

OSD RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

May 2009

APPROPRIATION/ BUDGET ACTIVITY RDTE, Defense Wide BA# 4		PE NUMBER AND TITLE 0603161D8Z - Nuclear & Conventional Phys Sec Equip						
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate					
P162 Nuclear & Conventional Phys Sec Equip	48.239	49.882	36.019					

A. Mission Description and Budget Item Justification:

The purpose of this program is the advanced engineering development of conventional and nuclear physical security equipment (PSE) systems for all DoD components. This program supports the protection of tactical, fixed, and nuclear weapons systems, DoD personnel and DoD facilities. The funds are used to provide PSE RDT&E for continuing and evolving individual Service and joint PSE requirements that provide capability in the areas of force protection and tactical security equipment; robotic security systems integration; waterside security systems; explosive detection equipment; locks, safes and vaults; commercial-off-the-shelf (COTS) testing; and nuclear weapons security. Many RDT&E efforts arising from this PE will transition to PE 604161D8Z for system demonstration and validation. The PSE program is organized so that representatives from the Army, Navy, Air Force, and Defense Threat Reduction Agency (DTRA) monitor, direct and prioritize potential and existing PSE programs through the auspices of the Physical Security Equipment Action Group (PSEAG) and the Security Policy Verification Committee (SPVC). With few exceptions, each Service sponsors RDT&E efforts for technologies and programs that have multi-Service application. This program element supports: 1) the Army's PSE RDT&E efforts in the areas of Interior and Exterior Detection, Security Lighting, Security Barriers and Security Display Units; 2) the Air Force's PSE RDT&E efforts in the areas of Exterior Detection/Surveillance, Entry Control, Delay/Denial, Tactical Systems and Airborne Intrusion; 3) the Navy's PSE RDT&E efforts in the areas of Waterside Security, Explosive Detection, and improved technology for Locks, Safes and Vaults; and 4) DTRA's PSE RDT&E efforts that enhance the security of Navy and Air Force nuclear assets. This PE also funds Force Protection Commercial-Off-The-Shelf (FP COTS) evaluation and testing, which has received additional focus since the 1996 Khobar Towers terrorist bombing incident. The FP COTS testing applies to all available technologies that are considered effective for DoD physical security use.

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<u>B. Program Change Summary</u>	FY 2008	FY 2009	FY 2010	
Previous President's Budget (FY 2008/2009)	49.131	38.758	39.913	
Current BES/President's Budget (FY 2010)	48.239	49.882	36.019	
Total Adjustments	-0.892	11.124	-3.894	
Congressional Program Reductions				
Congressional Rescissions		-0.276		
Congressional Increases		11.400		
Reprogrammings				
SBIR/STTR Transfer	-0.797			
Other	-0.095		-3.894	

The PB 2010 submission accommodates the maturation of PSE developmental items from advanced engineering development (BA #4) to system development and demonstration (BA #5). PE 604161D8Z identifies the offset.

C. Other Program Funding Summary: Not applicable for this item.

D. Acquisition Strategy: Not applicable for this item.

E. Performance Metrics:

FY	Strategic Goals Supported	Existing Baseline	Planned Performance Improvement / Requirement Goal	Actual Performance Improvement	Planned Performance Metric / Methods of Measurement	Actual Performance Metric / Methods of Measurement
08						

Comment:

The program performance metrics are established/approved through the DoD Physical Security Equipment Action Group (PSEAG) and the Security Policy Verification Committee (SPVC). The cost, schedule and technical progress of each project is reviewed at quarterly PSEAG and SPVC meetings. Performance variances are addressed and corrective action is implemented as necessary.

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COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate					
P162 Nuclear & Conventional Phys Sec Equip	48.239	49.882	36.019					

A. Mission Description and Budget Item Justification:

The purpose of this program is the advanced engineering development of conventional and nuclear physical security equipment (PSE) systems for all DoD components. This program supports the protection of tactical, fixed, and nuclear weapons systems, DoD personnel and DoD facilities. The funds are used to provide PSE RDT&E for continuing and evolving individual Service and joint PSE requirements that provide capability in the areas of force protection and tactical security equipment; robotic security systems integration; waterside security systems; explosive detection equipment; locks, safes and vaults; commercial-off-the-shelf (COTS) testing; and nuclear weapons security. Many RDT&E efforts arising from this PE will transition to PE 604161D8Z for system demonstration and validation. The PSE program is organized so that representatives from the Army, Navy, Air Force, and Defense Threat Reduction Agency (DTRA) monitor, direct and prioritize potential and existing PSE programs through the auspices of the Physical Security Equipment Action Group (PSEAG) and the Security Policy Verification Committee (SPVC). With few exceptions, each Service sponsors RDT&E efforts for technologies and programs that have multi-Service application. This program element supports: 1) the Army's PSE RDT&E efforts in the areas of Interior and Exterior Detection, Security Lighting, Security Barriers and Security Display Units; 2) the Air Force's PSE RDT&E efforts in the areas of Exterior Detection/Surveillance, Entry Control, Delay/Denial, Tactical Systems and Airborne Intrusion; 3) the Navy's PSE RDT&E efforts in the areas of Waterside Security, Explosive Detection, and improved technology for Locks, Safes and Vaults; and 4) DTRA's PSE RDT&E efforts that enhance the security of Navy and Air Force nuclear assets. This PE also funds Force Protection Commercial-Off-The-Shelf (FP COTS) evaluation and testing, which has received additional focus since the 1996 Khobar Towers terrorist bombing incident. The FP COTS testing applies to all available technologies that are considered effective for DoD physical security use.

B. Accomplishments/Planned Program:

<u>Accomplishments/Planned Program Title:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
Force Protection/Tactical Security Equipment (FP/TSE):	18.832	16.083	12.659

FY 2008 Accomplishments:

- Began Light Kit, Motion Detection (LKMD) Prototype Design, Fabrication, and Integration of 40 prototype systems.
- Developed an enhanced Command and Control Display Element (CCDE) for Physical Security Systems.
- Developed the software to support the Common Operational Picture.
- Conducted Combined Test Force Evaluation of Phase IV development of the Remote Detection and Tracking System (RDTS).
- Continued to integrate Identify Friend or Foe (IFF) with radar detection systems.
- Continued to seek a solution for a automated installation access control system maintenance and sustainment.
- Continued to seed an appropriate interface between an automated installation access control system and a database management systems.
- Completed Light Kit, Motion Detection (LKMD) product qualification testing (PQT1).
- Initiated the critical design review (CDR) for the LKMD.
- Evaluated two COTS Protected Distribution Systems (PDS) against forced entry.
- Continued to manage, develop, evaluate, and test Detection/Assessment/Delay/Denial products.

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APPROPRIATION/ BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT				
RDTE, Defense Wide BA# 4	0603161D8Z - Nuclear & Conventional Phys Sec Equip	P162				
<p>- Continued to manage sensor and assessment product developments and tests.</p> <p>- Continued to research technological advances within industry; at DARPA; DoD, DoE, and University Labs; etc., that have PSE utility.</p> <p>- Continued to prepare operational systems improvement plans; develop technology roadmaps, and update system architecture.</p> <p>- Executed a congressional add to continue the development of the Intelligent Design Exploration effort.</p> <p>- Executed a congressional add to develop an Integrated Base Defense Operation Planning Process.</p> <p>FY 2009 Plans:</p> <ul style="list-style-type: none"> - Develop a Trip Wire Sensor. - Develop an improved active infrared detection system. - Complete LKMD PQT2. - Continue spiral development of the Aircraft Self-Protection System (ASPSS). - Continue spiral development of the Tactical Automated Security System (TASS). - Continue spiral development of automated base access control systems. - Continue to manage, develop, evaluate, and test Detection/Assessment/Delay/Denial products. - Continue to manage sensor and assessment product developments and tests. - Continue to research technological advances within industry; at DARPA; DoD, DoE, and University Labs; etc., that have PSE utility. - Continue to prepare operational systems improvement plans; develop technology roadmaps, and update system architecture. - Execute a congressional add that continues the development of the Intelligent Design Exploration effort. <p>FY 2010 Plans:</p> <ul style="list-style-type: none"> - Conduct LKMD early user appraisals (EUA). - Approve Milestone Decision C for full rate production (FRP) of the LKMD. - Approve the Aircraft Self-Protection Security System (ASPSS) as a fly-away system for USAF security forces. - Continue to manage, develop, evaluate, and test Detection/Assessment/Delay/Denial products. - Continue to manage sensor and assessment product developments and tests. - Continue to research technological advances within industry; at DARPA; DoD, DoE, and University Labs; etc., that have PSE utility. - Continue to prepare operational systems improvement plans; develop technology roadmaps, and update system architecture. 						
<u>Accomplishments/Planned Program Title:</u>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;"><u>FY 2008</u></td> <td style="width: 25%; text-align: center;"><u>FY 2009</u></td> <td style="width: 25%; text-align: center;"><u>FY 2010</u></td> <td style="width: 25%;"></td> </tr> </table>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	
<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>				

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APPROPRIATION/ BUDGET ACTIVITY RDTE, Defense Wide BA# 4	PE NUMBER AND TITLE 0603161D8Z - Nuclear & Conventional Phys Sec Equip			PROJECT P162
Robotic Security Systems Integration (RSSI):	5.810	11.630	1.000	

FY 2008 Accomplishments:

- Continued to integrate remote weapon systems with robotic platforms.
- Completed the Force Protection Aerial Surveillance System (JFASS) web-based training and simulation certification.
- Transitioned FPASS web-based Trainer and system to USAF.
- Continued the development of networked remotely operated weapons.
- Continued to develop, test, evaluate, and modify Multi-robot Operator Control Unit/Unmanned Aerial Vehicle (MOCU/UAV) interface.
- Continued to manage, develop, evaluate, and test Detection/Assessment/Delay/Denial products.
- Continued to research technological advances within industry; at DARPA; DoD, DoE, and University Labs; etc., that have PSE utility.
- Continued to test, develop, and integrate equipment to improve robotic integration capability.
- Executed a congressional add to continue the development of the Digital Network Centric Remotely Operated Weapon System.
- Executed a congressional add to continue the development of the Integrated High Activity Response System.

FY 2009 Plans:

- Conduct a live-fire demonstration of remotely operated weapon systems (ROWS).
- Collaborate on Human Presence sensor integration and testing on robotic platform in exterior environment to refine hardware and algorithms.
- Demonstrate Networked Remotely Operated Weapon System (NROWS) detecting and tracking multiple targets under various control scenarios.
- Continue to manage, develop, evaluate, and test Detection/Assessment/Delay/Denial products.
- Continue to manage sensor and assessment product developments and tests.
- Continue to prepare operational systems improvement plans; develop technology roadmaps, and update system architecture.
- Continue to test, develop, and integrate equipment to improve security robotic integration capability.
- Develop a (NROWS) detecting and tracking multiple targets under various control scenarios.
- Execute a congressional add that supports the Camp Guernsey Joint Training and Experimentation Center.

FY 2010 Plans:

- Study the integration of robotic systems in nuclear physical security efforts.
- Continue to manage, develop, evaluate, and test Detection/Assessment/Delay/Denial products.
- Continue to manage sensor and assessment product developments and tests.
- Continue to prepare operational systems improvement plans; develop technology roadmaps, and update system architecture.

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- Continue to test, develop, and integrate equipment to improve security robotic integration capability.

<u>Accomplishments/Planned Program Title:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	
Waterside Security System (WSS):	3.250	3.290	1.550	

FY 2008 Accomplishments:

- Continued to explore opportunities to develop a viable non-lethal means to neutralize swimmer threats.
- Further developed brassboard WSS prototypes transitioned from concept development.
- Initiated the redesign of existing radar track processor.
- Continued to develop and integrate a prediction tool into the AN/WQX-2 ADCAP (advanced capability) processor.
- Began the development of a passive sonar with enhanced diver detection classification and localization (DCL) and engagement capability.
- Supported an Expeditionary Waterside Security - JCTD by integrating the Tactical Integration Sensor (TIS) with the Tactical Automated Security System (TASS).
- Demonstrated connectivity from the Integrated Swimmer Defense (ISD) system to the Tactically Integrated Sensors (TIS).
- Redirected integration efforts into an Integrated Swimmer Defense effort that provides a swimmer interface with the Joint Force Protection Advanced Security System Joint Capabilities Technical Demonstration (JFPASS JCTD).
- Continued to develop an overwater detection capability for the Remote Detection and Tracking Sensor (RDTS).
- Examined the feasibility of fusing data from sonar systems which have more than one sonar head.
- Conducted a study to get a better understanding of the source of sonar nuisance alerts.
- Continued to manage, develop, evaluate, and test Detection/Assessment/Delay/Denial products.
- Continued to manage sensor and assessment product developments and tests.
- Continued to research technological advances within industry; at DARPA; DoD, DoE, and University Labs; etc., that have Physical Security Equipment (PSE) utility.
- Continued to prepare operational systems improvement plans; develop technology roadmaps, and update system architecture.
- Continued to test, develop, and integrate equipment to improve security and access to facilities.

FY 2009 Plans:

- Continue to develop integrated anti-swimmer defense and detection capability.
- Continue to improve algorithms that provide target analysis of waterborne threat.
- Continue the development of a passive sonar with enhanced diver detection classification and localization (DCL) and engagement capability.
- Continue to manage, develop, evaluate, and test Detection/Assessment/Delay/Denial products.

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- Continue to manage sensor and assessment product developments and tests.
- Continue to research technological advances within industry; at DARPA; DoD, DoE, and University Labs; etc., that have PSE utility.
- Continue to prepare operational systems improvement plans; develop technology roadmaps, and update system architecture.
- Continue to test, develop, and integrate equipment to improve security and access to facilities.

FY 2010 Plans:

- Develop single sonar system that works in the active and passive modes.
- Continue to manage, develop, evaluate, and test Detection/Assessment/Delay/Denial products.
- Continue to manage sensor and assessment product developments and tests.
- Continue to research technological advances within industry; at DARPA; DoD, DoE, and University Labs; etc., that have PSE utility.
- Continue to prepare operational systems improvement plans; develop technology roadmaps, and update system architecture.
- Continue to test, develop, and integrate equipment to improve security and access to facilities.

<u>Accomplishments/Planned Program Title:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	
Explosive Detection Equipment (EDE):	6.394	4.300	2.750	

FY 2008 Accomplishments:

- Continued to invest in the development of a viable technology to provide a stand off explosive detection capability against Improvised Explosive Devices (IEDs).
- Added a capability for R/SEDS to detect obscurants material that may shield the detection of explosives.
- Conducted comparative testing of commercial and developmental explosive detection devices.
- Conducted operational testing and evaluation (OT&E) of R/SEDS.
- Determined the feasibility of using Computed Tomography (CT) X-Ray technology to detect explosives.
- Continued the development of a long range TeraHetz (THz) explosive detection capability.
- Continued the development test and evaluation of mobile vehicle x-ray systems.
- Provided the DoD Military Working Dog (MWD) School with a plan for comparative testing of MWDs against Trace Detectors.
- Continued to refine the capability of Remote/Standoff Explosive Detection System (R/SEDS) to specifically identify types of explosives.
- Continued to seek a CT Scan algorithm for explosive detection.
- Awarded a contract to develop a representative prototype of a field-ruggedized, handheld, battery powered, THz spectrometer for use in military applications.
- Continued to research technological advances within industry; at DARPA; DoD, DoE, and University Labs; etc., that have PSE/EDE utility.
- Continued to prepare operational systems improvement plans; develop technology roadmaps, and update system architecture.

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- Continued to test, develop, and integrate equipment to improve security and access to facilities.

FY 2009 Plans:

- Develop a phosphor plate detector for a Computed Tomography (CT) Explosive Scanner.
- Upgrade and test the CT Scanner algorithms.
- Develop a 650 gigahertz (GHz) source for teacher imaging.
- Continue to explore TeraHertz technology in academia and the National Labs.
- Continue to research technological advances within industry; at DARPA; DoD, DoE, and University Labs; etc., that have PSE/EDE utility.
- Continue to prepare operational systems improvement plans; develop technology roadmaps, and update system architecture.
- Continue to test, develop, and integrate equipment to improve security and access to facilities.
- Continue to manage, develop, evaluate and test explosive detection products and systems.
- Execute a congressional add to develop a Terahertz High-Resolution Portable Explosives Detector.

FY 2010 Plans:

- Complete testing of handheld trace and bulk explosive detection systems.
- Develop and test XD4 prototypes.
- Continue to research technological advances within industry; at DARPA; DoD, DoE, and University Labs; etc., that have PSE/EDE utility.
- Continue to prepare operational systems improvement plans; develop technology roadmaps, and update system architecture.
- Continue to test, develop, and integrate equipment to improve security and access to facilities.
- Continue to manage, develop, evaluate and test explosive detection products and systems.

<u>Accomplishments/Planned Program Title:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
Locks, Safes, Vaults:	1.731	1.750	4.760

FY 2008 Accomplishments:

- Incorporated ILD design improvements that will increase operational capability and improve resistance against forced entry.
- Integrated and automated locking systems into other support systems.
- Began OT&E of Storage Magazine door redesign.
- Developed, prototyped and tested DoD/GSA shipboard security containers.
- Planned and executed the 2008 Seals Symposium.

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- Integrated the Internal Locking Device (ILD) identity verification capability software.
- Continued to manage, develop, evaluate, and test Delay/Denial products.
- Continued to research technological advances within industry; at DARPA; DoD, DoE, and University Labs; etc., that have PSE utility.
- Continued to prepare operational systems improvement plans; develop technology roadmaps, and update system architecture.
- Continued to test, develop, and integrate equipment to improve security of facilities.

FY 2009 Plans:

- Begin Low Rate Initial Production (LRIP) of redesigned storage magazine doors.
- Coordinate and support the installation of redesigned storage magazine doors.
- Continue field support program.
- Conduct force and surreptitious entry testing of Protected Distribution System lockboxes and manhole cover locks.
- Continue to develop ILD with biometrics/identity verification capability.
- Continue to manage, develop, evaluate, and test Delay/Denial products.
- Continue to research technological advances within industry; at DARPA; DoD, DoE, and University Labs; etc., that have PSE utility.
- Continue to prepare operational systems improvement plans; develop technology roadmaps, and update system architecture.
- Continue to test, develop, and integrate equipment to improve security of facilities.

FY 2010 Plans:

- Assess magazine structure vulnerability and upgrade the structure design.
- Integrate ILDs with Class 5 vault doors.
- Continue to manage, develop, evaluate, and test Delay/Denial products.
- Continue to research technological advances within industry; at DARPA; DoD, DoE, and University Labs; etc., that have PSE utility.
- Continue to prepare operational systems improvement plans; develop technology roadmaps, and update system architecture.
- Continue to test, develop, and integrate equipment to improve security of facilities.

<u>Accomplishments/Planned Program Title:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	
Nuclear Weapon Physical Security:	9.994	10.579	11.100	

FY 2008 Accomplishments:

- Continued to develop a fully functioning, interactive, 3D view client workstation for the Joint Conflict and Tactical Simulation (JCATS) software.

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- Continued to develop systems to prevent unauthorized access to submarines while located at pier side and in dry dock.
- Continued to enhance the Navy's Marine Mammal System (MMS) by further development of the Limpet Mine Detection capability and the Optimizing the Vigilance of the MMS.
- Developed a technical solution that provides the ability to remotely visually assess (RVA) alarms at remote critical facilities.
- Continued to assess alternative solutions for a risk management tool that uses modeling and simulation software.
- Continued to build algorithms that model terrorist attacks against critical resources.
- Continued developmental testing of modeling and simulation software.
- Continued to fabricate access denial system prototypes.
- Continued to manage, develop, evaluate, and test Detection/Assessment/Delay/Denial products.
- Continued to manage sensor and assessment product developments and tests.
- Continued to research technological advances within industry; at DARPA; DoD, DoE, and University Labs; etc., that have PSE utility.
- Continued to prepare operational systems improvement plans; develop technology roadmaps, and update system architecture.
- Continued to test, develop, and integrate equipment to improve security and access to facilities.

FY 2009 Plans:

- Conduct JCATS operational assessment and acceptance testing.
- Release JCATS to the user community.
- Continue to enhance AVERT software as a possible solution for a risk management tool.
- Examine the feasibility of using voice over internet protocol (VoIP) to support RVA communications requirements.
- Continue testing high explosives against re-enforced concrete panels and testing mechanical couplers at high strain rates.
- Develop a risk management tool for nuclear weapons physical security.
- Support the retrofit of Storage Magazines.
- Continue to adapt weapons intercept technology to provide protection of nuclear weapons facilities.
- Continue to test and evaluate access denial systems.
- Continue to manage, develop, evaluate, and test Detection/Assessment/Delay/Denial products.
- Continue to manage sensor and assessment product developments and tests.
- Continue to research technological advances within industry; at DARPA; DoD, DoE, and University Labs; etc., that have PSE utility.
- Continue to prepare operational systems improvement plans; develop technology roadmaps, and update system architecture.
- Continue to test, develop, and integrate equipment to improve security and access to facilities.

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FY 2010 Plans:

- Add a 3-D view to the JCATS after action review tools in order to better understand the JCATS simulation results.
- Solve Virtual Presence Extended Detection communications concerns for a more robust extended detection system.
- Conduct cost/benefit analysis fo alternative designs for reinforced concrete panels.
- Continue to adapt weapons intercept technology to provide protection of nuclear weapons facilities.
- Continue to test and evaluate access denial systems.
- Continue to manage, develop, evaluate, and test Detection/Assessment/Delay/Denial products.
- Continue to manage sensor and assessment product developments and tests.
- Continue to research technological advances within industry; at DARPA; DoD, DoE, and University Labs; etc., that have PSE utility.
- Continue to prepare operational systems improvement plans; develop technology roadmaps, and update system architecture.
- Continue to test, develop, and integrate equipment to improve security and access to facilities.

<u>Accomplishments/Planned Program Title:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
Commercial-Off-The-Shelf (COTS) Testing:	2.228	2.250	2.200

FY 2008 Accomplishments:

- Continued to seek near-term (commercial) solutions for immediate force protection needs.
- Conducted qualification testing of the MicroTrack Buried Cable Sensor, the OminTrax Buried Cable Sensor and interior sensors.
- Continued the environmental and human health assessment of COTS Oleroresin Capsicum (OC) pepper spray conister inserts for the TigerLight.
- Continued to seek near-term (commercial) solutions for immediate force protection needs.
- Planned FPED VII.
- Test the Laser Breakbeam Sensor.
- Continue qualification testing of various commercial intrusion detection sensors.
- Continued to manage, develop, evaluate, and test Detection/Assessment/Delay/Denial products.
- Continued to manage sensor and assessment product developments and tests.
- Continued to test, develop, and integrate equipment to improve security and access to facilities.

FY 2009 Plans:

- Execute FPED VII.

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- Continue qualification testing of various commercial intrusion detection sensors.
- Continue to seek near-term (commercial) solutions for immediate force protection needs.
- Continue to manage, develop, evaluate, and test Detection/Assessment/Delay/Denial products.
- Continue to manage sensor and assessment product developments and tests.
- Continue to test, develop, and integrate equipment to improve security and access to facilities.

FY 2010 Plans:

- Continue to manage, develop, evaluate, and test Detection/Assessment/Delay/Denial products.
- Continue to manage sensor and assessment product developments and tests.
- Continue to test, develop, and integrate equipment to improve security and access to facilities.

C. Other Program Funding Summary: Not applicable for this item.

D. Acquisition Strategy: Not applicable for this item.

E. Major Performers: Not applicable for this item.

OSD RDT&E COST ANALYSIS (R3)

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT				
4 - Advanced Component Development and Prototypes (ACDP)			0603161D8Z - Nuclear & Conventional Phys Sec Equip							P162				
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date					
Force Protection/Tactical Security Equipment (FP/TSE)	MIPR	PM-FPS (USA), Ft. Belvoir, VA	4900	4200	1Q	5000	1Q	5000	1-2Q					
Force Protection/Tactical Security Equipment	MIPR	642nd ELSS (USAF), Hanscom AFB, MA	4290	4200	1Q	5000	1Q	6864	1-2Q					
Force Protection/Tactical Security Equipment	MIPR	DTRA, Ft. Belvoir, VA	700	1750	1Q	1985	1Q							
Congressional Add for INDEX (FP/TSE)	MIPR	NAVSEA Crane, IN	1600	5500	1Q	3600								
Robotic Security Systems Integration (RSSI)	MIPR	DTRA, Ft. Belvoir, VA	397											
Robotic Security Systems Integration (RSSI)	MIPR	PM-FPS (USA), Ft. Belvoir, VA	3	1020	1Q	2030	1Q	1000	1-2Q					
Congressional Add for INHARS (RSSI)	MIPR	AFRL, Tyndall AFB, VA	2600	4000	2Q									
Congressional Add for Pacific Tech (RSSI)		SPAWAR, San Diego, CA				1000	1-3Q							
Congressional Add for Digital ROWS (RSSI)	MIPR	PM-FPS (USA), Ft. Belvoir, VA	1000	1000	2Q									
Congressional Add for Camp Guernsey (RSSI)	MIPR	6000				6000	1-3Q							
Congressional Add for the Integrated Base Defense Operation Planning Process	MIPR	AFRL, Tyndall AFB, VA		1000	2Q									
Waterside Security	MIPR	NSWC, Crane, IN	1600	3250	1Q	3290	1Q							
Waterside Security	MIPR	NUWC, Newport, RI						1550	1-2Q					
Congressional Add for Terahertz	MIPR	NAVEODTECHDIV, Indian Head, MD				800								
Explosive Detection Equipment	MIPR	NAVEODTECHDIV, Indian Head, MD	3210	5500	1Q	3500	1-2Q	2750	1-2Q					
Explosive Detection Equipment	MIPR	PM-FPS (USA), Ft. Belvoir, VA	315				1Q							

OSD RDT&E COST ANALYSIS (R3)

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT				
4 - Advanced Component Development and Prototypes (ACDP)			0603161D8Z - Nuclear & Conventional Phys Sec Equip							P162				
Explosive Detection Equipment	MIPR	DTRA, Ft. Belvoir, VA	800											
Locks, Safes, and Vaults	MIPR	NFESC, Port Hueneme, CA	1383	1700	1Q	1750	1Q	3500	1-2Q					
Nuclear Weapons Physical Security	MIPR	DTRA, Ft. Belvoir, VA	4500	9327	1Q	9822	1Q	10000	1-2Q					
Nuclear Weapons Physical Security	MIPR	SSP, Arlington, VA	3750											
Subtotal:			31048	42447		43777		30664						
II. Support Costs														
	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date					
Subtotal:														
III. Test And Evaluation														
	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date					
Explosive Detection Equipment	MIPR	642nd ELSS, Hanscom AFB, MA	870											
COTS Testing	MIPR	PM-FPS (USA), Ft. Belvoir, VA	2247	2228	1Q	2250	1Q	2200	1-3Q					
Subtotal:			3117	2228		2250		2200						
IV. Management Services														
	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date					
Force Protection/Tactical Security Equipment	MIPR	642nd ELSS (USAF) , Hanscom AFB, MA	2047	1839	1-2Q	2400	1-2Q	1800	1-2Q					
Force Protection/Tactical Security Equipment		DATSD (Nuclear Matters)	1400	600	1-3Q									
Waterside Security	MIPR	NAVSEA (Navy) Arlington, VA	517	500	1-2Q	600	1-2Q	500	1-2Q					
Locks, Seals, and Vaults	MIPR	NFESC (Navy), Port Hueneme, CA	390	350	1-2Q	455	1-2Q	355	1-2Q					
Nuclear Weapons Physical Security	MIPR	SPAWAR, Charleston, SC	345	275	1-2Q	400	1-2Q	500	1-2Q					

OSD RDT&E COST ANALYSIS (R3)

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes (ACDP)	PE NUMBER AND TITLE 0603161D8Z - Nuclear & Conventional Phys Sec Equip	PROJECT P162								
Subtotal:	4699	3564	3855	3155						
Project Total Cost:	38864	48239	49882	36019						

Schedule Profile (R4 Exhibit)

May 2009

BUDGET ACTIVITY

4 - Advanced Component Development and Prototypes (ACDP)

PE NUMBER AND TITLE

0603161D8Z - Nuclear & Conventional Phys Sec Equip

PROJECT

P162

Event Name	FY 08				FY 09				FY 10																							
	1	2	3	4	1	2	3	4	1	2	3	4																				
Identify FPED VII vendors.																																
Identify FPED VII sponsors.																																
(1) Execute FPED VII																																
(2) Complete Light Kit, Motion Detection (LKMD) product qualification testing (PQT).																																
Integrate remote weapon systems with robotic platforms.																																
(4) LKMD Full Rate Production decision (Milestone C).																																
(5) Demonstrate NROWS detecting & tracking multiple targets under various scenarios.																																
Leverage WSS efforts in support of SSBNs.																																
Limited Production of Optimized door within the Magazine Access Denial program.																																
(6) Integrate the Navy's TIS with USAF's TASS.																																
Design Handheld THz Spectrometer.																																
Fully integrate biometrics with the ILD.																																
Model all nuclear weapons facilities using the AVERT Risk Management Tool.																																

Schedule Profile (R4a Exhibit)

May 2009

BUDGET ACTIVITY

4 - Advanced Component Development and Prototypes (ACDP)

PE NUMBER AND TITLE

0603161D8Z - Nuclear & Conventional Phys Sec Equip

PROJECT

P162

<u>Schedule Detail</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>					
Identify FPED VII vendors.	4Q	1Q - 2Q						
Identify FPED VII sponsors.	2Q - 4Q							
Execute FPED VII		3Q						
Complete Light Kit, Motion Detection (LKMD) product qualification testing (PQT).	4Q	1Q						
Integrate remote weapon systems with robotic platforms.	1Q - 4Q	1Q - 4Q	1Q - 4Q					
Demonstrate NROWS capability to detect and track multiple targets.		1Q						
LKMD Full Rate Production decision (Milestone C).		4Q						
Demonstrate NROWS detecting & tracking multiple targets under various scenarios.	1Q - 4Q	1Q - 2Q						
Leverage WSS efforts in support of SSBNs.	1Q - 4Q	1Q - 4Q	1Q - 4Q					
Limited Production of Optimized door within the Magazine Access Denial program.	4Q	1Q - 4Q	1Q - 4Q					
Integrate the Navy's TIS with USAF's TASS.		1Q - 2Q						
Design Handheld THz Spectrometer.		1Q - 4Q						
Fully integrate biometrics with the ILD.	4Q	1Q - 4Q						
Model all nuclear weapons facilities using the AVERT Risk Management Tool.	4Q	1Q - 3Q						