Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Office of the Secretary Of Defense	Date: February 2016
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603716D8Z / *Strategic Environmental Research and Development Program (SERDP)*

COST ($ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	183.492	54.357	55.705	65.078	-	65.078	69.961	75.779	76.870	78.409	Continuing	Continuing
P470: *Strategic Environmental Research and Development Program (SERDP)*	183.492	54.357	55.705	65.078	-	65.078	69.961	75.779	76.870	78.409	Continuing	Continuing

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)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	57.714	65.836	69.905	-	69.905
Current President's Budget	54.357	55.705	65.078	-	65.078
Total Adjustments	-3.357	-10.131	-4.827	-	-4.827
• Congressional General Reductions	-	-10.000			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-2.022	-0.131			
• SBIR/STTR Transfer	-1.335	-			
• Realignment	-	-	-4.324	-	-4.324
• Economic Assumptions Adjustment	-	-	-0.503	-	-0.503

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Change Summary Explanation

FY 2017 internal realignment reflects funding for higher Departmental priorities and requirements.

Exhibit R-2A, RDT&E Project Justification: PB 2017 Office of the Secretary Of Defense			Date: February 2016
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603716D8Z / *Strategic Environmental Research and Development Program (SERDP)*	**Project (Number/Name)** P470 / *Strategic Environmental Research and Development Program (SERDP)*	

COST ($ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
P470: *Strategic Environmental Research and Development Program (SERDP)*	183.492	54.357	55.705	65.078	-	65.078	69.961	75.779	76.870	78.409	Continuing	Continuing

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. Technologies developed by SERDP enhance military operations, improve military systems' effectiveness, enhance military training/ readiness, sustain DoD's training and test ranges and installation infrastructure, and help 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 by 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. Accomplishments/Planned Programs ($ in Millions)	FY 2015	FY 2016	FY 2017
Title: Environmental Restoration	13.512	13.846	16.238
Description: 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.			
FY 2015 Accomplishments: Research initiatives focused 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. A Statement of Need was released and projects selected for funding that address improved understanding of long term natural attenuation processes on contaminants in groundwater. Details are available at www.serdp-estcp.org.			
FY 2016 Plans: 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: 1) Measurement and			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2015	FY 2016	FY 2017
Enhancement of Abiotic Attenuation Processes in Groundwater, 2) Ecotoxicity of Perfluorinated Compounds, and 3) Improved Understanding of Particle Deposition from Low-Order Detonations of High Explosive Munitions. Details are available at www.serdp-estcp.org. ***FY 2017 Plans:*** 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.			
Title: Munitions Response (MR) ***Description:*** Munitions Response (MR) develops detection, classification, 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. ***FY 2015 Accomplishments:*** Research initiatives focused on the highest priority DoD requirements in underwater UXO detection and classification, 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. A Statement of Need was released and projects selected for funding that address these issues. Details are available at www.serdp-estcp.org. ***FY 2016 Plans:*** New research initiatives will focus on the highest priority DoD requirements in underwater UXO detection and classification and protocols to reduce the costs associated with detecting and remediating UXO underwater. A Statement of Need was released and proposals are being selected to address these issues. Details are available at www.serdp-estcp.org. ***FY 2017 Plans:*** New research initiatives will focus on the highest priority DoD requirements in underwater UXO detection and protocols to reduce the costs associated with detecting and remediating UXO underwater.	8.145	8.347	11.063
Title: Resource Conservation and Climate Change (RC) ***Description:*** Resource Conservation and Climate Change (RC) develops the science and technologies required to sustain training and testing ranges. ***FY 2015 Accomplishments:*** Research initiatives focused 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 2014 Quadrennial Defense Review (QDR), including the	17.681	18.120	19.630

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2015	FY 2016	FY 2017
assessment of climate change impacts to DoD installations. Specific Statements of Need were released and projects selected for funding that address new paradigms for managing species and ecosystems in a non-stationary world and adapting to changes in the hydrologic cycle under non-stationary climate conditions. Details are available at www.serdp-estcp.org. ***FY 2016 Plans:*** 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: 1) Changes in Pathogen Exposure Pathways under Non-Stationary Conditions and Their Implications for Wildlife and Human Exposure on Department of Defense Lands and 2) Improved Understanding of Wildland Fire Combustion Processes for Department of Defense Managed Ecosystems. Details are available at www.serdp-estcp.org. ***FY 2017 Plans:*** 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 2014 QDR, including the assessment of climate change impacts to DoD installations.			
Title: Weapons Systems and Platforms (WP) ***Description:*** 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. ***FY 2015 Accomplishments:*** Research focused 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 and projects selected for funding that address sustainable gasless delay formulations and standardized test methodologies for low observable coating durability. Details are available at www.serdp-estcp.org. ***FY 2016 Plans:*** 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 and proposals are being selected for funding to address: 1) Data to Improve Understanding of the Source and Mechanism of Full Scale Military Tactical Aircraft Engine Noise, 2) Reducing or Eliminating HAPs and VOCs from Polyurethane Rain Erosion	15.019	15.392	18.147

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2015	FY 2016	FY 2017
Coatings, 3) Environmentally Sustainable Manufacturing for Energetic Formulations, and 4) Alternatives for Chromium and Nickel Plating in Repair Operations. Details are available at www.serdp-estcp.org. ***FY 2017 Plans:*** 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.			
Accomplishments/Planned Programs Subtotals	54.357	55.705	65.078

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.