ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

May 2009

BUDGET ACTIVITY	PE NUMBER AND TITLE
6 - Management support	**0605857A - Environmental Quality Technology Mgmt Support**

	COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
	Total Program Element (PE) Cost	8790	5110	5191
031	Environmentally Sustainable Acquisition/Logistics	3311	3622	3677
06E	ENVIRONMENTAL RESTORATION TECH SUPPORT	4001		
06H	UNEXPLODED ORDNANCE CLEARANCE TECHNOLOGY SUPPORT	1138	1216	1239
06I	POLLUTION PREVENTION TECH SUPPORT	340	272	275

A. Mission Description and Budget Item Justification: This program resources environmental quality technology (EQT) related management support functions including support of RDT&E required for EQT technical integration efforts at demonstration/validation test sites, technical information and activities, test facilities and general test instrumentation, and EQT requirement assessments. Funds required to support the management of technology transfer associated with technology demonstrated and validated as part of Army EQT projects are included in this program element. In addition, support to the Army weapon system acquisition community to address generic pollution prevention related requirements are included under the Environmentally Sustainable Acquisition/Logistics Program.

The Environmentally Sustainable Acquisition/Logistics project includes the program management for developing acquisition strategies that both achieve system key performance parameters and sustain the environment without permanent and unacceptable change in the natural environment or human health from system concept refinement to disposal. It includes systematic consideration of environmental impacts, energy use, natural resource, installation impacts, economics, and quality of life. It provides support to the system acquisition community; e.g., program and project managers, to integrate environmental quality analyses into system acquisition process. The goal is to resolve environmental quality issues related to weapon systems that are identified during design, development, testing, operation, or support to reduce Army environmental liabilities and total ownership cost and includes the following: efforts to eliminate the use of hazardous and ozone-depleting materials from weapon systems and facilities, and helping to ensure the availability of Halon 1301 to support weapon system fire suppression requirements through the year 2020.

The Unexploded Ordnance Detection and Clearance project, beginning in FY 2004, is being overseen by the Army. The project had been overseen by Office of the Secretary of Defense in prior years. This project funds the Unexploded Ordnance Center of Excellence (UXOCOE) to provide for coordination of unexploded ordnance (UXO) technologies across the Department of Defense.

The Pollution Prevention Technology Support project will provide management support for the demonstration and validation of reformulated surface coating materials for weapon systems production and maintenance operations. These materials will increase operational sustainment and warfighter training capabilities by reducing soldier health risks, environmental impacts and compliance enforcement actions against installations while increasing coatings performance and standardization across the Army. This project manages research, development, test and evaluation (RDTE) activities under projects 0603779A, Environmental Quality Technology Dem/Val (E21), and 0603804A, Logistics

and Engineer Equipment Adv Dev (K42), which together serve to transition advanced technologies developed under 0603728A, Environmental Quality Technology Demonstrations (025).

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B. Program Change Summary	FY 2008	FY 2009	FY 2010
Previous President's Budget (FY 2009)	4926	5125	5238
Current BES/President's Budget (FY 2010)	8790	5110	5191
Total Adjustments	3864	-15	-47
Congressional Program Reductions		-15	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	4000		
SBIR/STTR Transfer	-136		
Adjustments to Budget Years			-47

FY2008 - The reprogramming (of $4.0 million) transferred the Environmental Restoration Components' Operation and Maintenance (O&M) appropriation to Research, Development, Test, and Evaluation, Army (RDT&E,A), FY 2008/2009, appropriation for the proper execution of the approved environmental restoration activities to improve the Army's Business Enterprise Architecture (BEA) System, pursuant to the authorities provided by Public Law 110-116, the Department of Defense (DoD) Appropriations Act, 2008.

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May 2009

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
6 - Management support	**0605857A - Environmental Quality Technology Mgmt Support**	**031**

COST (In Thousands)		FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
031	Environmentally Sustainable Acquisition/Logistics	3311	3622	3677

A. Mission Description and Budget Item Justification: The Environmentally Sustainable Acquisition/Logistics (ESAL) project provides support to the system acquisition community to integrate environmental quality, safety and occupational health, energy efficiency and materials compatibility issues and concerns into the life cycle system acquisition process. The Army Acquisition Executive, the Assistant Secretary of the Army (Acquisition, Logistics, and Technology), and the Commanding General, Army Materiel Command (AMC) have defined the functions of the ESAL project in coordination with the office of the Assistant Secretary of the Army for Installations and Environment [ASA(I&E)]. This project provides direct support to the Army acquisition community to comply with legal statutes, policy and regulations during the life cycle of Army materiel. Direct support is provided to Program Executive Officers and Program, Product and Project Managers to ensure systems integrate ESAL considerations during system design, operation and maintenance. ESAL helps the Army achieve compliance with its weapon systems, industrial base, field and deployed activities directed by international treaties, Federal statutes, Executive Orders, Department of Defense (DoD) and Army policies and regulations.

ESAL funds system acquisition support to the Army's Environmental Technology Technical Council (ETTC) and coordinates environmental quality related systems' needs for expanded research and development efforts. ESAL tasks are executed using appropriate Army research, development, and engineering centers; Army laboratories; and contractor facilities. Technologies are assessed for material compatibility, system safety, toxicity and health hazard risks and are implemented by program managers and life cycle management commands with their resources during design, development, or production; on the shop floor; during operations; and/or through improved materials and processes used by or on their system.

ESAL includes Army efforts to manage the use of ozone-depleting substances and greenhouse gases from weapon systems, to manage the Army ozone-depleting substance reserve, and Army acquisition efforts to eliminate the use of hazardous and toxic materials on Army systems. ESAL works in coordination with tactical units and field commands to leverage lessons-learned from field commanders to reduce the burden of hazardous materials on logistics and to reduce hazardous waste generated during operations and support of weapon systems. This includes supporting National Environmental Policy Act (NEPA) analyses by sharing data at the major command, installation, and unit level as appropriate. The focus of ESAL is on improving readiness, improving acquisition processes, reducing supportability burden, and minimizing total ownership cost.

Accomplishments/Planned Program:	FY 2008	FY 2009	FY 2010
- Environmentally Sustainable RDTE program management and oversight of technology integration efforts by Army Life Cycle Management Commands and environmental integrated process teams for new design, new procurement and fielded weapon systems. Participation and technical assistance in integrating sustainable pollution prevention technologies into system engineering activities. Technology management with weapon system environmental management teams to implement DoD/Army policies related to hazardous and toxic materials, ozone depleting substances, greenhouse gases and environmental management systems to reduce environmental risks to acquisition programs. Provide oversight to integrated process teams addressing environmental quality issues from Army commodities, for example the use of perchlorate in the Excalibur artillery projectile. Provide technology management support across all commodity areas and represent the Army acquisition community in development and review of Environmental Analyses. Continued emphasis on	688	783	809

supporting Acquisition Category (ACAT) II and ACAT III systems when the Milestone Decision Authority is not the Army Acquisition Executive.			
- Technical management and oversight of the Army's reserve of ozone depleting substances. Includes oversight of Army programs developing alternative chemicals to substitute into mission critical applications in tactical vehicles and aircraft. The reserve contains the Army's strategic resources of Halon used for explosion and fire suppression systems and R-22 used in fielded environmental control units. Technical management includes oversight of operational use of reserve resources, resolution of operational problems affecting reserve resources, coordination with weapon system program managers to affect system replacement and retrofit to eliminate ozone depleting chemicals while minimizing greenhouse gases, coordination and technical assistance to garrison commanders to assure recovery and deposit of excess Halon and R-22 into the reserve and management of resource levels to assure continued availability of Halon and R-22 needed to support combat mission critical applications throughout the life of legacy weapon systems. Includes participation in Federal government and multi-national forums discussing use of ozone depleting substances and greenhouse gases, justifying mission critical applications, and addressing international importation and use regulations. Significant effort supports Army warfighters in Operation Enduring Freedom and Operation Iraqi Freedom assuring adequate supplies of fire/explosion suppression and cooling agents in the theatre of operations.	414	430	456
- Technical management and oversight of safety, health hazard and toxicity assessments of materials and chemicals used in weapon system configuration, production, maintenance and operation. Army regulations require all new materials and chemicals be assessed for health hazards and toxicity prior to introduction into the Army inventory. Technical management and oversight assure "environmentally preferable" materials and chemicals do not introduce unknown risks to soldiers and workers. Technical management is provided to assist in risk mitigation decisions for implementing solutions.	89	92	98
- Technology support to Program Executive Offices and Program Managers to integrate environment, safety and occupational health considerations into systems engineering activities. Includes definition of technology requirements to meeting operational requirements, participation in developing test plans and protocols, oversight of testing efforts, analysis of technical data to support implementation decisions, participation in technical and cost risk assessment and reassessment and revision of contractual and operational requirements for successful technology integration, operation and support. Accomplished through direct participation in weapon system environmental management teams located at major subordinate commands. Includes technology management in Environmental Management Systems and participation in acquisition documentation and review processes supporting weapon system program milestone decisions. Directly support replacement of cadmium, hexavalent chromium, Halon and other pollutants from ground combat systems, aviation systems, communication-electronic systems and other commodities. Review environmental, safety, occupational health and energy statutes and regulations affecting all Army commodity areas, and prepare environmental documentation for initial capability documents and in preparation for milestone reviews.	455	469	499
- Technology management and technical support to logistics initiatives including the environmental, safety and occupational health aspects of the Army Corrosion Program and the DoD Corrosion Program on Acquisition. Includes coordination of technology requirements among service members, coordination of technology and operational requirements among Army program managers, management and oversight for developing joint test protocols, oversight of testing activities, and technical data analysis of test results to support systems engineering decision making.	149	152	162
- Technology management, technical support, and representation of the AMC voting member of the Army Environmental Quality Technology program's ETTC. Includes coordination of Technology Base (RDTE) Budget Activity (BA)-1 and BA-2 requirements among members of the ETTC Pollution Prevention Technology Team, coordination of technology and operational requirements in support of	739	790	818

RDTE BA-3 and BA-4 evaluations in support of weapon system platform integration, management and oversight for developing test plans, oversight of testing activities, and technical data analysis of test results to support weapon systems engineering decision making. Participation in performance and cost/risk assessments in support of ASA(I&E) program objectives. Manage development and execution of plans for pollution prevention technology development in four or more technology areas including Sustainable Painting Operations for the Total Army (SPOTA) that address Army compliance with impending National Emission Standards for Hazardous Air Pollutants (NESHAPs) through a pollution prevention solution. Provide oversight RDTE management to recomposition ammunition, rockets and missiles, and pyrotechnics to remove perchlorate and other hazardous constituents. Develop and execute management plans for emerging environmental quality technology programs as necessary, including Zero Footprint Camp, Reductions in Toxic Metals Used in Surface Finishing on Army Weapon Systems, Joint Battlespace Use Fuel of the Future-Ultra Sustainable, and Airborne Lead Reduction in Army Weapon Systems.			
- Technology management and technical support to AMC industrial base and Army field installations for fielding and maintaining pollution prevention technology. Includes coordination of weapon system integration of pollution prevention technology for resolution of industrial base (depots, arsenals and ammunition plants) and garrison environmental issues associated with system fielding (operation and support). Coordination and information transfer supporting materiel fielding. Analysis of impending legal statutes impacting production, operation and support of weapon systems. Assessment of readiness impacts to weapon systems resulting from impacts in capabilities of industrial base and garrisons to support production levels, training and operational tempo and maintenance activities. Participate with ASA(I&E) management and representatives in assessing the readiness implications of impending NESHAPs, greenhouse gas and energy regulations and other environmental, safety and health regulations on Army industrial base and garrison activities. Evaluate impacts of impending regulations on fielded Army weapon systems and future acquisition programs. Provide Army acquisition community representation in Office of Secretary of Defense (OSD) and Department of the Army (DA) committees addressing environmental legislation and rulemaking.	777	805	835
Small Business Innovation Research/Small Business Technology Transfer Programs (SBIR/STTR)		101	
Total	3311	3622	3677

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BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
6 - Management support	**0605857A - Environmental Quality Technology Mgmt Support**	**06E**

COST (In Thousands)		FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
06E	ENVIRONMENTAL RESTORATION TECH SUPPORT	4001		

A. Mission Description and Budget Item Justification: This project will support the technical integration and transfer of environmental quality technology at RDT&E demonstration sites. These funds will be used to support the technical integration of capabilities, processes, test sets, etc. at the demonstration site until the receiving organization can assume responsibility for operate those capabilities, processes, test sets, etc.

Accomplishments/Planned Program: Not applicable for this item.

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May 2009

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
6 - Management support	**0605857A - Environmental Quality Technology Mgmt Support**	**06H**

COST (In Thousands)		FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
06H	UNEXPLODED ORDNANCE CLEARANCE TECHNOLOGY SUPPORT	1138	1216	1239

A. Mission Description and Budget Item Justification: This effort was devolved to the Army from the office of the Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)). This effort funds the Unexploded Ordnance Center of Excellence (UXOCOE), which provides the day-to-day management, coordination, and information clearinghouse functions, and serves as the Department of Defense's (DoD) center for coordinating Unexploded Ordnance (UXO) Research, Development, Test and Evaluation (RDT&E) requirements and programs across DoD; develops and promotes standards for testing, modeling, and evaluation; maintains information on technologies for UXO detection and clearance; publishes an annual report summarizing the activities and accomplishments of the UXOCOE in order to improve the effectiveness and economy of UXO detection and clearance RDT&E efforts throughout DoD; and gathers and maintains a database for the results of these efforts. The Army manages, oversees, and coordinates this effort on behalf of the office of the USD(AT&L).

Accomplishments/Planned Program:	FY 2008	FY 2009	FY 2010
Conduct review and technology workshops to coordinate and improve the technological thrusts of DoD UXO RDT&E.	125	130	134
Coordinate/collect/analyze UXO RDT&E information via conferences, seminars, and workshops.	355	371	362
Generate an annual UXO Clearance Report focused on UXO RDT&E efforts for countermine, explosive ordnance disposal, UXO remediation, humanitarian demining, and active range clearance.	196	205	215
Maintain and update the UXO clearance/detection databases and computer web site and analyze data from and programs in UXO RDT&E for potential solutions to UXO related needs.	286	280	290
Provide oversight of UXOCOE's Ft. A. P. Hill test site which is used for standardized scientific experiments to help gather data on and model the performance of potential UXO sensors. Data are needed for the acquisition of UXO sensor performance data versus a full system evaluation. Focus is on the sensor itself, not on full-scale operational system capability. Full-scale development would occur during engineering and manufacturing development and be aimed at meeting validated requirements prior to full-rate production.	176	195	238
Small Business Innovative Research/Small Business Technology Transfer Programs		35	
Total	1138	1216	1239

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May 2009

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
6 - Management support	**0605857A - Environmental Quality Technology Mgmt Support**	**06I**

COST (In Thousands)		FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
06I	POLLUTION PREVENTION TECH SUPPORT	340	272	275

A. Mission Description and Budget Item Justification: This project provides RDTE Management Support for the demonstration and validation of new and reformulated paints, paint removers, cleaners and other surface coating materials and processes for weapon systems production and maintenance operations. The project increases operational sustainment and warfighter training capabilities by reducing soldier health risks, environmental impacts and compliance enforcement actions against installations while increasing coatings performance and standardization across the Army. Materials and processes supported by this project are inherently compliant with all applicable National Emissions Standards for Hazardous Air Pollutants that regulate surface coating activities, thereby eliminating the need for Army installations to incur hundreds of millions of dollars in expenses to purchase, install and operate air pollution control devices. This project provides for management of RDTE activities conducted under projects 0603779A, Environmental Quality Technology Dem/Val (E21), and 0603804A, Logistics and Engineer Equipment - Adv Dev (K42), which together serve to transition advanced technologies developed under 0603728A, Environmental Quality Technology Demonstrations (025). The project supports Sustainable Painting Operations for the Total Army (SPOTA) at facilities that produce and maintain Combat Support/Combat Service Support systems, Ground Combat Vehicles and other Army equipment. The project expedites technology transition from the laboratory to operational use by supporting the demonstration of new materials and processes to fulfill the performance requirements outlined in Material Specifications, Depot Maintenance Work Requirements, Technical Manuals and other technical data. The project is managed by the Director of the Environmental Acquisition and Logistics Sustainment Program at the Headquarters, U.S. Army RDECOM.

Accomplishments/Planned Program:	FY 2008	FY 2009	FY 2010
Manage and oversee demonstration/validation of reformulated surface coating materials	340	266	275
Small Business Innovation Research/Small Business Technology Transfer		6	
Total	340	272	275