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**OSD RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)**

Date: February 2006

APPROPRIATION/ BUDGET ACTIVITY  
RDT&E/ Defense Wide BA# 2

PE NUMBER AND TITLE

**0602000D8Z - Joint Munitions Technology**

Cost (\$ in Millions)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total Program Element (PE) Cost	0.000	6.078	10.447	10.864	10.571	15.807	15.791
P000 Insensitive Munitions	0.000	6.078	10.447	10.864	10.571	15.807	15.791

**A. Mission Description and Budget Item Justification:** This program addresses applied research associated with providing the capability for munitions to withstand unplanned stimuli such as heat, shock and impact. The goal is to develop the enabling Insensitive Munition (IM) technologies that will provide the backbone for the Services to leverage as they pull these technologies into their specific weapon programs. This investment strategy was derived from a joint technology roadmap developed by the DoD Insensitive Munitions IPT that examined the IM shortfalls in today's weapons, and focused an investment portfolio on the top 7 DoD weapon technology priorities. Ultimate payoffs to the war fighter include significantly increased platform and crew survivability, increased safety and reduced quantity-distance requirements for munitions storage. Incorporation of IM technology, and the subsequent reduction in hazard classification, can significantly reduce weapon lifecycle costs and reduce the real estate required for munitions storage and handling operations. The department will also develop Joint Enabling Munitions Technologies under this PE.

<b><u>B. Program Change Summary</u></b>	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2006)	0.000	5.176	10.285
Current BES/President's Budget (FY 2007)	0.000	6.078	10.447
Total Adjustments	0.000	0.902	0.162
Congressional Program Reductions		-0.098	
Congressional Rescissions			
Congressional Increases		1.000	
Reprogrammings			
SBIR/STTR Transfer			
Other			0.162

**C. Other Program Funding Summary:** Not Applicable.

**D. Acquisition Strategy:** Not Applicable.

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<b><u>E. Performance Metrics:</u></b>						
FY	Strategic Goals Supported	Existing Baseline	Planned Performance Improvement / Requirement Goal	Actual Performance Improvement	Planned Performance Metric / Methods of Measurement	Actual Performance Metric / Methods of Measurement
07						
<p>Comment: This PE will be incorporated into WE.96, a Defense Technology Objective (DTO) administered by DDR&amp;E and subjected to annual review. The DTO also includes additional IM investments from the Army, Navy, and Air Force and willenable efforts to be leveraged across all services, while avoiding duplication of efforts.</p>						

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<b>OSD RDT&amp;E PROJECT JUSTIFICATION (R2a Exhibit)</b>								Date: February 2006																															
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<p><b><u>A. Mission Description and Project Justification:</u></b> This RDT&amp;E effort is aimed at developing the enabling technologies needed to build weapons in compliance with Insensitive Munitions (IM) requirements established in statute (Title 10, United States Code) and regulation (DoDI 5000.1 and CJCSI 3170.01C). The underlying assumption is that future variants of current weapon systems will have the same, or worse, response to IM stimuli (i.e., they will not improve with the technology available today). New weapon developments will face similar challenges.</p>																																							
<p><b><u>B. Accomplishments/Planned Program:</u></b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%; padding: 5px;"><b>Accomplishment/Planned Program Title</b></td> <td style="width: 10%; text-align: center; padding: 5px;">FY 2005</td> <td style="width: 10%; text-align: center; padding: 5px;">FY 2006</td> <td style="width: 10%; text-align: center; padding: 5px;">FY 2007</td> </tr> <tr> <td style="padding: 5px;">High Energy Materials</td> <td style="text-align: center; padding: 5px;">0.000</td> <td style="text-align: center; padding: 5px;">6.078</td> <td style="text-align: center; padding: 5px;">0.000</td> </tr> <tr> <td colspan="4" style="padding: 5px;">FY 2006 Plans: Evaluate, select, and prove novel insensitive high-energy materials, for both warhead propulsion applications, which exploit managed energy release, and are required for improving the lethality and reducing the vulnerability of future gun/missile systems and warheads. Characterize candidate novel insensitive high-energy materials, binders, and liners and additional concepts for mitigating the IM response of candidate systems while maintaining performance. Explore the introduction of additives to propellant formulations to assist in absorbing the energy released during and unplanned exothermic event.</td> </tr> <tr> <td style="padding: 5px;"><b>Accomplishment/Planned Program Title</b></td> <td style="text-align: center; padding: 5px;">FY 2005</td> <td style="text-align: center; padding: 5px;">FY 2006</td> <td style="text-align: center; padding: 5px;">FY 2007</td> </tr> <tr> <td style="padding: 5px;">High Energy Materials</td> <td style="text-align: center; padding: 5px;">0.000</td> <td style="text-align: center; padding: 5px;">0.000</td> <td style="text-align: center; padding: 5px;">10.447</td> </tr> <tr> <td colspan="4" style="padding: 5px;">FY2007 Plans: In FY 2007, in addition to those efforts already underway, extend and validate modeling and simulation tools used for design of managed energy systems, and experimentally assess promising materials. Evaluate new and novel methodologies for venting rocket motor and warhead cases, preventing catastrophic energy release.</td> </tr> <tr> <td style="padding: 5px;"><b>Accomplishment/Planned Program Title</b></td> <td style="text-align: center; padding: 5px;">FY 2005</td> <td style="text-align: center; padding: 5px;">FY 2006</td> <td style="text-align: center; padding: 5px;">FY 2007</td> </tr> <tr> <td style="padding: 5px;">Nanomaterial Technology</td> <td style="text-align: center; padding: 5px;">0.000</td> <td style="text-align: center; padding: 5px;">0.000</td> <td style="text-align: center; padding: 5px;">0.000</td> </tr> </table>								<b>Accomplishment/Planned Program Title</b>	FY 2005	FY 2006	FY 2007	High Energy Materials	0.000	6.078	0.000	FY 2006 Plans: Evaluate, select, and prove novel insensitive high-energy materials, for both warhead propulsion applications, which exploit managed energy release, and are required for improving the lethality and reducing the vulnerability of future gun/missile systems and warheads. Characterize candidate novel insensitive high-energy materials, binders, and liners and additional concepts for mitigating the IM response of candidate systems while maintaining performance. Explore the introduction of additives to propellant formulations to assist in absorbing the energy released during and unplanned exothermic event.				<b>Accomplishment/Planned Program Title</b>	FY 2005	FY 2006	FY 2007	High Energy Materials	0.000	0.000	10.447	FY2007 Plans: In FY 2007, in addition to those efforts already underway, extend and validate modeling and simulation tools used for design of managed energy systems, and experimentally assess promising materials. Evaluate new and novel methodologies for venting rocket motor and warhead cases, preventing catastrophic energy release.				<b>Accomplishment/Planned Program Title</b>	FY 2005	FY 2006	FY 2007	Nanomaterial Technology	0.000	0.000	0.000
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<p><u>E. Major Performers</u> Not Applicable.</p>		

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