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Exhibit R-2, RD1&E Budget Item Justification: PB 2012 Office of Secretary Of Defense

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE										Cost To	Total Cost
0400: Research, Development, Test & Evaluation, Defense-Wide BA 4: Advanced Component Development & Prototypes (ACD&P)	PE 0603851D8Z: Environmental Security Technology Certification Program										Complete	Continuing
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	Total Cost	
Total Program Element	40.998	30.419	63.606	-	63.606	39.703	37.365	31.151	31.126	Continuing	Continuing	
P514: Environmental Security Technology Certification Program	40.998	30.419	63.606	-	63.606	39.703	37.365	31.151	31.126	Continuing	Continuing	

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

(U) This program demonstrates and validates the most promising innovative environmental and energy technologies that target DoD's most urgent needs. Technologies selected are projected to provide pay back of the investment through cost savings and improved efficiencies. The program responds to: (1) Congressional concern over the slow pace of remediation of environmentally polluted sites on military installations, (2) Congressional direction to conduct demonstrations specifically focused on emerging new technologies, and (3) the need to improve defense readiness by reducing the drain on the Department's operation and maintenance dollars caused by environmental restoration, waste management, and the cost of energy. Preference for demonstrations are given to technologies that have successfully completed all necessary research and development objectives, and address the highest priority DoD requirements.

**B. Program Change Summary (\$ in Millions)**

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	31.613	30.419	31.222	-	31.222
Current President's Budget	40.998	30.419	63.606	-	63.606
Total Adjustments	9.385	-	32.384	-	32.384
• Congressional General Reductions	-	-	-	-	-
• Congressional Directed Reductions	-	-	-	-	-
• Congressional Rescissions	-	-	-	-	-
• Congressional Adds	-	-	-	-	-
• Congressional Directed Transfers	-	-	-	-	-
• Reprogrammings	-	-	-	-	-
• SBIR/STTR Transfer	-	-	-	-	-
• Other Program Adjustments	9.385	-	50.625	-	50.625
• Defense Efficiency - Baseline Review Adjustments	-	-	-15.670	-	-15.670
• Defense Efficiency - Report, Studies, Boards, and Commissions	-	-	-1.332	-	-1.332
• Defense Efficiency - Contractor Staff Support	-	-	-1.169	-	-1.169
• Economic Assumptions	-	-	-0.070	-	-0.070

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**Exhibit R-2A, RD&E Project Justification:** PB 2012 Office of Secretary Of Defense

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<b>APPROPRIATION/BUDGET ACTIVITY</b>		<b>R-1 ITEM NOMENCLATURE</b>			<b>PROJECT</b>						
0400: Research, Development, Test & Evaluation, Defense-Wide BA 4: Advanced Component Development & Prototypes (ACD&P)		PE 0603851D8Z: Environmental Security Technology Certification Program			P514: Environmental Security Technology Certification Program						
<b>COST (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
P514: Environmental Security Technology Certification Program	40.998	30.419	63.606	-	63.606	39.703	37.365	31.151	31.126	Continuing	Continuing
Quantity of RD&E Articles											

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

(U) ESTCP demonstrates and validates the most promising innovative environmental and energy technologies that target DoD's most urgent needs. Technologies selected are projected to provide a return on the investment through cost savings and improved efficiencies. The program responds to: (1) Congressional concern over the slow pace of remediation of environmentally polluted sites on military installations. (2) Congressional direction to conduct demonstrations specifically focused on emerging new technologies, and (3) the need to improve defense readiness by reducing the drain on the Department's operation and maintenance dollars caused by environmental restoration, waste management, and the cost of energy. Preference for demonstrations is given to technologies that have successfully completed all necessary research and development objectives, and address the highest priority DoD requirements.

**B. Accomplishments/Planned Programs (\$ in Millions)**

<b>Title:</b> Environmental Technology Demonstration/Validation	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<b>Description:</b> Funds are programmed for investments in projects that address priority DoD environmental requirements. The focus of the program is on live site UXO discrimination demonstrations, addressing emerging and recalcitrant cleanup issues, range sustainment technologies, and reducing life cycle costs of DoD weapon systems by eliminating hazardous materials. Accomplishments/plans are described for each FY below.	40.998	30.419	33.606
<b>FY 2010 Accomplishments:</b> (U) FY 2010 Accomplishments:			
Funds were programmed for investments in projects that address priority DoD environmental requirements. The focus of the program was on live site UXO discrimination demonstrations, addressing emerging and recalcitrant cleanup issues, range sustainment technologies, and reducing life cycle costs of DoD weapon systems by eliminating hazardous materials. Funds were primarily required to continue and complete ongoing investments. In addition, four Congressionally directed projects were executed.			
Investment by Focus Area: - Environmental Restoration: (\$13.400 million) - Munitions Response: (\$6.300 million) - Resource Conservation: (\$7.600 million)			

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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: Research, Development, Test & Evaluation, Defense-Wide BA 4: Advanced Component Development & Prototypes (ACD&P)	<b>R-1 ITEM NOMENCLATURE</b> PE 0603851D8Z: Environmental Security Technology Certification Program	<b>PROJECT</b> P514: Environmental Security Technology Certification Program
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**B. Accomplishments/Planned Programs (\$ in Millions)**

- Weapons Systems and Platforms: (\$11.100 million)
- Provide pro-rata share to AT&L/MHS to cover administrative support cost and SBIR/STTR (\$0.835 million)

**FY 2011 Plans:**  
(U) 2011 Plans:

Funds are planned for continued investment in projects that address priority DoD environmental requirements. Focused new investment topics for FY 2011 include: 1) Remediation of Contaminated Groundwater; 2) In Situ Management of Contaminated Sediments; 3) Characterization, Control, and Treatment of Range Contamination; and 4) Military Munitions Detection, Discrimination, and Remediation. Details are provided at [www.serdp-estcp.org](http://www.serdp-estcp.org)

**FY 2012 Plans:**  
(U) 2012 Plans:

Funds are planned for continued investment in projects that address priority DoD environmental requirements. Focused new investment topics for FY 2012 include: 1) Remediation of Contaminated Groundwater; 2) In Situ Management of Contaminated Sediments; 3) Characterization, Control, and Treatment of Range Contamination; and 4) Military Munitions Detection, Discrimination, and Remediation. Increased funding in FY 2012 is to support new live site UXO demonstrations. This effort will transition innovative technologies that can reduce DoD's military munitions response liabilities by approximately 75% with an expected cost savings of \$10 billion. Details are provided at [www.serdp-estcp.org](http://www.serdp-estcp.org)

**Title: Energy Technology Demonstration/Validation**

**Description:** Funds are programmed for investments in projects that respond to Congressional direction for the Department to increase energy efficiency, reduce installation energy intensity, increase the use of renewable energy, and improve energy security. Emerging energy technologies offer DoD a cost effective opportunity to meet these requirements for reduced energy consumption and improved energy security on its installations while reducing energy and operational costs.

**FY 2012 Plans:**  
FY2012

Funds are planned to continue investments in energy projects that constitute the Installation Energy Test Bed Initiative. The test bed program will validate and test the operational cost and performance of innovative energy technologies in a real-world integrated building environment so as to reduce risk, overcome the barriers to deployment, and facilitate wide-scale deployment. The DoD test bed program exploits the Department's existing built infrastructure to test energy efficiency and renewable energy technologies in three areas: component technologies (i.e., HVAC, lighting, distributed energy generation); system approaches to building energy design, control, and management; and installation-level smart micro-grid technologies. It is a distributed test bed designed to evaluate energy technologies under the varied climatic conditions and building types DoD manages. The

	FY 2010	FY 2011	FY 2012
-	-	-	30,000

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>  test beds key elements are: 1) competitive selection of new technologies, 2) systematic and consistent evaluation to determine performance, operational readiness and life cycle costs, and 3) development of guidance and design information for future deployment across installations. This process has been developed, piloted, and validated through previous Congressional funding. Information on existing demonstrations can be found at WWW.SERDP-ESTCP.ORG.	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
	<b>Accomplishments/Planned Programs Subtotals</b>	40.998	30.419

**C. Other Program Funding Summary (\$ in Millions)**  
N/A

**D. Acquisition Strategy**  
ESTCP solicits proposals from all DoD organizations, other Federal Agencies, and the commercial sector. Projects are selected based on an annual competitive process through reviews by multi-agency panels.

**E. Performance Metrics**  
Performance in this program is monitored at two levels. At the lowest level, each individual project is measured against technical and financial milestones on a quarterly and annual basis. At a program-wide level, progress is measured against DoD's environmental requirements and the demonstration and transition of technologies that address these requirements.