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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Operational Test and Evaluation, Defense **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY

0460: *Operational Test and Evaluation, Defense*

BA 6: *RDT&E Management Support*

R-1 ITEM NOMENCLATURE

PE 0605131OTE: *Live Fire Test and Evaluation (LFT&E)*

COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	12.234	12.899	12.126	-	12.126	11.982	12.349	13.235	14.578	Continuing	Continuing
1: <i>OT&E</i>	12.234	12.899	12.126	-	12.126	11.982	12.349	13.235	14.578	Continuing	Continuing

A. Mission Description and Budget Item Justification

This Program Element (PE) directly supports the Congressional statutory requirements for oversight of Live Fire Test and Evaluation (LFT&E). The primary objective of LFT&E is to assure that the vulnerability and survivability of Department of Defense (DoD) crew-carrying platforms and the lethality of our conventional munitions are known and acceptable before entering full-rate production. LFT&E encompasses realistic tests involving actual United States and foreign threat hardware or, if not available, acceptable surrogate threat hardware. The objective is to identify and correct design deficiencies early in the development process. A completed LFT&E program and test report is required before programs proceed beyond low-rate initial production (BLRIP). LFT&E also includes realistic modeling and simulation to examine survivability and lethality attributes not assessed during testing. The LFT&E program is essential, especially in view of the escalating costs of technologically sophisticated weapons systems.

This program element also supports DoD's Joint Live Fire (JLF) Program and other LFT&E related initiatives. JLF was begun in 1984 under an Office of the Secretary of Defense charter to test fielded front-line combat aircraft and armor systems for their vulnerabilities as well as fielded weapons, both U.S. and foreign, for their lethality against their respective targets. Funds are also used to support other initiatives related to quick reaction requests from theater and other areas of personnel survivability.

This program element includes funds to obtain Federally Funded Research and Development Center expertise in performing analyses in support of described tasks, as well as travel funds to carry out the LFT&E program.

This program was reduced in FY 2012 and the outyears as part of the Secretary's Task Force on Efficiencies.

This program element is budgeted in Budget Activity 6, RDT&E Management Support, to support LFT&E management activities for the oversight of RDT&E of new systems, as well as RDT&E of fielded systems.

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APPROPRIATION/BUDGET ACTIVITY 0460: <i>Operational Test and Evaluation, Defense</i> BA 6: <i>RDT&E Management Support</i>	R-1 ITEM NOMENCLATURE PE 0605131OTE: <i>Live Fire Test and Evaluation (LFT&E)</i>
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B. Program Change Summary (\$ in Millions)	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>
Previous President's Budget	12.234	12.899	13.661	-	13.661
Current President's Budget	12.234	12.899	12.126	-	12.126
Total Adjustments	-	-	-1.535	-	-1.535
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Funding to Support Underbody Blast Testing	-	-	-1.000	-	-1.000
• Cost Efficiency Reduction	-	-	-0.535	-	-0.535

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Operational Test and Evaluation, Defense	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 0460: <i>Operational Test and Evaluation, Defense</i> BA 6: <i>RDT&E Management Support</i>	R-1 ITEM NOMENCLATURE PE 0605131OTE: <i>Live Fire Test and Evaluation (LFT&E)</i>	PROJECT 1: <i>OT&E</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
1: OT&E	12.234	12.899	12.126	-	12.126	11.982	12.349	13.235	14.578	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This Program Element (PE) directly supports the Congressional statutory requirements for oversight of Live Fire Test and Evaluation (LFT&E). The primary objective of LFT&E is to assure that the vulnerability and survivability of Department of Defense (DoD) crew-carrying platforms and the lethality of our conventional munitions are known and acceptable before entering full-rate production. LFT&E encompasses realistic tests involving actual United States (U.S.) and foreign threat hardware or, if not available, acceptable surrogate threat hardware. The objective is to identify and correct design deficiencies early in the development process. A completed LFT&E program and test report is required before programs proceed beyond low-rate initial production (BLRIP). LFT&E also includes realistic modeling and simulation (M&S) to examine survivability and lethality attributes not assessed during testing. The LFT&E program is essential, especially in view of the escalating costs of technologically sophisticated weapons systems.

This program element also supports DoD's Joint Live Fire (JLF) Program and other LFT&E related initiatives. JLF was begun in 1984 under an Office of the Secretary of Defense (OSD) charter to test fielded front-line combat aircraft and armor systems for their vulnerabilities as well as fielded weapons, both U.S. and foreign, for their lethalties against their respective targets. Funds are also used to support other initiatives related to quick reaction requests from theater and other areas of personnel survivability.

This program element includes funds to obtain Federally Funded Research and Development Center (FFRDC) expertise in performing analyses in support of described tasks, as well as travel funds to carry out the LFT&E program.

This program was reduced in FY 2012 and the outyears as part of the Secretary's Task Force on Efficiencies.

This program element is budgeted in Budget Activity 6, RDT&E Management Support, to support LFT&E management activities for the oversight of RDT&E of new systems, as well as RDT&E of fielded systems.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012
Title: Live Fire Test and Evaluation	12.234	12.899	12.126
FY 2010 Accomplishments: Major Test and Evaluation Programs			

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011
<p>The FY 2010 budget provided Live Fire Test and Evaluation input for Test and Evaluation Master Plans, Test Plans, System Acquisition Reports, Defense Acquisition Executive Summary reports, and BLRIP reports for those programs designated for oversight by DOT&E and OUSD(AT&L). The oversight list is developed and approved annually.</p> <p>JLF Programs and LFT&E Initiatives</p> <p>Conducted tests of fielded systems not previously tested under Air, Land, or Sea Joint Live Fire programs to support DOT&E and warfighter needs. The need for these tests result from systems being exposed to new threats, used in new unanticipated tactics, or being operated in new combat environments, and the subsequent need for an assessment of their performance. Continued to support and partner with the Joint Improvised Explosive Device Defeat Organization (JIEDDO). Addressed urgent requests that directly support deployed warfighters and issues of importance to the Congress in the areas of personnel body armor and combat helmets. Supported helicopter survivability efforts of the Department to recommend quickly fielded survivability improvements to the combat theater. Completed an initiative to investigate aortic injuries in partnership with OUSD (Personnel and Readiness) and NASA as part of Occupant Casualty initiatives.</p> <p>Continued to perform JLF projects to provide survivability data on currently fielded U.S. systems. JLF Air projects investigated vulnerabilities of aircraft to man-portable air defense systems (MANPADS). Projects are updating models and simulation to more accurately take into account vulnerabilities to MANPADS fragments and debris as well as blast. JLF Air continued work on large engine vulnerability to MANPADS, including hit point analyses and miss distance measurements. JLF Land projects continued to investigate the vulnerability of vehicles to new threats from theater and the lethality of U.S. weapons against typical in-theater targets, as well as improving modeling and simulation tools by providing validation data. JLF Sea projects continued to develop key components of alternatives to traditional shock trials of ships and submarines and began to investigate ship vulnerabilities in the areas of commercial standards and specific designs, equipment and component damage, and compartment fires.</p> <p>LFT&E published the following special reports during FY 2010:</p> <ul style="list-style-type: none"> • Assessment of the Mine Resistant Ambush Protected (MRAP) Family of Vehicles • Operational and Live Fire Report of the M915A5 Truck Tractor, Line Haul • Live Fire and Operational Test and Evaluation Report on the Mine Resistant Ambush Protected (MRAP) – All Terrain Vehicle (M-ATV) • Hard Body Armor Phase II and Phase II Follow-on Test and Evaluation, DOT&E Independent Assessment <p>FY 2011 Plans: Major Test and Evaluation Programs</p>			

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011
<p>This is a continuing effort. The FY 2011 budget provides Live Fire Test and Evaluation input for Test and Evaluation Master Plans, Test Plans, System Acquisition Reports, Defense Acquisition Executive Summary reports, and BLRIP reports for those programs designated for oversight by DOT&E and OUSD(AT&L). The oversight list is developed and approved annually.</p> <p>JLF Programs and LFT&E Initiatives</p> <p>Conduct tests of fielded systems not previously tested under Air, Land, or Sea Joint Live Fire programs to support DOT&E and warfighter needs. The need for these tests result from systems being exposed to new threats, used in new unanticipated tactics, or being operated in new combat environments, and the subsequent need for an assessment of their performance. As necessary, continue to support and partner with the Joint Trauma Analysis and Prevention of Injury in Combat (JTAPIC) program. Continue efforts in support of Personnel Protection Equipment, including combat helmets and body armor. Continue to address urgent requests that directly support deployed warfighters and issues of importance to the Congress as they arise.</p> <p>Continue to perform JLF projects to provide survivability data on currently fielded U.S. systems. JLF Air projects will continue the investigation of an emerging threat first seen in a CH 47 combat incident, test the vulnerability of sponsons to RPGs, evaluate engine nacelle vulnerability reduction techniques, as well as generic vulnerabilities to all aircraft, such as to MANPADS, small arms, and the performance of self sealing fuel tanks using bio-fuels. JLF Land projects will continue to investigate the vulnerability of vehicles to underbody blast and the lethality of U.S. weapons against typical in-theater targets, as well as improving modeling and simulation tools by providing validation data. JLF Sea projects will continue to develop key components of alternatives to traditional shock trials of ships and submarines, will continue to investigate ship vulnerabilities in the areas of commercial standards, equipment and component damage, and will investigate vulnerabilities of designs and components for new ships.</p> <p>FY 2012 Plans: Major Test and Evaluation Programs</p> <p>This is a continuing effort. The FY 2012 budget provides Live Fire Test and Evaluation input for Test and Evaluation Master Plans, Test Plans, System Acquisition Reports, Defense Acquisition Executive Summary reports, and BLRIP reports for those programs designated for oversight by DOT&E and OUSD(AT&L). The oversight list is developed and approved annually.</p> <p>JLF Programs</p>			

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011
Conduct tests of fielded systems not previously tested under Air, Land, or Sea Joint Live Fire programs to support DOT&E and warfighter needs. The need for these tests result from systems being exposed to new threats, used in new unanticipated tactics, or being operated in new combat environments, and the subsequent need for an assessment of their performance. As necessary continue to support and partner with the JTAPIC. Continue initiatives with crew survivability. Address urgent requests that directly support deployed warfighters and issues of importance to the Congress.			
Accomplishments/Planned Programs Subtotals		12.234	12.899
C. Other Program Funding Summary (\$ in Millions)			
N/A			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
Performance Measure: Percentage of required live fire test planning documents, assessments, and reports applicable to acquisition programs on the OSD Test and Evaluation Oversight List and other special interest programs/legacy systems that are completed and delivered to the appropriate decision makers on time. Percentage of required live fire test planning documents, assessments, and reports applicable to acquisition programs on the OSD Test and Evaluation Oversight List and other special interest programs/legacy systems that are completed and delivered to the appropriate decision makers on time.			
Actual Performance and Goals:			
Live Fire Testing	FY 2010 (Actual)	FY 2011 (Goal)	FY 2012 (Goal)
On-Time Completion Rate	94%	95%	96%
The on-time completion rate was computed on the basis of the number of beyond low-rate initial production live fire test and evaluation reports, Joint Live Fire Quick Look Reports, and Joint Live Fire Test reports that were submitted within established time standards relative to the total number of such products that fell due during the fiscal year. DOT&E plans to achieve its goals for FY 2011 and FY 2012 through continued management emphasis on timely delivery of required reports to customer activities.			