGET ACTIVITY

RDT&amp;E DEFENSE-WIDE/

BA5 - Engineering and Manufacturing Dev

## PE NUMBER AND TITLE

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)

**A. Mission Description and Budget Item Justification:** Operational forces have an immediate need to survive, safely operate, and sustain operations in a chemical and biological agent threat environment across the continuum of global, contingency, special operations/low-intensity conflict, counternarcotics, and other high risk missions. Operating forces have a critical need for defense against worldwide proliferation of Chemical and Biological (CB) warfare capabilities and for medical treatment of casualties in medical treatment facilities. Congress has directed centralized management of Department of Defense (DoD) CB Defense initiatives, both medical and non-medical. This program element supports the Engineering and 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 specific commodity areas: contamination avoidance, force protection (individual and collective), decontamination and medical countermeasures. The consolidation will provide for development and operational testing of equipment for Joint Service as well as Service-unique requirements.

Contamination avoidance efforts under this 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 (individual and collective) 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.

Decontamination systems provide a force restoration capability for units that become contaminated. Decontamination systems are being engineered, manufactured, and developed to provide decontamination units with the capability to tailor their equipment to specific missions. In the event contamination cannot be avoided, personnel and equipment must be decontaminated in order to reduce and/or eliminate hazards after chemical and biological agent employment in order to restore and maintain operational tempo.

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)**DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)**

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. This program element also provides for the development of biological defense medical programs. DoD Biological Defense medical mission will address: (1) protective vaccines - vaccination capability against the most probable biological threat agents; (2) identification - clinical identification of biological threat agents through medical evaluation and laboratory analysis to augment early warning capabilities.

The projects in this Program Element support research efforts in the engineering and manufacturing development phase of the acquisition process and are therefore correctly placed in Budget Activity 5.

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)

DATE  
June 2001

## BUDGET ACTIVITY

RDT&amp;E DEFENSE-WIDE/

BA5 - Engineering and Manufacturing Dev

## PE NUMBER AND TITLE

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)

<b>B. <u>Program Change Summary:</u></b>	<b><u>FY 2000</u></b>	<b><u>FY 2001</u></b>	<b><u>FY 2002</u></b>	
FY 2001 President's Budget	118458	100815	166231	
Appropriated Value	119365	104015	0	
Adjustment to Appropriated Value	0	0	0	
a. Congressional General Reductions	0	-728	0	
b. SBIR/STTR	-1717	0	0	
c. Omnibus or Other Above Threshold Reductions	-1478	0	0	
d. Below Threshold Reprogramming	-2849	-353	0	
e. Rescissions	-413	-227	0	
Adjustments to Budget Years Since FY 2001 PB	0	0	-6288	
FY2002/2003 President's Budget	112908	102707	159943	

**Change Summary Explanation:****Funding:**

FY02 - In project BJ5, JBPDS (\$1,600K) for increased EMD effort; JBPDS Blk II (-\$5,584K) to properly phase program with JBPDS; JBREWS (-\$24,676K) program redefined based on technology and user requirements and integrated into the JBSDS program. In project CA5, JCAD (\$14,997K) for increased EMD effort; JSLNBCRS (\$13,000K) for increased EMD effort to include TICs and TIMs detection in sub components, JWARN (\$10,000K) for increased efforts to insure integration into service command control systems. In project CO5, CBPS (\$800K) for increased EMD effort for the P3I systems for Airborne and Heavy units. In project DE5, JSFXD (-\$975K) moved to project DE4 efforts; SORBDECON (-\$3,804K) moved to procurement. In project IP5, JPACE (\$2,137K) for increased EMD effort; JSAM (-\$5,414K) moved to IP4; JSGPM (\$2,500K) for increase EMD effort; PROT CLTH (\$1,500K) for increased EMD effort. In project MB5, JBAIDS (\$10,500K) establishes new start program; VACCINES (-\$21,563K) program realignment. Moved to higher priority programs, BJ5 (-\$2K); CA5 (-\$5K); CO5 (-\$1K); DE5 (-\$1K); IP5 (-\$3K); MB5 (-\$8K). Realigned development funding for JTCOPS from BA5 to BA4 (-\$4,553K). Increase for inflation

UNCLASSIFIED

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)**DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)****Funding (cont.)**

assumptions (\$867K). Increased funding to establish a program office associated with a vaccine production facility (\$2,400K).

**Schedule:****Technical:**

# CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
**June 2001**

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**BJ5**

COST (In Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate							
BJ5 BIOLOGICAL DEFENSE (EMD)	13575	5950	18178							

## A. Mission Description and Budget Item Justification:

**Project BJ5 BIOLOGICAL DEFENSE (EMD):** The Department of Defense's (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.

The Joint Biological Point Detection System (JBPDS) program is an evolutionary advancement of the Army Biological Integration Detection system (BIDS), Navy Interim Biological Agent Detection (IBAD) and Air Force and Marine Corps Service-specific development programs. The common detection suite will meet the Joint Service requirements contained in the Joint Operational Requirements Document (JORD). This suite will be integrated onto Service-specific platforms (e.g., High Mobility Multi-purpose Wheeled Vehicle (HMMWV), ship, etc.), employed at fixed sites (e.g., airbase), and may be employed as a portable system for expeditionary and forward operating forces. The JBPDS is a common detection system employed by all services, thus greatly enhancing Joint Service interoperability. The JBPDS is a fully automated system, that increases the number of agents that can be identified by the current BIDS and IBAD systems, and provides first-time point biological detection capability to the Air Force and Marine Corps. An evolutionary component/suite upgrade acquisition approach (Block II program) will be used to take advantage of emerging technologies, and to provide the Services with enhanced bio detection performance at lower life cycle costs.

This project includes the completion of installation of IBAD rapid prototypes aboard Naval ships 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 Block I JBPDS will replace the IBAD beginning in FY02.

## UNCLASSIFIED

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)**DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT  
BJ5**

This project also supports the XM99, Air Base/Port Detector System (ABPDS) also known as the Portal Shield System with Contractor Logistics Support (CLS), spares/repairs of network detection sensors, and an upgrade to the sampling system at four sites in the Central Command/Pacific Command (CENTCOM/PACOM) Area of Responsibility (AOR).

The Critical Reagent Program (CRP) is integrating and consolidating all Department of Defense (DoD) reagents/antibodies/DNA biological detection requirements in demonstration/validation through production. The CRP ensures the availability of high-quality reagents throughout the life-cycle of all Biological Warfare (BW) detection/identification systems. This project supports all aspects of manufacturing "SCALE-UP" of developmental protocols for Critical Reagent Program-developed products, including maintenance of repositories and validation laboratories.

The Joint Biological Standoff Detection System (JBSDS) will be employed to provide detection of biological hazards employed by various means and will provide early warning via the Joint Warning and Reporting System (JWARN). JBSDS will augment and integrate with existing biological detection systems to provide a biological detection network capable of near real time detection and warning theater-wide to limit the effects of biological agent hazards against U.S. forces at the tactical and operational level of war. JBSDS will have the flexibility to warn automatically or to allow for human intervention in the detection-to-alarm process. JBSDS will be employed in support of various areas of interest (e.g. fixed sites, air/sea ports of debarkation, amphibious landing sites, etc.). JBSDS will be capable of operating remotely, in unattended configurations, or on platforms to include vehicles, aircraft, and ships.

UNCLASSIFIED

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT  
BJ5****FY 2000 Accomplishments:**

- 367 Air Base/Port Biological Detector (Portal Shield) - Initiated upgrades to trigger and sampling components.
- 340 Air Base/Port Biological Detector (Portal Shield) - Provided depot repairs and spares for detector networks in CENTCOM/PACOM Area of Operations (AO).
- 2017 Air Base/Port Biological Detector (Portal Shield) - Provided contractor logistics support of installed Advanced Concept Technology Demonstration (ACTD) detector networks in CENTCOM/PACOM AO.
- 675 CRP - Transitioned three newly-developed reagent protocols to full-scale production. Completed five reagent standardizations across biodetection platforms.
- 538 CRP - Supported reagent repository and reagent validation.
- 328 IBADS - Continued material support of rapid prototype systems and investigation of aerosol background.
- 3933 JBPDS - Completed the fabrication and documentation of 15 JBPDS detection systems used in Engineering Design Test (EDT), and Production Qualification Test/Operational Assessment (PQT/OA), required prior to entry into Low Rate Initial Production (LRIP).
- 1752 JBPDS - Collected, reviewed, and analyzed PQT/OA test information required for entry into LRIP.
- 1557 JBPDS - Developed initial plans for Initial Operational Testing & Evaluation (IOT&E) required prior to a Milestone III.
- 1297 JBPDS - Completed Integrated Logistics Support (ILS) tasks, including operator and organizational technical manual, training support packages, safety analysis, logistics supportability analyses, and provisioning databases to the Line Replaceable Unit (LRU) level, and Reliability, Availability and Maintainability (RAM) analysis.
- 771 JBPDS - Provided test and analytical support to Joint Field Trials (JFT-6) at Defense Research Establishment, Suffield, Canada. This test identified and evaluated candidate technologies for use in JBPDS.

**Total** 13575

Project BJ5

Page 8 of 109 Pages

Exhibit R-2 (PE 0604384BP)

UNCLASSIFIED



## UNCLASSIFIED

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)**DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT  
BJ5****FY 2001 Planned Program:**

- 1105 CRP - Initiate transition of newly developed protocols to full scale production. Begin transition of molecular reagents to production. Maintain reagent repositories and validation processes.
- 324 IBADS - Continue material support of rapid prototype systems.
- 3183 JPBDS - Conduct Operational Assessment II and support Block I IOT&E planning required for a Milestone III decision.
- 1237 JBPDS Block II - Initiate Block II design studies define performance specifications, identify potential design concepts, and reduce risk to the EMD program. Prepare request for proposal for Block II EMD contract.
- 101 SBIR

**Total** 5950

UNCLASSIFIED

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT  
BJ5**

## FY 2002 Planned Program:

- 1148 CRP - Continue transition of newly developed ITF-6B Protocols. Continue transition of molecular reagents. Maintain reagent repositories and validation processes.
- 336 IBADS - Continue material support of rapid prototype systems.
- 2000 JBPDS Block II - Initiate software development and documentation. Develop advanced algorithms that will enhance the JBPDS Block II ability to discriminate background environment aerosol components, while not sacrificing its sensitivity and responsiveness to biological warfare attacks.
- 1696 JBPDS Block II - Initiate early integrated logistics support to ensure the lowest possible life cycle costs and supportability of the Block II system in the field.
- 7000 JBPDS Block II - Initiate component selection, fabrication, and evaluation to develop and refine the critical components of the Block II that will give system the performance capabilities required in the JORD.
- 4398 JBPDS Block II - Initiate system level hardware development, integration, evaluation, and documentation to ensure that individual components can be successfully integrated into a functioning, coordinated system to meet system automation, and ensure component compatibility.
- 732 JBPDS Block II - Support a joint field trial conducted to identify technologies for the Joint Biological Standoff Detection System (JBSDS) and the Joint Biological Agent Identification Diagnostic System (JBAIDS).
- 868 JBPDS Block II - Support the hardware selection, fabrication, and evaluation efforts necessary to develop and refine the critical components that will ensure the JBPDS Block II system meets the performance capabilities required by the Joint Operational Requirement Document (JORD).

**Total** 18178

UNCLASSIFIED

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**BJ5****B. Other Program Funding Summary:**

	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>							
G47101 JOINT WARNING & REPORTING NETWORK (JWARN)	9639	8483	0							
JP0100 JOINT BIO POINT DETECTION SYSTEM (JBPDS)	18163	28881	38579							
JPO210 CRITICAL REAGENTS PROGRAM (CRP)	2399	2293	1926							
JPO230 PORTAL SHIELD EQUIPMENT	4751	26315	3892							
M93001 BIO INTEGRATED DETECTOR SYSTEM (BIDS)	14593	33319	55445							
MC0100 JT SVC LTWT NBC RECON SYS (JSLNBCRS)	0	0	0							

UNCLASSIFIED

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)**DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT  
BJ5****C. Acquisition Strategy:**

ABPDS	In-house development and fabrication of detection prototypes and use of competitive omnibus contract for fabrication of upgrades.
CRP	Contract development of reagents to detect threat agents and procurement of more effective agents to replace older stocks. Consolidate the R&D effort within DoD for all biological detector/identification requirements. The BJ5 Program transitions these reagent protocols into production following the testing of these reagents in fielded platforms. ITF-6A Priority List completed in FY00. Continue to focus efforts on developing and transitioning reagents against the ITF-6B Priority List in order to meet JBPDS Block II requirement.
JBPDS	Contractor design, fabrication, platform integration and testing of JBPDS prototypes. Low Rate Initial Production (LRIP) decision in FY00 will provide production representative systems for Initial Operational Test and Evaluation (IOT&E) in FY01, and ramp up production base for fielding in FY02.
JBPDS Block II	Government run modeling and simulation results will be given to one or more contractors for brass board development and testing. The preferred design will be carried through the rest of EMD by a prime systems contractor. JBPDS Block II will advance biological point detection capabilities (smaller, lower power, dry detection technologies, etc.) for operational level systems.
IBADS	In-house installation and support of rapid prototypes.
JBSDS	This program will rely heavily on the Technology Transition-Bio program for the early development of Program Definition and Risk Reduction (PDRR) for collection and detection technologies. Program will utilize a streamlined Engineering and Manufacturing Development.

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)**

PROJECT  
**BJ5**

D. <u>Schedule Profile:</u>	FY 2000				FY 2001				FY 2002			
	1	2	3	4	1	2	3	4	1	2	3	4
ABPDS												
Trigger/Sampler Upgrade Development			3Q									
Complete Advanced Concept Technology Demonstration (ACTD) CLS Support	1Q											
Site Installation and Training				4Q								
CRP												
ITF-6A List Complete				4Q								
JBPDS												
Perform Engineering, Design and Test (EDT)	>>	2Q										
Perform Pre Production Qualification Test (PPQT)			3Q									
Low Rate Initial Production (LRIP) In Process Review (IPR)				4Q								


## UNCLASSIFIED

# CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
**June 2001**

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)**
PROJECT  
**BJ5**

D. <u>Schedule Profile (cont):</u>	FY 2000				FY 2001				FY 2002			
	1	2	3	4	1	2	3	4	1	2	3	4
JBPDS (Cont)												
Perform Initial Operational Test and Evaluation							3Q					
Block I Milestone III								4Q				
Block I First Unit Equipped										2Q		
JBPDSBLK2												
Analysis of Alternatives/Concept Studies				4Q				 4Q				
Engineering and Manufacturing Development (EMD) Request for Proposal (RFP) Release and Source Selection											3Q	4Q

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
June 2001

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**BJ5**

I. Product Development	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
ABPDS													
HW C - Develop Portal Shield Equipment	MIPR	Naval Research Laboratory, Wash., DC	U	405	0	NONE	0	NONE			0	405	0
CRP													
HW C - Purchase of Critical Reagent Products	PO	Naval Medical Research Institute, Bethesda, MD	C	513	200	Jan-01	208	Jan-02			0	921	0
JBPDSBLK2													
SW SB - Block II Hardware Development	C/CPIF	TBD	C	0	0	NONE	8436	2Q FY02			15943	24379	0
SW S - Block II Software Development	SS/CPIF	TBD	C	0	0	NONE	1596	2Q FY02			4376	5972	0
SW S - JBPDS Block II Software Documentation	MIPR	Life Cycle Software Engineering Center, Picatinny, NJ	U	0	0	NONE	500	1Q FY02			1172	1672	0
Subtotal I. Product Development:				918	200		10740				21491	33349	

Remarks:

UNCLASSIFIED

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT  
BJ5**

II. Support Costs	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
ABPDS													
ILS S - Portal Shield Contractor Logistics Support	PO	Camber Corp., Huntsville, AL	C	2083	0	NONE	0	NONE			0	2083	0
CRP													
TD/D SB - Critical Reagent Product	MIPR	SBCCOM, APG, MD	U	400	100	Jan-01	100	Jan-02			0	600	0
IBADS													
ILS S - Continued Support of Fielded IBAD Systems	MIPR	NSWC, Dahlgren, VA	U	311	307	1Q FY01	317	1Q FY02			0	935	0
JBPDSBLK2													
ES S - Engineering Support	MIPR	NSWC, Dahlgren, VA	U	0	1087	1Q FY01	2304	1Q FY02			4830	8221	0
ILS S - Integrated Logistics Support	C/CPIF	TBD	C	0	0	NONE	1696	2Q FY02			2171	3867	0
TD/D S - Tech Data Documentation	SS/CPIF	TBD	C	0	0	NONE	600	2Q FY02			2900	3500	0
JBSDS													
TD/D SB - Technology Analysis to Support Component Selection	PO	TBD		0	0	NONE	0	NONE			1000	1000	0
ES S - System Engineering Design Study	PO	TBD		0	0	NONE	0	NONE			4055	4055	0
Subtotal II. Support Costs:				2794	1494		5017				14956	24261	

Remarks:

Project BJ5

Page 16 of 109 Pages

Exhibit R-3 (PE 0604384BP)

UNCLASSIFIED



## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
June 2001

## BUDGET ACTIVITY

RDT&amp;E DEFENSE-WIDE/

BA5 - Engineering and Manufacturing Dev

## PE NUMBER AND TITLE

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT

BJ5

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
ABPDS													
OTHT SB - Portal Shield Test Support	MIPR	Dugway Proving Ground, UT	U	88	0	NONE	0	NONE			0	88	0
CRP													
OTHT C - Maintain Critical Reagent Repositories	PO	SBCCOM, APG, MD		0	300	Jan-01	300	Jan-02			0	600	0
OTHT C - Antigen Development	PO	Dugway Proving Ground, UT		108	163	Jan-01	190	Jan-02			0	461	0
JBPDS													
OTES - Funding Support for Block I IOT&E	MIPR	ATEC/AFOTEC, Washington, D.C.	U	0	3183	1Q FY01	0	NONE			0	3183	0
JBPDSBLK2													
OTHT C - Joint Field Trials	Various	Dugway Proving Ground, UT	U	0	0	NONE	732	1Q FY02			0	732	0
Subtotal III. Test and Evaluation:				196	3646		1222				0	5064	

Remarks:

UNCLASSIFIED

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
June 2001

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**BJ5**

IV. Management Services	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
ABPDS													
PM/MS S - Program Management/Program Manager Support	Various	JPO-BD, Falls Church, VA	U	145	0	NONE	0	NONE			0	145	0
PM/MS C - Program Manager Training	MIPR	USAMRIID, Fort Detrick, MD	U	3	0	NONE	0	NONE			0	3	0
CRP													
PM/MS S - Program Management/Program Manager Support	SS/CPFF	Camber Corporation, Huntsville, AL	C	192	342	Jan-01	350	Jan-02			0	884	0
IBADS													
PM/MS S - Program Management/Program Manager Support	Various	JPO-BD, Falls Church, VA	U	17	17	1Q FY01	19	1Q FY01			0	53	0
JBPDSBLK2													
PM/MS S - Program Management/Program Manager Support	PO	JPO-BD, Falls Church, VA		0	150	1Q FY01	830	1Q FY02			2111	3091	0
JBSDS													
PM/MS S - Program Management/Program Manager Support	Various	JPO-BD, Falls Church, VA	U	0	0	NONE	0	NONE			1315	1315	0

Project BJ5

Page 18 of 109 Pages

Exhibit R-3 (PE 0604384BP)

UNCLASSIFIED

## UNCLASSIFIED

**CBDP PROJECT COST ANALYSIS (R-3 Exhibit)**DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) BJS**

IV. Management Services - Cont.	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date	FY2003 Cost	FY2003 Award Date	Cost to Complete	Total Cost	Target Value of Contract
ZSBIR													
SBIR - Aggregated from SBIR	Various	HQ AMC, Alexandria, VA	U	0	101	Oct-00	0	NONE			0	101	101
Subtotal IV. Management Services:				357	610		1199				3426	5592	

Remarks:

TOTAL PROJECT COST:

4265

5950

18178

39873

68266

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**CA5**

COST (In Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate							
CA5 CONTAMINATION AVOIDANCE (EMD)	61717	61208	64099							

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

**Project CA5 CONTAMINATION AVOIDANCE (EMD):** This project funds Engineering and Manufacturing Development (EMD) of an array of reconnaissance, detection, identification equipment and warning systems.

Efforts funded in this project are: (1) CB Mass Spectrometer (CBMS), (2) Nuclear, Biological and Chemical Reconnaissance System (NBCRS) Block II, (3) Joint Chemical Agent Detector (JCAD), (4) Joint Service Lightweight Standoff Chemical Agent Detector (JSLSCAD), (5) Joint Service Lightweight Nuclear, Biological and Chemical Reconnaissance System (JSLNBCRS), and (6) Joint Warning and Reporting Network (JWARN).

The CBMS will provide significant enhancements by simultaneously detecting and identifying chemical and biological threat agents at lower system cost. CBMS will replace the MM1 Mass Spectrometer in the NBCRS Block I and will be a component of the JSLNBCRS.

The JCAD program will develop a miniaturized, ruggedized, and portable point chemical agent detector that automatically and simultaneously detects, identifies, quantifies, and alerts in the presence of nerve, blister and blood agents. JCAD will be used for aircraft, shipboard, wheeled vehicles, stand alone, and individual soldier applications.

The JSLNBCRS is a new lightweight NBC detection and identification system and will consist of a Base Vehicle (BV) equipped with hand-held, portable and mounted, current, and advanced NBC detection and identification equipment. The JSLNBCRS will provide on-the-move reconnaissance and surveillance in support of combat, combat support, and combat service support forces. There will be two variants of the JSLNBCRS: the High Mobility Multi-Purpose Wheeled Vehicle (HMMWV) variant and the Light Armored Vehicle (LAV) variant.

UNCLASSIFIED

## UNCLASSIFIED

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)**DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CA5**

## PROJECT

**CA5**

The JSLSCAD utilizing passive infrared technology, provides a first-time on-the-move automatic scanner and chemical stand-off detection capability to the Services. The JSLSCAD will replace the M21 Remote Standoff Chemical Agent Alarm (RSCAAL).

The JWARN will provide standard integration and analysis of NBC detection information with Command, Control, Communication, Computers, Information and Intelligence (C4I2) on the battlefield automating the NBC warning and reporting processes currently performed manually throughout the Services. The JWARN will collectively consist of Commercial Off the Shelf (COTS) materiel and JWARN software for C4I2. JWARN is being developed for deployment with NBC detectors in the following battlefield applications: combat and armored vehicles, tactical vehicles, vans, shelters, shipboard application, area warning, semi-fixed sites, and fixed sites. Block I was the initial acquisition and fielding of COTS and Government Off the Shelf (GOTS) software to standardize NBC warning and reporting throughout the Armed Forces. Block II will integrate NBC legacy and future detector systems, NBC Warning and Reporting Software Modules, and NBC battlespace Management Modules in the Joint Services C4I systems. Block III will investigate new NBC warning and reporting software technologies and developmental NBC detector/sensors. Block III will also investigate software changes to Service C4I systems.

The NBCRS (M93 Fox) is a dedicated system of nuclear and chemical detection and warning equipment, and biological sampling equipment integrated into a high speed, high mobility armored carrier capable of performing NBC reconnaissance on primary, secondary, or cross country routes throughout the battlefield. The NBCRS Block II improvement of the NBCRS will meet all of the requirements contained in the approved requirements document.

UNCLASSIFIED

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)**DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CA5**

## PROJECT

**CA5****FY 2000 Accomplishments:**

- 1770 CBMS - Finalized design of the Block II to allow for simultaneous detection and identification of chemical and biological threat agents at lower system cost.
- 2271 CBMS - Completed fabrication of nine pre-production units.
- 2578 CBMS - Completed engineering tests to establish technical performance baseline.
- 3734 CBMS - Completed engineering drawings and specifications for integration into the JSLNBCRS and NBCRS Block II.
- 4660 JCAD - Completed fabrication of six JCAD Phase I prototypes (with a total unit price of \$1.154M each). Continued Phase II hardware and software development. Modified the selected sensor module, and updated the algorithms to reflect lessons-learned from prototype testing.
- 2781 JCAD - Conducted first Critical Design Review and evaluated engineering design tests (EDT) issues.
- 3104 JCAD - Completed unit-specific systems integration on the Phase I prototypes. Continued systems integration planning for Phase II final production units.
- 1196 JCAD - Completed JCAD Phase I prototype testing and evaluation on six engineering development test units. Planned Phase II test and evaluation.
- 3712 JSLNBCRS - Completed integration of three High Mobility Multi-Purpose Wheeled Vehicle (HMMWV) variants.
- 2846 JSLNBCRS - Completed HMMWV variant Developmental Test I (DT I) at Dugway and Yuma Proving Grounds.
- 908 JSLNBCRS - Prepared initial Technical Data Package (TDP) for HMMWV variant.
- 2200 JSLSCAD - Completed fabrication of 15 Engineering Design Test (EDT) articles (\$146K each).
- 5549 JSLSCAD - Conducted Critical Design Review (CDR). Incorporated changes to design based on EDT results.

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

## BUDGET ACTIVITY

RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev

## PE NUMBER AND TITLE

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT  
CA5

## FY 2000 Accomplishments (Cont):

- 5445 JSLSCAD - Conducted engineering test to include environmental extremes, shock and vibration, Electromagnetic Interference (EMI), Electromagnetic Pulse (EMP), reliability growth, and agent testing. Completed test methodology development.
- 3052 JSLSCAD - Purchased long lead items for 40 Production Qualification Testing/Initial Operational Test & Evaluation (PQT/IOT&E) test articles (long lead parts \$76.3K each).
- 799 JSLSCAD - Reviewed and prepared all program documents, which included technical manuals, logistics support analysis report, training materials, plans, and support for simulation and modeling.
- 1100 JSLSCAD - Continued integration for Joint Service Lightweight Nuclear Biological and Chemical Reconnaissance System (JSLNBCRS), CH-53 helicopter, and C-130 fixed wing test platforms.
- 826 JWARN - Prepared program documentation for Milestone II and provided IPT support to other Services.
- 7550 JWARN - Completed Milestone II and awarded EMD contract for Block II integration of NBC legacy and future detector systems. Developed NBC warning and reporting modules and battlespace management modules for use by Joint Services C4I2 systems.
- 2400 NBCRS Block II - Purchased developmental detectors and component parts for integration into vehicle. Items purchased included: one Chemical Biological Mass Spectrometer (CBMS) for \$400K; four CBMS component sets for \$1200K; CBMS algorithm for \$300K; one Joint Service Lightweight Chemical Agent Detector (JSLSCAD) for \$200K; and five communications sets for \$300K.
- 886 NBCRS Block II - Started NBC sensor suite software development.
- 2350 NBCRS Block II - Awarded development contract. Conducted NBCRS suite engineering development.

**Total** 61717

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT CA5**

## FY 2001 Planned Program:

- 4678 JCAD - Continue Phase II hardware and software development of final production representative units (average unit costs of \$.079M each).
- 2953 JCAD - Continue systems engineering, manufacturing, and logistics development for final production representative units.
- 3950 JCAD - Continue systems integration on 168 JCAD final production representative units for operational test and evaluation.
- 796 JCAD - Initiated Phase II engineering test and evaluation. Start production qualification tests, and continue to plan operational tests.
- 3874 JSLNBCRS - Conduct LAV variant PDR/CDR reviews, build two integrated LAV variants, fix/redesign HMMWV variant.
- 7302 JSLNBCRS - Conduct Limited User Test (LUT), HMMWV variant development test, and DT II for HMMWV variant.
- 1015 JSLSCAD - Complete integration for JSLNBCRS, CH-53 helicopter, and C-130 fixed wing test platforms.
- 3800 JSLSCAD - Complete EDT. Review and modify system design to incorporate test review results.
- 4400 JSLSCAD - Fabricate 40 Production Qualification Testing/Initial Operational Test & Evaluation (PQT/IOT&E) test articles (\$100K each).
- 8834 JSLSCAD - Init iate PQT/ IOT&E which includes environmental extremes, shock and vibration, Electromagnetic Interference (EMI), Electromagnetic Pulse (EMP), agent, and shipboard, helicopter, airplane, and ground vehicle field testing.
- 799 JSLSCAD - Prepare and review technical data package and acquisition documentation for Joint Service Milestone III decision in FY02.

UNCLASSIFIED



## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CA5**

## PROJECT

**CA5****FY 2001 Planned Program (Cont):**

- 7093 JWARN - Continue Block II integration of NBC legacy and future detector systems. Develop NBC warning and reporting modules and battlespace management modules for use by Joint Services C4I2 systems.
- 8265 NBCRS Block II - Continue sensor suite engineering development.
- 100 NBCRS Block II - Initiate plans for Developmental Test and Evaluation (DTE). Finalize Test and Evaluation Master Plan (TEMP).
- 515 NBCRS Block II - Continue software development.
- 1845 NBCRS Block II - Assemble and integrate developmental detectors into vehicles.
- 989 SBIR

**Total** 61208**FY 2002 Planned Program:**

- 3920 JCAD - Complete hardware and software for production representative units delivery and reports.
- 3578 JCAD - Complete systems engineering, manufacturing, and logistics development for final production representative units.
- 3413 JCAD - Complete system integration on final Milestone III representative units.
- 4173 JCAD - Complete Phase II engineering test and evaluation, production qualification tests, and operational tests.
- 3300 JSLNBCRS - Start Initial Operational Test & Evaluation (IOT&E).
- 2400 JSLNBCRS - Continue Limited User Test (LUT) of HMMWV variant at the U.S. Army Test Activity.

UNCLASSIFIED

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CA5**

## PROJECT

**CA5**

## FY 2002 Planned Program (Cont):

- 4000 JSLNBCRS - Start Software and Hardware engineering development and integration of commercial off the shelf , government off the shelf software hardware and Non-Developmental Item software hardware products to the maximum extent possible for HMMWV & LAV variants .
- 1300 JSLNBCRS - Continue Developmental Test II (DTII) at Dugway and Yuma proving ground.
- 2012 JSLNBCRS - Initiate Toxic Industrial Chemical (TIC's) and Toxic Industrial Materials (TIM's) software development for CBMS transition to JSLNBCRS procurement.
- 3334 JSLSCAD - Complete Production Qualification Testing and Initial Operational Test & Evaluation (PQT/IOT&E).
- 1000 JSLSCAD - Complete technical data package and acquisition documentation for Milestone III. All program documentation will be reviewed and updated to support MS III. This includes: Acquisition Strategy; Acquisition Baseline; Performance Specifications; and Environment Assessment. In Process Review (IPR) package preparation and coordination is also included.
- 1545 JSLSCAD - Complete review and preparation of technical manuals, logistics support, and training materials. All logistics documentation to include: Technical Manuals; Integrated System Support Plans; and Logistics Support Plans will be updated based on test results. In addition, Materiel Fielding Plans, fielding schedules, and platform integration guides will be prepared and approved.
- 13175 JWARN - Continue Block II integration of NBC legacy and future detector systems. Develop NBC warning and reporting modules and battlespace management modules for use by Joint Services C4I2 systems.
- 693 JWARN - Prepare integrated logistic support technical data.
- 1422 JWARN - Conduct Block II modeling and simulation.
- 2124 JWARN - Conduct Block II system Test and Evaluation (T&E).

UNCLASSIFIED

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

## BUDGET ACTIVITY

RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev

## PE NUMBER AND TITLE

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT  
CA5

## FY 2002 Planned Program (Cont):

- 1875 NBCRS Block II - Conduct Modeling and Simulation (M&S) of human factors.
- 5800 NBCRS Block II - Continue sensor suite engineering development and refurbish prototypes.
- 2624 NBCRS Block II - Continue integration of developmental detectors into vehicles.
- 2411 NBCRS Block II - Begin warfighter operational capability assessment.

Total 64099

B. Other Program Funding Summary:

	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>							
N00041 SHIPBOARD DETECTOR MODIFICATIONS	8725	4644	4703							

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)**DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CA5**

## PROJECT

**CA5****C. Acquisition Strategy:**

## CBMS

Contract development and fabrication of prototype test hardware, contractor testing, integration by host platforms, and contract fabrication of production units. The CBMS Block I (PDRR phase) was developed under a task order contract with Bruker Industries. The system was type-classified as part of the P3I BIDS system. The CBMS Block II (EMD phase) was developed under an interagency agreement with Oak Ridge National Lab, with Orbital Sciences Corp as the main subcontractor. The system will be type classified as a component of the Fox Block II system (IAV-NBCRV) and the Joint Service Lightweight NBCRS system. A PDRR effort is being initiated to configure the system as a stand-alone system.

## JCAD

Competitive contract development and fabrication, contractor and government testing. Potential for sole source initial procurement to the development contractor.

## JSLSCAD

The JSLSCAD is a five year contract development effort with Intellitec of Deland, FL. Development includes ground, air, and sea based platforms. Three production follow-on options are planned. The first option is to refurbish the EMD test units. The second and third options are for initial and full scale production, respectively.

## JSLNBCRS

Competitive development and fabrication of prototypes. Continue EMD phase and initiate LRIP for HMMWV platform integration.

## JWARN

Competitive contract for EMD development and integration of software for Block II. Conduct development and fabrication of hardware/interfaces; test prototypes; contractor/in-house testing; competitive contract fabrication of production units.

## NBCRS Blk II

The NBCRS Blk II program is a two phase integration effort to improve the NBCRS Fox detection and reporting capability. The first phase is a joint contractor and in-house effort to design and develop sensor suites to integrate into test vehicles. The second phase is a competitive contract for Production Readiness (completion of Initial Operational Test and Evaluation (IOT&E), and Low Rate Initial Production (LRIP)).

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**CA5**

D. <u>Schedule Profile:</u>	FY 2000				FY 2001				FY 2002			
	1	2	3	4	1	2	3	4	1	2	3	4
ACADA												
XM279 Surface Sampler Development	>>							2Q				
JCAD												
Engineering and Manufacturing Development (EMD) Phase I: Prototype Development & Fabrication	>>											
EMD Phase II: Production Representative Unit Development/Fabrication/Test	>>											
Government Production Qualification Test/Development Test									1Q	2Q		
Government Operational Test										2Q		4Q
Milestone III												4Q
JSLNBCRS												
Milestone II							3Q					

Project CA5

Page 29 of 109 Pages

Exhibit R-2 (PE 0604384BP)

UNCLASSIFIED

## UNCLASSIFIED

# **CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)**

DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT CA5**

D. <u>Schedule Profile (cont):</u>	FY 2000				FY 2001				FY 2002			
	1	2	3	4	1	2	3	4	1	2	3	4
JSLNBCRS (Cont)												
Preliminary Design Review - LAV									1Q			
Critical Design Review - High Mobility Multipurpose Wheeled Vehicle (LAV)									2Q			
Developmental Test (DT) LAV									3Q			
Development Testing II HMMWV									2Q			
Limited User Test (LUT) HMMWV variant									3Q			
JSLSCAD												
Fabricate Engineering, Design, and Test (EDT) Units	>>	2Q										
Conduct Engineering Test		2Q										

## UNCLASSIFIED

# CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
**June 2001**

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**CA5**

D. <u>Schedule Profile (cont):</u>	FY 2000				FY 2001				FY 2002			
	1	2	3	4	1	2	3	4	1	2	3	4
JSLSCAD (Cont)												
Pre-Production Qualification Test (PPQT)/Initial Operational Test and Evaluation (IOT&E)							3Q				3Q	
JWARN												
Block II Engineering and Manufacturing Development (EMD) Phase Contract Award			3Q									
Block II DT/Operational Test (OT)											4Q	
NBCRSBLKII												
Purchase Government Furnished Equipment (GFE) and Perform Digital Integration	1Q											
Block II R&D Contract Award		2Q										

Project CA5

Page 31 of 109 Pages

Exhibit R-2 (PE 0604384BP)



UNCLASSIFIED

# CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
**June 2001**

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**CA5**

D. <u>Schedule Profile (cont):</u>	FY 2000				FY 2001				FY 2002			
	1	2	3	4	1	2	3	4	1	2	3	4
NBCRSBLKII (Cont)												
Fabricate Engineering Prototypes						2Q		4Q				
Developmental Test/Operational Test (DT/OT)								4Q		2Q		



## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
June 2001

## BUDGET ACTIVITY

RDT&amp;E DEFENSE-WIDE/

BA5 - Engineering and Manufacturing Dev

## PE NUMBER AND TITLE

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CA5

## PROJECT

CA5

I. Product Development	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
JCAD													
HW/SW-JCAD 6 Units FY00; 168 Units FY01	C/CPAF	BAE SYSTEMS Inc, Austin, TX	C	14237	9208	Nov-00	8097	Nov-01			0	31542	0
JSLNBCRS													
SW S - Develop SW for integration of sensors and dectectors with NBC equipment suite.	C/CPFF	TRW Carson, CA.	C	0	0	NONE	4000	4Q FY01			0	4000	0
JSLSCAD													
HW S - Design & Build hardware	C/CPFF	Intellitec, Deland, FL	C	28000	6000	Nov-00	1000	Nov-01			0	35000	34407
SW S - Develop Software	C/CPFF	Intellitec, Deland, FL	C	10500	814	Nov-00	0	NONE			0	11314	11095
NBCRSBLKII													
HW S - NBCRS Sensor Suite Engineering Development; Fabricate Prototypes; Complete Development	C/CPFF	CACI Technologies Inc, Manassas, VA	C	2000	3240	Dec-00	5074	Dec-01			0	10314	16401
SW SB - Provide Sensor Suite Hardware	MIPR	PM NBCDS, APG, MD	U	2000	5553	Dec-00	2234	Dec-01			0	9787	5865
Subtotal I. Product Development:				56737	24815		20405				0	101957	

Project CA5

Page 33 of 109 Pages

Exhibit R-3 (PE 0604384BP)

UNCLASSIFIED

UNCLASSIFIED

**CBDP PROJECT COST ANALYSIS (R-3 Exhibit)**

DATE  
**June 2001**

**BUDGET ACTIVITY**

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

**PE NUMBER AND TITLE**

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CA5**

**PROJECT**

**I. Product Development- Cont**

Remarks: JSLSCAD - HW S - FY00 Purchased long lead items and fabricated hardware: 15 Engineering Design Test (EDT) articles (\$146,000 each); 40 Production Qualification Test/Initial Operational Test and Evaluation (PQT/IOTE); FY01 complete PQT articles. SW S - FY00 develop software: 15 EDT articles; 40 PQT/IOTE articles (\$71,000 each). FY01 complete software.

NBCRS Blk II - HWS - FY00-FY03 sensor suite engineering development. FY01 prototype fabrication. FY03 - complete development. HW GFPP - FY00 & FY01 provide sensor suite components to include Chemical Biological Mass Spectrometer (CBMS) and Joint Service Lightweight Chemical Agent Detector (JSLSCAD) to contractor - five each, FY02 provide four each.

JWARN - FY00 funded Block II Integration contract award delayed pending Milestone II decision.

UNCLASSIFIED

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CA5**

## PROJECT

**CA5**

II. Support Costs	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
JCAD													
Technical Data and Logistics Support	MIPR	Various	U	840	429	Nov-00	444	Nov-01			0	1713	0
JSLNBCRS													
ES C - CSS Support	C/FP	Sverdrup, Dumfries, VA	C	0	306	Dec-00	0	NONE			0	306	0
HW C - Integration contract	C/FFP	TRW, Carson, CA		7550	3780	Mar-01	2012	Mar-02			0	13342	0
JSLSCAD													
TD/D SB - JSLSCAD Evaluation of Engineering changes	C/CPFF	PM NBC Defense Systems, APG, MD	U	200	390	Nov-00	280	Nov-01			0	870	870
ILS S - JSLSCAD ILS Analysis and Documentation	C/CPFF	Intellitec, Deland, FL	C	1400	165	Nov-00	750	Nov-01			0	2315	2315
TD/D SB - JSLSCAD Technical Manuals and Documents	C/CPFF	Intellitec, Deland, FL	C	600	20	Nov-00	30	Nov-01			0	650	650
JWARN													
ES S - Modeling and Simulation	MIPR	SBCCOM, APG, MD	U	0	0	NONE	1422	Mar-02			0	1422	0
ILS S - Prepare Technical Data	C/FFP	Sverdrup, Dumfries, VA	C	0	0	NONE	693	Mar-02			0	693	0
HW S - Block II HW/SW Integration Contract	C/FFP	TBS	C	7550	6314	1Q FY01	11664	1Q FY02			0	25528	0
Subtotal II. Support Costs:				18140	11404		17295				0	46839	

Remarks: JSLSCAD - ESS - Government and contractor support needed to evaluate Engineering Design Test (EDT), and Production Qualification Test (PQT) data; ILS S - Government and contractor Integrated Logistics Support (ILS); TD/D SB - Technical manuals and documentation.

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
**June 2001**

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**CA5**

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
JCAD													
DTE S - JCAD DT/PQT Testing	MIPR	Various Govt	U	3624	796	Mar-01	2086	Mar-02			0	6506	0
OTE S - JCAD Govt OT Costs	PO	Various Govt	U	0	0	NONE	2087	Jan-02			0	2087	0
JSLNBCRS													
OTHT SB - Conduct Limited User Test of HMMWV	MIPR	Various	U	0	6263	Mar-01	2400	4Q FY01			0	8663	0
OTE S - Conduct Initial OT&E for the HMMWV variant.	MIPR	Various	U	0	0	NONE	3300	4Q FY01			0	3300	0
DTE S - Conduct Developmental Test II (DTII) for Hmmwv variant.	MIPR	Various	U	0	0	NONE	1300	4Q FY01			0	1300	0
JSLSCAD													
OTHT SB - JSLSCAD Technical Testing and Test Methodology	Various	DPG, UT; PNAS, Patuxent, MD	U	7200	2500	Nov-00	0	NONE			0	9700	8268
OTHT SB - JSLSCAD PQT/IOTE and Integration Test	Various	DPG, UT; PNAS, Patuxent, MD	U	1100	5959	Nov-00	3439	Nov-01			0	10498	9767
OTHT SB - Engineering Design Test, and PQT and IOT&E Support	C/CPFF	Intellitec, Deland, FL	C	1500	2800	Nov-00	0	NONE			0	4300	3464
JWARN													
DTE S - DT I Testing of System	WR	MCSC, Quantico, VA	U	0	0	NONE	251	NONE			0	251	0

UNCLASSIFIED

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CA5**

## PROJECT

**CA5**

III. Test and Evaluation - Cont.	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date	FY2003 Cost	FY2003 Award Date	Cost to Complete	Total Cost	Target Value of Contract
DTE S - System Test and Evaluation of C4I Software Modules	MIPR	MCSC, Quantico, VA	U	0	0	NONE	2124	Nov-01			0	2124	0
NBCRSBLKII													
OTE S - Conduct Operational Demonstration	Various	PM NBCDS, APG, MD	U	0	0	NONE	2160	Dec-01			0	2160	3244
OTE SB - Modeling and Simulation (M&S)	PO	CACI Technologies Inc., Manassas, VA		0	0	NONE	1632	Dec-01			0	1632	1632
Subtotal III. Test and Evaluation:				13424	18318		20779				0	52521	

Remarks:

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
**June 2001**

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**CA5**

IV. Management Services	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
JCAD													
PM/MS C - PM/MS C	PO	Various - Government Contractor Support	U	2861	1944	Nov-00	2370	Nov-01			0	7175	0
JSLNBCRS													
PM/MS C - Joint Service IPT Support	MIPR	Various	U	0	827	Mar-01	0	NONE			0	827	0
JSLSCAD													
PM/MS S - JSLSCAD Prepare Acquisition Documentation through Milestone III IPR	PO	PM NBC Defense Systems, APG, MD	U	2000	200	Nov-00	380	NONE			0	2580	2580
JWARN													
PM/MS C - Joint IPT Support	MIPR	Various	U	826	779	NONE	1260	Feb-02			0	2865	0
NBCRSBLKII													
PM/MS S - Engineering Management	Various	PM NBCDS, APG, MD	U	809	1932	Dec-00	1610	Dec-01			0	4351	4197
ZSBIR													
SBIR - Aggregated from SBIR	Various	HQ AMC, Alexandria, VA	U	0	989	Oct-00	0	NONE			0	989	989
Subtotal IV. Management Services:				6496	6671		5620				0	18787	

Remarks: NBCRS Blk II - Salaries and Other Government Agencies (OGA's).

Project CA5

Page 38 of 109 Pages

Exhibit R-3 (PE 0604384BP)

UNCLASSIFIED

<b>CBDP PROJECT COST ANALYSIS (R-3 Exhibit)</b>						DATE <b>June 2001</b>							
BUDGET ACTIVITY <b>RDT&amp;E DEFENSE-WIDE/ BA5 - Engineering and Manufacturing Dev</b>				PE NUMBER AND TITLE <b>0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)</b>				PROJECT <b>CA5</b>					
TOTAL PROJECT COST:				94797	61208		64099				0	220104	
Project CA5													
Page 39 of 109 Pages													
Exhibit R-3 (PE 0604384BP)													

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**CO5**

COST (In Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate							
CO5 COLLECTIVE PROTECTION (EMD)	4835	3232	4012							

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

**Project CO5 COLLECTIVE PROTECTION (EMD):** This project provides Engineering and Manufacturing Development (EMD) of Joint Service Nuclear, Biological & Chemical (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. As Techbase Non-Medical Collective Protection efforts become mature, they will be transitioned into the following EMD efforts.

Systems funded under this project are: (1) Shipboard Collective Protection Equipment (SCPE); (2) Joint Collective Protection Equipment (JCPE); 3) Joint Transportable Collective Protection System (JTCOPS); and 4) Chemical Biological Protective System (CBPS) P3I.

The SCPE program provides an NBC free environment within specified zone boundaries of high priority ships by providing overpressurization with filtered air. One of the major goals of this program is to extend the service life of shipboard High Efficiency Particulate Air (HEPA) filters. Current efforts are focused on extending the service life from three years to four years. The program will continue testing of collective protection system components that decrease Total Ownership Costs (TOC), reduce shipboard maintenance requirements, and provide energy-efficient equipment.



## UNCLASSIFIED

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)**DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CO5**

## PROJECT

**CO5**

The JCPE program will provide needed improvements and cost saving standardization to currently fielded systems. Standardization of individual system components (specifically filter systems) across Joint Service mission areas will reduce logistics burden while maintaining the industrial base. JCPE will focus on fixing specific problems and deficiencies with currently fielded equipment. JTCOPS will provide the long term solution to portable shelters only, while JCPE provides improvements to current fixed site, building, shipboard, and vehicle collective protection systems. JCPE's efforts on portable shelters are limited to providing an interim capability until JTCOPS is fielded. JCPE will specifically insert off-the-shelf technologies into these older systems to: 1) solve reliability, maintainability, and operational problems, 2) significantly reduce manufacturing and/or operating costs, 3) solve previously unmet requirements, 4) provide low-level interim capabilities until JTCOPS enters production.

JTCOPS will use the latest technologies to provide the next generation of lightweight, modular, self-supporting collective protection shelter systems. JTCOPS Block I will backfit selected existing standard military tent systems with a collective protection capability beyond that which is currently available. JTCOPS Block II will fully integrate next-generation collective protection into future military tent systems to provide NBC protection that is inherent to the system.

The CBPS-P3I will: (1) Improve the operational suitability and reliability of the CBPS for light divisions that is currently in production. This phase of the P3I will develop a self-sustained Environmental Support System (ESS) that does not require the HMMWV engine for power resulting in reduced vehicle maintenance and sustainment costs. To improve operational capability, further system weight reductions will be implemented to allow for more medical equipment to be transported inside the CBPS. Improvements will be made to the CB tent using lightweight, low cost CB materials being developed in R&D. All these improvements will be incorporated into CBPS production line in FY04 following a Production Verification Test; (2) Provide a critical capability to address the need for collective protection within Level 1 and 2 Heavy and Airborne units. Currently, no capability exists to provide medical treatment in a CB contaminated environment for these types of units. The self-sustained ESS and CB tent of CBPS-light will be used to maximize commonality of components. These components will be integrated onto platforms suitable for Airborne and Heavy divisions. The CBPS P3I contract will have three phases: Phase 1: Develop design concepts and fabricate prototype ESS; Phase 2: Fabricate three ESS prototypes for integration onto each of three CBPS platforms; and Phase 3: Fabricate CBPS Heavy and Airborne prototype systems.

UNCLASSIFIED

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

## BUDGET ACTIVITY

RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev

## PE NUMBER AND TITLE

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT  
CO5

## FY 2000 Accomplishments:

- 1643 JCPE - Performed tradeoff analysis to optimize the M48A1 and M56 carbon filter designs to extend the filter life and reduce manufacturing costs. Performed market survey and tradeoff analysis to identify candidate motorblowers that provided the best combination of improved efficiency, transportability, and reduced procurement costs for future development and testing on Modular Collective Protection Equipment (MCPE), M20A1 Simplified Collective Protection Equipment (SCPE), and various applications of M28 SCPE. Initiated redesign of the M49 Fixed Installation Filter (FIF) to reduce production costs. Initiated development of improved 200 cubic feet per minute (CFM) particulate filter to extend filter life. Initiated development of Acceptance Tester to verify performance of the Recirculation Filter Unit (RFU) used on MCPE and Chemically Protected Deployable Medical Shelter System.
- 696 JCPE - Initiated development of lightweight Environmental Control Unit (ECU) to meet the rapid deployment requirement for transportable collective protection systems. Initiated development of two prototype hardened Modular General Purpose Tent Systems (MGPTS) using an M28 (Variant) collective protection liner, motorblower, hermetically sealed NBC filter canister (HSFC), and the existing NBC rated ECU to meet the Marine Corps requirement for an environmentally controlled transportable collective protection system until the Joint Transportable Collective Protection System (JTCOPS) is fielded.
- 1795 JTCOPS - Prepared program documentation including the Single Acquisition Management Plan, the System Requirements document and the Life Cycle Cost Assessment. Prepared a draft Request for Proposals, obtained engineering support, and conducted program management activities.
- 701 SCPE - To reduce logistics costs, developed and initiated testing on nine V-cell (mini-pleat) Limited Protection (LP) HEPA filters. Initiated land-based testing of four improved Collective Protection System (CPS) fans. Completed first year of verification testing to validate the four-year performance of 34 improved prefilters and 66 improved HEPA filters. Prepared and updated documentation (test reports, technical manuals, and technical data packages (TDPs).

**Total** 4835

Project CO5

Page 42 of 109 Pages

Exhibit R-2 (PE 0604384BP)

UNCLASSIFIED

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)**DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT  
CO5****FY 2001 Planned Program:**

- 1236 JCPE - Complete development and testing of 20 improved 200 CFM particulate filters to reduce logistics costs. Complete redesign and testing of M49 FIF filter to reduce costs, production time, and waste. Complete development of M48A1 and M56 carbon filter improvements to extend filter life and reduce manufacturing and logistics costs. Complete development of Acceptance Tester to verify performance of the RFU used on MCPE and Chemically Protected Deployable Medical Shelter System. Initiate development of a single pleatable charcoal/HEPA bonded filter to replace two chemical/biological (CB) filters used in collective protection systems to reduce installation time, logistics, and cost.
- 1250 JCPE - Initiate development and testing of the Filter Fan Assembly (FFA) 400-100 and M93 candidate motorblowers for CB shelter systems to improve efficiency, reliability, size, and weight. Complete development and testing of a lightweight ECU for transportable collective protection systems to allow rapid deployment of a reduced weight and cube unit. Prepare technical drawings for Integrated Logistics Support (ILS) for the Bump Through Door (BTD) airlock modification to the transportable collective protection systems and Chemically Hardened Air Transportable Hospital (CHATH). Initiate development of universal NBC ECU adapter that can apply a transportable cooling coil to the FFA 580 blower and other FFA blower configurations. Complete design and test a prototype one-piece 32-foot liner, 8-foot extension (HUB) and vestibules for use in the Small Shelter System to provide the Air Force Expeditionary Medical Support (EMEDS) system with collective protection capability until JTCOPS is fielded. Complete market surveys and evaluate systems capable of meeting the Operational Requirements Document (ORD) for a CHATH transportable latrine and water distribution system. Development of a transportable latrine and water distribution system was not previously accomplished by the USAF due to funding and schedule constraints.

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)**DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT  
CO5****FY 2001 Planned Program (Cont):**

- 691 SCPE - Complete land-based and initiate shipboard testing of one improved CPS fan and develop CPS fan performance specification. Shipboard testing is required to verify actual noise reduction in a fan room and adjacent manned spaces on board a ship. Improved CPS fan will increase efficiency and reduce noise levels by 12 to 17 decibels. Complete second year of verification testing to validate the four-year performance of improved prefilters and HEPA filters. Complete testing of nine V-cell (mini-pleat) LP HEPA filter. Initiate shock and vibration testing on ten commercial off the shelf (COTS) LP HEPA filters. Transition COTS LP HEPA filter to JCPE for further development. Perform literature search and develop a table listing the performance of shipboard CPS filters versus high threat toxic industrial chemicals / toxic industrial materials (TICs/TIMs), leveraging data from Techbase Non-Medical efforts. Initiate development and testing of two electronic differential pressure gauges for remote reading to ease shipboard maintenance. Prepare and update documentation (test reports, technical manuals, and TDPs).
- 55 SBIR

**Total** 3232

## UNCLASSIFIED

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)**DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CO5**

## PROJECT

**CO5****FY 2002 Planned Program:**

- 350 CBPS P3I - Develop design concept for CBPS airborne and heavy versions. Coordinate with user and field representatives on requirements and logistics supportability. Initiate and manage CBPS P3I program.
- 455 CBPS P3I - Award a three phase contract for design and fabrication of a self-powered Environmental Support System (ESS). Award Phase 1 in FY02 to develop an ESS that will meet the requirements for CBPS-light, heavy, and airborne versions. Fabricate one prototype and conduct initial performance and reliability testing for \$455K.
- 1164 JCPE - Initiate development and testing of two types of improved COTS LP HEPA filters to extend filter life and improve performance. Test ten improved M48A1 and M56 carbon filter with live agents to complete qualification of filter design. Complete development of a single pleatable charcoal/HEPA bonded filter to replace two CB filters used in collective protection systems to reduce installation time, logistics, and cost. Conduct testing of RFU acceptance tester. RFU is designed to eliminate low level contamination brought into collective protection systems by personnel or equipment.
- 810 JCPE - Increase efficiency of CPS supply fans by developing a variable speed air supply system to allow the CPS system to operate at peak performance over the entire range of filter loading. Complete development and testing of FFA 400-100 and M93 candidate motorblowers for CB shelter systems to improve efficiency, reliability, size, and weight.
- 514 JCPE - Complete development of the universal NBC ECU adapter that can apply a transportable cooling coil to the FFA 580 blower and other FFA blower configurations. Initiate development of a new Air Force shelter configuration which combines a medium size shelter between two small shelters using an M28 collective protection liner.

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)**DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT  
CO5****FY 2002 Planned Program (Cont):**

- 719 SCPE - Continue shipboard testing of improved CPS fan. Shipboard testing is required to verify actual noise reduction in a fan room and adjacent manned spaces on board a ship. Use test data to revise performance specification as necessary. Improved CPS fans will increase efficiency and reduce noise levels by 12 to 17 decibels. Complete third year of verification testing to validate the four-year performance of improved prefilters and HEPA filters. Continue evaluation of potential HEPA filter performance degradation after toxic industrial chemical/material (TIC/TIM) exposure. Continue development and testing of two electronic differential pressure gauges for remote reading to ease shipboard maintenance. Prepare and update documentation (test reports, technical manuals, and TDPs). Initiate transition of selected efforts to JCPE.

**Total** 4012

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**CO5**

**B. Other Program Funding Summary:**

	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>							
JCP001 COLLECTIVELY PROTECTED DEPLOYABLE MEDICAL SYSTEM	2731	5909	3017							
JF0102 TRANSPORTABLE COLLECTIVE PROT SYS	4246	3588	0							
JN0013 NAVY INDIVIDUAL PROTECTIVE GEAR	3369	5406	2328							
JN0014 COLLECTIVE PROT SYS AMPHIB BACKFIT	11991	17530	17834							
JN0017 JOINT COLLECTIVE PROT SYSTEMS & IMPROVEMENTS	1186	1043	2395							
R12301 CB PROTECTIVE SHELTER (CBPS)	4103	11365	15694							

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)**DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CO5**

## PROJECT

**CO5****C. Acquisition Strategy:**

CBPS/P3I

An up-front analysis will be performed to develop design concepts for Heavy and Airborne versions of CBPS. This development will support the P3I requirement in the ORD for a capability to provide medical treatment in a CB environment in these divisions. The CBPS ORD also addresses the need for a P3I to develop a self-sustained Environmental Support System (ESS) for the current version of CBPS that does not require the High Mobility Multi-Purpose Wheeled Vehicle (HMMVW) engine for primary power. A competitive contract will be awarded to develop and fabricate ESS prototypes suitable for CBPS light, heavy and airborne versions. The ESS prototype will be subjected to performance and reliability testing and the design finalized. Other weight and durability improvements will be investigated and evaluated on the current CBPS. Three ESS prototypes will be fabricated. One ESS will be integrated with the current version of CBPS and validated for use through a Production Verification Test. The ESS and other improvements will be integrated into the existing CBPS production line in FY04. The other two ESS prototypes will be integrated onto platforms determined to be suitable for Heavy and Airborne applications.

JCPE

This program will utilize the modification clause under DOD 5000 to provide solutions to current deficiencies in fielded collective protection equipment. The various efforts under JCPE will leverage Techbase efforts, market analysis, and tradeoff studies to determine the optimum configuration for any modifications or improvements. All modified components will be contractor fabricated and in-house/contractor tested to ensure performance compatibility. Performance and/or procurement specifications will be updated to ensure that modifications are included in future acquisitions. Modified components will be integrated into existing systems via field modification or replacement spares.

JTCOPS

Block I will develop a new collective protection capability for existing DoD shelters. A competitive contract will be awarded for the design and prototype fabrication phase, with options for Low Rate Initial Production (LRIP) and production. After successful completion of development testing and the Milestone II decision, the LRIP option will be exercised to produce systems for Operational Testing (OT). After completion of OT and the Milestone III decision, the production option of the contract will be exercised. Block II is scheduled to begin in FY05.



## UNCLASSIFIED

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)**DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CO5**

## PROJECT

**CO5**

SCPE

In-house/contract design and fabrication of prototype components with in-house/contract testing. Initial fans, motors, and filters will be procured as part of new ship construction using Shipbuilding and Conversion, Navy (SCN) funds. Replacements will be provided with Operation & Maintenance, Navy (O&M,N) funds.

<b>D. <u>Schedule Profile:</u></b>	FY 2000				FY 2001				FY 2002			
	1	2	3	4	1	2	3	4	1	2	3	4
CBPS												
CBPS P3I- Initiate Program									1Q			
CBPS P3I- Award Phase 1 Contract									1Q			
CBPS P3I- Conduct Reliability, Availability, and Maintainability (RAM) Testing												4Q
JCPE												
Tradeoff Analysis of M48A1 & M56 Filters				4Q								
Develop Improved M48A1 & M56 Carbon Filters					1Q			4Q				
Agent Testing of M48A1 & M56 Carbon Filters									1Q			4Q

Project CO5

Page 49 of 109 Pages

Exhibit R-2 (PE 0604384BP)

UNCLASSIFIED

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

## BUDGET ACTIVITY

RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev

## PE NUMBER AND TITLE

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT  
CO5

D. <u>Schedule Profile (cont):</u>	FY 2000				FY 2001				FY 2002			
	1	2	3	4	1	2	3	4	1	2	3	4
JCPE (Cont)												
Survey/Tradeoff Analysis of Motorblowers	1Q			4Q								
Develop & Test Improved Motorblowers					1Q							4Q
Redesign & Test FIF	1Q							4Q				
Develop & Test Improved 200 cfm Filter	1Q							4Q				
Develop RFU Acceptance Tester	1Q							4Q				
Test RFU Acceptance Tester									1Q			4Q
Develop & Test Lightweight Environmental Control Unit (ECU)	1Q							4Q				
Modify M28 Liner for MGPTS	1Q			4Q								







## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**CO5**

D. <u>Schedule Profile (cont):</u>	FY 2000				FY 2001				FY 2002			
	1	2	3	4	1	2	3	4	1	2	3	4
JCPE (Cont)												
Develop Pleatable Charcoal and High Efficiency Particulate Arresting (HEPA) Filter					1Q							4Q
Prepare Technical Drawings for Bump Through Doors (BTDs)					1Q							
Develop Universal NBC ECU Adapter					1Q							4Q
Modify/Test M28 Liner for Small Shelter					1Q							
Latrine/Water Distribution System Market Survey					1Q							
Develop and Test Limited Production High Efficiency Particulate Arresting (HEPA) Filters									1Q			4Q








## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**CO5**

D. <u>Schedule Profile (cont):</u>	FY 2000				FY 2001				FY 2002			
	1	2	3	4	1	2	3	4	1	2	3	4
JCPE (Cont)												
Develop & Test Variable Speed CPS Supply Fans									1Q			4Q
Develop Small-Medium-Small Shelter Liner									1Q			4Q
SCPE												
Fan Testing & Evaluation (Land-based)	>>							4Q				
Develop CPS Fan Performance Specification		2Q										4Q
Fan Testing & Evaluation (Shipboard)					1Q							4Q
Develop and Test Electronic Differential Pressure Gauge					1Q							4Q
CPS Filter TICs/TIMs Evaluation					1Q							4Q
Revise CPS Fan Performance Specification											3Q	4Q

Project CO5

Page 52 of 109 Pages

Exhibit R-2 (PE 0604384BP)

UNCLASSIFIED

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)**DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT  
CO5****D. Schedule Profile (cont):**

FY 2000

FY 2001

FY 2002

1

2

3

4

1

2

3

4

1

2

3

4

SCPE (Cont)

Transition to JCPE

3Q

4Q

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
June 2001

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CO5**

## PROJECT

**CO5**

I. Product Development	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
CBPS													
HW SB - Contractor Hardware Development	C/CPFF	TBD	C	0	0	NONE	455	Dec-01			0	455	0
JCPE													
HW SB - 200 CFM HEPA - Market Survey of Media	WR	NSWCDD, Dahlgren, VA	U	305	185	Dec-00	0	NONE			0	490	490
HW SB - FIF - Engineering & Prototype Development	MIPR	SBCCOM, Edgewood, MD	U	163	124	Dec-00	0	NONE			0	287	287
HW SB - Carbon Filter - Market Survey & Prototype Development	MIPR	SBCCOM, Edgewood, MD	U	484	467	Dec-00	0	NONE			0	951	951
HW SB - Pleatable Charcoal/HEPA Filter - Development	MIPR	SBCCOM, Edgewood, MD	U	0	194	Dec-00	200	Dec-01			0	394	394
HW SB - Improved Motorblower - Market Survey & Prototype Development	MIPR	SBCCOM, Edgewood, MD	U	338	194	Dec-00	200	NONE			0	732	732
HW SB - Lightweight ECU Development and Engineering	MIPR	Various	U	213	69	Dec-00	0	NONE			0	282	282
HW SB - Universal NBC ECU Adapter - Development	MIPR	HSW/YACN, Brooks AFB, San Antonio, TX	U	0	25	Dec-00	114	Dec-01			0	139	139
HW SB - Small Shelter - Develop M28 Liner	MIPR	HSW/YACN, Brooks AFB, San Antonio, TX	U	0	243	Dec-00	0	NONE			0	243	243

Project CO5

Page 54 of 109 Pages

Exhibit R-3 (PE 0604384BP)

UNCLASSIFIED

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/****BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CO5**

## PROJECT

**CO5**

I. Product Development - Cont.	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date	FY2003 Cost	FY2003 Award Date	Cost to Complete	Total Cost	Target Value of Contract
HW SB - Transportable Latrine & Water Distribution System - Market Survey	MIPR	HSW/YACN, Brooks AFB, San Antonio, TX	U	0	120	Dec-00	0	NONE			0	120	120
HW C - LP HEPA Filter - Market Survey and Improvements	WR	NSWCDD, Dahlgren, VA	U	0	0	NONE	376	Dec-01			150	526	676
HW C - NSIF - Market Survey and Improvements	WR	NSWCDD, Dahlgren, VA	U	0	0	NONE	0	Dec-01			400	400	550
HW C - Residual Life Indicator - Transition Tech Base Technology to NBC Filters	MIPR	SBCCOM, Edgewood, MD	U	0	0	NONE	0	Dec-01			1200	1200	1511
HW C - CPS Supply Fans - Market Survey and Development	WR	NSWCDD, Dahlgren, VA	U	0	0	NONE	110	Dec-01			300	410	625
HW C - Lightweight Power Production - Market Survey and Development	MIPR	HSW/YACN, Brooks AFB, San Antonio, TX	U	0	0	NONE	0	Dec-01			0	0	100
HW C - Small/Medium/Small Shelter - M28 Liner Development	MIPR	HSW/YACN, Brooks AFB, San Antonio, TX	U	0	0	NONE	350	Dec-01			0	350	450
HW SB - RFU Acceptance Tester - Development	MIPR	SBCCOM, Edgewood, MD	U	0	0	NONE	200	Dec-01			0	200	273

Project CO5

Page 55 of 109 Pages

Exhibit R-3 (PE 0604384BP)

UNCLASSIFIED

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT  
CO5**

I. Product Development- Cont.	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date	FY2003 Cost	FY2003 Award Date	Cost to Complete	Total Cost	Target Value of Contract
SCPE													
HW C - CPS Fan, Electronic Differential Pressure Gauge, Filter Performance - Development	WR	NSWCDD, Dahlgren, VA	U	0	75	Dec-00	125	Dec-01			0	200	325
Subtotal I. Product Development:				1503	1696		2130				2050	7379	

Remarks:



## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
June 2001

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**CO5**

II. Support Costs	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
CBPS													
ES S - Shelter Government Engineering Support	Allot	SBCCOM - Natick, MA	U	0	0	NONE	300	Oct-01			0	300	0
ILS S - Shelter - Contractor ILS Support	Various	TBD	C	0	0	NONE	25	Oct-01			0	25	0
TD/D S - Shelter - Technical Data and Documentation	Various	TBD	C	0	0	NONE	0	NONE			0	0	0
JCPE													
TD/D SB - BTM Airlock TDP Development	MIPR	HSW/YACN, Brooks AFB, San Antonio, TX	U	0	145	Dec-00	0	Dec-01			0	145	145
TD/D SB - 200 CFM HEPA Filter - Engineering Support for Market Survey	C/CPFF	Synetics, Dahlgren, VA	C	49	50	Dec-00	0	NONE			0	99	99
SCPE													
TD/D SB - Update/Develop TDPs, Perf Specs, Drawings, and Reports	WR	NSWCDD, Dahlgren, VA	U	786	98	Dec-00	169	Dec-01			0	1053	1190
Subtotal II. Support Costs:				835	293		494				0	1622	

Remarks:

Project CO5

Page 57 of 109 Pages

Exhibit R-3 (PE 0604384BP)

UNCLASSIFIED

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/****BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CO5**

## PROJECT

**CO5**

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
CBPS													
DTE S - Shelter - Development Test and Evaluation	MIPR	TBD	U	0	0	NONE	0	NONE			0	0	0
JCPE													
OTHT C - Carbon Filter - Live Agent Testing	MIPR	SBCCOM, Edgewood, MD	U	0	0	NONE	388	Dec-01			0	388	738
OTHT SB - 200 CFM HEPA Filter - Testing Media and Assemblies	C/CPFF	Battelle, Columbus, OH	N	129	144	Dec-00	0	NONE			0	273	273
OTHT SB - FIF - Prototype Testing	MIPR	SBCCOM, Edgewood, MD	U	30	70	Dec-00	0	NONE			0	100	100
OTHT C - Improved Motorblower - Acceptance Testing	MIPR	SBCCOM, Edgewood, MD	U	0	0	NONE	200	Dec-01			0	200	200
OTHT C - Lightweight ECU - Prototype Testing	MIPR	Eglin AFB, Valparaiso, FL	U	0	100	Dec-00	0	NONE			0	100	100
OTHT C - CPS Supply Fans - Testing Prototype System	WR	NSWCDD, Dahlgren, VA	U	0	0	NONE	0	NONE			150	150	300
OTHT SB - Lightweight Power Production - Prototype Testing	MIPR	HSW/YACN, Brooks AFB, San Antonio, TX	U	0	0	NONE	0	Dec-01			0	0	50
OTHT SB - Small/Medium/Small - M28 Liner Testing	MIPR	HSW/YACN, Brooks AFB, San Antonio, TX	U	0	0	NONE	0	NONE			0	0	100

Project CO5

Page 58 of 109 Pages

Exhibit R-3 (PE 0604384BP)

UNCLASSIFIED

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
June 2001

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CO5**

## PROJECT

**CO5**

III. Test and Evaluation - Cont.	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date	FY2003 Cost	FY2003 Award Date	Cost to Complete	Total Cost	Target Value of Contract
OTHT S - RFU Acceptance Tester - Testing	MIPR	SBCCOM, Edgewood, MD	U	0	0	NONE	0	NONE			0	0	100
SCPE													
OTHT SB - Improved CPS Fan - Shipboard Testing	WR	NSWCDD, Dahlgren, VA	U	0	99	Dec-00	155	Dec-01			0	254	409
OTHT SB - Improved CPS Fan - Landbased Testing	WR	NSWCDD, Philadelphia, PA	U	110	99	Dec-00	0	NONE			0	209	209
OTHT SB - Improved CPS Fan - Additional Landbased Testing	C/FP	New World Associates, Fredericksburg, VA	C	60	100	Jun-01	0	NONE			0	160	160
OTHT SB - Filters - Various Component Testing and Testing Electronic Differential Pressure Gauge	WR	NSWCDD, Dahlgren, VA	U	770	70	Dec-00	120	Dec-01			0	960	1080
OTHT C - HEPA Filter TIC/TIM Evaluation	WR	NSWCDD, Dahlgren, VA	U	0	50	NONE	50	Dec-01			0	100	150
Subtotal III. Test and Evaluation:				1099	732		913				150	2894	

Remarks:

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/****BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CO5**

## PROJECT

**CO5**

IV. Management Services	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
CBPS													
SBIR - Aggregated from SBIR	Allot	SBCCOM-Natick, MA	U	0	0	NONE	25	Oct-01			0	25	0
JCPE													
PM/MS S - Overall Program Management and IPT Oversight	WR	NSWCDD, Dahlgren, VA	U	192	200	Oct-00	200	Oct-01			0	592	792
PM/MS S - IPT Support	MIPR	Various	U	146	156	Dec-00	150	Dec-01			0	452	600
SCPE													
PM/MS S - Overall Program Management	WR	DPG, UT; PNAS, Patuxent, MD	U	220	100	Dec-00	100	Dec-01			0	420	520
ZSBIR													
SBIR - Aggregated from SBIR	Various	HQ AMC, Alexandria, VA	U	0	55	Oct-00	0	NONE			0	55	55
Subtotal IV. Management Services:				558	511		475				0	1544	

Remarks:

TOTAL PROJECT COST:

3995

3232

4012

2200

13439

Project CO5

Page 60 of 109 Pages

Exhibit R-3 (PE 0604384BP)

UNCLASSIFIED

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**CP5**

COST (In Thousands)		FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate						
CP5	COUNTERPROLIFERATION SUPPORT (EMD)	6784	0	0						

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

**Project CP5 COUNTERPROLIFERATION SUPPORT (EMD):** The Counterproliferation Support Program was funded in FY00 to complete the development of the Long Range Biological Stand-off Detection System (LR-BSDS) for Initial Operational Test and Evaluation (IOT&E) and to support type classification of the LR-BSDS prior to production. An Internal Program Review (IPR) was provided to Deputy Assistant to the Secretary of Defense for Chem-Bio Defense DATSD (CBD) to terminate the LR-BSDS program. The U.S. Army Chemical School no longer has a requirement for a LR-BSDS and recommended termination of the program. The Milestone Decision Authority (MDA) prepared an Acquisition Decision Memorandum on 15 May 00 directing an orderly shutdown of this program. The termination plan incorporates completion of two prototypes, completion of the Technical Data Package and Technical Manuals, and preparation of a final report. Program closed out.

**FY 2000 Accomplishments:**

- 742 LR-BSDS - Conducted an orderly shutdown.
- 1152 LR-BSDS - Completed two LR-BSDS prototypes.
- 451 LR-BSDS - Completed technical data package and technical manuals.
- 814 LR-BSDS - Contract termination costs include: canceled contracts; inventoried materials; transferred or returned Government Furnished Equipment (GFE) to the appropriate government agencies; and completed final report.
- 1689 LR-BSDS - Completed redesign to solve technical problems.
- 1936 LR-BSDS - Conducted successful engineering design testing.

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CP5**

## PROJECT

## FY 2000 Accomplishments (Cont):

Total 6784

FY 2001 Planned Program: No planned program

FY 2002 Planned Program: No planned program

<b>B. <u>Other Program Funding Summary:</u></b>										
	<b><u>FY 2000</u></b>	<b><u>FY 2001</u></b>	<b><u>FY 2002</u></b>							
CP3 COUNTERPROLIFERATION SUPPORT (ADV TECH DEV)	10240	10245	12575							
CP4 COUNTERPROLIFERATION SUPPORT (DEMVAL)	16819	19839	15346							
JPO230 PORTAL SHIELD EQUIPMENT	4751	26315	3892							

C. Acquisition Strategy:

LR-BSDS

Program closed out 31 Dec 00.

Project CP5

Page 62 of 109 Pages

Exhibit R-2 (PE 0604384BP)

UNCLASSIFIED

UNCLASSIFIED

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)**

DATE  
**June 2001**

BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CP5**

PROJECT

D. Schedule Profile: N/A

UNCLASSIFIED

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/****BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CP5**

## PROJECT

**CP5**

I. Product Development	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
LRBSDS													
HW C - Long Range-Biological Standoff Detection System (LR-BSDS)	PO	Schwartz Electro Optics, Orlando, FL	C	3136	0	NONE	0	NONE			0	3136	0
Subtotal I. Product Development:				3136	0		0				0	3136	

Remarks:

II. Support Costs	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
LRBSDS													
TD/D C - LR-BSDS Orderly Shutdown	PO	Schwartz Electro Optics, Orlando, FL	C	500	0	NONE	0	NONE			0	500	0
Subtotal II. Support Costs:				500	0		0				0	500	

Remarks:

Project CP5

Page 64 of 109 Pages

Exhibit R-3 (PE 0604384BP)

UNCLASSIFIED



## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CP5**

## PROJECT

**CP5**

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
LRBSDS													
OTHT C - LR-BSDS Engineering Design Testing	MIPR	PD Bio, Edgewood, MD	U	1442	0	NONE	0	NONE			0	1442	0
Subtotal III. Test and Evaluation:				1442	0		0				0	1442	

Remarks:

IV. Management Services	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
LRBSDS													
PM/MS C - Program Management	PO	PD Bio, Edgewood, MD		1948	0	NONE	0	NONE			0	1948	0
Subtotal IV. Management Services:				1948	0		0				0	1948	

Remarks:

**UNCLASSIFIED**

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE \_\_\_\_\_

## June 2001

## BUDGET ACTIVITY

RDT&amp;E DEFENSE-WIDE/

## BA5 - Engineering and Manufacturing Dev

PE NUMBER AND TITLE

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) CP5

PROJECT

CP5

**TOTAL PROJECT COST:**

7026

0

0

0

7026

Project CP5

Page 66 of 109 Pages

Exhibit R-3 (PE 0604384BP)

**UNCLASSIFIED**

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**DE5**

COST (In Thousands)		FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate						
DE5	DECONTAMINATION SYSTEMS (EMD)	0	2580	2514						

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

**Project DE5 DECONTAMINATION SYSTEMS (EMD):** This project funds Engineering and Manufacturing Development (EMD) of decontamination equipment for the Joint Service Fixed Site Decontamination (JSFXD) Program aimed at developing a family of decontaminants and a family of applicators. The program will provide soldiers, sailors, marines, and airmen the equipment necessary to fully decontaminate their vital areas to sustain critical cargo flow into theater. The program has been divided into three blocks. Block I will field decontaminants that will be used with integral or existing applicators. Block II will field any additional applicators and containment systems required to provide the full fixed site decontamination capability (excluding Block III). Block III will provide the capability to decontaminate skin/casualties with open wounds.

**FY 2000 Accomplishments: None****FY 2001 Planned Program:**

- 1619 JSFXD - Conduct MS B and initiate MS C program documentation for Block I. Prepare solicitation package and award EMD contract for Block II.
- 917 JSFXD - Initiate Block I Development Test (DT)/Operational Test (OT) on Block II.
- 44 SBIR

**Total** 2580

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
**June 2001**

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)**

PROJECT  
**DE5**

**FY 2002 Planned Program:**

- 1522 JSFXD - Complete DT/OT on family of decontaminants for Block I. Complete MS C documentation for Block I.
- 200 JSFXD - Incorporate lessons learned from OT into logistics support documentation for Block I family of decontaminants.
- 792 JSFXD - prepare documentation and test reports, conduct down select of medical/skin decontaminant in support of Block III EMD contract award.

**Total** 2514

**B. Other Program Funding Summary:**

	<u><b>FY 2000</b></u>	<u><b>FY 2001</b></u>	<u><b>FY 2002</b></u>							
G47001 MODULAR DECON SYSTEM	7520	2429	5032							
JN0010 JOINT SERVICE FIXED SITE DECON (JSFXD)	0	0	1526							
JN0018 SORBENT DECON	0	2740	8638							
M67401 M17 LTWT DECON SYSTEM (LDS)	4612	0	0							

UNCLASSIFIED

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)**

DATE  
**June 2001**

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**DE5**

**C. Acquisition Strategy:** JSFXD Block I will competitively procure COTS/NDI decontaminants and where required, integral applicators for government/contractor testing with options for production. Block II will be a competitive contract to develop applicators and containment systems for government and contractor testing with options for production. Block III will be a competitive procurement of COTS/NDI decontaminants with potential to meet FDA requirements for government/contractor testing with options for production.

UNCLASSIFIED

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)





DATE  
June 2001

## BUDGET ACTIVITY

RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev

## PE NUMBER AND TITLE

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT  
DE5

D. <u>Schedule Profile:</u>	FY 2000				FY 2001				FY 2002			
	1	2	3	4	1	2	3	4	1	2	3	4
JSFXD												
Block I - IV IPR					1Q	2Q						
Block I Milestone B							3Q					
Block I Developmental Test (DT)/Operational Test (OT)							3Q		1Q			
Block II Prototype Testing								4Q		3Q		
Block II Milestone B												4Q
Block III Tests for Down Select							3Q			3Q		
Block III Milestone C												4Q
Block I MS C											3Q	

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
**June 2001**

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**DE5**

I. Product Development	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
JSFXD													
SW SB - EMD Contract for Block II	C/FFP	TBS	C	0	1219	Nov-00	0	NONE			0	1219	0
HW C - EMD Contract for Medical and Skin Decon	C/CPFF	TBS	C	0	0	NONE	0	NONE			0	0	0
Subtotal I. Product Development:				0	1219		0				0	1219	
Remarks:													
II. Support Costs	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
JSFXD													
ES S - Contract Support for EMD Phase	C/CPFF	MCSC, Quantico, VA	C	0	175	Jan-00	300	Feb-02			0	475	0
Subtotal II. Support Costs:				0	175		300				0	475	

Remarks:

Project DE5

Page 71 of 109 Pages

Exhibit R-3 (PE 0604384BP)

UNCLASSIFIED

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) DE5**

## PROJECT

**DE5**

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
JSFXD													
OTE SB - Block I Family of Decontaminants	MIPR	SBCCOM. Edgewood, MD	U	0	917	Feb-00	1614	Feb-01			0	2531	0
OTE S - DT/OT Family of Applicators	MIPR	SBCCOM, Edgewood, MD	U	0	0	NONE	0	NONE			0	0	0
OTHT S - FDA Testing of Skin Decon	MIPR	USAMMDA, Ft. Detrick, MD	U	0	0	NONE	0	NONE			2900	2900	0
Subtotal III. Test and Evaluation:				0	917		1614				2900	5431	

Remarks:



## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) DE5**

## PROJECT

**DE5**

IV. Management Services	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
JSFXD													
PM/MS S - Joint IPT Support	MIPR	Various	U	0	225	NONE	600	NONE			0	825	0
ZSBIR													
SBIR - Aggregated from SBIR	Various	HQ AMC, Alexandria, VA	U	0	44	Oct-00	0	NONE			0	44	44
Subtotal IV. Management Services:				0	269		600				0	869	

Remarks:

TOTAL PROJECT COST:

0

2580

2514

2900

7994

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

## BUDGET ACTIVITY

RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev

## PE NUMBER AND TITLE

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT

PROJECT

IP5

COST (In Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate							
IP5 INDIVIDUAL PROTECTION (EMD)	10328	7379	20850							

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

**Project IP5 INDIVIDUAL PROTECTION (EMD):** This project funds Engineering and Manufacturing Development (EMD) of individual protection equipment, such as the Joint Service Lightweight Integrated Suit Technology (JSLIST) ensemble, aimed at increasing individual protection levels while reducing physiological and logistical burdens. The goal is to provide equipment that allows the individual Soldier, Sailor, Airman, or Marine to operate in a contaminated Nuclear, Biological and Chemical (NBC) environment with little or no degradation of his/her performance. Funding is provided for: (1) design of Aircrew Eye-Respiratory Protection (AERP) systems modification kits for aircraft compatibility; (2) development of the Joint Service Aircrew Mask (JSAM), to replace multiple Service-specific aircrew chemical protective masks; (3) development of a JSLIST Block I glove upgrade to meet special operations forces and other Services hand protection requirements; (4) development of a JSLIST Block II glove upgrade to meet joint aircrew and ground hand protection requirements; (5) development of a Joint Protective Aircrew Ensemble (JPACE) to standardize aircrew ensembles across the services and reduce user fatigue; and (6) development of a Joint Service General Purpose Mask (JSGPM) to replace and improve upon the multiple masks currently used by U.S. ground forces.

UNCLASSIFIED

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

## BUDGET ACTIVITY

RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev

## PE NUMBER AND TITLE

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT  
IP5

## FY 2000 Accomplishments:

- 404 AERP - Continued B-2 aircraft non-recurring engineering design and development of drawing changes.
- 600 JPACE - Conducted Acquisition Strategy Review and obtained direction from the Milestone Decision Authority to proceed with Acquisition Strategy. Identified and documented performance specifications for system, materials, and components leveraging other complimentary programs such as JSLIST Pre-Planned Product Improvement (P3I).
- 827 JPACE - Completed baseline Developmental Testing (DT) I of current aviation systems to quantify requirements that were identified with respect to current systems (for example, impose less thermal burden than the current aircrew CB ensembles) for incorporation into the solicitation and to obtain information for development of pattern designs.
- 964 JPACE - Initiated development of patterns for use in fabrication of JPACE. Initiated system engineering and system logistics efforts to support JPACE development and production planning.
- 139 JSAM - Initiated Government test working group activities to include JPACE/JSJGPM Program coordination, JSAM baseline testing of filter and Smartman, and preparing PDRR test matrix.
- 1013 JSAM - Obtained Milestone I decision approval; conducted source selection for development contracts.
- 3374 JSAM - Initiated development contracts and Cost As an Independent Variable activities.
- 300 JSLIST Block I Glove - Procured 1200 Gloves (total cost is \$40K) for prototype candidate materials for testing.
- 786 JSLIST Block I Glove - Prepared technical data input for materials and patterns production specifications.
- 1000 JSLIST Block I Glove - Conducted laboratory chemical/biological agent testing.
- 921 JSLIST Block I Glove - Conducted user wear test and developmental testing.

**Total** 10328

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)**DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT****IP5****FY 2001 Planned Program:**

- 105 AERP - Continue B-2 Aircraft non-recurring engineering design and development of drawing changes.
- 2327 JPACE - Solicit a Request for Proposals to obtain 30 candidate materials for DT IIA. Initiate DT IIA material swatch testing to downselect to the best six candidates.
- 1288 JPACE - Continue development of patterns for use in fabrication of JPACE. Initiate development of program, logistics, and technical documentation to support the development and fielding of JPACE.
- 292 JSLIST Second Source - Conduct research and evaluation of second source material for JSLIST production.
- 600 JSLIST Second Source - Initiate screening and testing on selected second source materials candidates.
- 2230 JSLIST Second Source - Evaluate and test final selected material for second source for technology insertion to JSLIST.
- 412 JSLIST Block I Glove - Complete Operational Test (OT) and documentation for Milestone C.
- 125 SBIR

**Total** 7379

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)**DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)**

## PROJECT

**IP5****FY 2002 Planned Program:**

- 82 AERP - Maintain configuration control on B-2 Aircraft modification design.
- 2204 JPACE - Complete DT IIA material swatch testing and downselect to best six candidate materials. Initiate DT IIB testing on the six candidates to verify system level performance requirements have been met.
- 504 JPACE - Fabricate 75 prototype ensembles of each of the six selected candidates for use in DT IIB (450 total at \$400 each).
- 1117 JPACE - Complete development of patterns for use in fabrication of JPACE. Continue developing and updating program, logistics, and technical documentation required to support the development and fielding of JPACE.
- 1890 JSAM - Conduct MS II and initiate EMD contract and begin logistics activities. The government test group activity will begin formulating DT/OT test plans .
- 10154 JSGPM - Conduct Engineering and Manufacturing Development. EMD includes system support packages for Production Qualification Testing and Initial Operational Testing and Evaluation. The contract includes delivery of 5,000 prototypes (\$500 each) in 1QFY04.
- 1720 JSGPM - Prepare program/project documentation to achieve Milestone III. Documentation includes: Acquisition Strategy (AS), the Manpower and Personnel Integration (MANPRINT) Plan, and performance specifications.
- 780 JSGPM - Execute Logistics Support Plan. This effort includes development of manuals and finalization of supportability plans.
- 890 JSGPM - Initiate the documentation and planning for Developmental and Operational Testing (DT/OT). Test redesigned prototypes to assess shortcomings exposed during Program Definition and Risk Reduction (PDRR) Phase.
- 1000 JSLIST Block II Glove - Initiate engineering and design of an integrated JSLIST Block II glove for DT/OT to meet air and ground usage requirements in a CB environment.

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) IP5**

## PROJECT

## FY 2002 Planned Program (Cont):

- 509 JSLIST Block II Glove - Prepare program documentation for MS C.

**Total** 20850

B. Other Program Funding Summary:

	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>							
JA0002 JT SVC AVIATION MASK (JSAM)	0	0	0							
JN0011 AERP AIRCRAFT MODS	0	2745	2962							
JN0013 NAVY INDIVIDUAL PROTECTIVE GEAR	3369	5406	2328							
JN0015 JOINT PROTECTIVE AIRCREW ENSEMBLE	0	0	0							
M95801 PROTECTION ASSESSMENT TEST SYSTEM (PATS) M41	7254	0	0							
M99501 MASK, AIRCRAFT M45	3832	1000	457							
M99601 MASK, CHEM-BIOLOGICAL PROTECTIVE FIELD:M40/M40A1	13412	1492	143							

# CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
**June 2001**

BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/**

**BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)**

PROJECT

**IP5**

**B. Other Program Funding Summary (Cont):**

	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>							
MA0400 PROTECTIVE CLOTHING	87192	100579	99220							
N00020 CB RESPIRATORY SYSTEM - AIRCREW	7297	3991	3924							

# CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/**

**BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) IP5**

## PROJECT

### C. Acquisition Strategy:

AERP

Various methods will be utilized, to include both government project order and commercial contracts for contract development, fabrication of prototype test hardware, and maintenance of configuration control.

JSAM

The acquisition strategy for EMD is to select one contractor through Full and Open competition and include options for Production.

JPACE

Conduct Commerce Business Daily (CBD) material search for advanced material technologies addressing aviation material performance requirements from JPACE Joint Operational Requirements Document. Leverage JSLIST P3I advanced material testing and technologies to maximum extent possible. Competitive contract to develop materials/components and manufacture prototypes for developmental and operational testing and to produce full rate protection garments under contract options.

JSLIST Block I

Conduct market research and operation assessment of commercial CB protective glove to satisfy SOCOM requirement and the four services urgent requirement for an improved CB protective glove to replace the current butyl rubber glove.

JSLIST Block II

Conduct research, development and operational assessment of CB protective glove materials, concentrating on selectively permeable solutions to satisfy the current 45 day requirement in JSLIST, JPACE, and SOCOM ORD.

JSPGM

Combined full scale development (Program Definition & Risk Reduction (PDRR) and Engineering and Manufacturing Development (EMD)) and Production with contractor logistics support (CLS). The contract for development/production is based on a Joint Service performance specification with special emphasis on reducing weight, bulk, and breathing resistance by as much as 50 percent, and the lowest achievable total ownership cost.



## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**IP5**

D. <u>Schedule Profile:</u>	FY 2000				FY 2001				FY 2002			
	1	2	3	4	1	2	3	4	1	2	3	4
AERPMODS												
B-2 Develop Mod Design Proposal			3Q					4Q				
B-2 Modification Design and Development						2Q		4Q				
B-2 Configuration Maintenance of Design									1Q			4Q
JPACE												
Developmental Testing (DT I) on Existing Aviation Systems/Requirements Definition	1Q	2Q										
Direction to Execute Approved Acquisition Strategy				4Q								
Pattern Development				4Q							3Q	
Release Solicitation				4Q								

UNCLASSIFIED

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)**DATE  
**June 2001**

BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) IP5**

PROJECT

**D. Schedule Profile (cont):**

	FY 2000				FY 2001				FY 2002			
	1	2	3	4	1	2	3	4	1	2	3	4
JPACE (Cont)												
Develop Prototypes for Developmental Testing - DT IIA					1Q	2Q						
Conduct Developmental Testing - DT IIA						2Q			1Q			
Milestone I/II								4Q				
Award System Test Quantity									2Q			
Fabricate Prototypes for Developmental Test - DT IIB-IID									2Q			4Q
Conduct Developmental Testing - DT IIB										3Q		4Q
JSAM												
Milestone I		2Q										
Engineering and Manufacturing Development (EMD) Contract Award (MS II)												4Q

Project IP5

Page 82 of 109 Pages

Exhibit R-2 (PE 0604384BP)

UNCLASSIFIED

## UNCLASSIFIED

**CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)**DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) IP5**

## PROJECT

**IP5**

<b>D. <u>Schedule Profile (cont):</u></b>	FY 2000				FY 2001				FY 2002			
	1	2	3	4	1	2	3	4	1	2	3	4
JSGPM												
Award Engineering and Manufacturing Development (EMD) Option									1Q			
PROT CLTH												
JSLIST Block I Glove Operational Test (OT)							3Q					
JSLIST Block I Glove Milestone IIIA								4Q				
JSLIST Block II Glove Prototype Build											3Q	

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
**June 2001**

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**IP5**

I. Product Development	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
AERPMODS													
HW C - Engineering Modification Design of B-2 Aircraft to Support AERP Equipment	SS/FPI	OC-ALC, Tinker AFB OK	C	404	105	2Q FY01	82	2Q FY02			0	591	675
JPACE													
HW C - Prototype Pattern Design	MIPR	NCTRF/PMESS, Natick, MA	U	399	253	Dec-00	180	Dec-01			50	882	932
HW S - Prototype Procurement	C/CPFF	TBD	C	0	0	NONE	180	Mar-02			600	780	1320
JSAM													
HW S - Contractor Development	C/CPFF	TBD	C	3374	0	NONE	861	Nov-01			0	4235	0
JSGPM													
HW S - EMD by Contractor	C/CPIF	Avon, Inc., Cadillac, MI	C	0	0	NONE	9421	Dec-01			6000	15421	22738
PROT CLTH													
HW S - Prototype Procurement	MIPR	SBCCOM, Natick, MA	U	40	0	NONE	0	NONE			0	40	40
HW C - Technical Data and Patterns Specifications	MIPR	SBCCOM, Natick, MA	U	786	0	NONE	0	NONE			0	786	0
OTHT S - Material Candidate Testing	MIPR	MCSC, Quantico, VA	U	260	275	Nov-01	800	NONE			0	1335	0
Subtotal I. Product Development:				5263	633		11524				6650	24070	

Project IP5

Page 84 of 109 Pages

Exhibit R-3 (PE 0604384BP)

UNCLASSIFIED

UNCLASSIFIED

**CBDP PROJECT COST ANALYSIS (R-3 Exhibit)**

DATE  
**June 2001**

BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) IP5**

PROJECT

I. Product Development- Cont

Remarks: JSAM - Initial development funded and executed under IP5 in FY00. Follow-on development for demonstration and validation funded under IP4 in FY01 and transition to engineering manufacturing development funded under IP4 in FY02.

JSGPM - FY02 award option on Engineering and Manufacturing Development contract. FY03 continues EMD. EMD includes delivery of 5,000 prototypes (\$500 each) in 1QFY04.

UNCLASSIFIED

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
June 2001

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**IP5**

II. Support Costs	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
JPACE													
ES S - Systems Engineering	WR	NAWCAD, Patuxent River, MD	U	221	234	Nov-00	255	Nov-01			320	1030	1190
ILS S - Systems Logistics	WR	NAWCAD, Patuxent River, MD	U	96	104	Nov-00	105	Nov-01			150	455	540
TD/D S - Technical Report	C/CPFF	Various	C	0	180	Dec-00	104	Dec-01			34	318	352
ILS S - Logistics Support	C/CPFF	Various	C	344	52	Dec-00	150	Dec-01			350	896	1096
JSAM													
TD/D S - Technical Reports	C/CPFF	TBD	C	0	0	NONE	10	Nov-01			0	10	0
ES S - Systems Engineering	C/CPFF	TBD	C	0	0	NONE	101	Nov-01			0	101	0
JSGPM													
ES S - Engineering Support	PO	PM NBCDS, APG, MD	U	0	0	NONE	1073	1Q FY02			989	2062	2852
TD/D S - Tech Data and Documentation of JSGPM System	PO	PM NBCDS, APG, MD	U	0	0	NONE	500	1Q FY02			250	750	1000
ILS S - Logistics Support of JSGPM System	PO	PM NBCDS, APG, MD	U	0	0	NONE	700	1Q FY02			500	1200	1700
PROT CLTH													
ES S - Research and Evaluation of Second Source Material	MIPR	Various	U	0	255	Mar-01	0	NONE			0	255	0
ES S - Design Block II Glove	MIPR	Various		0	0	NONE	0	NONE			0	0	0
Subtotal II. Support Costs:				661	825		2998				2593	7077	

Project IP5

Page 86 of 109 Pages

Exhibit R-3 (PE 0604384BP)

UNCLASSIFIED

UNCLASSIFIED

**CBDP PROJECT COST ANALYSIS (R-3 Exhibit)**

DATE  
**June 2001**

BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) IP5**

PROJECT

II. Support Costs - Cont

Remarks:

Project IP5

Page 87 of 109 Pages

Exhibit R-3 (PE 0604384BP)

UNCLASSIFIED

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/****BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) IP5**

## PROJECT

**IP5**

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
JPACE													
DTE S - Aircraft Integration Testing	WR	NAWCAD, Patuxent River, MD	U	53	0	NONE	65	Nov-01			300	418	1638
DTE S - Material Testing	WR	NCTRF, Natick, MA	U	35	0	NONE	281	Dec-01			300	616	766
DTE C - Material Testing	MIPR	PMESS, Natick, MA	U	162	30	Dec-00	179	Dec-01			30	401	496
DTE C - Chemical Testing	MIPR	USA DTC, Dugway, UT	U	200	792	Dec-00	395	Dec-01			450	1837	2359
DTE C - Prototype Testing	C/CPFF	Various	C	280	77	Dec-00	140	Dec-01			0	497	497
DTE S - Don/Doff Testing	WR	LANL, Los Alamos, NM	U	40	0	NONE	389	Dec-01			600	1029	1329
DTE S - Fit Testing	SS/CPFF	Anthrotech, Yellow Springs, OH	C	57	0	NONE	50	Dec-01			130	237	294
DTE C - Prototype Test Support	C/CPFF	Research Triangle Institute, Research Triangle, NC	C	0	0	NONE	0	NONE			380	380	760
DTE S - Chemical Tests	MIPR	USA DTC, Dugway, UT	U	0	0	NONE	232	Dec-01			740	972	1347
DTE S - Prototype Test	WR	NAWCAD, Patuxent River, MD	U	0	0	NONE	0	NONE			895	895	1498
OTHT S - JSSED - Block II Competitive Prototype Testing	C/CPFF	Battelle, Columbus, OH	C	0	960	Mar-01	150	Mar-02			450	1560	2082
JSAM													
DTE S - Govt Test Activities	Various	NAVAIR, MD & AFOTEC, NM	U	139	0	NONE	233	Jan-02			0	372	0

Project IP5

Page 88 of 109 Pages

Exhibit R-3 (PE 0604384BP)

UNCLASSIFIED



## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/****BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) IP5**

## PROJECT

**IP5**

III. Test and Evaluation - Cont.	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date	FY2003 Cost	FY2003 Award Date	Cost to Complete	Total Cost	Target Value of Contract
JSGPM													
DTE S - Developmental Testing of JSGPM System	PO	ATEC Falls Church VA, DTC; HRED, APG, MD	U	0	0	NONE	270	Dec-01			500	770	1250
OTE S - Operational Testing of JSGPM System	PO	OTC PAT/IOT&E various locations	U	0	0	NONE	570	Dec-01			4500	5070	8050
PROT CLTH													
DTE S - Dugway, UT Chemical Agent User Wear Test	MIPR	DPG, Dugway, UT	U	850	0	NONE	509	Nov-01			0	1359	0
OTE S - Block II Glove Test	MIPR	Various	U	685	0	NONE	0	NONE			0	685	0
OTHT S - Material Candidate Testing	MIPR	MCSC, Quantico, VA	U	0	450	Mar-01	0	NONE			0	450	0
OTE S - Final Testing of Selected Material	MIPR	Various		0	1802	May -01	0	NONE			0	1802	0
OTE S - Complete Testing for Block I Glove	MIPR	Various		0	312	NONE	0	NONE			0	312	0
Subtotal III. Test and Evaluation:				2501	4423		3463				9275	19662	

Remarks: JSAM - Responsible test organization is the Naval Air Warfare Center in Patuxent River, Maryland.  
Operational test organization is AFOTEC.

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
June 2001

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**IP5**

IV. Management Services	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
JPACE													
PM/MS S - Overall Program Coordination	WR	NAWCAD, Patuxent River, MD	U	186	389	Nov-00	328	Nov-01			200	1103	1428
PM/MS C - Fabrication Oversight and Chemical School Support	MIPR	Various	U	94	35	Dec-00	200	Dec-01			200	529	649
PM/MS S - Air Force, Army, Marine Corps Program Coordination	MIPR	Various	U	224	109	Dec-00	109	Dec-01			220	662	772
PM/MS C - Management Support	C/CPFF	Various	C	0	400	Dec-00	333	Dec-01			320	1053	1352
JSAM													
TD/D S - Conduct Program/Project Documentation	MIPR	Various	U	1013	0	NONE	685	Aug-02			0	1698	0
JSGPM													
PM/MS S - Program Management by Army (Lead Service)	PO	PM NBCDS, SBCCOM, APG, MD	U	0	0	NONE	410	1Q FY02			500	910	1400
PM/MS S - Program Management by Joint Services other than Army	PO	USN, USAF, USMC various locations	U	0	0	NONE	600	1Q FY02			650	1250	1900
PROT CLTH													
PM/MS C - Joint IPT Support	MIPR	MCSC, Quantico, VA	U	386	440	Feb-01	200	Nov-01			0	1026	0

Project IP5

Page 90 of 109 Pages

Exhibit R-3 (PE 0604384BP)

UNCLASSIFIED

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) IP5**

## PROJECT

IV. Management Services - Cont.	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date	FY2003 Cost	FY2003 Award Date	Cost to Complete	Total Cost	Target Value of Contract
ZSBIR													
SBIR - Aggregated from SBIR	PO	HQ AMC, Alexandria, VA	U	0	125	Oct-00	0	NONE			0	125	125
Subtotal IV. Management Services:				1903	1498		2865				2090	8356	

Remarks:

TOTAL PROJECT COST:

10328

7379

20850

20608

59165

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
**June 2001**

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**MB5**

COST (In Thousands)		FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate						
MB5	MEDICAL BIOLOGICAL DEFENSE (EMD)	14945	21277	48818						

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

**Project MB5 MEDICAL BIOLOGICAL DEFENSE (EMD):** This project funds the Engineering and Manufacturing Development (EMD) (acquisition Phase II) of vaccines, drugs, and diagnostic medical devices that are directed against validated biological warfare (BW) agents to include bacteria, viruses, and toxins of biological origin. EMD efforts for medical biological defense product development involve production scale-up studies, consistency manufacturing, and expanded human safety studies. The results of these efforts, and those conducted during the Program Definition and Risk Reduction (PDRR) phase, will be used to submit a biologic license application to the Food and Drug Administration (FDA) for product licensure. Upon FDA licensure the product will transition to full-scale licensed production. Products to be developed under this program include: Recombinant Botulinum, Next Generation Anthrax, Plague, Smallpox, Tularemia, and Multivalent Equine Encephalitis vaccines.

Joint Biological Agent Identification and Diagnostic System (JBAIDS): This project will transition from a Defense Technology Objective (DTO). JBAIDS will identify and quantify biological organisms of operational concern and other pathogens of clinical significance for confirmatory and prognostic purposes. JBAIDS will provide U.S. operating forces with a reusable, portable, and modifiable biological organism identification and diagnostic device capable of simultaneous reliable identification of multiple biological organisms. The system will be configured to support deployed medical personnel with the ability to quickly and reliably identify specific biological organisms from clinical and environmental sources and samples. JBAIDS will be operated throughout the combat zone by medical laboratory personnel qualified by the DoD in compliance with the Clinical Laboratory Improvement Act.

**FY 2000 Accomplishments:**

- 5837 JVAP - Q-fever Vaccine - Initiated clinical assay development and validation for Q-fever vaccine.

# CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT MB5**

**FY 2000 Accomplishments (Cont):**

- 3968 JVAP - Q-fever Vaccine - Initiated facility re-design for Q-fever vaccine.
- 1823 JVAP - Q-fever Vaccine - Initiated Investigational New Drug (IND) preparation for Q-fever vaccine.
- 3317 JVAP - Pentavalent Botulinum Toxoid - Continued clinical and booster studies of Pentavalent Botulinum Toxoid. Began serologies and data analysis of the booster study to validate surrogate marker concept.

**Total** 14945

**FY 2001 Planned Program:**

- 4981 JVAP - Q-fever Vaccine - Continue assay validation and consistency lot production. Current Q-fever vaccine is not a viable product. Alternatives are being assessed to meet DoD requirements.
- 6304 JVAP - Smallpox Vaccine - Begin manufacture consistency lots and conduct stability testing for Smallpox vaccine. Initiate protocol preparation for Phase 2b clinical trial for Smallpox vaccine to satisfy FDA requirement for licensure.
- 2946 JVAP - Smallpox Vaccine (Vaccinia Immune Globulin-VIG component) - Manufacture consistency lots and revalidate Plaque Reduction Neutralization (PRN) assay for VIG. Initiate Biologics License Application (BLA) process.
- 2980 JVAP - Pentavalent Botulinum Toxoid - Continue serologies and data analysis of the Pentavalent Botulinum Toxoid booster study to validate surrogate marker concept.
- 3660 JVAP - Prime Systems Contract - Systems Integration, Earned Value Management System (EVMS), Integrated Digital Environment (IDE) initiatives, special studies (Investigation New Drug stockpile assessment), regulatory compliance and quality assurance.
- 406 SBIR

**Total** 21277

Project MB5

Page 93 of 109 Pages

Exhibit R-2 (PE 0604384BP)

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

## BUDGET ACTIVITY

RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev

## PE NUMBER AND TITLE

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT  
MB5

## FY 2002 Planned Program:

- 6848 JBAIDS - Initiate design improvements of units transitioning from DTO and begin fabrication of Engineering Development Test (EDT) units. Conduct Engineering Development Test.
- 1061 JBAIDS - Initiate submission of Identification Assays to the Food and Drug Administration (FDA) for regulatory approval.
- 650 JBAIDS - Initiate Integrated Logistics Support (ILS) analysis development and technical drawings package requirements. Initiate development of technical manuals.
- 2000 JBAIDS - Design and produce four JBAIDS biological organism Identification Assays (transitioning from DTO).
- 2400 VP-GOCO - Establish Program Management Office for the Vaccine Production Facility. Release RFP and conduct source selection process.
- 20300 JVAP - Smallpox Vaccine - Continue consistency lot manufacture and conduct stability testing for Smallpox vaccine. Initiate Phase 2b clinical trial for Smallpox vaccine.
- 7884 JVAP - Smallpox Vaccine (VIG component) - Develop manufacturing capability for VIG and continue BLA process.
- 3778 JVAP - Pentavalent Botulinum Toxoid - Complete serologies and data analysis of the Pentavalent Botulinum Toxoid booster study and prepare final report for submission to the FDA.
- 3897 JVAP - Prime Systems Contract activities - Systems integration, EVMS, IDE initiatives, special studies, regulatory compliance, and quality assurance.

**Total** 48818

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**MB5**

**B. Other Program Funding Summary:**

	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>							
JX0005 DOD BIOLOGICAL VACCINE PROCUREMENT	66430	52876	56074							

**C. Acquisition Strategy:** JVAP: USD(A&T) ADM (dated 2 May 1995) for the Biological Defense program directs that "The Army shall use the prime contract approach in procuring the required vaccines."

JBAIDS: JBAIDS will transition from medical diagnostic DTO to the acquisition program in FY 2002 and continue advanced development and testing of JBAID EDT units. Additionally, this program will design and produce biological organism Identification Assays and reagents for use in JBAIDS. Technical data for both JBAIDS and its assays will be submitted to FDA for approval.



## UNCLASSIFIED

# CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
**June 2001**

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**MB5**

D. <u>Schedule Profile:</u>	FY 2000				FY 2001				FY 2002			
	1	2	3	4	1	2	3	4	1	2	3	4
JBAID												
Block I Milestone I/II									1Q			
Block I Engineering, Manufacturing, and Development (EMD) Contract Award									1Q	2Q		
Design/Fabricate Engineering Design Test (EDT) Units										2Q		4Q
Critical Design Review										3Q		4Q
Conduct Engineering Design Test (EDT)												4Q
Design/Construct Assays for Production Qualification Test (PQT)										2Q		4Q
VACCINES												




# CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
**June 2001**

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**MB5**

D. <u>Schedule Profile (cont):</u>	FY 2000				FY 2001				FY 2002			
	1	2	3	4	1	2	3	4	1	2	3	4
VACCINES (Cont)												
Smallpox - Phase II Engineering and Manufacturing Development (EMD)						2Q						4Q

## UNCLASSIFIED

**CBDP PROJECT COST ANALYSIS (R-3 Exhibit)**DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) MB5**

## PROJECT

**MB5**

I. Product Development	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
JBAID													
HW C - Design/fabricate EDT units	Various	TBD	U	0	0	NONE	4754	Jan-02			0	4754	0
HW SB - Design/fabricate Identification Assays	Various	TBD	U	0	0	NONE	2000	Jan-02			0	2000	0
HW SB - FDA Submission and Regulatory approval of Assays	Various	TBD	U	0	0	NONE	1000	Jan-02			0	1000	0
SW SB - Modify and Fabricate Test Systems	PO	TBD		0	0	NONE	0	NONE			0	0	0
HW SB - FDA Submission and Regulatory Approval of Equipment	Various	TBD	U	0	0	NONE	0	NONE			0	0	0
VACCINES													
HW S - Vaccine Development - Includes Consistency Lot, Pilot Lot, and Scale-up Production	SS/CPAF	DynPort Vaccine Company, Frederick, MD	C	3023	5773	Nov-00	9747	Nov-01			0	18543	0
Subtotal I. Product Development:				3023	5773		17501				0	26297	

Remarks: Biological Vaccines - Cost to Complete: "Continuing"

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
June 2001

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT  
MB5**

II. Support Costs	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
JBAID													
TD/D SB - Manual Development	Various	TBD	U	0	0	NONE	300	Jan-02			0	300	0
TD/D SB - LSA Development/Technical Drawing Package	Various	TBD	U	0	0	NONE	350	Jan-02			0	350	0
VACCINES													
TD/D S - Vaccine Development - Includes Process Definition, Environmental and FDA Documentation	SS/CPAF	DynPort Vaccine Company, Frederick, MD	C	1468	2805	Nov-00	4735	Nov-01			0	9008	0
Subtotal II. Support Costs:				1468	2805		5385				0	9658	

Remarks: Biological Vaccines - Cost to Complete: "Continuing"

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
**June 2001**

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**MB5**

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
JBAID													
DTE C - Conduct EDT	Various	TBD	U	0	0	NONE	2005	Jan-02			0	2005	0
DTE C - PQT/IOT&E	Various	TBD	U	0	0	NONE	0	NONE			0	0	0
VACCINES													
OTHT SB - Vaccine Development - Includes Phase I/II Clinical and Non-clinical Trials, Tox Studies, Surrogate and Assay Testing	SS/CPAF	DynPort Vaccine Company, Frederick, MD	C	3541	4064	Nov-00	11419	Nov-01			0	19024	0
OTHT SB - Pentavalent Botulinum Toxoid - Booster Study	SS/CPFF	Battelle Memorial Inst., Columbus, OH	C	1343	770	Mar-01	576	Mar-02			0	2689	0
OTHT S - Vaccine Development - Includes Stability and Efficacy Testing	SS/CPAF	DynPort, LLC Reston, VA	C	605	1155	Nov-00	1950	Nov-01			0	3710	0
Subtotal III. Test and Evaluation:				5489	5989		15950				0	27428	

Remarks: Biological Vaccines - Cost to Complete: "Continuing"

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
June 2001

## BUDGET ACTIVITY

RDT&amp;E DEFENSE-WIDE/

BA5 - Engineering and Manufacturing Dev

## PE NUMBER AND TITLE

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT MB5

IV. Management Services	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
JBAID													
PM/MS S - Program Management and Program Manager Support	Various	Joint Program Office for Biological Defense, Falls Church, VA	U	0	0	NONE	150	1Q FY02			0	150	0
VAC PRD FA													
PM/MS S - Program Management and Program Manager Support	Allot	TBD	U	0	0	NONE	2400	NONE			0	2400	0
VACCINES													
PM/MS S - Vaccine Development	C/FP	Camber, Inc., Frederick, MD	C	1062	1462	Feb-01	1535	Feb-02			0	4059	0
PM/MS S - Vaccine Development - Joint Vaccine Acquisition Program - Program Management Office	Various	JVAP, Fort Detrick, MD	U	1513	1451	1Q FY01	1612	1Q FY02			0	4576	0
PM/MS S - Vaccine Development Support	C/FP	SAIC, Frederick, MD	C	330	375	1Q FY01	394	1Q FY02			0	1099	0
PM/MS S - Program Management and Program Manager Support	Various	Joint Program Office for Biological Defense, Falls Church, VA	U	1061	1983	Oct-00	2860	Oct-01			0	5904	0
PM/MS S - Contractor Program Management and System Engineering	Various	Camber Corporation, Falls Church, VA	C	1000	1033	Oct-00	1031	Oct-01			0	3064	0

Project MB5

Page 101 of 109 Pages

Exhibit R-3 (PE 0604384BP)

UNCLASSIFIED

## UNCLASSIFIED

**CBDP PROJECT COST ANALYSIS (R-3 Exhibit)**DATE  
**June 2001**

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**MB5**

IV. Management Services - Cont.	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date	FY2003 Cost	FY2003 Award Date	Cost to Complete	Total Cost	Target Value of Contract
ZSBIR													
SBIR - Aggregated from SBIR	PO	HQ AMC, Alexandria, VA	U	0	406	Oct-00	0	NONE			0	406	406
Subtotal IV. Management Services:				4966	6710		9982				0	21658	

Remarks: Biological Vaccines - Cost to Complete: "Continuing"

TOTAL PROJECT COST:	14946	21277		48818				0	85041	
---------------------	-------	-------	--	-------	--	--	--	---	-------	--

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**MC5**

COST (In Thousands)		FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate						
MC5	MEDICAL CHEMICAL DEFENSE (EMD)	724	1081	1472						

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

**Project MC5 MEDICAL CHEMICAL DEFENSE (EMD):** 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 (EMD) 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. Project funds research and development of safety studies, manufacturing scale up, process validation, drug interaction, performance test and submission of FDA drug licensure application(s).

**FY 2000 Accomplishments:**

- 218 Multichambered Autoinjector - Continued a multi-year stability study and prepared a New Drug Application.
- 456 Pyridostigmine Bromide - Initiated four 2-year studies to validate surrogate markers for human efficacy. (Human ex vivo muscle study, human ex vivo blood study, nonhuman primate ex vivo study, and small animal ex vivo muscle study).
- 50 Skin Exposure Reduction Paste Against Chemical Warfare Agent (SERPACWA, formerly Topical Skin protectant, TSP) - Initiated and completed a user acceptability study.

**Total** 724

## UNCLASSIFIED

## CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
June 2001

## BUDGET ACTIVITY

RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev

## PE NUMBER AND TITLE

0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) PROJECT  
MC5

## FY 2001 Planned Program:

- 296 Pyridostigmine Bromide - Continue four 2-year studies to validate surrogate markers for human efficacy. (Human ex vivo muscle study, human ex vivo blood study, nonhuman primate ex vivo study, and small animal ex vivo muscle study) .
- 137 Pyridostigmine Bromide - Conduct storage and stability testing, and submit support documentation for FDA licensure.
- 212 Multichambered Autoinjector - Submit support documentation for FDA licensure and conduct a Milestone III in-process review.
- 418 SERPACWA - Prepare sample packaging and validate manufacturing procedure.
- 18 SBIR

Total 1081

## FY 2002 Planned Program:

- 140 Pyridostigmine Bromide - Continue storage and stability testing.
- 820 Pyridostigmine Bromide - Conduct FDA required additional studies.
- 512 Multichambered Autoinjector - Conduct FDA required additional studies for licensure.

Total 1472

B. Other Program Funding Summary: N/A



# CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
**June 2001**

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**MC5**

## C. Acquisition Strategy:

Multi Autoinjector	In-house contractor development to FDA licensure, followed by single source procurement.
Pyrido Bromide	In-house development to FDA licensure, followed by single source procurement.
Adv Anticonvuls	In-house development to FDA licensure, followed by single source procurement.
SERPACWA	In-house development to FDA licensure, followed by single source procurement.

## D. Schedule Profile:

	FY 2000				FY 2001				FY 2002			
	1	2	3	4	1	2	3	4	1	2	3	4
MEDCHEM												
Advanced Anticonvulsant - Milestone II											3Q	
Multichambered Autoinjector - Milestone III								4Q				
Multichambered Autoinjector - Conduct Additional FDA Studies									1Q			4Q
Multichambered Autoinjector - Stability Study	1Q											4Q
SERPACWA - Milestone III				4Q								

# CBDP BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE  
**June 2001**

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**MC5**

D. <u>Schedule Profile (cont):</u>	FY 2000				FY 2001				FY 2002			
	1	2	3	4	1	2	3	4	1	2	3	4
MEDCHEM (Cont)												
Pyridostigmine Bromide - Validate Surrogate Markers	1Q									2Q		
Pyridostigmine Bromide - Stability Study	1Q											4Q

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
**June 2001**

## BUDGET ACTIVITY

**RDT&E DEFENSE-WIDE/****BA5 - Engineering and Manufacturing Dev**

## PE NUMBER AND TITLE

**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) MC5**

## PROJECT

**MC5**

I. Product Development	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
<b>MEDCHEM</b>													
HW S - New Drug Application for Multichambered Autoinjector	C/CPFF	Meridian Medical Technologies, Columbia, MD	C	165	0	NONE	0	NONE			0	165	125
HW S - Support Documentation for FDA Licensure of Pyridostigmine Bromide	C/CPFF	EER Inc, Chantilly, VA	C	0	99	1Q FY01	0	NONE			0	99	0
HW S - Sample Packaging and Manufacturing Validation of SERPACWA	C/CPFF	McKesson BioServices, Rockville, MD	C	0	419	1Q FY01	0	NONE			0	419	0
HW S - Support Documentation for FDA Licensure of Multichambered Autoinjector	PO	EER, Inc, Chantilly, VA		0	162	1Q FY01	0	NONE			0	162	0
HW S - MS III IPR for Multichambered Autoinjector	PO	Cambridge Consulting Corp, Reston, VA		0	50	1Q FY01	0	NONE			0	50	0
Subtotal I. Product Development:				165	730		0				0	895	

Remarks:

II. Support Costs: Not applicable

Project MC5

Page 107 of 109 Pages

Exhibit R-3 (PE 0604384BP)

UNCLASSIFIED

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
June 2001

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD)** PROJECT  
**MC5**

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
<b>MEDCHEM</b>													
DTE S - Stability Study for Multichambered Autoinjector	C/CPFF	Meridian Medical Technologies, Columbia, MD	C	53	0	NONE	0	NONE			0	53	98
DTE S - Surrogate validation of Pyridostigmine Bromide	Allot	Walter Reed Army Institute of Research, Silver Spring, MD	U	456	0	NONE	0	NONE			0	456	400
OTE S - User Acceptability Study for SERPACWA	MIPR	AMEDD Center and School, Ft Sam Houston, San Antonio, TX	U	50	0	NONE	0	NONE			0	50	40
DTE S - Pyridostigmine Bromide - Surrogate Validation	Allot	USA Medical Research Institute of Chemical Defense, Edgewood, MD	U	0	295	1Q FY01	820	NONE			0	1115	0
DTE S - FDA Required Studies for Multichambered Autoinjector	C/CPFF	Meridian Medical Technologies, Columbia, MD	C	0	0	NONE	512	1Q FY02			0	512	0
DTE S - Bioequivalence Study for Advanced Anticonvulsant	C/CPFF	TBD	C	0	0	NONE	0	NONE			0	0	0
DTE S - Stability Test for Pyridostigmine Bromide	C/CPFF	Stanford Research International, Palo Alto, CA	C	0	38	1Q FY01	140	1Q FY02			0	178	0

Project MC5

Page 108 of 109 Pages

Exhibit R-3 (PE 0604384BP)

UNCLASSIFIED

## UNCLASSIFIED

## CBDP PROJECT COST ANALYSIS (R-3 Exhibit)

DATE  
June 2001

BUDGET ACTIVITY  
**RDT&E DEFENSE-WIDE/  
 BA5 - Engineering and Manufacturing Dev**

PE NUMBER AND TITLE PROJECT  
**0604384BP CHEMICAL/BIOLOGICAL DEFENSE (EMD) MC5**

III. Test and Evaluation - Cont.	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
Subtotal III. Test and Evaluation:				559	333		1472				0	2364	

Remarks:

IV. Management Services	Contract Method & Type	Performing Activity & Location	US NF CC	Total PYs Cost	FY2001 Cost	FY2001 Award Date	FY2002 Cost	FY2002 Award Date			Cost to Complete	Total Cost	Target Value of Contract
ZSBIR													
SBIR - Aggregated from SBIR	Various	HQ AMC, Alexandria, VA	U	0	18	Oct-00	0	NONE			0	18	18
Subtotal IV. Management Services:				0	18		0				0	18	

Remarks:

TOTAL PROJECT COST:				724	1081		1472				0	3277	
---------------------	--	--	--	-----	------	--	------	--	--	--	---	------	--