Exhibit R-2, RDT&E Budget Item Justification								Date: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E Defense Wide/Budget Activity 4				R-1 ITEM NOMENCLATURE Environmental Security Technology Certification Program (ESTCP) PE 0603851D8Z					
COST ($ in Millions)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Total PE 0603851D Cost	28.611	20.504	28.334	36.149	33.245	31.770	29.436	Continuing	Continuing
ESTCP Cost	28.611	20.504	28.334	36.149	33.245	31.770	29.436	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program demonstrates and validates the most promising innovative environmental technologies that target DoD's most urgent environmental needs and are projected to pay back the investment within five years through cost savings and improved efficiencies. It 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 real world commitments such as environmental restoration and waste management. Preference for demonstrations are given to technologies that have successfully completed all necessary research and development objectives, and address the highest priority DoD environmental requirements. Project funding supports the following categories for each year.

FY 2001 Accomplishments:

- Reviewed and selected 29 technologies for demonstration.
  - Reviewed and selected sites for demonstration of technologies.
  - Prepared site-specific implementation plans.
  - Prepared sites and secure regulatory permitting.
- Continued to demonstrate and evaluate 30 selected technologies.
- Completed evaluation of 30 technologies.

By Pillar:

- Remediation: Successfully demonstrated and validated technologies in multiple high priority areas related to the Cleanup of contaminated DoD sites. For example, ESTCP Researchers have completed a standardized protocol that describes a simple and cost effective treatability test to determine the potential for employing reductive anaerobic biological in-situ treatment technologies to remediate chloroethenes. Successfully developed and demonstrated cost effective in-situ treatment of MTBE contaminated groundwater and advanced techniques to remediate lead contaminated soil. ($8.690 Million)
- Unexploded Ordnance: ESTCP validated UXO technologies are having a significant impact on the DoD UXO remediation efforts. ESTCP has established national test sites to support the test and evaluation of advanced UXO detection technologies. To address the challenge associated with locating UXO buried in highly vegetative and variable terrain, researchers have demonstrated portable detection systems that will allow the collection and analysis of high-quality data at all DoD ranges regardless of terrain or tree cover equivalent to the most advanced vehicular systems. To reduce false-positive rates for UXO detection methods, ESTCP researchers have demonstrated advanced algorithms using data from both Magnetometer and EMI sensors to improve ordnance characterization and the rejection of false targets. To address large area sites, ESTCP has demonstrated multiple airborne detection technologies. ($8.100 Million)
- Pollution Prevention: ESTCP continues to validate and transition environmentally clean technologies that directly support the military mission. Examples include, demonstration of an enhanced, “drop-in” fuel additive that promotes lower emissions; and demonstration of environmentally

friendly alternative for hard chrome plating for a wide variety of air craft components. ($7.906 Million)

- Compliance: Significant progress has been made in the development of waste treatment and environmental monitoring technologies required by DoD. These include, successful testing of a biological treatment system for TNT contaminated wastewater; successful demonstration of a self-regenerating filter to scrub small diameter particulate matter from DoD vehicle emissions; successful operational demonstration of an acoustic based leak detection system at Pearl Harbor, HI; and successful demonstration of an oil spill detection system. (3.915 Million)

FY 2002 Plans:

The FY2002 funds are invested in projects that address priority DoD environmental requirements.

- Review and award 25 technologies for demonstration.
- Continue and complete 59 technology demonstrations.
    - Review and select sites for demonstration of technologies.
    - Prepare site-specific implementation plans.
    - Prepare sites and secure regulatory permitting.

By Pillar:

- Remediation: Demonstrate and validate innovative technologies to restore DoD facilities contaminated with toxic or hazardous waste. ($7.018 Million)
- Unexploded Ordnance: Demonstrate and validate innovative technologies to detect UXO and remediate land contaminated with UXO. ($4.255 Million)
- Pollution Prevention : Demonstrate validate innovative technologies to reduce the use of hazardous materials, and curb emissions of pollutants in military operations as well as weapons systems manufacturing, operations, and maintenance. ($6.377Million)
- Compliance: Demonstrate and validate innovative technologies to ensure DoD complies with our federal, state, and local environmental laws. ($2.854Million)

FY 2003 Plans:

- Review and select technologies for demonstration.
    - Review and select sites for demonstration of technologies.
    - Prepare site-specific implementation plans
    - Prepare sites and secure regulatory permitting
- Award demonstration testing and evaluation for selected technologies.

By Pillar:

- Remediation: ($8.102 Million)
- UXO: ($6.068 Million)
- Pollution Prevention: ($8.933 Million)
- Compliance: ($5.231 Million)

FY 2004-07 Plans: The ESTCP will continue to program and budget for the most promising innovative environmental technologies that target DoD's most urgent environmental needs and are projected to pay back the investment within five years.

B. **Program Change Summary**:

Exhibit R-2, RDT&E Budget Item Justification	Date: February 2002

	FY2001	FY2002	FY2003	Total Cost
Previous President's Budget	24.906	25.314	25.314	Continuing
Appropriated Values	29.256	21.054		
Adjustments to Appropriated Values				
a. Undistributed reduction	(.334)	(.287)		
b. SBIR	(.311)	(.263)		
c. Other			3.020	
Current Budget Submit	28.611	20.504	28.334	Continuing

Change Summary Explanation**:** FY2001 and FY2002 changes reflect Congressional actions. FY2003 reflects increased requirements.

C. Other Program Funding Summary Not applicable

D. Execution

For the execution year (FY01):

Labs/centers
Universities
FFRDCs
Contractors
Other

No individual organization/group receives 10% or more of total funding available in ESTCP**.**

R-1 Shopping List - Item No

Exhibit R-2, RDT&E S&T Budget Item Justification

Exhibit R-2a, RDT&E Project Justification							Date: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E Defense Wide/Budget Activity 4	PROGRAM ELEMENT				PROJECT/THRUST NAME AND NUMBER Environmental Security Technology Certification Program (ESTCP) PE 0603851D8Z			
Cost ($ in Millions)		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
ESTCP Cost		28611	20504	28334	36149	33245	31770	29436

A. Mission Description and Budget Item Justification

This program demonstrates and validates the most promising innovative environmental technologies that target DoD's most urgent environmental needs and are projected to pay back the investment within five years through cost savings and improved efficiencies. It 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, (3) Executive Order 12856 which requires Federal agencies place a high priority on obtaining funding and resources needed for the development of innovative pollution prevention programs and technologies for installations and in acquisitions, and (4) the need to improve defense readiness by reducing the drain on the Department's operation and maintenance dollars caused by real world commitments such as environmental restoration and waste management. Preference for demonstrations are given to technologies that have successfully completed all necessary research and development objectives, and address the highest priority DoD environmental requirements. Project funding supports the following categories for each year.

FY 2001 Accomplishments:

- Reviewed and selected 29 technologies for demonstration.
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  - Prepared site-specific implementation plans.
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By Pillar:

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detection technologies. ($8.100 Million)

- Pollution Prevention: ESTCP continues to validate and transition environmentally clean technologies that directly support the military mission. Examples include, demonstration of an enhanced, "drop-in" fuel additive that promotes lower emissions; and demonstration of environmentally friendly alternative for hard chrome plating for a wide variety of air craft components. ($7.906 Million)
- Compliance: Significant progress has been made in the development of waste treatment and environmental monitoring technologies required by DoD. These include, successful testing of a biological treatment system for TNT contaminated wastewater; successful demonstration of a self-regenerating filter to scrub small diameter particulate matter from DoD vehicle emissions; successful operational demonstration of an acoustic based leak detection system at Pearl Harbor, HI; and successful demonstration of an oil spill detection system. (3.915 Million)

FY 2002 Plans:

The FY2002 funds are invested in projects that address priority DoD environmental requirements.

- Review and award 25 technologies for demonstration.
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By Pillar:

- Remediation: Demonstrate and validate innovative technologies to restore DoD facilities contaminated with toxic or hazardous waste. ($7.018Million)
- Unexploded Ordnance: Demonstrate and validate innovative technologies to detect UXO and remediate land contaminated with UXO. ($4.255Million)
- Pollution Prevention : Demonstrate and validate innovative technologies to reduce the use of hazardous materials, and curb emissions of pollutants in military operations as well as weapons systems manufacturing, operations, and maintenance. ($6.377 Million)
- Compliance: Demonstrate and validate innovative technologies to ensure DoD complies with Federal, State, and local environmental laws. ($2.854 Million)

FY 2003 Plans:

- Review and select technologies for demonstration.
  - Review and select sites for demonstration of technologies.
  - Prepare site-specific implementation plans
  - Prepare sites and secure regulatory permitting
- Award demonstration testing and evaluation for selected technologies.

By Pillar:

- Remediation: ($8.102 Million)
- UXO: ($ 6.068Million)
- Pollution Prevention: ($8.933 Million)
- Compliance: ($ 5.231 Million)

FY 2004-07 Plans: The ESTCP will continue to program and budget for the most promising innovative environmental technologies that target DoD's most urgent environmental needs and are projected to pay back the investment within five years.

Exhibit R-2a, RDT&E Project Justification	Date: February 2002

B. Other Program Funding Summary Not Applicable

R-1 Shopping List - Item No

Exhibit R-2a, RDT&E S&T Project Justification
(Exhibit R-2, page X of X)

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)	DATE : (MONTH/YEAR) February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-wide/Budget Activity 4	**R-1 ITEM NOMENCLATURE PE NUMBER/PROJECT NUMBER** Environmental Security Technology Certification Program (ESTCP) PE 0603851D8Z

Project Cost Categories	FY 2001	FY 2002	FY 2003
Cost Categories:			
a. Demonstration & Validation	27.249	19.404	26.884
b. Program Management Support	1.362	1.100	1.450
TOTAL	28.611	20.504	28.334

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)	DATE : (MONTH/YEAR) February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-wide/Budget Activity 4	**R-1 ITEM NOMENCLATURE PE NUMBER/PROJECT NUMBER** Environmental Security Technology Certification Program (ESTCP) PE 0603851D8Z

B. Budget Acquisition History and Planning Information

Performing Organizations

Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY 2001	Budget FY 2001	Budget FY 2002	Budget FY 2003	Budget to Complete	Total Program
DoD	C	-	-	-	142.939	28.611	20.504	28.334	Continuing	Continuing

Actual or Budget Value ($ in millions)

Government Furnished Property

Item Description	Contract Method/Type or Funding Vehicle	Award or obligation Date	Delivery Date	Total Prior to FY2000	Budget 2001	Budget 2002	Budget 2003	Budget to Complete	Total Program

Product Development Property (list each item separately) N/A
Support and Management Property (list each item separately) N/A
Test and Evaluation Property (list each item separately) N/A
Subtotal Product and Development
Subtotal Support and Management
Subtotal Test and Evaluation