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Exhibit R-2, RDT&E Budget Item Justification									Date: February 1999	
APPROPRIATION/BUDGET ACTIVITY RESEARCH, DEVELOPMENT, TEST & EVALUATION, DEFENSE-WIDE, BUDGET ACTIVITY 4					R-1 ITEM NOMENCLATURE PHYSICAL SECURITY EQUIPMENT PE 0603228D8Z					
COST (\$ in Millions)	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	Cost to Complete	Total Cost
Total PE Cost	17.801	25.465	37.107	36.201	36.383	36.729	37.370	38.029	CONTINUING	CONTINUING
Force Protection COTS	1.624	6.065	15.607	14.201						
Tactical Automated Security	1.320	2.300	2.560	1.875						
Weapon Storage Area	2.068	2.400	2.665	3.525						
MDARS-I	2.201									
MDARS-E	1.903	5.500	4.890	5.590						
WSS	1.800	1.800	1.950	1.650						
EDE	0.300	0.900	1.250	1.750						
SPS	0.900	1.200	1.350	1.150						
Locks, Safes, Vaults	1.300	1.100	1.450	1.450						

A. Mission Description and Budget Item Justification. This program is a budget activity level 4 based on the demonstration/ validation activities ongoing within the program. The purpose of this program is to develop physical security equipment (PSE) systems and to safeguard DoD acquisition information for all DoD components, to include Force Protection. This program supports the protection of nuclear weapons, tactical and nuclear weapons systems, DoD personnel and DoD weapon systems. Funding for critical RDT&E security improvements within service channels has fluctuated widely over the years and prompted the consolidation of the Services and former Defense Special Weapons Agency (DSWA) PSE RDT&E funds into this single OSD controlled program element. This program was originally formed by the Congressional consolidation of the three Services and the former DSWA RDT&E PSE budget submissions for FY 1989. The funds are used to provide PSE RDT&E for individual Service and joint PSE requirements. The PSE program is organized so that an ongoing DoD-coordinated Joint Action Group, consisting of Army, Navy, Air Force, and Defense Threat Reduction Agency (DTRA) representatives monitor, direct, and prioritize potential and existing PSE programs. With few exceptions, each Service sponsors RDT&E efforts for technologies and programs, which have multi-service applications. In several cases, applications are unique to only one service. The funds are also employed to evaluate exploratory development of Physical Security Equipment. This program element supports the Army's advanced and engineering development of Interior Detection, Exterior Detection, Security Lighting, Security Barriers and Security Display Units. In a like manner, the program element also supports the Air Force's PSE RDT&E effort in the area of Exterior Surveillance, Entry Control and Airborne Intrusion. Finally, the program supports Navy RDT&E efforts in the areas of Shipboard Security, Waterside Security, Explosive Detection, Locks and anti-compromise and emergency destruction of classified material equipment. Concerns regarding the protection of DoD weapon systems acquisition information at DoD

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RDT&E facilities has led to an expanded role for this Program Element since FY 1995. Beginning with FY 1997, this PE includes funding for Force Protection Commercial-Off-The-Shelf (FP COTS) evaluation and testing, which has received focus since the 1996 Khobar Towers bombing incident. The FP COTS testing applies to all available technologies, which are considered effective for DoD use.

OTHER PROGRAMS

(U) FY 1998 Accomplishments

DELAY-DENIAL (SABER 203) (1.100 million)

- Conduct Saber 203 Initial Operational Test & Evaluation
- Continue Hindering Adversaries with Less-than lethal Technology (HALT) Technological demonstration project
- Conduct detailed design review and demonstration for potential Military/Civilian users

HIGH VALUE ITEM SECURITY (HVISS) PHASE II (RFID) (0.050 million)

- Prepared/released RFID Broad Area Announcement (BAA) for FY99 award
- Continued Concept Exploration

PLATOON EARLY WARNING DEVICE II (PEWD II) (0.435 million)

- Initiated market investigation
- Evaluated candidate NDI/COTS Systems including Air Force TASS to determine requirement shortfalls

TECHNOLOGY BASE (2.800 million)

- Completed and demonstrated prototype hardware for the Advanced Exterior Sensor project, the Millimeter Wave Data Link (Exterior), and the Wireless and Self-Powering Sensor. In addition, continued work on the improved laser diode, miniaturized radio frequency tag, underwater security vehicle with acoustic guidance, sonic denial systems, and an acoustic detection and classification sensor.

(U) FY 1999 Plans

DELAY-DENIAL (SABER 203) (0.500 million)

- Transition SABER 203 to Hinder Adversaries with less than Lethal Technology (HALT) Eye Safe at the Aperture (ESATA)
- Transition Laser Diode Improvements Program from DTRA to USAF

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HIGH VALUE ITEM SECURITY SYSTEM (HVISS) PHASE II (RFID) (0.200 million)

- Prepare/release RFID BAA proposal
- Prepare BTA
- Award BAA

ELECTRONIC TRIP FLARE (0.200 million)

- Conduct MS/MI
- Conduct Concept Exploration
- Prepare/release BAA proposal

PLATOON EARLY WARNING DEVICE II (PEWD II) (0.300 million)

- Complete Market Investigation/TASS determination
- Conduct Technical Feasibility Testing
- Develop Program Management Plan

TECHNOLOGY BASE (3.000 million)

- Complete and demonstrate prototype hardware for the improved laser diode, miniaturized radio frequency tags, the underwater security vehicle with acoustic guidance and the acoustic detection and classification sensor systems. In addition, continue the detection on the move project, the millimeter wave data link (interior), the sonic denial project, and the photoneutron probe for the detection of explosives and nuclear material. If funding is available, initiate a project for the fluorescence detection of explosives, a targeting classifying sensor, and develop a force protection sensor selector.

(U) FY 2000 Plans

DELAY-DENIAL (HINDER ADVERSARIES WITH LESS THAN LETHAL TECHNOLOGY [HALT]) (0.775 million)

- Initiate Laser Diode Improvements qualification, demonstration and test program

HIGH-VALUE ITEM SECURITY SYSTEM (HVISS) PHASE II (RFID) (0.260 million)

- Prepare COEA
- Conduct Technical Feasibility Testing

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<p>ELECTRONIC TRIP FLARE (0.850 million)</p> <ul style="list-style-type: none"> • Prepare/release BAA • Develop draft Specification and RFP components for EMD/Production Contract • Conduct Technical Feasibility Testing <p>PLATOON EARLY WARNING DEVICE II (PEWD II) (0.500 million)</p> <ul style="list-style-type: none"> • Complete Concept Formulation Package • Develop logistics concept • Develop RFP • Develop Milestone I/II IPR Package <p>TECHNOLOGY BASE (3.000 million)</p> <ul style="list-style-type: none"> • Continue the fluorescence detection of explosives project, the Intruder Detection System from an external robotics platform and complete the development of a force protection sensor selector. In addition, initiate projects to evaluate the capability to improve the situational awareness of security personnel through coordinated task execution with robotic sensor systems, improve video motion detection for tactical surveillance sensors, a portable vehicle explosion detection system, as well as a remote explosive detection system. <p>(U) <u>FY 2001 Plans</u></p> <p>DELAY-DENIAL (HINDER ADVERSARIES WITH LESS THAN LETHAL TECHNOLOGY [HALT]) (0.600 million)</p> <ul style="list-style-type: none"> • Transition Laser Countermeasures Study from DTRA and establish EMD program <p>HIGH-VALUE ITEM SECURITY SYSTEM (HVISS) PHASE II (RFID) (0.160 million)</p> <ul style="list-style-type: none"> • Conduct Milestone I/II In-Process Review • Release EMD RFP, conduct EMD Source Selection <p>ELECTRONIC TRIP FLARE (0.750 million)</p> <ul style="list-style-type: none"> • Conduct MS I/II In-Process Review • Release EMD RFP, conduct EMD Source Selection • Conduct Technical Feasibility Testing <p>PLATOON EARLY WARNING DEVICE II (PEWD II) (0.500 million)</p> <ul style="list-style-type: none"> • Conduct MS I/II In-Process Review • Release EMD RFP, conduct EMD Source Selection 	

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<ul style="list-style-type: none"> Conduct Technical Feasibility Testing 								
TECHNOLOGY BASE (3.000 million)								
<ul style="list-style-type: none"> Continue to manage projects under the Security Concepts Development, Advanced Sensors, Mobile Platforms, Advanced Storage and Transportation and Waterside Security programs as defined by the Services. Evaluate Commercial-off-the-shelf (COTS) equipment, to determine the potential to meet the needs of the Services. 								
B. <u>Program Change Summary</u> (\$ million)								
	<u>FY1998</u>	<u>FY1999</u>	<u>FY2000</u>	<u>FY2001</u>	<u>Total</u>			
Previous President's Budget	17.939	31.792	31.727	30.814	<u>Cost</u>	Continuing		
Appropriated Value								
Adjustments to Appropriated Value								
a. Congressionally Directed								
Appropriation Reduction								
b. Congressionally Directed								
Undistributed Reduction								
c. OSD Directed								
Undistributed Reduction	(0.138)	(6.327)	(0.620)	(0.613)				
Current Budget Submit/President's Budget	17.801	25.465	37.107	36.201		Continuing		
Change Summary Explanation:								
Funding:	N/A							
Schedule:	N/A							
Technical:	N/A							
C. <u>Other Program Funding Summary</u>								
	<u>FY1998</u>	<u>FY1999</u>	<u>FY2000</u>	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>	<u>FY2004</u>	<u>Compl</u>
<u>Cost</u>								
Procurement Line P-1 No(s) - USAF	0.300	1.000	1.000	1.000	1.000	1.000	TBD	TBD
Milcon Project No(s) - N/A								
Related RDT&E: - N/A								
D. <u>Acquisition Strategy:</u> Delay-Denial (SABER 203) and Hinder Adversaries with less than Lethal Technology (HALT) will utilize existing DoD or DOE contract vehicles								

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E. <u>Schedule Profile</u>					
Fiscal Year actual and planned events:					
	FY1998	FY1999	FY2000	FY2001	
Acquisition Milestones					
SABER 203		MS III			
HALT		MS II	MSIII		
HVISS				MSI/II	
PEWD II				MSI/II	
ETF				MSI/II	
Engineering Milestones					
N/A					
T&E Milestones					
SABER 203	IOT&E				
HALT		QT&E			
HVISS			TFT		
PEWD II				TFT	
ETF				TFT	
Contract Milestones					
HVISS		BAA Awd			
ETF			BAA Awd		

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Exhibit R-2a, RDT&E Project Justification									Date:		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER					
RDT&E, DEFENSE WIDE, BUDGET ACTIVITY 4			PE 0603228D8Z			FORCE PROTECTION (FP) COTS EQUIPMENT EVALUATION AND INTEGRATION					
Cost (\$ in Millions)	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY2005	Cost to Complete	Total Cost	
FP COTS	1.624	6.065	15.607	14.201					CONT	CONT	
RDT&E Articles Qty											
<p>A. <u>Mission Description and Budget Item Justification.</u> The DoD Force Protection Commercial-Off-The-Shelf (COTS) evaluation and integration project identifies and evaluates commercial systems and equipment that have potential for solving critical Force Protection problems. Equipment is tested in laboratory and operational settings to determine its suitability for a wide range of Force Protection applications. These include applications in nuclear security, aircraft flight lines, personnel facilities and resource protection. Products that are identified as having military value, are made available for use by incorporating them into existing or new programs. Current emphasis is on products that provide day/night all-weather detection/surveillance, sniper location and non-lethal defensive capability. Planned testing will be accomplished at the established DoD Test Facility at Eglin AFB FL.</p> <p>(U) <u>FY 1998 Accomplishments</u></p> <ul style="list-style-type: none"> • Published User's Guide of Commercially available Non Developmental Items for Force Protection uses • Updated methodology and published evaluation and test schedule for FY 1999 <p>(U) <u>FY 1999 Plans</u></p> <ul style="list-style-type: none"> • Perform scheduled FY 1999 test and evaluations of selected COTS equipment/systems • Conduct Force Protection Equipment Demonstration (3-6 May, 1999 at MCB Quantico, VA) • Publish appropriate reports • Update a User's Guide of Commercially available Non Developmental Items for Force Protection uses • Update methodology and publish test and evaluation schedule for FY 2000 <p>(U) <u>FY 2000 Plans</u></p> <ul style="list-style-type: none"> • Perform scheduled FY 2000 test and evaluations of selected COTS equipment/systems • Publish appropriate reports. 											

Exhibit R-2a, RDT&E Project Justification	Date: February 1999			
<ul style="list-style-type: none">• Update the User's Guide of Commercially available Non Developmental Items for Force Protection uses• Update methodology and publish test and evaluation schedule for FY 2001				
(U) <u>FY 2001 Plans</u>				
<ul style="list-style-type: none">• Perform scheduled FY 2001 test and evaluations of selected COTS equipment/systems• Conduct Force Protection Equipment Demonstration• Publish appropriate reports• Update the User's Guide of Commercially available Non Developmental Items for Force Protection uses• Update methodology and publish test and evaluation schedule for FY 2002				
B. Other Program Funding Summary				
C. Acquisition Strategy: Identify available government contracts or commence action to competitively awarded delivery order contracts.				
D. Schedule Profile:				
Fiscal Year actual and planned events:				
	FY 1998	FY 1999	FY 2000	FY2001
Acquisition Milestones				
Engineering Milestones				
T&E Milestones				
Contract Milestones				

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Exhibit R-3 Cost Analysis (page 1)										Date: February 1999		
RDT&E, DEFENSE-WIDE BUDGET ACTIVITY 4				PROGRAM ELEMENT PE 0603228D8Z						FORCE PROTECTION COTS		
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development						2.900		2.900				
Ancillary Hardware Development						0.500		0.500				
Systems Engineering						0.400		0.400				
Licenses												
Tooling												
GFE						0.250		0.250				
Award Fees												
Subtotal Product Development						4.050		4.050		CONT	CONT	
Remarks:												
Development Support						0.250		0.250				
Software Development												
Training Development						0.250		0.250				
Integrated Logistics Support												
Configuration Management						0.050		0.050				
Technical Data						0.150		0.150				
GFE												
Subtotal Support						0.700		0.700		CONT	CONT	
Remarks												

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Exhibit R-3 Cost Analysis (page 2)									Date: February 1999			
RDT&E, DEFENSE-WIDE BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z						FORCE PROTECTION COTS			
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation				1.353		1.250		1.250				
Operational Test & Evaluation			1.366	3.500		8.532		7.217				
Tooling												
GFE												
Subtotal T&E			1.366	4.853		9.782		8.467		CONT	CONT	
Remarks												
Contractor Engineering Support			0.158	0.804		0.685		0.616				
Government Engineering Support			0.080	0.348		0.340		0.318				
Program Management Support												
Program Management Personnel												
Travel			0.020	0.060		0.050		0.050				
Labor (Research Personnel)												
Miscellaneous												
Subtotal Management			0.258	1.212		1.075		0.984		CONT	CONT	
Remarks												
Total Cost			1.624	6.065	[1]	15.607	[1]	14.201	[1]			
Remarks [1] On going program to demonstrate and document availability of COTS equipment for force protection missions												

Exhibit R-2a, RDT&E Project Justification									Date:	
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER				
RDT&E, DEFENSE WIDE, BUDGET ACTIVITY 4			PE 0603228D8Z			TACTICAL AUTOMATED SECURITY SYSTEM (TASS)				
Cost (\$ in Millions)	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY2005	Cost to Complete	Total Cost
TASS	1.320	2.300	2.560	1.875					CONT	CONT
RDT&E Articles Qty										
<p>A. <u>Mission Description and Budget Item Justification.</u> The Tactical Automated Security System (TASS) originally an Air Force and now DoD program is an ongoing effort to develop an integrated portable relocatable security system to provide Force Protection capability for personnel, dispersed assets, fixed base facilities and Air Base Ground Defense applications. The system includes remote sensing, alarm monitoring through fiber optic and wireless data communications and remote assessment through the use day/night all weather Thermal Imaging systems. A Common Operational Picture/Common Tactical Picture (COP/CTP) system to support commanders at all levels from a local site or base through to the regional Area Of Responsibility will be developed to provide an expanded command and control capability.</p> <p>(U) <u>FY 1998 Accomplishments</u></p> <ul style="list-style-type: none"> • Prepared System for FOT&E • Completed site surveys for Korean Deployments • Evaluated four new sensors for TASS applications • Developed concept for TASS application for Force Protector/Force Provider Exercise • Briefed TASS program to the Army - issued delivery orders Army (ARCENT Kuwait) equipment <p>(U) <u>FY 1999 Plans</u></p> <ul style="list-style-type: none"> • Perform Technology Enhancement ECP's, investigate and integrate potential Army/Industry chemical biological detectors for TASS • Develop and demonstrate a Common Operation, Common Tactical Picture (COP/CTP) basic capability system integrating mapping and TASS input <p>(U) <u>FY 2000 Plans</u></p>										

Exhibit R-2a, RDT&E Project Justification									Date:		
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<ul style="list-style-type: none"> • Commence DII/COE compliance evaluation for future TASS equipment. • Continue integration of new detection and surveillance equipment. • COP/CTP - Integrate and demonstrate multi-level security investigation and Sensor Guard Intel work station. • Investigate JWARN and Portal Shield interoperability. • Begin Redundant Annunciate Priority A (Nuclear) capability implementation • Investigate Micro-Sensor Technology integration studies • Transition from DTRA and initiate Passive Millimeter Wave Sensor EMD effort 											
(U) <u>FY 2001 Plans</u>											
<ul style="list-style-type: none"> • Begin Micro-Sensor EMD project • COP/CTP - Develop interface with JWARN system. Incorporate analyst support and vulnerability assessment tools and base status cell capability. • Complete Passive Millimeter Wave Sensor (PMWS) EMD effort 											
B. Other Program Funding Summary											
		<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	To	Total
Procurement		11.650	15.500	21.300	20.600	11.700	10.000	8.500	8.500	<u>Complete</u>	<u>Cost</u>
										TBD	TBD
C. Acquisition Strategy: One (1) large, two (2) Small Business competitively awarded contracts with technology enhancement delivery order available.											
D. Schedule Profile:											
Fiscal Year actual and planned events:											
		FY1998	FY1999	FY2000	FY2001						
-	FOT&E	■									
-	P3I		■								
-	COP/CTP (Basic)		■								
-	DII/COE Certification			■							
-	COP/CTP (Upgrade I)			■							
-	Redundant Annunciator Integration			■							
-	Micro-Sensor Integration				■						
-	COP/CTP (Upgrade II)					■					
-	PMWS EMD						■				

Exhibit R-2a, RDT&E Project Justification	Date: February 1999
<p>Acquisition Milestones</p> <p>Engineering Milestones</p> <p>T&E Milestones</p> <p>Contract Milestones</p>	

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Exhibit R-3 Cost Analysis (page 1)									Date: February 1999			
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z						TACTICAL AUTOMATED SECURITY SYSTEM (TASS)			
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	CPFF	HQ/ESC Hanscom	0.231	0.625	2/99	0.278	12/99	0.268	1/01			
Ancillary Hardware Development	CPFF	HQ/ESC	0.020	0.080	2/99	0.082	12/99	0.027	1/01			
Systems Engineering	CPFF	HQ/ESC	0.254	0.327	[1]	0.408	[1]	0.363	[1]			
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development			0.505	1.032		0.768		0.658		CONT	CONT	
Remarks: [1] Numerous delivery orders awarded throughout the fiscal year												
Development Support	CPFF	HQ/ESC	0.211	0.235	11/98	0.330	11/99	0.228	11/00			
Software Development	CPFF	HQ/ESC	0.013	0.142	12/98	0.246	12/99	0.159	11/00			
Training Development	CPFF	HQ/ESC	0.026	0.017	1/99	0.033	2/00	0.027	11/00			
Integrated Logistics Support	CPFF	HQ/ESC	0.028	0.024	11/98	0.033	11/99	0.023	11/00			
Configuration Management	CPFF	HQ/ESC	0.022	0.031	11/98	0.040	11/99	0.021	11/00			
Technical Data	CPFF	HQ/ESC	0.013	0.017	11/98	0.022	11/99	0.023	11/00			
GFE												
Subtotal Support			0.313	0.466		0.704		0.481		CONT	CONT	
Remarks												

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Exhibit R-3 Cost Analysis (page 2)										Date: February 1999		
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z							TACTICAL AUTOMATED SECURITY SYSTEM (TASS)		
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	AFMC	Eglin AFB	0.087	0.169	12/98	0.265	12/99	0.245	12/00			
Operational Test & Evaluation	AFTEC	Eglin AFB	0.073	0.081	12/98	0.066	12/99	0.028	12/00			
Tooling												
GFE												
Subtotal T&E			0.160	0.250		0.331		0.273		CONT	CONT	
Remarks												
Contractor Engineering Support	FFP/DO	HQ/ESC	0.185	0.380	[2]	0.536	[2]	0.277	[2]			
Government Engineering Support	MIPR	DOE SNL	0.048	0.046	1/99	0.057	1/00	0.066	1/01			
Program Management Support	PO	HQ/ESC	0.066	0.095	[2]	0.124	[2]	0.089	[2]			
Program Management Personnel												
Travel		HQ/ESC	0.043	0.031	[2]	0.040	[2]	0.031	[2]			
Labor (Research Personnel)												
Miscellaneous												
Subtotal Management			0.342	0.552		0.757		0.463		CONT	CONT	
Remarks [2] Various documents and award dates throughout the year												
Total Cost			1.320	2.300		2.560		1.875				
Remarks												

Exhibit R-2a, RDT&E Project Justification									Date: February 1999	
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT		PROJECT NAME AND NUMBER					
RDT&E, DEFENSE WIDE, BUDGET ACTIVITY 4			PE 0603228D8Z		WEAPONS STORAGE AREA (WSA) UPGRADES					
Cost (\$ in Millions)	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY2005	Cost to Complete	Total Cost
WSA	2.068	2.400	2.665	3.525					CONT	CONT
RDT&E Articles Qty										
<p>A. <u>Mission Description and Budget Item Justification.</u> Develop and deploy, equipment that will provide new capability or upgrade the existing WSA Security mission. This activity will be accomplished through the employment of Advanced Entry Control Systems (AECS) for automatic access control and command and control of WSA intrusion detection and surveillance equipment. Develop the all weather Advanced Exterior Sensor (AES) for a wide area detection and surveillance capability. Integrate and deploy suitable commercial exterior Video Motion Detection (VMD) systems for WSA applications.</p> <p>(U) <u>FY 1998 Accomplishments</u></p> <ul style="list-style-type: none"> • Initiate project to incorporate Video Storage capability into the IDS mission of AECS • Conduct AES proof-of concept demonstration (May 98) • Commence AES Risk Reduction phase planning <p>(U) <u>FY 1999 Plans</u></p> <ul style="list-style-type: none"> • Initiate requirements analysis and market survey for the Base Gate Access Control System (BGACS) • AES - Initiate Risk Reduction Phase • Evaluate commercial systems for wide area detection and surveillance (WADS) • Initiate VMD integration program <p>(U) <u>FY 2000 Plans</u></p> <ul style="list-style-type: none"> • Develop BGACS Architecture, purchase, integrate Demo System • Continue AES Risk Reduction Phase and demonstrate prototype <p>(U) <u>FY 2001 Plans</u></p> <ul style="list-style-type: none"> • BGACS Demonstration and start field trial • Initiate AES EMD Phase 										

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(U) <u>FY 2001 Plans</u>										
<ul style="list-style-type: none"> • BGACS Demonstration and start field trial • Initiate AES EMD Phase 										
B. Other Program Funding Summary										
	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	To Complete	Total Cost
Procurement	1.361	4.900	3.500	4.000	5.100	7.000	6.000	6.000	TBD	TBD
C. Acquisition Strategy: Utilize existing DoD or DoE contract vehicles										
D. Schedule Profile:										
Fiscal Year actual and planned events:										
	FY1998	FY1999	FY2000	FY2001						
- Initiate VMD Eval	■									
- Integrate VMD		■								
- AES Risk Reduction Phase		■	■							
- AES EMD Phase				■						
- WADS COTS Evaluation				■						
- Design BGACS		■								
- Build and Demo BGACS			■							
- BGACS Field Trial				■						
Acquisition Milestones										
Engineering Milestones										
T&E Milestones										
Contract Milestones										

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Exhibit R-3 Cost Analysis (page 1)										Date: February 1999		
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z							WEAPONS STORAGE AREA (WSA)		
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	CPFF	HQ/ESC Hanscom	0.363	0.382	2/99	0.209	12/99	0.366	1/01			
Ancillary Hardware Development	CPFF	HQ/ESC	0.029	0.105	2/99	0.063	12/99	0.043	1/01			
Systems Engineering	CPFF	HQ/ESC	0.400	0.378	[1]	0.482	[1]	0.493	[1]			
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development			0.792	0.865		0.754		0.902		CONT	CONT	
Remarks: [1] Numerous delivery orders awarded throughout the fiscal year												
Development Support	CPFF	HQ/ESC	0.330	0.290	11/98	0.246	11/99	0.318	11/00			
Software Development	CPFF	HQ/ESC	0.115	0.164	12/98	0.189	12/99	0.199	11/00			
Training Development	CPFF	HQ/ESC	0.046	0.021	1/99	0.026	2/00	0.043	11/00			
Integrated Logistics Support	CPFF	HQ/ESC	0.039	0.032	11/98	0.026	11/99	0.035	11/00			
Configuration Management	CPFF	HQ/ESC	0.037	0.042	11/98	0.032	11/99	0.026	11/00			
Technical Data	CPFF	HQ/ESC	0.023	0.015	11/98	0.013	11/99	0.035	11/00			
GFE												
Subtotal Support			0.590	0.564		0.532		0.656		CONT	CONT	
Remarks												

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Exhibit R-3 Cost Analysis (page 2)										Date: February 1999		
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z							WEAPONS STORAGE AREA (WSA)		
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	AFMC	Eglin AFB	0.138	0.209	12/98	0.210	12/99	0.324	12/00			
Operational Test & Evaluation	AFTEC	Eglin AFB	0.114	0.145	12/98	0.127	12/99	0.220	12/00			
Tooling												
GFE												
Subtotal T&E			0.252	0.354		0.337		0.544		CONT	CONT	
Remarks												
Contractor Engineering Support	FFP/DO	HQ/ESC	0.295	0.200	[2]	0.391	[2]	0.545	[2]			
Government Engineering Support	MIPR	DOE SNL	0.076	0.250	1/99	0.514	1/00	0.630	1/01			
Program Management Support	PO	HQ/ESC	0.021	0.146	[2]	0.095	[2]	0.195	[2]			
Program Management Personnel												
Travel		HQ/ESC	0.042	0.021	[2]	0.042	[2]	0.053	[2]			
Labor (Research Personnel)												
Miscellaneous												
Subtotal Management			0.434	0.617		1.042		1.423		CONT	CONT	
Remarks [2] Various documents and award dates throughout the year												
Total Cost			2.068	2.400		2.665		3.525				
Remarks												

Exhibit R-2a, RDT&E Project Justification									Date:	
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER				
RDT&E, DEFENSE WIDE, BUDGET ACTIVITY 4			PE 0603228D8Z			MOBILE DETECTION ASSESSMENT RESPONSE SYSTEM - EXTERIOR (MDARS-E)				
Cost (\$ in Millions)	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY2005	Cost to Complete	Total Cost
MDARS-E	1.903	5.500	4.890	5.590					CONT	CONT
RDT&E Articles Qty										
<p>A. <u>Mission Description and Budget Item Justification.</u> The Mobile Detection Assessment Response System - Exterior (MDARS-E) is intended to support the physical security of fixed installations including warehouses, large storage facilities and ammunition facilities. In addition to security, the system will also support inventories and track movement or disturbance of critical inventory items.</p> <p>(U) <u>FY 1998 Accomplishments</u></p> <ul style="list-style-type: none"> • Initiated development of Command and Control Capabilities for MDARS-E Vehicle into the MDARS Console (MRHA) • Completed second design iteration and prototype the Integrated Lock Device (ILD) • Install ILD at MDARS-E Final Demonstration <p>(U) <u>FY 1999 Plans</u></p> <ul style="list-style-type: none"> • Prepare Test TFT Plans/Test Procedures • Conduct Developmental Testing • Update MS I/II IPR Documentation • Conduct final demonstration of Broad Area Announcement (BAA) contract MDARS-E system capabilities <p>(U) <u>FY 2000 Plans</u></p> <ul style="list-style-type: none"> • Conduct Technical Feasibility Testing (TFT) • Conduct System Functional Review • Conduct Milestone I/II In-Process Review • Prepare/release EMD RFP • Conduct EMD Source Selection • Prepare/award EMD contract 										

Exhibit R-2a, RDT&E Project Justification		Date: February 1999			
(U) <u>FY 2001 Plans</u>					
• Conduct Engineering Development					
• Conduct MS III					
B. Other Program Funding Summary					
C. Acquisition Strategy					
D. Schedule Profile:					
Fiscal Year actual and planned events:					
	FY1998	FY1999	FY2000	FY2001	
Acquisition Milestones					
MDARS-E			MSI/II	MSIII	
Engineering Milestones					
T&E Milestones					
MDARS-E			TFT		
Contract Milestones					

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Exhibit R-3 Cost Analysis (page 1)									Date: February 1999			
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z						MOBILE DETECTION ASSESSMENT RESPONSE SYS - EXTERIOR (MDARS-E)			
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development			0.650	1.509		2.600		2.661				
Ancillary Hardware Development												
Systems Engineering			0.650	0.500		0.600		0.606				
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development			1.300	2.009	2/3Q	3.200	2/3Q	3.267	2/3Q	CONT	CONT	
Remarks:												
Development Support			0.106	0.611		0.505		0.528				
Software Development			0.263	0.680		0.545		0.423				
Training Development								0.051				
Integrated Logistics Support				0.500		0.090		0.180				
Configuration Management				0.031		0.023		0.045				
Technical Data			0.140	0.464		0.337		0.513				
GFE												
Subtotal Support			0.509	2.286	2/3Q	1.500	2/3Q	1.740	2/3Q	CONT	CONT	
Remarks												

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Exhibit R-3 Cost Analysis (page 2)									Date: February 1999			
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z						MOBILE DETECTION ASSESSMENT RESPONSE SYSTEM - EXTERIOR (MDARS-E)			
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation				0.415		0.100		0.241				
Operational Test & Evaluation								0.161				
Tooling												
GFE												
Subtotal T&E				0.415	2/3Q	0.100		0.402	2/3Q	CONT	CONT	
Remarks												
Contractor Engineering Support				0.300								
Government Engineering Support				0.100				0.092				
Program Management Support			0.004	0.006		0.006		0.007				
Program Management Personnel			0.080	0.272		0.072		0.068				
Travel			0.010	0.112		0.012		0.014				
Labor (Research Personnel)												
Miscellaneous												
Subtotal Management			0.094	0.790	2/3Q	0.090	2/3Q	0.181	2/3Q	CONT	CONT	
Remarks												
Total Cost			1.903	5.500		4.890		5.590				
Remarks												

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Exhibit R-2a, RDT&E Project Justification									Date:		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER					
RDT&E, DEFENSE WIDE, BUDGET ACTIVITY 4			PE 0603228D8Z			WATERSIDE SECURITY SYSTEM (WSS)					
Cost (\$ in Millions)	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY2005	Cost to Complete	Total Cost	
WSS	1.800	1.800	1.950	1.650					CONT	CONT	
RDT&E Articles Qty											
<p>A. <u>Mission Description and Budget Item Justification.</u> The Space and Naval Warfare Center (SPAWARCEN), San Diego is the Center of Excellence for waterfront security. Responsibilities include fixed and transportable waterside security systems, swimmer detection sonars, and commercial-off-the-shelf (COTS) equipment test and evaluation, which focuses on waterfront force protection.</p> <p>(U) <u>FY 1998 Accomplishments</u></p> <ul style="list-style-type: none"> Supported three Waterside Security System (WSS) sites: SUBASE Bangor, SUBASE Kings Bay and ASU Bahrain Upgraded WSS systems to PC based architecture (Kings Bay/Bangor) Coordinated with US Coast Guard on security technology applications for San Diego Bay Completed development of new Radar Track Processor Conducted site survey for the installation of a WSS at Portsmouth Naval Ship Yard Validated transportable system configuration <p>(U) <u>FY 1999 Plans</u></p> <ul style="list-style-type: none"> Manage the Waterside Security System and Shipboard Physical Security programs Support installed WSS hardware at field sites Transfer the Intrusion Detection Distributed Array (IDDA) from advanced research to the WSS program Integrate IDDA into the WSS Establish a website to provide technical information to potential users Investigate barriers and swimmer nets <p>(U) <u>FY 2000 Plans</u></p> <ul style="list-style-type: none"> Manage the Waterside Security System and Shipboard Physical Security programs Test, evaluate and integrate COTS technology, e.g. barriers, underwater cameras 											

Exhibit R-2a, RDT&E Project Justification	Date: February 1999																									
<p>(U) <u>FY 2001 Plans</u></p> <ul style="list-style-type: none">• Test, evaluate COTS technologies for the Waterfront environment• Test an integrated WSS, which includes barriers and underwater assessment of potential targets• Complete the development of a transportable WSS• Manage the Waterside Security System and Shipboard Physical Security programs• Support installed WSS hardware at field sites <p>B. Other Program Funding Summary</p> <p>C. Acquisition Strategy</p> <p>D. Schedule Profile:</p> <p>Fiscal Year actual and planned events:</p> <table><thead><tr><th></th><th>FY1998</th><th>FY1999</th><th>FY2000</th><th>FY2001</th></tr></thead><tbody><tr><td>Acquisition Milestones</td><td></td><td></td><td></td><td></td></tr><tr><td>Engineering Milestones</td><td></td><td></td><td></td><td></td></tr><tr><td>T&E Milestones</td><td></td><td></td><td></td><td></td></tr><tr><td>Contract Milestones</td><td></td><td></td><td></td><td></td></tr></tbody></table>			FY1998	FY1999	FY2000	FY2001	Acquisition Milestones					Engineering Milestones					T&E Milestones					Contract Milestones				
	FY1998	FY1999	FY2000	FY2001																						
Acquisition Milestones																										
Engineering Milestones																										
T&E Milestones																										
Contract Milestones																										

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Exhibit R-3 Cost Analysis (page 1)									Date: February 1999			
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z						WATERSIDE SECURITY SYSTEM (WSS)			
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development			0.400	0.400		0.400		0.353				
Ancillary Hardware Development												
Systems Engineering			0.160	0.160		0.172		0.147				
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development			0.560	0.560		0.572		0.500		CONT	CONT	
Remarks:												
Development Support			0.060	0.060		0.046		0.029				
Software Development			0.100	0.100		0.114		0.086				
Quality Insurance			0.020	0.020		0.020		0.014				
Integrated Logistics Support			0.050	0.050		0.057		0.046				
Configuration Management			0.085	0.085		0.091		0.070				
Technical Data			0.045	0.045		0.057		0.057				
RAM			0.060	0.060		0.051		0.046				
Subtotal Support			0.420	0.420		0.436		0.348		CONT	CONT	
Remarks												

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Exhibit R-3 Cost Analysis (page 2)										Date: February 1999		
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4				PROGRAM ELEMENT PE 0603228D8Z						WATERSIDE SECURITY SYSTEM (WSS)		
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation			0.190	0.190		0.230		0.177				
Operational Test & Evaluation			0.200	0.200		0.230		0.236				
Tooling												
GFE												
Subtotal T&E			0.390	0.390		0.460		0.413		CONT	CONT	
Remarks												
Contractor Engineering Support												
Government Engineering Support												
Program Management Support			0.360	0.360		0.401		0.353				
Program Management Personnel												
Travel			0.070	0.070		0.081		0.036				
Labor (Research Personnel)												
Miscellaneous												
Subtotal Management			0.430	0.430		0.482		0.389		CONT	CONT	
Remarks												
Total Cost			1.800	1.800		1.950		1.650				
Remarks												

Exhibit R-2a, RDT&E Project Justification									Date:		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER					
RDTE&E, DEFENSE WIDE, BUDGET ACTIVITY 4			PE 0603228D8Z			EXPLOSIVE DETECTION EQUIPMENT (EDE)					
Cost (\$ in Millions)	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY2005	Cost to Complete	Total Cost	
EDE	0.300	0.900	1.250	1.750					CONT	CONT	
RDT&E Articles Qty											
<p>A. <u>Mission Description and Budget Item Justification.</u> Test and evaluate promising commercial-off-the-shelf technologies.</p> <p>(U) <u>FY 1998 Accomplishments</u></p> <ul style="list-style-type: none"> • Submitted draft Joint Services Operational Requirement (JSOR) • Developed recommendations for detecting explosives in concrete trucks • Conducted evaluation of CDS 2002 Mobile Search, remote-sensing device • Conducted market survey • Completed long range plans for explosive detection equipment (EDE) • Wrote EDE health and safety guidance document <p>(U) <u>FY 1999 Plans</u></p> <ul style="list-style-type: none"> • Develop guidance for selecting EDE for differing operational environments • Finalize JSOR • Complete evaluation of equipment Mobile Search vehicle • Identify promising technologies unique to EDE • Set up and maintain an information source for explosive detection equipment <p>(U) <u>FY 2000 Plans</u></p> <ul style="list-style-type: none"> • Transition a highly sensitive and robust detection system for finding explosives in air and water by biochemical signal amplifications • Conduct product evaluations, as necessary • Evaluate remote explosive detection equipment • Conduct an Explosive Detection Symposium 											

Exhibit R-2a, RDT&E Project Justification	Date: February 1999					
<p>(U) FY 2001 Plans</p> <ul style="list-style-type: none">• Provide an Ultra Violet Fluorescence Explosive Detection System• Continue product evaluations• Publish technical data sheets, guides and information relating to explosive detection equipment <p>B. Other Program Funding Summary</p> <p>C. Acquisition Strategy</p> <p>D. Schedule Profile:</p> <p>Fiscal Year actual and planned events:</p> <table><tr><td></td><td>FY1998</td><td>FY1999</td><td>FY2000</td><td>FY2001</td></tr></table> <p>Acquisition Milestones</p> <p>Engineering Milestones</p> <p>T&E Milestones</p> <p>Contract Milestones</p>			FY1998	FY1999	FY2000	FY2001
	FY1998	FY1999	FY2000	FY2001		

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Exhibit R-3 Cost Analysis (page 1)									Date: February 1999			
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z						EXPLOSIVE DETECTION EQUIPMENT (EDE)			
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development				0.130		0.187		0.465				
Ancillary Hardware Development												
Systems Engineering				0.010		0.037		0.037				
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development				0.140		0.224		0.502		CONT	CONT	
Remarks:												
Development Support				0.020		0.031		0.030				
Software Development												
Quality Insurance				0.015		0.025		0.058				
Integrated Logistics Support				0.040		0.050		0.053				
Configuration Management				0.010		0.025		0.058				
Technical Data				0.050		0.125		0.350				
RAM				0.010		0.019		0.058				
Subtotal Support				0.145		0.275		0.607		CONT	CONT	
Remarks												

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Exhibit R-3 Cost Analysis (page 2)									Date: February 1999			
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z						EXPLOSIVE DETECTION EQUIPMENT (EDE)			
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation				0.200		0.376		0.233				
Operational Test & Evaluation				0.150		0.187		0.175				
Tooling												
GFE												
Subtotal T&E				0.350		0.563		0.408		CONT	CONT	
Remarks												
Contractor Engineering Support												
Government Engineering Support												
Program Management Support			0.100	0.125		0.063		0.059				
Program Management Personnel												
Travel			0.025	0.100		0.094		0.087				
Labor (Research Personnel)												
Miscellaneous			0.175	0.040		0.031		0.087				
Subtotal Management			0.300	0.265		0.188		0.233		CONT	CONT	
Remarks												
Total Cost			0.300	0.900		1.250		1.750				
Remarks												

Exhibit R-2a, RDT&E Project Justification									Date: February 1999	
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT		PROJECT NAME AND NUMBER					
RDT&E, DEFENSE WIDE, BUDGET ACTIVITY 4			PE 0603228D8Z		SHIPBOARD PHYSICAL SECURITY (SPS)					
Cost (\$ in Millions)	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY2005	Cost to Complete	Total Cost
SPS	0.900	1.200	1.350	1.150					CONT	CONT
RDT&E Articles Qty										
<p>A. <u>Mission Description and Budget Item Justification.</u> The Shipboard Physical Security (SPS) program consists of integrated detection sensors, alarms, information displays, security force equipment, and procedures to provide defense in-depth against a wide range of external and internal shipboard threats.</p> <p>(U) <u>FY 1998 Accomplishments</u></p> <ul style="list-style-type: none"> • Completed phase I and II of the Smart Ship integrated security system project installation • Completed all Smart Ship installation drawings • Upgraded the Smart Ship security installation to Windows NT • Continued the upgrade of the Shipboard mock-up facility at Crane, IN • Defined minimum security system configuration for each class of ship • Defined the requirements and identified equipment for an Emergency Security Response Force Team • Tested and evaluated emerging security related technologies and where applicable, such technologies were integrated into the SPS baseline configuration <p>(U) <u>FY 1999 Plans</u></p> <ul style="list-style-type: none"> • Merge program management of SPS with Waterside Security System (WSS) • Continue evaluation of COTS technologies for shipboard applications • Support plans to install an operational test bed at SUBASE San Diego <p>(U) <u>FY 2000 Plans</u></p> <ul style="list-style-type: none"> • Continue the evaluation of COTS technologies for shipboard applications • Support the installation of an operational test bed at SUBASE San Diego • Support plans to install waterfront physical security hardware at NAVSTA Norfolk and/or SUBASE Norfolk 										

Exhibit R-2a, RDT&E Project Justification	Date: February 1999					
<p>(U) <u>FY 2001 Plans</u></p> <ul style="list-style-type: none">• Continue evaluation of COTS technologies for shipboard applications• Support operational test bed at SUBASE San Diego• Support installation at Norfolk <p>B. Other Program Funding Summary</p> <p>C. Acquisition Strategy</p> <p>D. Schedule Profile:</p> <p>Fiscal Year actual and planned events:</p> <table><thead><tr><th></th><th>FY1998</th><th>FY1999</th><th>FY2000</th><th>FY2001</th></tr></thead></table> <p>Acquisition Milestones</p> <p>Engineering Milestones</p> <p>T&E Milestones</p> <p>Contract Milestones</p>			FY1998	FY1999	FY2000	FY2001
	FY1998	FY1999	FY2000	FY2001		

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Exhibit R-3 Cost Analysis (page 1)									Date: February 1999			
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z						SHIPBOARD PHYSICAL SECURITY (SPS)			
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development			0.165	0.230		0.245		0.211				
Ancillary Hardware Development												
Systems Engineering			0.120	0.150		0.160		0.153				
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development			0.285	0.380		0.405		0.364		CONT	CONT	
Remarks:												
Development Support			0.040	0.060		0.061		0.051				
Software Development			0.050	0.070		0.092		0.064				
Quality Insurance			0.010	0.015		0.013		0.014				
Integrated Logistics Support			0.030	0.050		0.049		0.038				
Configuration Management			0.030	0.040		0.049		0.038				
Technical Data			0.025	0.030		0.037		0.032				
RAM			0.040	0.060		0.061		0.051				
Subtotal Support			0.225	0.325		0.362		0.288		CONT	CONT	
Remarks												

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Exhibit R-3 Cost Analysis (page 2)									Date: February 1999			
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z						SHIPBOARD PHYSICAL SECURITY (SPS)			
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation			0.130	0.150		0.172		0.165				
Operational Test & Evaluation			0.140	0.160		0.190		0.180				
Tooling												
GFE												
Subtotal T&E			0.270	0.310		0.362		0.345		CONT	CONT	
Remarks												
Contractor Engineering Support												
Government Engineering Support												
Program Management Support			0.120	0.185		0.184		0.153				
Program Management Personnel												
Travel						0.025						
Labor (Research Personnel)												
Miscellaneous						0.012						
Subtotal Management			0.120	0.185		0.221		0.153		CONT	CONT	
Remarks												
Total Cost			0.900	1.200		1.350		1.150				
Remarks												

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Exhibit R-2a, RDT&E Project Justification									Date: February 1999	
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER				
RDT&E, DEFENSE WIDE, BUDGET ACTIVITY 4			PE 0603228D8Z			DoD LOCKS, SAFES, VAULTS				
Cost (\$ in Millions)	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY2005	Cost to Complete	Total Cost
LOCKS	1.300	1.100	1.450	1.450					CONT	CONT
RDT&E Articles Qty										
<p>A. <u>Mission Description and Budget Item Justification.</u> The DoD Lock Program identifies, tests and evaluates commercial hardware for suitability and compliance with security requirements and tools and technology that may reduce the delay time afforded by present day security systems mandated by current regulations. Develop CD-ROM based security technology information program; test program for security seals; alternative high security locking system for AA&E applications; and entry system for "locked out" high security magazine doors.</p> <p>(U) <u>FY 1998 Accomplishments</u></p> <ul style="list-style-type: none"> • Conducted lightweight concrete forced entry and explosive test • Completed testing of X-ray equipment • Conducted operational and mechanical testing of the Internal Locking Device • Completed the Tamper Resistant Seals Guide • Completed the Federal Specification, FF-S-2738, for Tamper Resistant Seals • Published Beta version of CD-ROM for destruction of National Security Information • Published "Security Facts Newsletter" <p>(U) <u>FY 1999 Plans</u></p> <ul style="list-style-type: none"> • Develop repairable methods of entry for approved equipment • Write guide for storage of controlled substances • Provide engineering and consultation • Continue support for MDARS program • Publish final guidance on destruction of National Security Information • Develop anchoring methods for security equipment aboard ships 										

Exhibit R-2a, RDT&E Project Justification	Date: February 1999				
<p>(U) <u>FY 2000 Plans</u></p> <ul style="list-style-type: none"> • Update DoD Lock Program Hotline • Develop AA&E shipping container lock • Publish specification for GS approved key storage container • Update technical data sheets on security hardware <p>(U) <u>FY 2001 Plans</u></p> <ul style="list-style-type: none"> • Update or publish guide specifications for security equipment (as needed) • Update existing and publish new repairable methods of entry • Conduct a Security Seals Symposium • Update National Security Information destruction methods and guidance <p>B. Other Program Funding Summary</p> <p>C. Acquisition Strategy</p> <p>D. Schedule Profile:</p> <p>Fiscal Year actual and planned events:</p> <table style="margin-left: 200px;"> <tr> <td>FY1998</td> <td>FY1999</td> <td>FY2000</td> <td>FY2001</td> </tr> </table> <p>Acquisition Milestones</p> <p>Engineering Milestones</p> <p>T&E Milestones</p> <p>Contract Milestones</p>		FY1998	FY1999	FY2000	FY2001
FY1998	FY1999	FY2000	FY2001		

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Exhibit R-3 Cost Analysis (page 1)									Date: February 1999			
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z						DoD LOCKS, SAFES, VAULTS			
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development			0.400	0.393		0.556		0.614				
Ancillary Hardware Development												
Systems Engineering			0.175	0.137		0.217		0.211				
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development			0.575	0.530		0.773		0.815		CONT	CONT	
Remarks:												
Development Support			0.025	0.025		0.030		0.040				
Software Development			0.060	0.042		0.080		0.082				
Quality Insurance			0.025	0.025		0.030		0.040				
Integrated Logistics Support			0.040	0.034		0.047		0.060				
Configuration Management			0.060	0.042		0.047		0.060				
Technical Data			0.200	0.150		0.118		0.113				
RAM			0.050	0.043		0.059		0.071				
Subtotal Support			0.460	0.361		0.411		0.466		CONT	CONT	
Remarks												

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Exhibit R-3 Cost Analysis (page 2)										Date: February 1999		
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4				PROGRAM ELEMENT PE 0603228D8Z						DoD LOCKS, SAFES, VAULTS		
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation			0.150	0.116		0.121		0.084				
Operational Test & Evaluation			0.075	0.061		0.121		0.025				
Tooling												
GFE												
Subtotal T&E			0.225	0.177		0.242		0.109		CONT	CONT	
Remarks												
Contractor Engineering Support												
Government Engineering Support												
Program Management Support			0.040	0.032		0.024		0.060				
Program Management Personnel												
Travel												
Labor (Research Personnel)												
Miscellaneous												
Subtotal Management			0.040	0.032		0.024		0.060		CONT	CONT	
Remarks												
Total Cost			1.300	1.100		1.450		1.450				
Remarks												