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Exhibit R-2, PB 2010 Army RDT&E Budget Item Justification								DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 2040 - Research, Development, Test & Evaluation, Army/BA 3 - Advanced Technology Development (ATD)					R-1 ITEM NOMENCLATURE PE 0603103A Explosives Demilitarization Technology					
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	20.916	13.720	.000						Continuing	Continuing
D51: Explosives Demil Tech	9.998	10.530	.000						Continuing	Continuing
D91: EXPLOSIVE DEMIL DEMONSTRATIONS	10.918	3.190	.000						Continuing	Continuing
<u>A. Mission Description and Budget Item Justification</u>										
<p>The objective of this program element (PE) is to support the Explosive Demilitarization Technology Program, a cooperative interservice, interagency effort dedicated to the maturation of safe, efficient, and environmentally acceptable processes for the closed disposal of conventional munitions (project D51). Project D91 funds congressional interest items. This project transitions to PE 0605805/project F24 in FY10.</p> <p>The cited work is consistent with the Director, Defense Research and Engineering Strategic Plan, the Army Modernization Strategy, and the Army Science and Technology Master Plan.</p> <p>Work is integrated through the leadership of the Product Manager for Demilitarization and the Joint Ordnance Commanders Group Munitions Demilitarization/Disposal Subgroup leveraging support from the Department's Environmental Security Technology Certification Program (ESTCP), the Strategic Environmental Research and Development Program (SERDP), the Joint DOD/DOE Munitions Technology Program, and complementary Service science and technology programs. The Technology Directorate, Defense Ammunition Center, serves as the program manager (PM) Demilitarization's technical and programmatic support staff in this effort.</p>										

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B. Program Change Summary (\$ in Millions)

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
Previous President's Budget	21.511	10.564	10.971	
Current BES/President's Budget	20.916	13.720	.000	
Total Adjustments	-.595	3.156	-10.971	
Congressional Program Reductions	.000	-.044		
Congressional Rescissions	.000	.000		
Total Congressional Increases	.000	3.200		
Total Reprogrammings	.007	.000		
SBIR/STTR Transfer	-.602	.000		

Change Summary Explanation

FY 2009 increases are due to congressional adds.

This project transitions to Budget Activity 6, PE 0605805A Project F24 beginning in FY 2010.

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COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
D51: Explosives Demil Tech	9.998	10.530	.000						Continuing	Continuing
A. Mission Description and Budget Item Justification										
<p>This project matures safe, efficient, and environmentally acceptable processes for the closed disposal of conventional munitions including explosives, missiles, missile components, and large rocket motors. Efforts in this program emphasize environmentally compliant technologies to enhance existing methods for munitions resource recovery and recycling (R3) and treatment, and seek alternatives to open burning/open detonation (OB/OD). This project transitions to PE 0605805/project F24 in FY10.</p> <p>The cited work is consistent with the Director, Defense Research and Engineering Strategic Plan, the Army Modernization Strategy, and the Army Science and Technology Master Plan.</p> <p>The Technology Directorate, Defense Ammunition Center, serves as the PM Demilitarization's technical and programmatic support staff in this effort.</p>										
B. Accomplishments/Planned Program (\$ in Millions)							FY 2008	FY 2009	FY 2010	FY 2011
Supercritical Water Oxidation (SCWO): This effort develops technology for use in cleanup of waste streams associated with demilitarization of conventional weapons. In FY09, mature and demonstrate SCWO technology to treat liquid effluent from a supercritical water oxidation reactor.							.000	.589	.000	
Advanced Removal: This effort develops technology to remove propellant from a rocket motor case by cooling the propellant in order to remove it from the rocket motor case. In FY09, initiate design and fabrication of a propellant removal system using Augering techniques; initiate design and fabricate a flexible multi-missile milling system.							.000	.767	.000	
Small Business Innovative Research / Small Business Technology Transfer Programs							.000	.296	.000	
Resource Recovery and Reuse (R3): This effort focuses on enhancing existing methods of munitions R3. In FY08, conducted additional modeling using cluster model technology for the NIR scanners and completed machine vision integration for 155mm projectiles; demonstrated optimized propellant conversion to fertilizer technology; initiated accelerated design and fabrication of the Demilitarization by Inductive Heating Meltout (DIHME) project for 60mm							7.129	6.390	.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
mortars and improved the design in an effort to accommodate an additional demil requirement for 81mm and 120mm mortars; continued Joint Program integration. In FY09, mature and demonstrate DIHME project for 60mm, 81mm, and 120mm mortars; initiate development of machine vision for other projectiles; initiate transition of propellant conversion to fertilizer technology; continue research and development alternatives for ammonium perchlorate; demonstrate nitroamine high explosive (HMX) requalification technology; and continue Joint Program integration.				
Advanced Destruction: This effort focuses on destruction of munitions. In FY08, completed transition of stationary Contained Detonation Technology (CDT); initiated development of characterization data for Acid Hydrolysis steel Cartridge Actuated Device//Propellant Activated Device (CAD/PADs); demonstrated Mobile Plasma Treatment System (MPTS). In FY09, initiate testing and development of Acid Hydrolysis technology; initiate design to demil M433- high explosive dual purpose (HEDP) Cartridges.	1.211	1.703	.000	
Advanced Munitions Disassembly: This effort focuses on the disassembly of conventional munitions. In FY08, initiated transition of robotic disassembly of Area Denial Anti-personnel Mine (ADAM) projectile; transitioned waterjet technology to the Demil by Induction Heating Meltout (DIHME) project for 60mm mortars; designed and fabricated a disassembly system for the Stinger Missile; demonstrated rocket motor segmenting technique. In FY09, complete operational demonstration and initiate transition of rocket motor segmenting technique.	1.658	.785	.000	
Total	9.998	10.530	.000	
C. Other Program Funding Summary (\$ in Millions) N/A				
D. Acquisition Strategy N/A				
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.				

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APPROPRIATION/BUDGET ACTIVITY 2040 - Research, Development, Test & Evaluation, Army/BA 3 - Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603103A Explosives Demilitarization Technology					PROJECT NUMBER D91			
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost		
D91: EXPLOSIVE DEMIL DEMONSTRATIONS	10.918	3.190	.000						Continuing	Continuing		
A. Mission Description and Budget Item Justification												
These are Congressional Interest Items												
B. Accomplishments/Planned Program (\$ in Millions)												
									FY 2008	FY 2009	FY 2010	FY 2011
Missile Recycling Capability--Letterkenny Munitions Center								6.280	.000	.000		
Sierra Army Depot Cryofracture/Plasma Arc Transportable System								2.319	.000	.000		
Cryofracture/Plasma Arc Demilitarization Program								2.319	1.551	.000		
Unserviceable Ammunition Demilitarization via Chemical Dissolution								.000	.776	.000		
Press-Loaded Explosive Projectile Washout Line								.000	.775	.000		
SBIR/STTR								.000	.088	.000		
Total								10.918	3.190	.000		
C. Other Program Funding Summary (\$ in Millions)												
N/A												
D. Acquisition Strategy												
N/A												
E. Performance Metrics												
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.												

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