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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2012 Air Force	<b>DATE:</b> February 2011
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<b>APPROPRIATION/BUDGET ACTIVITY</b>				<b>R-1 ITEM NOMENCLATURE</b>							
3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				PE 0604618F: <i>Joint Direct Attack Munition</i>							
<b>COST (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	50.000	-	-	-	-	-	-	-	-	Continuing	Continuing
653890: <i>Joint Direct Attack Munitions</i>	50.000	-	-	-	-	-	-	-	-	Continuing	Continuing

**Note**

\$50M in FY10 supplemental funding was utilized for the development of a Joint Urgent Operational Need (JUON) response weapon known as the Very Low Collateral Damage Weapon (VLCDW). VLCDW has been given the identifier of BLU-129/B by USAF, and is also commonly referred to as a Precision Lethality MK-82, or PL MK-82.

BLU-129/B is not a Joint Direct Attack Munitions (JDAM) replacement, despite USAF placing this FY10 supplemental funding in the JDAM PE. BLU-129/B is a 500lb bomb body that is made from carbon fibers, instead of traditional steel. This 500lb bomb body will be joined to JDAM tailkits, and eventually other weapon tailkits that interface with the standard 500lb bomb body shape.

The \$50M was used to mature, test, and integrate the carbon fiber technology that was originally developed by USAF research laboratories with exiting weapon tailkits, fuzes, and fighter aircraft. Fielding of the BLU-129/B is expected to occur in FY11.

**A. Mission Description and Budget Item Justification**

\$50M in FY10 supplemental funding was utilized for the development of a Joint Urgent Operational Need (JUON) response weapon known as the Very Low Collateral Damage Weapon (VLCDW). VLCDW has been given the identifier of BLU-129/B by USAF, and is also commonly referred to as a Precision Lethality MK-82, or PL MK-82.

BLU-129/B is not a JDAM replacement, despite USAF placing this FY10 supplemental funding in the JDAM PE. BLU-129/B is a 500lb bomb body that is made from carbon fibers, instead of traditional steel. This 500lb bomb body will be joined to JDAM tailkits, and eventually other weapon tailkits that interface with the standard 500lb bomb body shape.

The \$50M was used to mature, test, and integrate the carbon fiber technology that was originally developed by USAF research laboratories with exiting weapon tailkits, fuzes, and fighter aircraft. Fielding of the BLU-129/B is expected to occur in FY11.

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<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604618F: <i>Joint Direct Attack Munition</i>
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<b>B. Program Change Summary (\$ in Millions)</b>	<b><u>FY 2010</u></b>	<b><u>FY 2011</u></b>	<b><u>FY 2012 Base</u></b>	<b><u>FY 2012 OCO</u></b>	<b><u>FY 2012 Total</u></b>
Previous President's Budget	-	-	-	-	-
Current President's Budget	50.000	-	-	-	-
Total Adjustments	50.000	-	-	-	-
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	50.000	-	-	-	-

**Change Summary Explanation**

\$50M in FY10 supplemental funding was utilized for the development of a Joint Urgent Operational Need (JUON) response weapon known as the Very Low Collateral Damage Weapon (VLCDW). VLCDW has been given the identifier of BLU-129/B by USAF, and is also commonly referred to as a Precision Lethality MK-82, or PL MK-82.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force								DATE: February 2011				
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604618F: Joint Direct Attack Munition				PROJECT 653890: Joint Direct Attack Munitions				
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	
653890: Joint Direct Attack Munitions	50.000	-	-	-	-	-	-	-	-	Continuing	Continuing	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0			
Note												
<p>\$50M in FY10 supplemental funding was utilized for the development of a Joint Urgent Operational Need (JUON) response weapon known as the Very Low Collateral Damage Weapon (VLCDW). VLCDW has been given the identifier of BLU-129/B by USAF, and is also commonly referred to as a Precision Lethality MK-82, or PL MK-82.</p>												
A. Mission Description and Budget Item Justification												
<p>\$50M in FY10 supplemental funding was utilized for the development of a Joint Urgent Operational Need (JUON) response weapon known as the Very Low Collateral Damage Weapon (VLCDW). VLCDW has been given the identifier of BLU-129/B by USAF, and is also commonly referred to as a Precision Lethality MK-82, or PL MK-82.</p> <p>BLU-129/B is not a JDAM replacement, despite USAF placing this FY10 supplemental funding in the JDAM PE. BLU-129/B is a 500lb bomb body that is made from carbon fibers, instead of traditional steel. This 500lb bomb body will be joined to JDAM tailkits, and eventually other weapon tailkits that interface with the standard 500lb bomb body shape.</p> <p>The \$50M was used to mature, test, and integrate the carbon fiber technology that was originally developed by USAF research laboratories with exiting weapon tailkits, fuzes, and fighter aircraft. Fielding of the BLU-129/B is expected to occur in FY11.</p>												
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: VLCDW (BLU-129/B) Developement								50.000	-	-	-	-
Description: The development of a Joint Urgent Operational Need (JUON) response weapon known as the Very Low Collateral Damage Weapon (VLCDW). VLCDW has been given the identifier of BLU-129/B by USAF, and is also commonly referred to as a Precision Lethality MK-82, or PL MK-82.												
FY 2010 Accomplishments: \$50M was used to mature, test, and integrate the carbon fiber technology that was originally developed by USAF research laboratories with exiting weapon tailkits, fuzes, and fighter aircraft.												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Air Force				<b>DATE:</b> February 2011	
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0604618F: <i>Joint Direct Attack Munition</i>		<b>PROJECT</b> 653890: <i>Joint Direct Attack Munitions</i>	

  

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>
<p>Specific details: Design refinement and penetration modeling of the carbon fiber bomb body. Manufacturing processes for non-steel bomb body components which are joined with inventory standard metal weapon interface units (fuzes, lugs, cables, fins). Design of explosive fill that increases near-field blast lethality, yet does not negatively affect the bomb's center of gravity. Integration of the bomb body with JDAM tailkits. Arena and sled blast testing for lethality calculations. Integration on aircraft for safe carriage and separation certification.</p> <p><b>FY 2011 Plans:</b> Not Applicable</p> <p><b>FY 2012 Base Plans:</b> Not Applicable</p> <p><b>FY 2012 OCO Plans:</b></p>					
<b>Accomplishments/Planned Programs Subtotals</b>	50.000	-	-	-	-

  

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• (U) Procurement of Ammunition: <i>APAF, Air Force, JDAM, Appn.</i> <i>3011, PE 0207583F</i>	190.357	252.633	76.649	34.100	110.749	100.018	102.118	103.935	105.213	Continuing	Continuing

  

<b>D. Acquisition Strategy</b>
<p>Engineering, manufacturing, test, and integration contracts are all managed by Air Armament Center (AAC) at Eglin AFB, FL, acting as the Prime Integrator of the program. A sole source for urgent and compelling needs fixed price contract was issued to Aerojet Corporation for carbon case bomb body design, engineering, and manufacturing. Existing contracts between AAC and Boeing on the JDAM contract were used to test the weapon once it was meshed with JDAM tailkits. USAF aircraft at the Eglin AFB SEEK EAGLE program were used to test the carriage and release properties of the all-up-round weapon.</p> <p>The contract was awarded 21 Sep 10. DT/OT is scheduled for Feb/Mar 2011. A contract for production of 400 weapons will be awarded in Mar/Apr 2011. Production deliveries will start approximately April 2011, and continue through February 2012. During production, additional R&amp;D activities will be performed to qualify the weapon for Navy shipboard use, and to perform additional envelope expansion flight testing. All R&amp;D activity is expected to cease no later than Sep 2011.</p>

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Air Force		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604618F: <i>Joint Direct Attack Munition</i>	<b>PROJECT</b> 653890: <i>Joint Direct Attack Munitions</i>

**E. Performance Metrics**

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2012 Air Force											<b>DATE:</b> February 2011			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)				<b>R-1 ITEM NOMENCLATURE</b> PE 0604618F: Joint Direct Attack Munition				<b>PROJECT</b> 653890: Joint Direct Attack Munitions						

  

<b>Product Development (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
VLCDW Development, test, and integration	SS/FFP	Not specified.:	50.000	-		-		-		-	0.000	50.000	0.000
<b>Subtotal</b>			50.000	-		-		-		-	0.000	50.000	0.000

  

<b>Support (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Subtotal</b>			-	-		-		-		-	0.000	0.000	0.000

  

<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Subtotal</b>			-	-		-		-		-	0.000	0.000	0.000

  

<b>Management Services (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Subtotal</b>			-	-		-		-		-	0.000	0.000	0.000

  

			<b>Total Prior Years Cost</b>	<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			50.000	-		-		-		-	0.000	50.000	0.000

  

<b>Remarks</b>													

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604618F: <i>Joint Direct Attack Munition</i>	PROJECT 653890: <i>Joint Direct Attack Munitions</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Risk Reduction	3	2010	4	2010
Arena and Sled testing	4	2010	2	2011
Program Design	4	2010	4	2011

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