Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Office of Secretary Of Defense	DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603161D8Z: *Nuclear and Conventional Physical Security/Countering Nuclear Threats*

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	45.036	32.132	36.798	-	36.798	36.416	35.753	36.529	37.305	Continuing	Continuing
P162: *Nuclear and Conventional Physical Security/Countering Nuclear Threats*	45.036	32.132	36.798	-	36.798	36.416	35.753	36.529	37.305	Continuing	Continuing

Note

We changed the name of the PE from "Nuclear and Conventional Physical Security Equipment" to "Nuclear and Conventional Physical Security/Countering Nuclear Threats." It is important to highlight Combating Nuclear Threats given the potential spread of weapons of mass destruction (WMD) and how WMD threatens the security of the United States, its allies, and US deployed forces. As President Obama has repeatedly stated, nuclear-armed terrorists are “the most immediate and extreme threat to global security,” and thereby to the security of the United States.

A. Mission Description and Budget Item Justification

This program coordinates advanced engineering development for physical security equipment (PSE) technology and systems as well as for combating nuclear threats throughout DoD. The funding has been centralized in this Defense-wide Program Element (PE) since the early 1990s and represents a substantial portion of all DoD PSE RDT&E funding. The program supports the protection of DoD personnel and facilities for nuclear and conventional environments. Priorities for this Program Element’s RDT&E efforts are driven by inputs from QDR guidance, COCOMs (Joint Urgent Operational Need Statements (JUONS)), Services, analysis reports, such as “Protecting the Force: Lessons from Fort Hood (January 2010), the Integrated Unit, Base, and Installation Protection (IUBIP) Cost Benefits Analysis (CBA), and DoD Directive 5210.41M (Nuclear Weapon Security Manual: DoD Nuclear Weapon Environment-Specific Requirements) directed requirements and associated security deviation reports.

The funds are used to provide PSE advanced component development and prototypes for individual Service and Joint requirements that lead to capability in three functional mission areas: (1) nuclear physical security; (2) countering nuclear threats; and (3) conventional physical security. The projects under the Program Element either (a) lead to Programs of Record – which can transition to Program Element 0604161D8Z for systems development and demonstration (SDD); (b) become technology insertions into existing programs; or (c) advance to being a certified COTS product. The overall program element initiatives are coordinated by three Groups: the Security Policy Verification Committee (SPVC), the Countering Nuclear Threats Working Group (CNTWG) and the Physical Security Equipment Action Group (PSEAG). The SPVC, with Air Force, Navy and Defense Threat Reduction Agency (DTRA) membership, reviews and prioritizes nuclear physical security and countering nuclear threat requirements and recommends technology projects for solutions: the CNTWG has oversight over CNT projects, and the PSEAG, with membership by all four Services and DTRA, performs similar functions for conventional requirements and solutions. When applicable, projects overlap both the nuclear and conventional environments, seeking synergism and commonality in solutions.

With few exceptions, each Service sponsors RDT&E efforts for technologies and projects that have COCOM and multi-Service applications. To avoid duplication, the SPVC and PSEAG assign projects to the Services and DTRA, as directed in DoD Instruction 3224.03, to assure continuity and development of expertise in Department-wide key technology areas. Specific examples include the Army being responsible for Interior and Exterior Detection, Security Lighting, Security Barriers

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and Security Display Units; the Air Force for Exterior Detection/Surveillance, Entry Control, Delay/Denial, Tactical Systems and Airborne Intrusion; the Navy for Waterside Security, Explosive Detection, and Locks, Safes and Vaults; and, under direction from DoD Directive 5210.41M, DTRA for security of Navy and Air Force nuclear assets.

Note: This Program Element is presented in three major categories: (1) Nuclear Physical Security, (2) Countering Nuclear Threats, and (3) Conventional Physical Security

B. Program Change Summary ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	36.019	32.132	38.390	-	38.390
Current President's Budget	45.036	32.132	36.798	-	36.798
Total Adjustments	9.017	-	-1.592	-	-1.592
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Program Adjustments	9.017	-	-0.240	-	-0.240
• Defense Efficiency Baseline Review	-	-	-0.343	-	-0.343
• Defense Efficiency - Report, Boards, and Commissions	-	-	-0.958	-	-0.958
• Economic Assumptions	-	-	-0.051	-	-0.051

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2010	FY 2011
Project: P162: *Nuclear and Conventional Physical Security/Countering Nuclear Threats*		
Congressional Add: *Under Vehicle Inspection System (UVIS)*	2.300	-
Congressional Add: *Roadrunner Convoy Security Unmanned*	4.560	-
Congressional Add: *Pacific Data*	2.000	-
Congressional Add: *Advanced Detection of Special Nuclear Materials*	1.939	-
Congressional Add: *Handheld FDS Terahertz (THz) Spectrometer*	0.050	-
Congressional Add Subtotals for Project: P162	10.849	-
Congressional Add Totals for all Projects	10.849	-

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Change Summary Explanation

Reprogramming was used to accommodate the maturation of PSE developmental items from advanced engineering development (BA 4) to system development and demonstration (BA 5). PE 0604161D8Z identifies the offset.

Defense Efficiency – Baseline Review. As part of the Department of Defense reform agenda, implements a zero-based review of the organization to align resources to the most critical priorities and eliminate lower priority functions.

Defense Efficiency – Report, Studies, Boards and Commissions. As part of the Department of Defense reform agenda, reflects a reduction in the number and cost of reports, studies, DoD Boards and DoD Commissions below the aggregate level reported in previous budget submission.

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COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
P162: *Nuclear and Conventional Physical Security/Countering Nuclear Threats*	45.036	32.132	36.798	-	36.798	36.416	35.753	36.529	37.305	Continuing	Continuing
Quantity of RDT&E Articles											

Note

We changed the name of the PE from "Nuclear and Conventional Physical Security Equipment" to "Nuclear and Conventional Physical Security/Countering Nuclear Threats." It is important to highlight Combating Nuclear Threats given the potential spread of weapons of mass destruction (WMD) and how WMD threatens the security of the United States, its allies, and US deployed forces. As President Obama has repeatedly stated, nuclear-armed terrorists are “the most immediate and extreme threat to global security,” and thereby to the security of the United States.

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With few exceptions, each Service sponsors RDT&E efforts for technologies and projects that have COCOM and multi-Service applications. To avoid duplication, the SPVC and PSEAG assign projects to the Services and DTRA, as directed in DoD Instruction 3224.03, to assure continuity and development of expertise in Department-wide key technology areas. Specific examples include the Army being responsible for Interior and Exterior Detection, Security Lighting, Security Barriers

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and Security Display Units; the Air Force for Exterior Detection/Surveillance, Entry Control, Delay/Denial, Tactical Systems and Airborne Intrusion; the Navy for Waterside Security, Explosive Detection, and Locks, Safes and Vaults; and, under direction from DoD Directive 5210.41M, DTRA for security of Navy and Air Force nuclear assets.

Note: This Program Element is presented in three major categories: (1) Nuclear Physical Security, (2) Countering Nuclear Threats, and (3) Conventional Physical Security

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
Title: Automated Vulnerability Evaluation for Risks of Terrorism (AVERT)	2.699	2.953	2.169
Description: NUCLEAR PHYSICAL SECURITY The Department of Defense has a requirement to utilize a standardized approach for Modeling and Simulation analysis to assist in risk management, determining system vulnerabilities and choosing potential upgrades at nuclear weapon-based facilities and installations. AVERT (Automated Vulnerability Evaluation for Risks of Terrorism) is the current commercial off-the-shelf product undergoing software Verification, Validation and Accreditation (VV&A) to determine its feasibility of use in the DoD environment. Both the Air Force and Navy will utilize this product to determine vulnerabilities. ***FY 2010 Accomplishments:*** • Prepared Server in Albuquerque to be moved to DTRA HQ at Fort Belvoir, VA to be placed in the DTRA Experimental Laboratory (DEL) • Renewed AVERT Professional licenses for eight sites. • Completed Validation, Verification and Accreditation (VV&A) confirming software, software development process, modeling process and library development • Trained military and contractor personnel in use of AVERT ***FY 2011 Plans:*** • Provide additional software development/refinement, as required • Continue required training • Provide model products and outcomes to OSD and the Services for use ***FY 2012 Plans:*** - Periodically conduct site security risk assessments - Evaluate and quantify the effectiveness of potential security enhancements - Potential for additional software purchasees/leases, training, programming and modeling			
Title: Swarm Attack Boat Barrier	0.175	0.197	0.192

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
Description: NUCLEAR PHYSICAL SECURITY Both high-value port facilities and docked ships/boats require improved protection. Technologies will be explored and developed to provide improved barrier defense against multi-boat attacks, particularly barrier delay. ***FY 2010 Accomplishments:*** • Developed performance baseline in regards to breaching times for current port security barrier against a variety of threat scenarios. • Evaluated technical approaches to increase surface barrier delay time to meet identified delay requirements. • Established Minimum Performance Levels. ***FY 2011 Plans:*** • Analyze need for development effort. • Full review of Analysis of Alternatives. • Development effort (if necessary). ***FY 2012 Plans:*** - Evaluation of technical approaches to increase surface barrier delay time to meet delay requirements. Primary metric is delay time gains, with secondary metrics of cost, time to install, and waterfront operational impact. - Implementation of hardware derived from project findings.			
Title: Continuous Sound Velocity ***Description:*** NUCLEAR PHYSICAL SECURITY The Navy's Waterside Security System (WSS) requires accurate bulk underwater sound velocity data. The sound velocity data is used to accurately compute the geographic (geo) location of tracks output from the ADCAP WQX-2 swimmer/diver detection sonar. The objectives of this effort are to determine the accuracy and effectiveness of the current sound velocity and motion compensation algorithms in the ADCAP Version 4.0 sonar processor application. Actual data will be collected from an operational site over a period of time. ***FY 2010 Accomplishments:*** • Developed a methodology and needed tools to automatically gather and analyze data from the various sensor types. • Integrated the automatic system into an operational WSS site.	0.170	0.197	0.192

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
• Gathered the sensor information from the site for analysis. ***FY 2011 Plans:*** • Analyze data from the operational site to determine the accuracy of the ADCAP WQX-2 application's sound velocity and motion compensation algorithms. • Produce a test report that documents the results of the analysis. ***FY 2012 Plans:*** - Production of a test report that documents the results of the analysis to be incorporated into revision to Electronic Harbor Security System .			
Title: Attack Tool and Material Resistance ***Description:*** NUCLEAR PHYSICAL SECURITY The DoD Lock Program, under the direction of the PSEAG, continuously conducts research by testing and evaluating state-of-the-art tools and materials to identify current threats to DoD assets. Based on this research and associated test results, steps can be taken towards developing new standards, countermeasure development, input to modeling and simulation planning, and new design methodology. This is a continuing project. ***FY 2010 Accomplishments:*** • Coordinated with other DoD organizations (Army Research Laboratory) and attended National Advanced Ceramics and Composites Conference. • Performed test and evaluation of advanced, light-weight and rugged emergency response & mining tools. • Provided input to AVERT to update data libraries. • Updated DoD MIL-HDBK 1013/1A & DOE Barrier Handbook with current resistance data. ***FY 2011 Plans:*** • Continuation of test and evaluation against newly identifies tool sets. • Update DoD MIL-HDBK 1013/1A, AVERT, and DOE Barrier Handbook ***FY 2012 Plans:*** • Continuation of test and evaluation against newly identifies tool sets. • Update DoD MIL-HDBK 1013/1A, AVERT, and DOE Barrier Handbook	0.338	0.295	0.384
Title: Secure Wireless Communications Working Group ***Description:*** NUCLEAR PHYSICAL SECURITY	0.635	0.295	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
As an outgrowth of the FY 2007 Nuclear Weapons Summit, the SWCWG was chartered by the Technical Senior Steering Group (TSSG) to study the challenge of using wireless communications with nuclear physical security systems and make assessments/ recommendations for the path ahead. The SWCWG is now in its third year, working closely with other government agencies, to include the Department of Energy, the Nuclear Regulatory Commission, National Nuclear Security Administration and the National Security Agency to find common solutions to common problems. ***FY 2010 Accomplishments:*** • Identified and refined issues within four Integrated Product Teams (IPTs): Policy, Wireless Threat Vulnerability Assessments, Security Classification Guides, and Threat Continuity/Definition • Developed a Best Practices Guide focused on use of wireless communications in nuclear environments ***FY 2011 Plans:*** • Conduct an Inter Agency Table Top Exercise (TTX) to resolve issues identified by four IPTs • Complete and produce an initial living-document version of the Best Practices Guide			
Title: Sub-surface Sensor Algorithm Improvement Program ***Description:*** NUCLEAR PHYSICAL SECURITY The focus of this program is to concentrate on detection, classification, and localization (DCL) software performance rather than sensor hardware to improve underwater sensor performance, especially focused on swimmer detection. The combination of common DCL needs and impending modularization opens up the possibility that an R&D effort specifically focused upon DCL algorithm improvement can provide benefit to the full range of waterfront security constituencies. Objectives are to: (1) produce and deliver improved sub-surface maritime physical security DCL algorithms and (2) create a process by which the performance of DCL algorithms can be consistently and objectively evaluated independent from hardware ***FY 2010 Accomplishments:*** • Formed an Oversight Group (OWG) to monitor project • Established a performance criteria, select algorithms for funding and development • Issued a Request for Proposals (RFP) for candidate DCL algorithms. ***FY 2011 Plans:*** • Complete Algorithm Evaluation • Provide recommendations to Navy Strategic Systems Programs on which algorithms should be integrated into current & future sensor systems	0.274	0.295	0.192

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
• Set standard for sub-surface data collection ***FY 2012 Plans:*** -Integration of new algorithms into Electronic Harbor Security System .			
Title: Anti-Swimmer Grenade ***Description:*** NUCLEAR PHYSICAL SECURITY Finalize safety and performance analysis of ASG. Conduct lethality analysis to quantify performance specifications of deployable ASG. ***FY 2010 Accomplishments:*** • Fabricated ASG Inert Pre-Qualification Units. • Performed MIL-STD-331 environmental testing. • Conducted lethality analysis.	0.050	-	-
Title: Sonar and Acoustic Impulse Device Synchronization ***Description:*** NUCLEAR PHYSICAL SECURITY The Navy's Waterside Security System (WSS) has a requirement to have multiple sonar sensors operate in confined areas simultaneously. These numerous collocated sonar sensors can lead to interference, thus reducing efficiency. There is a requirement to have a dynamic device control the timing of each sonar transmission. A current device is in its final stage of development and will be deployed in early FY 10. The objective of this effort is to adapt the current synchronization system to include a way to dynamically control the transmission of all acoustic devices that can interfere. These include the WQX tracking sonar, expeditionary acoustic sensors and broadband diver interdiction impulse devices given any geometrical setup. ***FY 2010 Accomplishments:*** • Developed an automated system to control the transmission timing of acoustice devices to mitigate interference in a dynamic environment • Integrated the automatic system into an operational WSS site. The contractor shall gather the system and timing information from the site for analysis. ***FY 2011 Plans:*** • Analyze data from the operational site to determine the effectiveness of the system at reducing acoustic interference.	0.136	0.197	0.192

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
• Produce a test report that documents the results of the analysis. ***FY 2012 Plans:*** - Complete sensitivity study for detection vice FAR - Complete weighted voting scheme - Rebuilt passive replica portion of algorithm			
Title: Probability of Kill of Security Boat-Mounted Weapons Against Small Boat Attacks ***Description:*** NUCLEAR PHYSICAL SECURITY Analysis of the weapons and tactics currently deployed against prescribed waterborne surface threats in an effort to substantiate the effectiveness of employed weapons and tactics in the waterside security arsenal. This effort will utilize both live-fire tests and modeling & simulation to accomplish the data set. ***FY 2010 Accomplishments:*** • Developed postulated threat picture and test scenarios • Conducted Live-Fire Testing. ***FY 2011 Plans:*** • Input Live-Fire Test results into Weapons Effectiveness Model. • Perform Weapons Effectiveness Analysis. • Determine Probability of Kill results in final report. • Update various modeling & simulation data libraries.	0.288	0.295	-
Title: Advanced Security Container Device ***Description:*** NUCLEAR PHYSICAL SECURITY This project will provide breach detection for munitions transport and storage with low nuisance alarms; robust system design, low cost, and trenching detection. ***FY 2010 Accomplishments:*** - Conducted Feasibility Test at Port Hueneme - Completed HERO Testing March 2010 Indicating Zero Standoff All Munitions - Developed Interface between ACSD and 802.15.4 Mesh Radio Network - Conducted Detection Optimization Tests - Ongoing	0.180	0.197	0.192

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
- Developed 2nd Generation ACSD LRIP Model ***FY 2011 Plans:*** • Develop and evaluate prototype systems. • Integrate candidate technologies into BV software. • Evaluate operation of integrate prototype systems with SSBN. ***FY 2012 Plans:*** - Test Bed Concept Demonstration Report - Obtain ACSD System HERO Certification - Receive Five 2nd Generation ACSDs at Port H and Assess - Conduct Long Term OT at AA&E Site Finalize System Architecture			
Title: Handheld TDS Terahertz (THz) Spectrometer ***Description:*** COUNTERING NUCLEAR THREATS This effort is to develop and demonstrate a handheld time domain THz spectrometer for detecting explosives with a non-contact distance of 20-30cm. Current Trace detectors require consumables to swipe the interrogation surface and a radiological program since most contain Nickel 63 sources. THz spectrometers would reduce the need for consumables and remove the overhead costs for radiological support. Supporting requirement documentation includes JUONS CC-0255, IEDD ICD, IUBIP ICD, Portable Chemical, Biological, Radiation, Nuclear Explosive (CBRNE)/Weapons of Mass Destruction Detector - Navy Urgent Operational Needs Statement, IBDSS CDD, Joint Service Explosive Ordnance Disposal (JSEOD) ICD, CBRNE Sense ICD ***FY 2010 Accomplishments:*** • Began database development on laboratory instrument • Conducted Design Review for Ruggedized Field prototype • Began development of field systems algorithms • Refinement of optics ***FY 2011 Plans:*** • Package circuit boards and optics for handheld size spectrometer • Design the GUI • Deliver three field prototypes March 2011	0.900	0.246	-
Title: Educational and Non-Profit Outreach	0.750	0.739	1.151

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
Description: COUNTERING NUCLEAR THREATS This project is intended to enhance and strengthen research and development (R&D) capabilities in the areas of materials safeguards and security risk analysis, next generation detectors and monitors, and material accountability, inventory and tracking. Additionally, a task will conduct and evaluate rare event categorization. Specifically catastrophic terrorist events, including weapons of mass destruction or other high-profile attacks where there is sparse (or no) historical record from which to develop predictive models based on past statistics. ***FY 2010 Accomplishments:*** • Developed specifications, statement of work, and award contract to develop a methodology and performance metrics for material accountability, inventory, and tracking. • Developed specifications and statement of work to complete a nuclear security risk assessment. • Developed specifications and statement of work to assess next generation detectors and monitors. ***FY 2011 Plans:*** • Conduct and evaluate rare event categorization. Specifically catastrophic terriorist events, including weapons of mass destruction or other high-profile attacks where there is sparse (or no) historical record from which to develop predictive models based on past statistics. • Analyze nuclear security risk and develop performance-based risk assessment decision methodologies. • Analyze data for next generation detection and monitoring capabilities and determine the effectiveness of the use of solid state components, arrays, and alternative materials. ***FY 2012 Plans:*** • Refine rare event categorization. Specifically catastrophic terriorist events, including weapons of mass destruction or other high-profile attacks where there is sparse (or no) historical record from which to develop predictive models based on past statistics. • Refine nuclear security risk and develop performance-based risk assessment decision methodologies. • Refine data for next generation detection and monitoring capabilities and determine the effectiveness of the use of solid state components, arrays, and alternative materials.			
Title: Lighting Kit, Motion Detector ***Description:*** CONVENTIONAL PHYSICAL SECURITY	2.000	1.969	2.672

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
LKMD is a tactical, unmanned, simple, compact, modular, sensor-based early warning system that provides a programmable response set of illumination and sound, resulting in increased operational reaction time for individuals, teams, squads, or platoons. LKMD may be used as a tactical, stand-alone system or as a supplemental device for use with other security systems or missions. LKMD is designed to provide early detection and warning in order to enhance force effectiveness and increase situational awareness during all types of combat operations or missions ranging from small scale contingencies and Military Operations in Urban Terrain up to high intensity combat. An April 2008 Capability Production Document (CPD) supports this requirement. ***FY 2010 Accomplishments:*** • Completed Increment 1 fielding to first unit(s) planned for 4QFY10. • Developed the Increment 2 draft Capability Development Document (CDD) in progress. • Conducted Increment 2 Materiel Development Decision (MDD) to enter the acquisition cycle at Pre-Milestone B. • Performed Market Research and prepare Market Investigation Report. • Prepared draft Preliminary System Specification, Systems Engineering Plan (SEP), Analysis of Alternatives (AoA), Technology Development Strategy (TDS), Test and Evaluation Strategy, Acquisition Strategy, and Acquisition Plan. ***FY 2011 Plans:*** • Prepare Request for Proposal (RFP) and award up to three prototype development contracts. • Begin prototype manufacture. • Prepare draft Information Support Plan (ISP), Application for Spectrum Support, and Initial Product Support Strategy. ***FY 2012 Plans:*** - Prepare for procurement and deployment			
Title: Mobile Detection Assessment Response Systems ***Description:*** CONVENTIONAL PHYSICAL SECURITY MDARS provides the DOD and other agencies with a mobile, robotic security vehicle having the ability to conduct semi-autonomous random patrol and surveillance activities. It is designed to operate under various exterior environmental conditions at critical government installations. MDARS is currently being restructured by the Army. ***FY 2010 Accomplishments:*** • Completed MDARS Increment 1 by demonstrating all CPD Threshold requirements and some Objective Requirements. • Completed the initial outline and briefing for restructuring the MDARS program; briefed Joint Program Manager Guardian in Nov 09.	0.400	-	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
• Participated in Joint Force Protection Advanced Security System (JFPASS) Operational Demonstration 1 (Oct 09) at Eglin Air Force Base, FL as the Quick Reaction Force Team Element for initial incident contact. • Completed 30-day Endurance Test at HWAD (Sep 09). • Completed the Office of the Provost Marshall General (Army Staff)- requested operational data collection evolution at Hawthorne Weapons Army Depot to support a CAA CBA validation (Jan 10).			
Title: Tactical Video Surveillance System ***Description:*** CONVENTIONAL PHYSICAL SECURITY TVSS will be a tactical, lightweight, compact, modular, wireless video surveillance and warning system with motion detection activation and enhanced assessment capability. The major objective for TVSS is to improve the local area security and protection of tactical units and soldiers with quick set-up, high reliability, and operator selected mission dependent configurations. This program is interoperable with unattended ground sensors. It remains under review by the Army's Maneuver Support Center of Excellence as the Capability Development Document (CDD) is being developed. ***FY 2010 Accomplishments:*** • Conducted Market Research in Conjunction with Technical Support Working Group for Development of the Ultra High Resolution Surveillance System. • Coordinated with Maneuver Support Center of Excellence (MSCoE) for input during generation of the draft CDD. • Conducted a Materiel Development Decision for guidance to enter the acquisition cycle at Pre-Milestone B. • Began development of draft acquisition documentation to support a FY11 Milestone B Engineering and Manufacturing Development decision. Documentation includes Acquisition Program Baseline, System Performance Specification, Systems Engineering Plan (SEP), Analysis of Alternatives (AoA), Technology Development Strategy (TDS), Test and Evaluation Master Plan, Initial Product Support Strategy, and Acquisition Strategy. • Performed Market Research and prepare Market Investigation Report. • Conducted Tri-fusion Demonstration in conjunction with Space and Naval Warfare (SPAWAR) Systems Center-Pacific. ***FY 2011 Plans:*** • Receive Department of the Army approval of CDD. • Complete Milestone B acquisition documentation including preparation of an Acquisition Plan. • Conduct a Milestone B In-Process Review and receive Milestone Decision Authority approval to enter the Engineering and Manufacturing Development (EMD) phase.	2.080	1.969	1.919

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
• Prepare Request for Proposal for EMD contract. ***FY 2012 Plans:*** - Prepare for procurement and deployment			
Title: Integrated Ground Security Surveillance & Response Capability ***Description:*** CONVENTIONAL PHYSICAL SECURITY This is a new effort that will provide commanders a near real-time decision support system to counter threats in the field. It supports a Joint requirement for data integration, automation, and fusion. It is a follow on to the successful JFASS JCTD project partly funded by the PSEAG. The capability will use sensor data to provide actionable, multi-directional automated data for rapid responses and situational awareness. ***FY 2010 Accomplishments:*** • Conducted Market Research through a Request for Information (RFI) and assessment of the RFI responses (solicited both commercial/government “fusion” solutions) • Prepared for a Materiel Development Decision (MDD) • Initiated Milestone (MS) B documentation development ***FY 2011 Plans:*** • Obtain MDD approval • Determine competitive prototyping sources (commercial/Government) based on results of RFI • Select competitive prototyping sources • Conduct competitive prototyping • Complete a Preliminary Design Review • Complete MS B preparation ***FY 2012 Plans:*** - Integrate legacy and future sensors with data fusion	0.846	1.477	2.398
Title: Joint Force Protection Advanced Security System ***Description:*** CONVENTIONAL PHYSICAL SECURITY The purpose of the JFPASS JCTD is to demonstrate the value of linking disparate Force Protection: Physical Security, Chemical Biological Radiological and Nuclear (CBRN), and Incident Management systems into an integrated system of systems that	3.000	-	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
reduces risks, optimizes the use of manpower, and increases the commander's overall level of situational awareness. It enables the fusion of Force Protection capabilities by integrating and automating current and emerging systems, sensors, tools and processes so that operators can focus on responses. Requirements for this capability were derived from the IUBIP CBA and Interoperability ICD. ***FY 2010 Accomplishments:*** • Held first operational demonstration (OD-1) in Sep/Oct 09. • Distributed Interim Operational Utility Assessment (OUA) report highlighting operational value of integration, automation, and fusion of disparate force protection technologies into a system of systems. • Conducted second technical demonstration (TD-1) and second operational demonstration (OD-2) at Spangdahlem AFB, GE in Jul/Aug 10. • Transitioned appropriate Joint Force Protection technologies/architectures/lessons learned to several programs of record and other force protection initiatives/efforts.			
Title: Weapons Tracking Seal ***Description:*** CONVENTIONAL PHYSICAL SECURITY This project's objective is to leverage approved Department of Homeland Security (DHS) global communications and tracking tag for transmitting security alert information from ISO shipping containers into an automated DoD System. DoD benefits to using this technology are: improved situational awareness, DoD targeting and interdiction capability, leverages existing com networks, and interoperable in intermodal transport. Supporting Requirement Documents: Tier 1 -2.1.1.1 IBDSS CDD FEB05, Capabilities Detection, Access Control, Delay/Denial. DoD 5200.08-R, 09APR07, Security of controlled inventory, DTR 4500.9-R. ***FY 2010 Accomplishments:*** • Conducted Initial Testing at NBVC Rail Car Test Bed; Install 10 Systems on Railcars at Operational AA&E Site • Established Wireless Communications Architecture between Storage Yard and Command Center • Performed OT&E • Commenced CONOPS Development ***FY 2011 Plans:*** • Complete Prototype Tests • Design Mods/Reconcile w/CONOPS • Field Units/System Demonstration ***FY 2012 Plans:***	0.260	0.295	0.384

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
- Low rate initial production - Develop procurement packages			
Title: Physical Security of Storage Magazines ***Description:*** CONVENTIONAL PHYSICAL SECURITY At the request of the Under Secretary of Defense (Intelligence) (OUSD (I)), the DoD Lock Program conducted tests on existing magazine door designs. Results indicate many doors provide less than 10 minutes of resistance against attacks using commercially available tools. Therefore, security for current storage magazines must rely heavily on manpower to keep adversaries from gaining access to sensitive assets. The purpose of this project is to develop design criteria, for new construction and to retrofit existing structures, to provide 10 minutes of forced entry protection. Supporting Requirement Documents: Tier 1 - 2.1.1.1 IUBIP ICD JAN08, Capability Gap Priority 19, DoDD 5100.76M. ***FY 2010 Accomplishments:*** • Conducted Explosive and Ballistic Tests on Guam Door Design • Completed Prototype Thermal Relocker Design and Tests ***FY 2011 Plans:*** • Provide Acquisition Field Support	0.170	0.197	-
Title: Shipboard Security Systems ***Description:*** CONVENTIONAL PHYSICAL SECURITY This project identifies security, operational, and functional requirements for shipboard security containers to ensure these containers meet storage, shock, vibration and mounting requirements. In coordination with the Chief of Naval Operations, NAVSEA, and Shipbuilders, tasks for this project include the development of GSA Approved shipboard security containers and mounting systems; federal specifications for testing equipment for usage in shipboard environments; and updates to policy requirements to mitigate current security vulnerabilities and standardize protection of classified information aboard ship. Supporting Requirement Documents: Tier 1 – 2.1.2.2 OPNAVINST 5530.13C, September 2003. DoD Directives and Policy: Tier 1 – 2.1.4 DoD Directive 3224.3, Federal Specification FF-L-2740, SECNAV M-5510.36 Chapter 10. ***FY 2010 Accomplishments:*** • Updated DoD and Navy policy with container pedestal system security containers requirements	0.235	0.236	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
• Finalized and approved revision to Federal Specification AA-F-358H, Filing Cabinet, Legal and Letter Size, Uninsulated, Security, authorizing pedestal design • Manufactured and tested Phase III security container equipment for storing classified laptops • Transitioned shipboard security container pedestal system to field and acquisition sponsor ***FY 2011 Plans:*** • Transition Phase III security container equipment for storing classified laptops to field and acquisition sponsor • Prepare Final Report • Commence development of Class 9 Lightweight Security Container			
Title: Shore Line Interdiction ***Description:*** CONVENTIONAL PHYSICAL SECURITY This project will provide a detection barrier where fixed fence lines are not allowed. It is designed to detect and discriminate intruders at the land-water interface and operates in and around complex shoreline/littoral environments. Supporting Requirements Documents: DoD INST 2000.16, 5200.08, 5200.8R, OPNAV INST 5530.14C Ch2, Presidential DD 63, CIP-011-1 Sabotage Reporting, AT/FP Ashore Near -Term Requirements, NATTCO ***FY 2010 Accomplishments:*** • Built and installed 10 pole expanded system at Redstone Arsenal (RSA) • Conducted initial demonstration at RSA ***FY 2011 Plans:*** • Install 1st prototype system at Anniston Army Depot • Conduct Field testing ***FY 2012 Plans:*** - Install 2nd prototype system at Whidbey Island, WA	1.575	1.969	2.398
Title: Target Echo Analysis ***Description:*** CONVENTIONAL PHYSICAL SECURITY Support fixed and expeditionary based PORs that will field sub-surface threat detection, classification, localization and engagement of human and UUV based force protection threats. The Sonar Augmentation program has been working on utilizing	0.271	0.295	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
both passive and active clues to better classify targets of interest from an active swimmer detection system. Currently the project is focused on feature extraction from the active portion of known data sets containing both real and false targets. ***FY 2010 Accomplishments:*** • Created Software routines to extract complex beam formed data for contacts identified by active sonar • Extracted 6 parameters and an algorithm developed from a single training data set • Worked on analysis of independent data ***FY 2011 Plans:*** - Incorporate individual metrics (scinitillation, density, acoustic hardness, positional jitter) - Produce quantitative data - Final report			
Title: Integrated Defense Command and Control Common Operational Picture ***Description:*** CONVENTIONAL PHYSICAL SECURITY IDC2COP is a C2 system that is being developed to support the United States Air Force (USAF) Security Forces mission at garrison locations and in expeditionary environments. The primary mission support area includes law enforcement, force protection, and emergency management. IDC2COP provides automated incident management, base defense planning, and response force collaboration capabilities that are linked with defined quick response checklists. This project is being coordinated in its early stages with two other PSEAG initiatives: JFPASS and IGSSR-C. ***FY 2010 Accomplishments:*** • Installed wireless network equipment at Spangdahlem and Wright Patterson Air Force Base (WPAFB) • Obtained Interim Authority to Test (IATT) and conducted testing at WPAFB • Developed interfaces for Air Force Security annunciators and integration with external legacy systems • Participated in Operational Demonstration-2 at Spangdahlem AFB in Aug 10 ***FY 2011 Plans:*** • Continuous testing and development at a single base • Software development • Transition to procurement	3.160	2.954	-
Title: Commercial Off-the-Shelf (COTS) Qualification ***Description:*** CONVENTIONAL PHYSICAL SECURITY	0.515	0.689	0.767

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
The COTS Qualification Program (series of projects) was initiated to analyze, select, test and evaluate new or improved Intrusion Detection Equipment (IDE) that will meet or exceed the requirements identified in the Integrated Base Defense Security System CDD. The equipment will ultimately replace or augment existing similar capability with improved systems in intrusion detection and assessment capability for deployment in perimeter, flight line, access control, interior controlled facility, or avenue of approach applications. Test assessment reports are available for use to all federal agencies. ***FY 2010 Accomplishments:*** • Completed Cold Weather Endurance Testing of Buried Cable Sensors. • Completed Qualification Test & Evaluation (QT&E) of Video Management Systems. • Completed QT&E of Intrinsically Safe Interior Sensors. • Completed QT&E of New Fence Sensors. ***FY 2011 Plans:*** • Continue ongoing QT&E based on identified capability gaps. ***FY 2012 Plans:*** • Continue ongoing QT&E based on identified capability gaps.			
Title: Automated Installation Entry (AIE) Test Bed ***Description:*** CONVENTIONAL PHYSICAL SECURITY The Department of Defense (DoD) requires an interoperable, inter-Service capability at multiple DoD military installations. The purpose for AIE is to test and evaluate potential solutions to detect unauthorized personnel attempting to gain access to a DOD installation through screening of personal identification credentials at the installation entry control points. AIE will provide a DOD automated entry control capability that links to federal authoritative database and include biometrics. Adding AIE to the test bed at Site C-3 will allow the services to compare and contrast other services solutions and provide a location for each service to test upgrades before fielding. ***FY 2010 Accomplishments:*** • Installed significant AIE infrastructure at Eglin AFB Site C-3 test facility. • Awarded an AIE Increment II contract by the US Army. • Participated in Defense Installation Access Control (DIAC) Concept Demonstration ***FY 2011 Plans:***	0.800	0.788	1.535

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
• Determine DIAC lessons learned from demonstration ***FY 2012 Plans:*** • Implement solutions to lessons learned from concept demonstration			
Title: Defense Installation Access Control (DIAC) ***Description:*** CONVENTIONAL PHYSICAL SECURITY The Department of Defense (DoD) requires an interoperable, inter-Service capability at multiple DoD military installations. A series of concept demonstrations and table top exercises (TTX) will be conducted to verify the ability of the local Physical Access Control System (PACS) to electronically exchange an individual's access authorization data with an authoritative source system across available communications network using commercial/Government middleware and/or web services architecture. ***FY 2010 Accomplishments:*** • Conducted TTX in May to isolate issues in preparation for June 2010 Concept Demo I • Conducted DIAC Concept Demonstration I in June 2010 at three key locations: Washington Navy Yard, SPAWAR Charleston, SC and Eglin's Site C-3 to test and evaluate two middleware solutions and reliability/configuration of transferred data message sets ***FY 2011 Plans:*** • Conduct Concept Demo II • Prepare final assessments ***FY 2012 Plans:*** - Three (100 Day) spiral demonstrations to achieve Enterprise Svc Arch - Follow on technical demo of Behavioral Analysis technologies Ft. Hood - Checklist development of behavioral analysis patterns - Biometrics demonstration based on PDM II study from FY 11 - Implement solution for Continuous Vetting/Discover from FY 11 study	2.755	3.281	4.796
Title: Security Engineering Integration Working Group ***Description:*** CONVENTIONAL PHYSICAL SECURITY	1.836	1.969	1.919

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
The PSEAG is focused on harmonizing DoD-wide capabilities and requirements while assisting to find solutions that are interoperable, interchangeable and meet a series of PSEAG-established standards fitting into a physical security architecture. The continuous efforts of the Security Engineering Integration Working Group (SEIWG) meet this Department-wide objective. ***FY 2010 Accomplishments:*** • Participated in Defense Installation Access Control activities • Developed Use Cases for new Command and Control Display Equipment (CCDE) Interface Control Document (ICD) • Added Access Control details to the Holistic Joint Force Protection Architecture ***FY 2011 Plans:*** • Support DIAC activities and update ICD based on lessons learned • Complete and publish JFPASS JCTD Operational Demonstration-2 architecture • Provide Architecture and ICD SMEs as required to the services • Publish update to SEIWG ICD-0101A with lessons learned from JFPASS JCTD ***FY 2012 Plans:*** - Continue to support JFPASS Transition IPT - Support DIAC and update JGS ICD as applicable			
Title: PSEAG Program RDT&E Integration ***Description:*** CONVENTIONAL PHYSICAL SECURITY ***FY 2010 Accomplishments:*** • Assured Technical Advisor support to assess technologies, prioritize needs, and preclude duplication across all PSEAG initiatives • Pursued “reach out” initiatives to other RDT&E-like DoD organizations, to include Joint Non-Lethal Weapons Directorate • Coordinated and facilitated all programmatic efforts associated with entire program, including administration of entire Program Element, conduct of program management and financial reviews, and information sharing meetings. • Conducted a seven month review of the current Requirements Process that forms the basis of the PSEAG’s work efforts: results to be presented in FY 11 • Maintained internal DoD PSEAG Portal to facilitate sharing information ***FY 2011 Plans:*** • Continue Technical Advisor Support to assess technologies, prioritize needs, and preclude duplication across all PSEAG initiatives	3.647	1.654	7.782

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
• Pursue “reach out” initiatives to other RDT&E-like DoD organizations, to Office of Navy Research, Defense Advanced Research Projects Agency, Air Force Research Laboratory and Army Research Laboratory • Coordinate and facilitate all programmatic efforts associated with entire program, including administration of entire Program Element, conduct of programmatic and financial reviews, program management reviews and information sharing meetings and portal maintenance. • Brief results and make recommendations leading to a new approach for capability/requirements inputs for physical security needs • Continue to maintain DoD PSEAG Portal and develop public website ***FY 2012 Plans:*** • Continue Technical Advisor Support to assess technologies, prioritize needs, and preclude duplication across all PSEAG initiatives • Pursue “reach out” initiatives to other RDT&E-like DoD organizations, to Office of Navy Research, Defense Advanced Research Projects Agency, Air Force Research Laboratory and Army Research Laboratory • Coordinate and facilitate all programmatic efforts associated with entire program, including administration of entire Program Element, conduct of programmatic and financial reviews, program management reviews and information sharing meetings and portal maintenance. • Brief results and make recommendations leading to a new approach for capability/requirements inputs for physical security needs • Continue to maintain DoD PSEAG Portal and sustain public website			
Title: Light-weight Armor .50 cal Test ***Description:*** NUCLEAR PHYSICAL SECURITY This new project will analyze the theoretical problem, develop a test framework, and evaluate a maritime specific material solution to withstand a ballistic capability from at a minimum a .50 crew served weapon. ***FY 2010 Accomplishments:*** - Developed test framework - Evaluated a maritime material solution ***FY 2011 Plans:*** - Develop test framework	0.180	0.197	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
- Evaluate a maritime material solution			
Title: DTRA Modeling and Simulation Center of Excellence ***Description:*** NUCLEAR PHYSICAL SECURITY This new project will create a Modeling and Simulation Center of Excellence where computer generated models and simulations can be performed. Models and simulations will incorporate current intelligence capabilities analysis information, latest and previous Mighty Guardian exercise inputs, and physical security system upgrades at each Service CONUS / OCONUS installation. ***FY 2010 Accomplishments:*** - Developed a Modeling and Simulation Center of Excellence ***FY 2011 Plans:*** - Sustained a Modeling and Simulation Center of Excellence ***FY 2012 Plans:*** - Sustain and expand a Modeling and Simulation Center of Excellence	0.627	0.394	0.384
Title: Countering Nuclear Threats ***Description:*** This project addresses capability gaps by examining DoD CNT operation, ranging from steady state (Prevention) through surge (Protection), to consequence management and forensics/attribution (Response). The project will produce recommendations for a balanced and robust DoD CNT portfolio of capabilities, capacities, infrastructure, research and development programs, and operational concepts. ***FY 2010 Accomplishments:*** - Developed System-wide Objectives and Evaluation Metrics - Characterized CNT Scenarios and Response Options - Identified Strategic Capability Areas ***FY 2011 Plans:*** - Refine System Evaluation Metrics - Refine Potential Response Options - Develop Strategies to close gaps ***FY 2012 Plans:***	0.900	2.954	4.317

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
- Refine Strategies to close gaps			
Title: Common Operating Picture Integration ***Description:*** CONVENTIONAL PHYSICAL SECURITY The purpose of this project is to provide a common user interface (UI) environment across the Department of Defense (DoD)'s various Command and Control (C2) projects with systems that respond to physical security/force protection requirements. ***FY 2010 Accomplishments:*** - Conducted proof of concept ***FY 2011 Plans:*** - Develop report on Technical Details of Existing CCDE Systems - Develop report on software frameworks and tools for compatibility studies (more on this in a minute) - Create DoD Architecture Framework Views - Create Software Requirements Document - Create technology demonstrator / proof of concept showing two CCDE simulators merged into one UI via a prototype JIGSAW server ***FY 2012 Plans:*** - Provide a common User Interface (UI) environment across the Department of Defense (DoD)'s various Command and Control Display Equipment (CCDE) projects. - Create a "UI abstraction layer" that will allow for the fusion of multiple CCDE systems into one coherent interface. - Abstract the UI from the core functionality of the CCDE systems to reduce costs and provide additional functionality.	0.300	0.788	0.863
Title: Long Range TeraHertz (THz) Imaging Radar ***Description:*** CONVENTIONAL PHYSICAL SECURITY This project's objective is to develop a system capable of detecting person-borne IEDs (PBIED) at standoff distances of 25 meters or more. The system uses a 670 GHz to produce a 3D image to detect energetic material, IEDS and/or IED components at 25-100 meters standoff distance within five seconds of identifying suspect. Supporting requirement documentation includes JUONS CC-0315, Integrated Base Defense Security System (IBDSS) CDD, the Improvised Explosive Device Defeat (IEDD) ICD and the Integrated Unit Base Installation Protection (IUBIP) ICD. ***FY 2010 Accomplishments:***	1.500	1.969	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
• Completed upgraded laboratory prototype incorporating a 25 meter radar • Received a 1 meter antenna • Built laboratory prototype at JPL with simulated targets to prove ~ five seconds at a 25 meter standoff distance • Began Phase IV development to produce a field prototype ***FY 2011 Plans:*** • Develop moderately rugged field prototype with scan time of 1 second • Test and prepare report			
Title: Strategic Plans and Requirements ***Description:*** The primary purpose of this project is to develop a PSEAG and Navy Strategic Plan and to review the current PSEAG requirements process, both at current policy and execution level ***FY 2010 Accomplishments:*** - Proposed a study plan for approval - Reviewed the current PSEAG business model - Interviewed key personnel in key organizations - Proposed a ten-year Strategic Plan for approval - Published the approved plan reflecting a newly approved vision, mission, goals, objectives and associated metrics. ***FY 2011 Plans:*** - Deliver final Navy strategic plan briefing/report	0.535	0.182	-
Accomplishments/Planned Programs Subtotals	34.187	32.132	36.798

	FY 2010	FY 2011
Congressional Add: Under Vehicle Inspection System (UVIS) ***FY 2010 Accomplishments:*** • Continued to install at selected installations (MacDill AFB, New York Air National Guard, and Nellis AFB) to gain lessons learned to input into future technology improvements • Pursued LED Light Source utilization rather than halogen sources • Improved environmental shielding	2.300	-
Congressional Add: Roadrunner Convoy Security Unmanned ***FY 2010 Accomplishments:*** • Initiated concept flight testing activities • Initiated requirements generation	4.560	-

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	FY 2010	FY 2011
• Complete requirements generation • Begin system design and integration • Convoy Security UAS TTP development • Demonstration and evaluation		
Congressional Add: Pacific Data ***FY 2010 Accomplishments:*** • Support the establishment of a Technology Outreach center in conjunction with the Hawaii National Guard. • Man the Technology Outreach Center with technical personnel to support experimentation with various physical security and unmanned systems technologies. Develop a database for the collection and analysis of end-user feedback. • Provide analysis of end-user feedback. • Convert of experimentation reports and technical documentation using the S1000D standard and provide analysis of the conversion for use on the knowledge base.	2.000	-
Congressional Add: Advanced Detection of Special Nuclear Materials ***FY 2010 Accomplishments:*** • Built a first prototype of high pressure recovery system • Constructed LKr detectors • Reviewed/Developed, as appropriate, Cooling systems • Reviewed/built gas purification system	1.939	-
Congressional Add: Handheld FDS Terahertz (THz) Spectrometer ***FY 2010 Accomplishments:*** • Conducted Critical Design Review • Built the 783nm butterfly packaged laser • Completed component designs • Database development	0.050	-
Congressional Adds Subtotals	10.849	-

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

N/A

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E. Performance Metrics

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 is reviewed at quarterly PSEAG and SPVC meetings. Performance variances are addressed and corrective action(s) is(are) implemented as necessary.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Office of Secretary Of Defense			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603161D8Z: *Nuclear and Conventional Physical Security/Countering Nuclear Threats*	PROJECT P162: *Nuclear and Conventional Physical Security/Countering Nuclear Threats*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
US Army Force Protection/ Tactical Security Equipment (FP/TSE)	MIPR	PM-FPS (USA):Ft. Belvoir, Virginia	11.425	5.797	Mar 2011	3.523	Mar 2012	-		3.523	Continuing	Continuing	
US Air Force Force Protection/ Tactical Security Equipment (FP/TSE)	MIPR	642nd ELSS (USAF):Hanscom AFB, Massachusetts	11.625	5.510	Feb 2011	6.400	Feb 2012	-		6.400	Continuing	Continuing	
SPAWAR Force Protection/ Tactical Security (FP/TSE)	MIPR	SPAWAR System Center:San Diego, CA	3.860	0.500	Feb 2011	2.708	Feb 2012	-		2.708	Continuing	Continuing	
US Army Robotic Security Systems Integration (RSSI)	MIPR	PM-FPS (USA:Ft. Belvoir, Virginia	1.750	0.700	Dec 2010	2.000	Dec 2011	-		2.000	Continuing	Continuing	
US Air Force Robotic Security Systems Integration (RSSI)	MIPR	AFRL:Tyndall AFB, FL	5.030	1.000	Feb 2011	5.000	Feb 2012	-		5.000	Continuing	Continuing	
Waterside Security	MIPR	NUWC:Newport, Rhode Island	4.340	1.025	Dec 2010	2.708	Dec 2011	-		2.708	Continuing	Continuing	
Explosive Detection Equipment (EDE)	MIPR	NAVEODTECHDIV:Indian Head, Maryland	4.000	1.400	Nov 2010	2.001	Nov 2011	-		2.001	Continuing	Continuing	
Locks, safes, and Vaults	MIPR	NFESC:Port Hueneme, California	3.640	1.745	Jan 2011	2.708	Jan 2012	-		2.708	Continuing	Continuing	
DTRA Nuclear Weapon Physical Security Programs	MIPR	Defense Threat Reduction Agency (DTRA):Ft. Belvoir, Virginia	21.714	9.500	Dec 2010	9.750	Dec 2011	-		9.750	Continuing	Continuing	
		Subtotal	67.384	27.177		36.798		-		36.798			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
COTS Testing	MIPR	642d ELSS:Hanscom AFB, MA	2.450	0.500	Mar 2011	-		-		-	Continuing	Continuing	
Explosive Detection Equipment (EDE)	MIPR	NAVEODTECHDIV:Indian Head, MD	2.250	1.000	Feb 2011	-		-		-	Continuing	Continuing	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Office of Secretary Of Defense			DATE: February 2011
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Robotic COTS Testing	MIPR	PM-FPS:Ft. Belvoir, VA	2.000	0.500	Feb 2011	-		-		-	Continuing	Continuing	
		Subtotal	6.700	2.000		-		-		-			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
US Army Force Protection/ Tactical Security Equipment (FP/TSE)	MIPR	PM-FPS:Ft. Belvoir, VA	1.800	0.700	Jan 2011	-		-		-	Continuing	Continuing	
Force Protection/Tactical Security Equipment	MIPR	642d ELSS:Hanscom, AFB	1.950	0.600	Jan 2011	-		-		-	Continuing	Continuing	
SPAWAR Force Protection/ Tactical Security Equipment (FP/TSE)	MIPR	SPAWAR System Center:San Diego, CA	0.600	0.200	Feb 2011	-		-		-	Continuing	Continuing	
Robotic Security Systems Integration (RSSI)	MIPR	PM-FPS:Ft. Belvoir, VA	1.158	0.300	Dec 2010	-		-		-	Continuing	Continuing	
Waterside Security	MIPR	NAVSEA:Port Hueneme, CA	1.100	0.300	Jan 2011	-		-		-	Continuing	Continuing	
Locks, Seals, and Vaults	MIPR	NFESC:Port Hueneme, CA	0.810	0.355	Mar 2011	-		-		-	Continuing	Continuing	
Nuclear Weapons Physical Security	MIPR	SPAWAR:Charleston, SC	1.000	0.500	Jan 2011	-		-		-	Continuing	Continuing	
		Subtotal	8.418	2.955		-		-		-			

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	82.502	32.132		36.798		-		36.798			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Office of Secretary Of Defense		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603161D8Z: *Nuclear and Conventional Physical Security/Countering Nuclear Threats*	**PROJECT** P162: *Nuclear and Conventional Physical Security/Countering Nuclear Threats*

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Office of Secretary Of Defense		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603161D8Z: *Nuclear and Conventional Physical Security/Countering Nuclear Threats*	**PROJECT** P162: *Nuclear and Conventional Physical Security/Countering Nuclear Threats*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
THZ technologies system engineering and software development	1	2010	4	2011
Weapons Tracking Seal system integration and test/evaluation	1	2010	4	2011
Design Handheld THz Spectrometer	1	2010	4	2010
Continue testing and evaluation of COTS products	1	2010	4	2016
Automated Installation Entry (AIE) Testbed	1	2010	4	2011
Expanded Situational Awareness Capabilities	1	2010	4	2011
IDC2COP Network Enhancement and Interoperability Assessment	2	2010	3	2011
DIAC Proof of Concept and Evaluation of Systems Capabilities	2	2010	4	2010
Limited Production of Optimized door within the Magazine Access Denial program	1	2010	3	2010
Leverage WSS efforts in support of SSBNs	1	2010	4	2011
Execute FPED VII	3	2010	3	2010
LKMD Full Rate Production Decision (Milestone C)	1	2010	3	2010
JFPASS site setups, execution, and risk assessment	2	2010	3	2011
TVSS CDD, Tri-Fusion Demo, and Milestone B Documentation	2	2010	2	2011