Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Office of Secretary Of Defense											Date: March 2014	
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603161D8Z / *Nuclear and Conventional Physical Security/Equipment RDT&E ADC&P*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	63.401	29.919	48.302	41.072	-	41.072	41.762	42.296	46.238	49.979	Continuing	Continuing
P162: *Nuclear and Conventional Physical Security*	63.401	29.919	24.243	28.586	-	28.586	29.506	30.798	33.805	34.985	Continuing	Continuing
P041: *CNT Rad/Nuc Passive Defense ADC&P*	0.000	-	1.985	-	-	-	-	-	-	-	Continuing	Continuing
P040: *National Technical Nuclear Forensics Systems*	0.000	-	22.074	12.486	-	12.486	12.256	11.498	12.433	14.994	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This Program Element (PE) addresses the need to defend and deter against weapons of mass destruction (WMD) threats and to safeguard personnel; prevent unauthorized access to equipment, installations, material, and documents; and to safeguard the foregoing against espionage, sabotage, damage, and theft. This program oversees advanced engineering development throughout DoD for an integrated and systemic RDT&E approach for countering nuclear threats and nuclear and conventional physical security technology and systems. The funding has been centralized in this Defense-wide PE since the early 1990s and represents a substantial portion of all DoD physical security RDT&E funding. Priorities for this PE RDT&E efforts are driven by inputs from Quadrennial Defense Review guidance, Combatant Command and Service requirements, analysis reports such as “Protecting the Force: Lessons from Fort Hood," January 2010, the Integrated Unit, Base, and Installation Protection Cost Benefits Analysis, Multi-national Work Plans established through the Nuclear Security Summit process, and DoD Directive 5210.41, Security Policy for Protecting Nuclear Weapons-directed requirements and associated security deviation reports.

Under this integrated approach, funds are used to provide advanced component development and prototypes for the Department in seven capability areas: (1) Detection and Assessment; (2) Access Controls; (3) Installation and Transport Security; (4) Storage and Safeguards; (5) Prevention; (6) Decision Support Systems; and (7) Analytical Support. This program will evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment. 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 Commercial/Government off-the-shelf product. The PE initiatives are coordinated by the Physical Security Enterprise and Analysis Group. This group is responsible for avoiding duplication of effort and when applicable ensure systems integration and promote interoperability and sustainability.

This PE can fund travel to support the requirements of this program.

This appropriation will finance work, including manpower, performed by a government agency or by private individuals or organizations under a contractual or grant arrangement with the government who conduct research (systematic study directed toward fuller scientific knowledge or understanding of the subject studied),

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Office of Secretary Of Defense	Date: March 2014
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0603161D8Z *I Nuclear and Conventional Physical Security/Equipment RDT&E ADC&P*

development (systematic use of the knowledge and understanding gained from research, for the production of useful materials, devices, systems, or methods, including the design and development of prototypes and processes) and test and evaluation efforts.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	33.234	63.641	47.932	-	47.932
Current President's Budget	29.919	48.302	41.072	-	41.072
Total Adjustments	-3.315	-15.339	-6.860	-	-6.860
• Congressional General Reductions	-	-15.000			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.504	-			
• FY13 Adjustment	-2.811	-	-	-	-
• FFRDC Reduction	-	-0.339	-	-	-
• Strategic Efficiency Savings	-	-	-6.860	-	-6.860

Change Summary Explanation

For FY15 the reduction is a strategic efficiency approach to reduce funding and staffing. As a result, we provide a better alignment of funding and provide support to a smaller military force.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Office of Secretary Of Defense			Date: March 2014
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603161D8Z / *Nuclear and Conventional Physical Security/Equipment RDT&E ADC&P*	Project (Number/Name) P162 / *Nuclear and Conventional Physical Security*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
P162: *Nuclear and Conventional Physical Security*	63.401	29.919	24.243	28.586	-	28.586	29.506	30.798	33.805	34.985	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This Program Element (PE) addresses the need to defend and deter against weapons of mass destruction (WMD) threats and to safeguard personnel; prevent unauthorized access to equipment, installations, material, and documents; and to safeguard the foregoing against espionage, sabotage, damage, and theft. This program oversees advanced engineering development throughout DoD for an integrated and systemic RDT&E approach for countering nuclear threats and nuclear and conventional physical security equipment (PSE) technology and systems. The funding has been centralized in this Defense-wide PE since the early 1990s and represents a substantial portion of all DoD PSE RDT&E funding. Priorities for this PE RDT&E efforts are driven by inputs from Quadrennial Defense Review guidance, Combatant Command and Service requirements, analysis reports such as “Protecting the Force: Lessons from Fort Hood," January 2010, the Integrated Unit, Base, and Installation Protection Cost Benefits Analysis, Multi-national Work Plans established through the Nuclear Security Summit process, and DoD Directive 5210.41, Security Policy for Protecting Nuclear Weapons-directed requirements and associated security deviation reports.

Under this integrated approach, funds are used to provide PSE advanced component development and prototypes for the Department in seven capability areas: (1) Detection and Assessment; (2) Access Controls; (3) Installation and Transport Security; (4) Storage and Safeguards; (5) Prevention; (6) Decision Support Systems; and (7) Analytical Support. 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 Commercial/Government off-the-shelf product. The PE initiatives are coordinated by the Security Policy Verification Committee and the Physical Security Equipment Action Group. These groups work together to avoid duplication of effort and when applicable ensure systems integration and promote interoperability and sustainability.

This PE can fund travel to support the requirements of this program.

This appropriation will finance work, including manpower, performed by a government agency or by private individuals or organizations under a contractual or grant arrangement with the government who conduct research (systematic study directed toward fuller scientific knowledge or understanding of the subject studied), development (systematic use of the knowledge and understanding gained from research, for the production of useful materials, devices, systems, or methods, including the design and development of prototypes and processes) and test and evaluation efforts.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Detection and Assessment	4.817	3.903	8.566

Exhibit R-2A, RDT&E Project Justification: PB 2015 Office of Secretary Of Defense		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603161D8Z / *Nuclear and Conventional Physical Security/Equipment RDT&E ADC&P*	**Project (Number/Name)** P162 / *Nuclear and Conventional Physical Security*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Description: The ability to detect an adversary and assess their intentions is a basic physical security tenant. This capability area will design equipment to identify and warn of unauthorized access to a specified area or installation as well as equipment related to the notification and identification of explosive threats or hazards. ***FY 2013 Accomplishments:*** • Conducted Explosive Detection Equipment testing (Sensor Fusion: Raman and Infrared and Comparative Test & Evaluation of X-ray technology) • Developed wide-area, long-range, foliage, seismic and radiological detection capability (both fixed & mobile) • Developed waterside detection & tracking capability (underwater & land-water interface) • Conducted fence sensors & cold weather testing ***FY 2014 Plans:*** • Conduct Explosive Detection Equipment testing (Sensor Fusion: Raman and Infrared and Comparative Test & Evaluation of X-ray technology) • Develop wide-area, long-range, foliage, seismic and radiological detection capability (both fixed & mobile) • Develop waterside detection & tracking capability (underwater & land-water interface) • Conduct fence sensors & cold weather testing ***FY 2015 Plans:*** • Conduct Explosive Detection Equipment testing • Develop wide-area, long-range, foliage, seismic and radiological detection capability (both fixed & mobile) • Develop waterside detection & tracking capability (underwater & land-water interface) • Develop standoff detection, assessment and defeat capability			
Title: Access Controls ***Description:*** Controlling access to safeguard personnel and their families and to prevent unauthorized access to critical infrastructure and materials is paramount. This capability area will focus on programs and processes related to the validity and verification of individuals entering or already within a facility. ***FY 2013 Accomplishments:*** • Advanced technology and procedures to minimize an insider threat to intentionally exceed or misuse an authorized level of access to nuclear materials or weapons. • Developed interruption methods to provide immediate, semi-lethal effect on the interior of structures containing nuclear resources without any additional specialized equipment.	2.543	2.060	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Office of Secretary Of Defense		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603161D8Z / *Nuclear and Conventional Physical Security/Equipment RDT&E ADC&P*	**Project (Number/Name)** P162 / *Nuclear and Conventional Physical Security*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
• Transitioned Defense Installation Access Control to system development and demonstration activities. ***FY 2014 Plans:*** • Conduct Defense Installation Access control Joint Capability Technology Demonstration--determine if technology meets requirements. • Advance technology and procedures to minimize an insider threat to intentionally exceed or misuse an authorized level of access to nuclear materials or weapons.			
Title: Installation and Transport Security ***Description:*** Robust installation and transport security are vital to preventing a weapon of mass destruction attack or the unauthorized access to key assets such as nuclear weapons and special nuclear material. This capability area will focus on programs and equipment intended to improve the physical security profile of fixed sites and facilities, as well as critical items while in-transit. ***FY 2013 Accomplishments:*** • Determined if the radar technology can be successfully modified for operation in a cluttered environment while providing extended area protection against direct trajectory stand-off threats. • Assessed the ability of electronic warfare sensor to perform off-axis defeats against standoff direct-fired threats. • Established a semi-permanent installation or relocatable short-term and rapidly installed perimeter security system. • Developed proof of concept for detection options and response capabilities previously identified, to include the full spectrum of non-lethal to lethal tactical weapon systems, to protect personnel and assets against the terrorist threat in a waterside security environment. • Developed proof of concept for persistent surveillance, intrusion detection, explosive detection, entry denial, acoustic hailing, autonomous unmanned systems, chemical, biological, radiological, nuclear, and high-explosive and associated functions. • Designed a software baseline that brings all of the Tactical Automated Security System software versions back under Government configuration management and control. • Developed a low frequency, single crystal-based, non-lethal to lethal scalable transducer capable of emitting acoustic energy signal. ***FY 2014 Plans:*** • Develop an Integrated Waterside Security capability and conduct a concept demonstration. • Develop a near-shore unified tactical response capability. ***FY 2015 Plans:*** • Address technology gaps after Integrated Waterside Security concept demonstration.	5.026	4.073	4.577

Exhibit R-2A, RDT&E Project Justification: PB 2015 Office of Secretary Of Defense		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603161D8Z / *Nuclear and Conventional Physical Security/Equipment RDT&E ADC&P*	**Project (Number/Name)** P162 / *Nuclear and Conventional Physical Security*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
• Continue to develop a near-shore unified tactical response capability.			
Title: Storage and Safeguards	1.945	1.576	4.297
Description: Properly securing critical assets to prevent access by unauthorized persons and implementing control measures that ensure access is limited to authorized persons is the foundation of physical security. This capability area will focus on equipment (e.g., locks, doors, etc.) designed to delay or stop unauthorized entry / access to a specified / localized area. ***FY 2013 Accomplishments:*** • Advanced material accounting, inventory, and tracking methods using modern technologies to strengthen nuclear material safeguards and controls. • Evaluated options for intercontinental ballistic missile launcher closure door/lock mechanism upgrades to improve delay features. • Identified solutions for gaps in intercontinental ballistic missile security system to include access delay features, intrusion detection systems, and response forces. • Tested interior denial options for the intercontinental ballistic missile launch facility and develop recommendations based on weapon system impact, cost and overall security performance. ***FY 2014 Plans:*** • Develop specifications for Ordnance Storage and Operating Facilities that addresses explosives safety and physical security design requirements. • Design a Semi-Hardened Prime Nuclear Air Force Secure Transport Container. • Design a RFID Tagging for Items in Extreme Cold Storage (CONUS). ***FY 2015 Plans:*** • Finalize design of a Semi-Hardened Prime Nuclear Air Force Secure Transport Container. • Design an internal delay capability for the Secure Transportable Maintenance System. • Design a RFID Tagging for Items in Extreme Cold Storage (OCONUS).			
Title: Prevention	6.792	5.503	1.277
Description: The security procedures taken to discourage an adversary from accessing weapons of mass destruction or gaining unauthorized access to critical assets are at the heart of prevention. This capability area will focus on broad spectrum, generic efforts which have the ability to influence multiple areas. ***FY 2013 Accomplishments:*** • Supported bi-lateral engagements for the successful DoD participation in Exercise Opal Tiger.			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Office of Secretary Of Defense		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603161D8Z / *Nuclear and Conventional Physical Security/Equipment RDT&E ADC&P*	**Project (Number/Name)** P162 / *Nuclear and Conventional Physical Security*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
• Established a Global Initiative to Combat Nuclear Terrorism Strategic Engagement Plan to ensure an effective and efficient DoD participation in radiation detection and forensics activities. • Developed Inventory Management curriculum in conjunction with National Nuclear Security Administration • Improved test and standard reference materials for National Technical Nuclear Forensics simulation and exercise support. • Supported Physical Security Modeling and simulation support for curriculum development and support in conjunction with Global Nuclear Lockdown efforts at Internationals Centers of Excellence. • Investigated air assault threats and use modeling & simulation to conduct effectiveness analyses to identify the weapon system combinations that offer the most cost-effective approach to counter those threats. • Identified military, commercial and homemade explosives by integrating two identification technologies into one handheld rugged system. • Provided federal physical security decision-makers the opportunity to observe and become familiar with commercial-off-the-shelf force protection equipment available for procurement. • Qualified for procurement an array of commercial off-the-shelf intrusion detection and assessment equipment that addresses capability gaps. • Created a non-ionizing personnel scanner that can detect threats on the body in a high throughput environment. • Integrated security system components via wireless communications with high security over long ranges, without repeaters. ***FY 2014 Plans:*** • Expand engagement opportunities with international partners in Nuclear Security. • Develop nuclear threat-related scenarios & use cases to frame Countering Nuclear Threat situational awareness development. ***FY 2015 Plans:*** • Expand engagement opportunities with international partners in Nuclear Security.			
Title: Decision Support Systems ***Description:*** Decision support systems serve the management, operations, and planning levels of the DoD physical security enterprise to help to make decisions, which may be rapidly changing and not easily specified in advance. This capability area will focus on command and control equipment and projects related to the creation and enhancement of common operating pictures, and the establishment of common architectures / interface standards. ***FY 2013 Accomplishments:*** • Advanced Integration of sensors, sensor systems and unmanned systems with automated fusion capabilities to populate available Common Operating Pictures (COP) with in-depth security, surveillance, and response data for fixed and semi-fixed/ expeditionary elements.	4.996	4.049	5.261

Exhibit R-2A, RDT&E Project Justification: PB 2015 Office of Secretary Of Defense		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603161D8Z / *Nuclear and Conventional Physical Security/Equipment RDT&E ADC&P*	**Project (Number/Name)** P162 / *Nuclear and Conventional Physical Security*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
• Provided DoD and industry the means to achieve Physical Security Equipment interoperability through standards and interface specifications. • Designed the framework for the collection and consolidation of data from disparate small to large security systems. • Trained and demonstrated the ability for marine mammal to perform a 24/7 autonomous swimmer/diver detection and localization mission. ***FY 2014 Plans:*** • Develop capability to ensure threat alert and response systems are interoperable with equipment used by the DoD and mutual aid partners in the local communities. • Provide a backbone extending command and control and situational awareness within, between, and out to the edges of the missile launch facility complex. • Develop a risk analysis tool to help commanders' in the field make sound security decisions. • Develop a shared and automated content across the security domains and functional areas, enabling more efficient and accurate personnel vetting, access controls, insider threat prevention and enhanced security operating environments. ***FY 2015 Plans:*** • Defense Security Enterprise Architecture (DSEA) • Continue to develop a backbone extending command and control and situational awareness within, between, and out to the edges of the missile launch facility complex. • Continue to develop capability to ensure threat alert and response systems are interoperable with equipment used by the DoD and mutual aid partners in the local communities. • Finalize the development of a risk analysis tool to help commanders' in the field make sound security decisions. • Continue to develop a shared and automated content across the security domains and functional areas, enabling more efficient and accurate personnel vetting, access controls, insider threat prevention and enhanced security operating environments.			
Title: Analytical Support ***Description:*** This capability area will focus on studies related to physical security topics and operational and management efforts related to day-to-day activities of the DoD Physical Security Equipment/Countering Nuclear Threats RDT&E Program. ***FY 2013 Accomplishments:*** • Continued to conduct test and evaluation efforts for physical security equipment (PSE) • Continued to conduct live-fire and modeling tests of selected weapons, perform analysis, and develop policy requirements based on findings.	3.800	3.079	4.608

Exhibit R-2A, RDT&E Project Justification: PB 2015 Office of Secretary Of Defense		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603161D8Z / *Nuclear and Conventional Physical Security/Equipment RDT&E ADC&P*	**Project (Number/Name)** P162 / *Nuclear and Conventional Physical Security*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
• Continued to qualify, for procurement, an array of Commercial Off-The-Shelf (COTS) intrusion detection and assessment equipment that meets identified Integrated Base Defense Security Systems capability and sustainment gaps. ***FY 2014 Plans:*** • Provide DOD and industry the means to achieve PSE interoperability through the development of physical security standards and interface control devices. • Develop a comprehensive Physical Security Enterprise Test & Evaluation Program. • Conducts analyses and review of requirements, evaluates proposed RDT&E solutions and recommends priorities for the integrated investment portfolio. ***FY 2015 Plans:*** • Provide DOD and industry the means to achieve PSE interoperability through the development of physical security standards and interface control devices. • Develop a comprehensive Physical Security Enterprise Test & Evaluation Program • Conducts analyses and review of requirements, evaluates proposed RDT&E solutions and recommends priorities for the integrated investment portfolio.			
Accomplishments/Planned Programs Subtotals	29.919	24.243	28.586

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

The program performance metrics are established/approved through the DoD Physical Security Enterprise and Analysis Group (PSEAG). The cost, schedule and technical progress is reviewed at quarterly PSEAG meetings. Performance variances are addressed and corrective action(s) is(are) implemented as necessary.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Office of Secretary Of Defense			Date: March 2014
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603161D8Z / *Nuclear and Conventional Physical Security/Equipment RDT&E ADC&P*	Project (Number/Name) P041 / *CNT Rad/Nuc Passive Defense ADC&P*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
P041: *CNT Rad/Nuc Passive Defense ADC&P*	-	-	1.985	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project establishes a Defense-wide Countering Nuclear Threats (CNT) Materiel development Program. The CNT acquisition strategy directly applies to a Joint requirement for CNT materiel development and addresses the materiel and sustainment gaps for general purpose Joint Forces, including the US Army 20th Support Command and Navy Visit, Board, Search, and Seizure, as well as the Technical Support Groups; NIMBLE ELDER and the US Special Operations Command where required.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: CNT Rad/Nuc Passive Defense	-	1.985	-
Description: Advanced Development of Joint Radiological and Nuclear passive defense systems (i.e. Radiological Detection System and the Joint Personal Dosimeter). The Radiological Detection System will provide a ruggedized Radiation Detection, Indication, and Computation for real time gamma radiation monitoring and low energy x-ray, beta, alpha, and neutron detection. The Joint Personal Dosimeter will provide a joint solution to increase capability and reduce life-cycle costs. Both systems will address Operation TOMODACHI lessons learned for common, interoperable equipment with adequate sensitivity and common units of measure. ***FY 2014 Plans:*** Development of Joint Radiological and Nuclear passive defense systems (i.e. Radiological Detection System and the Joint Personal Dosimeter)			
Accomplishments/Planned Programs Subtotals	-	1.985	-

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2015 Office of Secretary Of Defense		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603161D8Z / *Nuclear and Conventional Physical Security/Equipment RDT&E ADC&P*	**Project (Number/Name)** P041 / *CNT Rad/Nuc Passive Defense ADC&P*

C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

The program performance metrics are established/approved through the Countering Nuclear Threats Program Manager. The cost, schedule and technical progress is reviewed on a quarterly basis. Performance variances are addressed and corrective action(s) is(are) implemented as necessary.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Office of Secretary Of Defense			Date: March 2014
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603161D8Z / *Nuclear and Conventional Physical Security/Equipment RDT&E ADC&P*	Project (Number/Name) P040 / *National Technical Nuclear Forensics Systems*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
P040: *National Technical Nuclear Forensics Systems*	-	-	22.074	12.486	-	12.486	12.256	11.498	12.433	14.994	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Nuclear forensics is the thorough collection, analysis and evaluation of radiological and nuclear material in a pre-detonation state and post-detonation radiological or nuclear materials, devices and debris, as well as the immediate effects created by a nuclear detonation. The ability to identify the source of nuclear material from radioactive debris is critical to our national defense and security. Swift and accurate forensic and attribution (identification) capabilities are vital to developing an appropriate national response to a nuclear event and preventing future attacks in a timely manner.

Nuclear Terrorism is one of the most significant and pressing threats identified by national leadership. A credible nuclear forensics program is essential to preventing nuclear terrorism by deterring nations from sponsoring nuclear terrorism. During the Deputy Management Advisory Group process shortfalls and resources to close these gaps were identified and supported by the Deputy Secretary of Defense. The purpose of this program is to develop systems such as ground based Prompt Diagnostic sensors and Particulate Airborne Collection Systems to provide timely and accurate information to national leadership in the area of Nuclear Forensics.

Per DoDI 2060.04 OSD AT&L NCB is the program lead for the Department of Defense in Nuclear Forensics. NCB represents DoD interests in all areas of nuclear forensics but focuses heavily on post-detonation applications due to Presidential guidance assigning the department the lead role in develop, providing, and maintaining post detonation Nuclear Forensics capability.

This PE can fund travel to support the requirements of this program.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: National Technical Nuclear Forensics Systems	-	22.074	12.486
Description: Advanced development of ground based diagnostic and collection systems. This next generation technology will provide new information that increases accuracy and provides an improved timeline in support of senior leadership decision making.			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Office of Secretary Of Defense		Date: March 2014
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603161D8Z / *Nuclear and Conventional Physical Security/Equipment RDT&E ADC&P*	**Project (Number/Name)** P040 / *National Technical Nuclear Forensics Systems*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Development for a Particulate Airborne Collection System that allows additional airborne sampling flexibility to reduce the risk in providing samples for the forensics process. Installation, testing, and operational support and integration of ground based Prompt Diagnostic systems in various key metropolitan areas. Development of a Gaseous Airborne Collection System that provides the Department of Defense with mobile nuclear air sampling capability to support collection requirements for treaty verification and National Technical Nuclear Forensics. ***FY 2015 Plans:*** Finish development of a Particulate Airborne Collection System that allows additional airborne sampling flexibility to reduce the risk in providing samples for the forensics process. Installation, testing, and operational support and integration of ground based Prompt Diagnostic systems in various key metropolitan areas. Continue to develop a Gaseous Airborne Collection System that provides the Department of Defense with mobile nuclear air sampling capability to support collection requirements for treaty verification and National Technical Nuclear Forensics.			
Accomplishments/Planned Programs Subtotals	-	22.074	12.486

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

The program performance metrics are established/approved through the Countering Nuclear Threats Program Manager. The cost, schedule and technical progress is reviewed on a quarterly basis. Performance variances are addressed and corrective action(s) is(are) implemented as necessary. This is new program focusing on advanced development to meet critical needs.