ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2006

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

COST (In Thousands)		FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate
Total Program Element (PE) Cost		4334	3957	4418	4643	4892	4996	5101
031	Environmentally Sustainable Acquisition/Logistics	2847	2925	3268	3455	3664	3737	3811
06E	ENVIRONMENTAL RESTORATION TECH SUPPORT	181	0	0	0	0	0	0
06G	ENVIRONMENTAL COMPLIANCE TECHNOLOGY SUPPORT	302	0	0	0	0	0	0
06H	UNEXPLODED ORDNANCE CLEARANCE TECHNOLOGY SUPPORT	1004	1032	1150	1188	1228	1259	1290

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 or 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 and 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 Environmental Restoration Technology Support project will: (1) support the technical integration of an enhanced sensing/processing system for optimized multi-sensor unexploded ordnance (UXO) identification and discrimination at an RDT&E validation site and (2) support the technical integration of a comprehensive hazard/risk assessment capability to predict contaminant, ecological, and human risks on active and inactive firing ranges of military unique materials at an RDT&E demonstration site.

The Environmental Compliance Technology Support project will provide resource management support of transfer technologies to: (1) identify risk assessment parameters for determining environmental compliance for training and live-fire operations and to identify on-post and off-post impacts; (2) develop and validate a compliance risk assessment model for training range siting, design, and maintenance to provide input to the military construction process; and (3) evaluate and validate improved designs for ranges that incorporate erosion and contaminant control technologies for current range problems and to support future sustainable range designs.

The Unexploded Ordnance Detection and Clearance project will, beginning in FY 2004, be overseen by the Army. The project has been overseen by office of the Secretary of

Defense in prior years. This project funds the Joint Unexploded Ordnance Coordination Office (JUXOCO) of the Unexploded Ordnance Center of Excellence (UXOCOE) to provide oversight in coordinating requirements and technologies in detection and clearance of unexploded ordnance (UXO) and related ordnance issues within the Department of Defense (DoD).

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B. Program Change Summary	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2006)	4336	4014	4360
Current BES/President's Budget (FY 2007)	4334	3957	4418
Total Adjustments	-2	-57	58
Congressional Program Reductions		-18	
Congressional Rescissions	-2	-39	
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer			
Adjustments to Budget Years			58

Change Summary Explanation:
None

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February 2006

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

COST (In Thousands)		FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate
031	Environmentally Sustainable Acquisition/Logistics	2847	2925	3268	3455	3664	3737	3811

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 issues and concerns into the 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 supports acquisition policy support for the environmental quality concerns of Program Executive Officers and program managers and environmental guidance and direct support for the Army acquisition community. ESAL helps the Army achieve environmental compliance with its weapon systems directed by international treaties, Federal statutes, Executive Orders, 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 toxicity and health hazard risk and are implemented by program managers and commodity 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 eliminate the use of ozone-depleting substances from weapon systems and facilities, and to manage the Army Halon 1301 reserve, and Army acquisition efforts to eliminate the use of hazardous and toxic materials on Army systems. ESAL works in coordination with field 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. ESAL includes support to the Joint Group on Pollution Prevention (JG-PP).

Accomplishments/Planned Program	FY 2005	FY 2006	FY 2007
- Environmentally Sustainable RDTE program management and oversight of technology integration efforts by Army major subordinate commands and weapon system program environmental integrated process teams. Participation and technical assistance in integrating pollution prevention technologies into system engineering activities. Technology management with weapon system environmental management teams to implement Department of Defense/Army policies related to hazardous and toxic materials, ozone depleting substances and environmental management systems to reduce environmental risks to acquisition programs. Provided oversight to integrated process teams addressing environmental quality issues from Army commodities and including participation in the Stryker Brigade Combat Team and Unit of Action environmental management teams. Provided technology management support across commodity areas for the Unit of Action in FY05 and represented the Army acquisition community in development of Environmental Analyses related to Army Transformation. During FY06, increasing emphasis will be placed on support of Acquisition Category (ACAT) II and ACAT III systems when the Milestone Decision Authority is not the Army Acquisition Executive.	561	634	689

- 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 1301 used for explosion and fire suppression systems, and Freon (R-12) used for tactical cooling systems in wheeled combat and combat support vehicles. 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, coordination and technical assistance to garrison commanders to assure recovery and deposit of excess Halon 1301 and R-12 into the reserve and management of resource levels to assure continued availability of Halon 1301 and R-12 needed to support combat mission critical applications throughout the life of legacy weapon systems (FY 2030). Includes participation in Federal government and multi-national forums discussing use of ozone depleting chemicals, justifying mission critical applications, and addressing international importation and use regulations. During FY05, significant effort supported Army warfighters in Operation Iraqi Freedom assuring adequate supplies of fire/explosion suppression and cooling agents in the theatre of operations. In addition, provided coordination and oversight to testing of Transcritical carbon dioxide (CO2) cooling systems for support to UpArmor tactical vehicles. This new cooling system is demonstrating significant cooling improvement and is being coordinated for implementation. ESAL plans to maintain level funding support of continued warfighter readiness.	341	342	372
- Technical management and oversight of 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. Provide technology management of toxicity assessments of alternatives to Halon 1301 used in fire suppression systems and alternatives to cadmium plating and hexavalent chromium used in paint systems.	97	78	84
- Technology support to Program Executive Offices and program managers to integrate environmental quality 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 documentation and review processes supporting weapon system program milestone decisions. Directly supported elimination of Cadmium, Hexavalent Chromium, and Halon from the Stryker and other ground combat systems. Developing an environmental management system for the Unit of Action, reviewing environmental statutes and regulations affecting communications-electronic commodities, and preparing environmental documentation for initial capability documents and in preparation for milestone reviews.	528	424	461
- Technology management, technical support and representation of the Army Materiel Command (AMC) on the Joint Logistics Commander's Joint Group on Pollution Prevention. 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.	169	155	169
- Technology management, technical support, and representation of the AMC voting member of the Army's Environmental Quality Technology program's Environmental Technology Technical Council (ETTC). Includes coordination of Technology Base (RDTE) Budget Activity (BA)-1 & BA-2 requirements among members of the ETTC Pollution Prevention Technology Team, coordination of technology and operational requirements in support of 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	503	662	720

support weapon systems engineering decision making. Participation in performance and cost/risk assessments in support of Assistant Secretary of the Army (Installations & Environment) [ASA(I&E)] program objectives. Manage development and execution of plans for pollution prevention technology development in four 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. Providing oversight RDTE management to recomposition of M115 and M116 training simulators to remove perchlorate constituents in the composition.			
- 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 on Army industrial base and garrison activities. Oversee evaluation of impacts of impending NESHAPs on Army Transformation and fielding of Unit of Action. Provide Army acquisition community representation in Office of Systems Develop (OSD) and Department of the Army (DA) committees addressing environmental legislation and rulemaking.	648	630	773
Total	2847	2925	3268

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

	COST (In Thousands)	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate
06H	UNEXPLODED ORDNANCE CLEARANCE TECHNOLOGY SUPPORT	1004	1032	1150	1188	1228	1259	1290

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 Joint Unexploded Ordnance Coordination Office (JUXOCO) of the Unexploded Ordnance Center of Excellence (UXOCOE) to provide the day-to-day management, coordination, and information clearinghouse functions of the UXOCOE, which serves as the Department of Defense's (DoD) center for coordinating Unexploded Ordnance (UXO) 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 throughout DoD; and gathers and maintains a database for the results of these efforts. The Army oversees and coordinates this effort on behalf of the office of the USD(AT&L).

Accomplishments/Planned Program	FY 2005	FY 2006	FY 2007
Conduct review and technology workshops to coordinate and improve the technological thrusts of DoD UXO RDT&E.	115	115	120
Coordinate/collect/analyze UXO RDT&E information via conferences, seminars, and workshops.	303	331	347
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.	178	178	187
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.	272	272	291
Provide oversight of JUXOCO'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.	136	136	205
Total	1004	1032	1150