ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

February 2003

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

	COST (In Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate
	Total Program Element (PE) Cost	1662	1820	4938	5217	5226	5005	5142	5269
031	ACQUISITION POLLUTION PREVENTION	1662	1524	3366	3426	3498	3576	3697	3814
06E	ENVIRONMENTAL RESTORATION TECH SUPPORT	0	153	189	218	0	0	0	0
06G	ENVIRONMENTAL COMPLIANCE TECHNOLOGY SUPPORT	0	143	185	363	494	169	173	177
06H	UNEXPLODED ORDNANCE CLEARANCE TECHNOLOGY SUPPORT	0	0	1198	1210	1234	1260	1272	1278

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 Army Acquisition Pollution Prevention Project (A2P3).

The Army Acquisition Pollution Prevention Project provides support to the weapon system acquisition community; e.g., program and project managers, to integrate environmental quality analyses into system acquisition. The A2P3 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: support to the Joint Group for Pollution Prevention, 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, beginning in FY 2003: (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, beginning in FY 2003, resource management support of transfer technology 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 (JUXOCO) project will, beginning in FY2004, be overseen by the Army. The project has been overseen by office of the Secretary of Defense prior to FY2004. This project funds the Joint Unexploded Ordnance Coordination Office (JUXOCO) of the Unexploded Ordnance Center of Excellence (UXOCOE) to develop policy and provide oversight in coordinating requirements and technology in detection and clearance of unexploded ordnance (UXO) within the Department of Defense (DoD).

B. Program Change Summary	FY 2002	FY 2003	FY 2004	FY 2005
Previous President's Budget (FY 2003)	1719	1902	1495	1705
Current Budget (FY 2004/2005 PB)	1662	1820	4938	5217
Total Adjustments	-57	-82	3443	3512
Congressional program reductions				
Congressional rescissions		-20		
Congressional increases				
Reprogrammings	-9	-11		
SBIR/STTR Transfer	-48	-51		
Adjustments to Budget Years			3443	3512

Change Summary Explanation: Funding - FY2004/FY2005: The project for Unexploded Ordnance Detection and Clearance (JUXOCO) was transferred for oversight by office of the Secretary of Defense to the Assistant Secretary of the Army for Installations and Environment beginning in FY2004. In addition, funds were realigned in FY2004 and thereafter from Operations and Maintenance, Army to focus work on RDT&E supporting pollution prevention technology needs of Army Program Executive Officers and Program Managers.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2003

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

COST (In Thousands)		FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate
031	ACQUISITION POLLUTION PREVENTION	1662	1524	3366	3426	3498	3576	3697	3814

A. Mission Description and Budget Item Justification: The Army Acquisition Pollution Prevention Project (A2P3) provides support to the weapon system acquisition community to integrate environmental quality issues and concerns into the weapon system acquisition process. The Army Acquisition Executive, the Assistant Secretary of the Army (Acquisition, Logistics, and Technology), and the Commanding General, Army Materiel Command have defined the functions of A2P3 in coordination with the office of the Assistant Secretary of the Army for Installations and Environment. This project supports acquisition policy support for the environmental quality concerns of Program Executive Officers and Program Managers and environmental training for the weapon system acquisition community. A2P3 helps the Army achieve environmental compliance with its weapon systems directed by international treaties, Federal statutes, National Emission Standards, Executive Orders, and DoD and Army policies and regulations.

A2P3 funds weapon system acquisition support to the Army's Environmental Technology Technical Council and coordinates environmental quality related weapon systems' needs for expanded research and development efforts. A2P3 tasks are executed using appropriate Army research, development, and engineering centers; Army laboratories; the National Defense Center for Environmental Excellence (NDCEE); and contractor facilities. Technologies are assessed for toxicity and safety risk and are implemented by weapon system program managers 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.

A2P3 includes Army efforts to eliminate the use of ozone-depleting chemicals from weapon systems and facilities, the Army Halon 1301 reserve, and Army acquisition efforts to eliminate the use of hazardous and toxic materials on Army weapon systems. A2P3 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 A2P3 is on readiness, improved acquisition processes, reduced supportability burden, and total ownership cost avoidance. A2P3 includes support to the Joint Group for Pollution Prevention (JG-PP).

This project supports the Interim transition path of the Transformation Campaign Plan (TCP).

Accomplishments/Planned Program	FY 2002	FY 2003	FY 2004	FY 2005
- Acquisition pollution prevention RDT&E 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 DoD/Army policies related to hazardous and toxic materials, ozone depleting chemicals and environmental management systems to reduce environmental risks to acquisition programs. Provided oversight to 7 integrated process teams addressing environmental issues from Army commodities and including participation in the Stryker Armored Vehicle and Comanche environment management teams. Beginning technology management support across commodity areas for the Future Combat Systems ("system of systems") in FY03 and representing the Army Acquisition Community in development of Environmental Analyses related to Army Transformation and current fielding of Stryker Brigade Combat Teams.	667	693	747	754

Accomplishments/Planned Program (continued)	FY 2002	FY 2003	FY 2004	FY 2005
- Technical management and oversight of the Army's reserve of ozone depleting chemicals. 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 importation and use legislation throughout overseas field locations. Achieved elimination of ozone depleting chemicals used in solvent applications; initiated retrofit of NBC Fox vehicles tactical cooling; working retrofit to tactical ambulance cooling; currently overseeing development of CO2 alternatives and supporting implementation of non-ozone depleting chemical explosion and fire suppression in the Stryker Armored Vehicle (the Army's Interim Armored Vehicle - IAV).	180	180	360	378
- Technical management and oversight of health hazard and toxicity assessment of pollution prevention technology (materials and chemicals) used in weapon system configuration, production, maintenance and operation. Army regulation requires 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 performance risk decisions for implementing pollution prevention technologies. Provided technology management of toxicity assessments of alternatives to Halon 1301 used in fire suppression systems, alternatives to cadmium plating and hexavalent chromium used in paint systems.	150	150	208	221

Accomplishments/Planned Program (continued)	FY 2002	FY 2003	FY 2004	FY 2005
- Technology support to Program Executive Offices and Program Managers to integrate pollution prevention technology 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 7 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, hex chrome, and Halon from the Interium Armored Vehicle and other ground combat systems. Currently overseeing development of an environmental management system for Future Combat Systems (system of systems), review of environmental statutes and regulations affecting communications-electronic commodities, and preparation of environmental documentation for operational requirements documents and in preparation for milestone reviews.	370	206	633	643
- Technology management, technical support and representation of the Army Materiel Command (AMC) on the Joint Logistics Commander's Joint Group for 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.	120	120	156	178

Accomplishments/Planned Program (continued)	FY 2002	FY 2003	FY 2004	FY 2005
- 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 (RDT&E BA-1/2) requirements among members of the ETTC Pollution Prevention Technology Team, coordination of technology and operational requirements in support of RDT&E 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 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.	175	175	625	643
- 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 weapon 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 Assistant Chief of Staff for Installation Management and ASA(I&E) representatives in assessing the readiness implications of impending National Emission Standards for Hazardous Air Pollutants (NESHAP) on Army industrial base and garrison activities. Oversee evaluation of impacts of impending NESHAPs on Army Transformation and fielding of Interim Brigade Combat Teams. Provide Army Acquisition Community representation in development of Environmental Analyses for Army Transformation including the Programmatic and local Environmental Impact Statements.	0	0	637	609
Totals	1662	1524	3366	3426

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2003

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

COST (In Thousands)		FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate
06H	UNEXPLODED ORDNANCE CLEARANCE TECHNOLOGY SUPPORT	0	0	1198	1210	1234	1260	1272	1278

A. Mission Description and Budget Item Justification: This project was transferred to the Army from the office of the Under Secretary of Defense for Acquisition and Technology beginning with the FY2004 funded program. This project funds the Joint Unexploded Ordnance Coordination Office (JUXOCO) of the Unexploded Ordnance Center of Excellence (UXOCOE) to develop policy and provide oversight in coordinating requirements and technology in detection and clearance of unexploded ordnance (UXO) within the Department of Defense (DoD), as well as with other United States and international agencies, academia, and industry. The DoD Executive Agent for the National Defense Center for Environmental Excellence (NDCEE) will oversee and coordinate this project on behalf of the office of the Under Secretary of Defense for Acquisition and Technology beginning in FY2004. In addition, this project funds the establishment and maintenance of standards for testing, modeling, and evaluation of unexploded ordnance detection and clearance technology and gathers and maintains a database for the results of these efforts. In response to a request from the House National Security Committee and concerns of the General Accounting Office, the Department of Defense submitted a plan in March 1997, "Report to Congress: Unexploded Ordnance Clearance: A Coordinated Approach to Requirements and Technology Development." This report was developed by a joint inter-agency task force comprised of the proponents of the unexploded ordnance (UXO) clearance mission areas (countermine, explosive ordnance disposal, environmental remediation, humanitarian demining, and active range clearance). That report defined research and development priorities, program management, and cooperative activities for technology applicable to UXO clearance. In May 1997, the Under Secretary of Defense for Acquisition and Technology directed the establishment of the UXO Center of Excellence (UXOCOE) to implement the plan, and in October 1997, the Department established the operational arm of the UXOCOE, the JUXOCO, which is collocated with the Night Vision Electronic Sensors Directorate at Ft. Belvoir, VA.

Accomplishments/Planned Program	FY 2002	FY 2003	FY 2004	FY 2005
Conduct requirements and technology workshops to coordinate and improve the efficiency of technological thrusts of DoD UXO RDT&E.	0	0	120	130
Coordinate/collect/analyze UXO RDT&E information via conferences, seminars, and workshops.	0	0	375	392
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).	0	0	187	200
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.	0	0	291	304

Accomplishments/Planned Program (continued)	FY 2002	FY 2003	FY 2004	FY 2005
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.	0	0	225	184
Totals	0	0	1198	1210