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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2015 Office of Secretary Of Defense **Date:** March 2014

<b>Appropriation/Budget Activity</b> 0400: Research, Development, Test & Evaluation, Defense-Wide I BA 3: Advanced Technology Development (ATD)	<b>R-1 Program Element (Number/Name)</b> PE 0603716D8Z I Strategic Environmental Research and Development Program (SERDP)
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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	64.220	58.621	62.324	57.796	-	57.796	68.287	72.572	77.490	83.590	Continuing	Continuing
P470: Strategic Environmental Research and Development Program (SERDP)	64.220	58.621	62.324	57.796	-	57.796	68.287	72.572	77.490	83.590	Continuing	Continuing

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

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

Congress established the Strategic Environmental Research and Development Program (SERDP) in 1990 (10 U.S.C. Section 2901-2904) to address Department of Defense (DoD) and Department of Energy (DOE) environmental concerns. It is conducted as a DoD program, jointly planned and executed by the DoD, DOE, and the Environmental Protection Agency (EPA), with strong participation by other Federal agencies, industry, and academia. SERDP's objective is to improve DoD mission readiness and environmental performance by providing new scientific knowledge and cost-effective technologies in the areas of Environmental Restoration, Munitions Response, Resource Conservation and Climate Change, and Weapons Systems and Platforms. SERDP does this by addressing high priority DoD environmental technology requirements. SERDP enhances military operations, improves military systems' effectiveness, enhances military training/readiness, sustains DoD's training and test ranges and installation infrastructure, and helps ensure the safety and welfare of military personnel and their dependents by eliminating or reducing the generation of pollution and use of hazardous materials and reducing the cost of remedial actions and compliance with environmental laws and regulations. As a secondary benefit, SERDP helps solve significant national and international environmental problems. The keys to a growing list of SERDP technological successes are the ability to respond aggressively and proactively to priority defense environmental needs; the pursuit of world-class technical excellence; and an emphasis on constant technology transfer.

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

	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015 Base</u>	<u>FY 2015 OCO</u>	<u>FY 2015 Total</u>
Previous President's Budget	58.621	72.324	75.832	-	75.832
Current President's Budget	58.621	62.324	57.796	-	57.796
Total Adjustments	-	-10.000	-18.036	-	-18.036
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Congressional General Reductions	-	-10.000	-18.036	-	-18.036

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**Change Summary Explanation**

The revised funding levels for FY14 are due to the need to address high priority programs within AT&L as determined by senior leadership. For SERDP this includes additional funding to address high priority issues including emerging groundwater contaminants, munitions response in the underwater environment, and development of munitions with fewer environmental impacts.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2015 Office of Secretary Of Defense										<b>Date:</b> March 2014		
<b>Appropriation/Budget Activity</b> 0400 / 3					<b>R-1 Program Element (Number/Name)</b> PE 0603716D8Z / <i>Strategic Environmental Research and Development Program (SERDP)</i>				<b>Project (Number/Name)</b> P470 / <i>Strategic Environmental Research and Development Program (SERDP)</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015 Base</b>	<b>FY 2015 OCO #</b>	<b>FY 2015 Total</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
P470: <i>Strategic Environmental Research and Development Program (SERDP)</i>	64.220	58.621	62.324	57.796	-	57.796	68.287	72.572	77.490	83.590	Continuing	Continuing

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

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

	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>
<b>Title:</b> Environmental Restoration	16.228	18.420	14.570
<b>Description:</b> Environmental Restoration (ER) reduces DoD's liabilities by developing technologies for the cost-effective detection, characterization, containment, and remediation of contamination in soil, sediments, and water.			
<b>FY 2013 Accomplishments:</b> New research initiatives focused on in situ remediation of 1,4-dioxane-contaminated groundwater and improved remediation technologies for treatment of chlorinated solvent-contaminated groundwater. A description of all ER projects funded in FY 2013 can be found at <a href="http://www.serdp-estcp.org">www.serdp-estcp.org</a> .			
<b>FY 2014 Plans:</b> New research initiatives will focus on the highest priority DoD requirements to reduce DoD's liabilities by developing technologies for the cost-effective detection, characterization, containment, and remediation of contamination in soil, sediments, and water. Specific Statements of Need were released and proposals are being selected that will address improved remediation operation			

PE 0603716D8Z: *Strategic Environmental Research and Development*

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>
<p>through fine scale delineation of contaminated subsurface environments, in situ remediation of perfluoroalkyl contaminated groundwater, and improved understanding of the impact of ongoing, low level contaminant influx to aquatic sediment site restoration. Details are available at <a href="http://www.serdp-estcp.org">www.serdp-estcp.org</a>.</p> <p><b>FY 2015 Plans:</b> New research initiatives will focus on the highest priority DoD requirements to reduce DoD's liabilities by developing technologies for the cost-effective detection, characterization, containment, and remediation of contamination in soil, sediments, and water.</p>			
<p><b>Title:</b> Munitions Response (MR)</p> <p><b>Description:</b> Munitions Response (MR) develops detection, discrimination, and remediation technologies for Unexploded Ordnance (UXO) to address the significant DoD liability in the Military Munitions Response Program. Investments are also made to improve active range clearance and to reduce generation of UXO during live fire testing and training operations.</p> <p><b>FY 2013 Accomplishments:</b> New research initiatives focused on advancements in underwater UXO detection and discrimination, advanced sensors, signal processing, supporting technologies, and protocols to support informed decisions and reduce the costs associated with detecting and remediating UXO. A description of all MR projects funded in FY 2013 can be found at <a href="http://www.serdp-estcp.org">www.serdp-estcp.org</a>.</p> <p><b>FY 2014 Plans:</b> New research initiatives will focus on the highest priority DoD requirements in underwater UXO detection and discrimination, including wide area and detailed surveys; cost-effective recovery and disposal; characteristics of munitions underwater and their environment; and protocols to reduce the costs associated with detecting and remediating UXO underwater. Statements of Need were released and proposals are being selected to address these issues. Details are available at <a href="http://www.serdp-estcp.org">www.serdp-estcp.org</a>.</p> <p><b>FY 2015 Plans:</b> New research initiatives will focus on the highest priority DoD requirements in underwater UXO detection and discrimination, advanced sensors, signal processing, supporting technologies, and protocols to reduce the costs associated with detecting and remediating UXO underwater.</p>	6.903	19.580	7.650
<p><b>Title:</b> Resource Conservation and Climate Change (RC)</p> <p><b>Description:</b> Resource Conservation and Climate Change (RC) develops the science and technologies required to sustain training and testing ranges.</p> <p><b>FY 2013 Accomplishments:</b></p>	20.092	24.324	19.518

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>
<p>New research initiated in FY 2013 included assessing the impacts of climate change on Alaskan ecological systems; improving the understanding of the behavioral ecology of cetaceans; developing fundamental and applied science required to manage and restore forested ecosystems on Department of Defense (DoD) lands; and improving our understanding of source-sink dynamics for populations of species of relevance to DoD resource managers. A description of all RC projects funded in FY 2012 can be found at <a href="http://www.serdp-estcp.org">www.serdp-estcp.org</a>.</p> <p><b>FY 2014 Plans:</b> New research initiatives will focus on the highest priority DoD requirements to develop the science and technologies required to sustain training and testing ranges and respond to requirements in the 2010 QDR, including the assessment of climate change impacts to DoD installations. Specific Statements of Need were released and proposals are being selected for funding to address these issues. Details are available at <a href="http://www.serdp-estcp.org">www.serdp-estcp.org</a>.</p> <p><b>FY 2015 Plans:</b> New research initiatives will focus on the highest priority DoD requirements to develop the science and technologies required to sustain training and testing ranges and respond to requirements in the 2010 QDR, including the assessment of climate change impacts to DoD installations.</p>			
<p><b>Title:</b> Weapons Systems and Platforms (WP)</p> <p><b>Description:</b> Weapons Systems and Platforms (WP) develops technologies and materials that reduce the waste and emissions associated with the manufacturing, maintenance, and use of DoD weapons systems and platforms to reduce future environmental liabilities and their associated costs and impacts.</p> <p><b>FY 2013 Accomplishments:</b> New initiatives included the development of non-isocyanate polymers for military topcoats, ionic liquids technology, environmentally advantaged submunitions, and the application of synthetic biological techniques for energetic materials. A description of all WP projects funded in FY 2013 can be found at <a href="http://www.serdp-estcp.org">www.serdp-estcp.org</a>.</p> <p><b>FY 2014 Plans:</b> New research initiatives will focus on the highest priority DoD requirements to develop technologies and materials that reduce the waste and emissions associated with the manufacturing, maintenance, and use of DoD weapons systems and platforms to reduce future environmental liabilities and their associated costs and impacts. Specific Statements of Need were released to address the development of environmentally Sustainable Gas Generators and Mono/Bi-Propellants, development of replacements for polyimide composite materials containing methylene dianiline (MDA). Details are available at <a href="http://www.serdp-estcp.org">www.serdp-estcp.org</a>.</p> <p><b>FY 2015 Plans:</b></p>	15.398	-	16.058

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>
New research initiatives will focus on the highest priority DoD requirements to develop technologies and materials that reduce the waste and emissions associated with the manufacturing, maintenance, and use of DoD weapons systems and platforms to reduce future environmental liabilities and their associated costs and impacts.			
<b>Accomplishments/Planned Programs Subtotals</b>	58.621	62.324	57.796

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

N/A

**Remarks**

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

Performance in this program is monitored at two levels. At the lowest level, each of the more than 160 individual projects is measured against both 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 development of technologies that address these requirements as well as the transition of these technologies to either to demonstration and validation programs or to direct use in the field.